

Dead Dogs, Darwin, and the Design of the Divine

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Preface:

In his theological prolegomena to his massive *magnum opus*, the *Church Dogmatics*, the Swiss theologian Karl Barth makes the following claim:

God may speak to us through Russian communism, through a flute concerto, through a blossoming shrub or through a dead dog. We shall do well to listen to him if he really does so. ... God may speak to us through a pagan or an atheist, and in that way give us to understand that the boundary between the Church and the profane world still and repeatedly takes a course quite different from that which we hitherto thought we saw [*CD*, I.1, 60f.].

My contention is that the work of Charles Darwin may well prove in certain respects to be something of an ambiguous *extra ecclesial* ‘word’ that may fruitfully aid recovery of theology’s proper subject matter, but only through critical reflection identify many of the muddles we have fallen into. Thus the task is *not* to ask first and foremost ‘what would a theological account look like if Darwin is taken seriously?’ That would theologically be an improper start, an example of which can be found in a claim made by Arthur Peacocke to the effect that ‘The aim of ... [his] work is to rethink our ‘religious’ conceptualizations in the light of the perspective on the world afforded by the sciences.’¹ Rather, the question is this: can Darwin’s account help the theological reading of the scriptures? The distinction is crucial: theology as *Wissenschaft* (or critical study) does not follow the winds of scientific fashion, but seeks to provide an account of the matter appropriate to it. That it does follow fashion unself-consciously is testimony not to good theological order but to a certain unnaturalness or disorder,

a cultural captivity that results in rational domestication and thus distortion. Yet in order to reason well about its subject-matter theology is to be attentive, firstly, to the enculturation of its students, and, secondly, to the vast range of possible overlaps with ‘other’ ways of attempting to tell the truth of things.² Thus theology does not engage with science in order to prevent it from operating in “a cultural ghetto” as Peacocke claims, but rather because ‘all truth is God’s’. And critically observing these moments of correlation do not emerge from ‘compromises’ as young-earth creationists John Whitcomb and Henry Morris had earlier accused Bernard Ramm of doing when speaking positively of Darwin.³ This, for someone like Barth, then, is not theology’s *securing* its voice but rather developing its properly fragile witness to the grace of God.

The Scope of Darwin’s Trial: ‘Don’t Make a Monkey Out of Me!’

In a recent BBC documentary entitled *Charles Darwin and the Tree of Life*, Sir David Attenborough, made the particularly grand claim that ‘Two hundred years ago a man was born who was able to explain this astonishing diversity [of life]. In doing so he revolutionised the way we see the world and our place in it. His name was Charles Darwin.’ That, being able to use hindsight, forms quite a contrast with a prediction of W.C. Wilson of Dickinson College in 1861: Darwin had failed, Wilson argues, ‘to re-establish on a scientific basis the often rejected theory of the transformation of the species’, and accordingly his thesis would soon be consigned to ‘the appropriate place in the museum of curious and fanciful specialities.’⁴ In the next scene of the Attenborough documentary, the English naturalist opens a bible and proclaims, ‘This book ... explains how this wonderful diversity came about. ... That explanation was believed, literally, by pretty well the whole of western Europe for the best part of two thousand years.’

Perhaps the most significant term in Attenborough's claim is that of 'revolutionised'. Darwin's *On the Origin of Species*, published in 1859 twenty eight years after departing on the *Beagle*, involves something of a seismic shift in our understanding of the world, and especially in relation to the Christian account that had been dominant. It is in this vein that Peacocke can talk of needing to reconceive theology 'after Darwin', rhetorically paralleling the more recent talk of doing theology 'after Auschwitz'.⁵ Wilson's comments, however, hint at three ways at least in which the ease of that popular reading of the situation requires to be subverted, and more meaningful interrogation about what the intellectual questions properly are can be opened up.

In the first place, his mention of 'the often rejected theory of the transformation of the species' indicates that Darwin's thought had not developed in a vacuum. Georges-Louis Leclerc in the mid C18th, for instance, had advocated an evolution in the natural world, albeit he was unable to specify its method. Perhaps most importantly for Darwin, in the late C18th his paternal grandfather, Erasmus Darwin, had read David Hume's attacks on the design argument through an assumption that 'nature' is not a passive mechanical or fixed system, but a dynamic, self-activating system with inherent powers of activity.⁶ Life originated from a 'single living filament'.⁷ French biologist Jean Baptiste de Lamarck (1744-1829) in his *Philosophie Zoologique* (1809) had maintained both that all plants, animals and human beings share a common origin, and that organisms slowly "transform" in developmental progression or 'perfection', thus moving from primitive blobs to the more complex and sophisticated human being and the diversity of organisms. Moreover, the development assumes the inheritance of acquired characteristics in adjusting to changes in circumstances, so that transmutation arises from a varying response in an existing group. Furthermore, lineages did not only change but they branched off to produce separately developing lines.⁸ In 1844 the anonymous *Vestiges of*

the Natural History of Creation appeared (being revealed in 1884 to have been the work of Scottish geologist Robert Chambers). All of these studies, together with the likes of Ludwig Büchner and Heinrich Friedrich Link, among others in Germany, enable Hans Schwarz to argue that ‘The stage was amazingly well prepared for Darwin’s evolutionary ideas.’⁹ Along with the emerging geology, there was evolving in the C19th a contesting of the natural theology that assumed the givenness of things.

In the second place, while not indicating the personnel involved, Wilson’s claim that the ‘theory of the transformation of the species’ had been ‘often rejected’ is telling of the type of opposition that Darwin faced in the years following 1859. The *Origin* was certainly greeted with some eagerness, apparently the first print run of 1,250 copies selling out on the day of publication with 3,000 following soon after. Yet there was also considerable outrage. Initially, the disputes were largely with other scientists over the notion of ‘random variations’. For instance, Louis Agassiz of Harvard, the leading American biologist of his time, argued that Darwin’s theory was ‘a scientific mistake, untrue to the facts, unscientific in its methods, and mischievous in its tendency.’¹⁰ Agassiz’s science was, however, according to Harvard botanist Asa Gray, ‘theistic to excess’ in that he attributed the origin and distribution of species directly to the divine will, consequently opposing Darwin’s more naturalistic scientific proposal.¹¹ For Gray, otherwise commonly known as ‘Darwin’s theist’, the Englishman’s ‘work is a scientific one, rigidly restricted to its direct object; and by its science it must stand or fall’.¹² One might argue that rather than simple naturalism opposing theism here, Darwin’s theory was a contention regarding the proper subject matter and means of discourse from within mid-to-late-C19th debates over the character of scientific description.

In the third place, following on immediately from this, the fact that Wilson does not raise theological objection to Darwin's work at this point is significant. The relations between the theologically minded and the biologist postulating his 'tree of life' were far from those popularly assumed to have been simply conflictual, and in many places any repercussions for theology took some time to be perceived.¹³ Some, like the American C.H. Hitchcock when referring to the works of James Dwight Dana, went as far as proclaim that Darwinism actually strengthens belief in the existence of God.¹⁴ What does this mean? A clue can be found in an article of 1871 in the *Quarterly Review of the Evangelical Lutheran Church*:

It would require the same infinite intelligence to create a universe out of nebular matter and primordial conditions, by the long process of development, as by a direct exercise of creative power. A development theory might be held, in harmony with a certain kind of theism.¹⁵

Of course, the phrase 'a certain kind of theism' is highly revealing, as we will see later. With a divine guiding hand on the process, natural selection has often been proclaimed to be 'God's way of doing things', or at least not opposed to divine creativity as B.B. Warfield and James Orr suggest.¹⁶

Darwinism, it would appear, had largely become intellectually acceptable in the United States by 1890, even being 'applied to [reading of] the Bible.'¹⁷ So Schwarz observes that 'With relative ease Darwinism became accepted in America in a thoroughly theistic fashion', although Marsden suggests that this was not quite as smooth as happened in Britain.¹⁸

Even if this situation has somewhat changed with more recent English-speaking reception, the simple tale of the revolutionary scientific discovery of truth concerning speciation that conflicts with Christian theology needs to be properly complexified. So, in 1887 Thomas H. Huxley declared his being impressed with both the knowledge of, and generous ethos towards, science expressed in recent sermons by three senior Anglican bishops.¹⁹ Yet, not only do his

comments suggest that in mainstream British churches evolution was beginning to be accepted, but also reveals that such an acceptance had not been widespread until at least this point when he refers to the opposition that hitherto often been the case.

However, even one's ability to recognise what passes for occasions of real conflict requires that one carefully handles matters so as to enable appropriate distinctions to be made. In the first place, initially shock was expressed over the perceived implications of Darwin's work for considerations of human dignity. *On the Origin of Species* mentions humanity rarely, and tends to avoid reflecting on the origins of the human species, something attended to more in *The Descent of Man and Selection in Relation to Sex* of 1871. Nonetheless, not only did he have human being in view 'From the beginning of his theorizing about species', but the implications of his account had become quickly clear. So in 1860 the Anglican Bishop of Oxford Samuel Wilberforce complained to the British Association for the Advancement of Science that for Darwin 'Humanity is descended from the monkeys'.²⁰ Similarly, at a meeting in 1873 of the American Evangelical Alliance Englishman George W. Weldon declared that Darwinism and biblical Christianity were utterly incompatible. The reason he suggested was that 'If man is sprung from primeval matter, he can not be the man spoken of in Genesis.'²¹

An interesting response was provided by David Friedrich Strauss. He questioned whether it is more of a slight to human dignity to be descended from apes than created in the image of God but excluded from paradise.²² Moreover, he extolled the notion of the ascension of life forms, and, in accordance with Hegel, claimed that while humans are natural beings they nevertheless sublimated the higher goal implanted in them.

More recently, there has been a turn toward refusing to separate humanity *qua* creature from other types of creatures, recognising that talk of dignity and identity-status is theological,

and therefore not a way of evading the deep symbiotic connections between all creatures whose being is blessed in the creativity of God.

In the second place, and most prominent in many contemporary debates, is the concern over the relation between Darwinism and design. It was this that prompted the geologist Charles Lyell, whose 1830 *Principles of Geology* influenced Darwin, to plead with Darwin to introduce just a little divine direction into his system of random selection. This was contrary to the earlier advice that the English botanist had followed, ‘never to introduce anything about religion in my works, if I wished to advance science in England’.²³

Now Darwin may have been strategically avoiding religious questions as a result, or he may have been studiously maintaining the distinct nature of scientific questions from the theological. Not all theological accounts will let Darwin get away with either of these moves, however, and would name them both as improper avoidance. Darwin will be forced into either the agnosticism of Thomas H. Huxley, Darwin’s so-called ‘bulldog’,²⁴ or the considerably less nescient atheism of Richard Dawkins, Darwin’s so-called ‘rottweiler’. One of the most famous objections to Darwin in this vein was learned from Charles Hodge’s *What is Darwinism?* The naturalism of the account of natural selection, according to Hodge, ‘intends to exclude design, or final causes’.²⁵ Of course, there is an important question to be asked regarding Darwin’s intentionality in relation to such a confident accusation. Darwin’s own hesitations in making too grand claims for his hypothesis is certainly a modesty of approach that is lost on several of our contemporaries for whom, in the words of philosopher Mary Midgley, evolution has become a form of religion itself, the ‘creation-myth ... [that] tells us how we got here, ... [and] what we are’.²⁶ Yet, the problem it would seem for Hodge was evolution’s naturalism, that it ‘was explained in natural terms instead of supernatural ones.’²⁷ Consequently, Hodge claims, this

‘denial of design in nature is virtually the denial of God ... virtually atheistical’.²⁸ It is unclear from this whether this critique is a modest one, that reconnecting stories of origins to the notion of purposes is in order, or whether it is stronger, that Darwinian evolution is *necessarily naturalistic*. The use of the term ‘virtually’ would certainly support the former. And yet Hodge’s pamphlet proved to be influential in suggesting the latter.²⁹

The third main area of concern was arguably, historically, the one that drove the earliest mobilisation of anti-evolutionary sentiment – the concern over ethical implications. The most famous clash occurred in 1925 in Dayton, Tennessee, the facts of which are quite contrary to Stanley Kramer’s later movie portrayal *Inherit the Wind* (1960). Christian groups had successfully pressurised the state legislature to outlaw the teaching of ‘any theory that denies the story of divine creation of man as taught in the Bible.’³⁰ Local high school teacher John Thomas Scopes was persuaded to become the test case, when standing in for the regular biology teacher on one occasion.

William Jennings Bryan, a three-times defeated Democratic presidential candidate, actively attempted to ‘drive Darwinism from schools’ and availed himself of the opportunity to act as the state representative in the high profile court case.³¹ It is important to notice that despite the corner he was too easily put into by opposing counsel Clarence Darrow, Bryan was neither defending biblical literalism, a literal six-day creationism (he was more a day-age creationist), nor rejecting the importance of science as such, and in these he largely considerably differed from the anti-evolutionists in the region.³² In fact, he may even have believed in evolution as accounting for the world’s origins in God’s creating *up until humanity*.³³

However, what was particularly urgent for Bryan was the connection between Darwinian evolution and the ethical and cultural crisis of the time. As early as 1905 he was warning that

‘such a conception of man’s origin would weaken the cause of democracy and strengthen class pride and the power of wealth’. By the end of WWI, the feeling was that the whole course of moral civilization was involved. Influenced by Vernon Kellog and Benjamin Kidd, Bryan came to believe that German barbarism was sustained by what was perceived as being a ‘might is right’ doctrine. One creationist announced at the time that

the German soldiers who killed Belgian and French children with poisoned candy were angels compared with the teachers and textbook writers who corrupted the souls of children and thereby sentenced them to eternal death.³⁴

Consequently, Bryan came to assert that not only did Darwinism ‘destroy the faith of Christians’, but it even ‘laid the foundation for the bloodiest war in history’ by committing German culture and consciousness to Nietzscheanism, a brutal materialist philosophy of competition and struggle.³⁵ ‘The objection to evolution is not, primarily, that it is not true. The principal objection ... is that it is highly harmful to those that accept it.’³⁶ Therefore the need to remove atheistic materialism from American schools was felt to be most urgent.

Ironically, then, although Darwin himself seems to have ‘shared the optimistic mid-Victorian view that humankind had proposed and would continue to progress from barbarity to civility’, historically it was less Darwin’s work that specifically was of concern than the form of social Darwinism popularised in the United States by Herbert Spencer largely through Harvard librarian and popular writer John Fiske, with his cosmic theory of an all-encompassing evolutionary process, described as a ‘beneficent necessity’, and of the ‘survival of the fittest’.³⁷ By the 1850s, even before his encounter with Darwin, Spencer had conceived of Nature and society as a lawful and ordered system of rewards and punishments that promoted material and moral progress. As a consequence, poverty is the fruit of individual improvidence, and wealth a sign of individual worth and naturally ordered success. From this he advocated a politics of

‘small’ government concerned with promoting an economic *laissez faire* and the space for individual freedom, albeit a liberty itself subjugated to the common good of social competition. From this philosophy of progress through competition, that which he describes as non-accidental ‘beneficent necessity’, Spencer opposed not only market regulation, but also welfare policies, and universal public education.³⁸ Of the ‘unfit’ he declared, ‘The whole effort of nature is to get rid of such, to clear the world of them and to make room for better. ... It is best that they should die.’³⁹ It was this perspective on social improvement of ‘the best stock’ that came to underpin the social ‘eugenics’ of Darwin’s own cousin Francis Galton.⁴⁰ Accordingly, Schwarz argues, ‘The course of events might have been considerably different’ if Darwinism had not been equated in the ‘American mind’ with Spencer and his interpreter Fiske.⁴¹

The Grammar of Creation: No More Theological Monkey-Business

By now, it should be clear that there was a differentiated and complex reception of Darwin’s work. Even the hostile approaches were diverse in what they opposed and thus in their theological reasoning. To be sure, there were issues of biblical interpretation, and the relation of theological to scientific description; but the difficulties were mainly over human dignity, the nature of design, and of evolutionary ethics.⁴² As John Hedley Brooke indicates, ‘the conflict thesis was largely a product of the nineteenth century, its champions having personal reasons for mocking ecclesiastical authority.’⁴³

It has often been claimed that Darwin hammered home the final nail in the coffin of the C18th argument from design. While Hume sophisticatedly began the process it was Darwin’s observations that were crucial for many thinkers. It is possibly this that underlies Dawkin’s much cited comment: ‘Darwin made it possible to be an intellectually fulfilled atheist.’⁴⁴ There

is something of the philosophical ignorance of a scientist here in this exaggeration, and a note of scientific positivism which is culturally revealing. Nonetheless, the funeral rites have been offered for teleology only prematurely, and it has, in the form of new considerations of design, emerged with considerable energy over the past few years – first as part of the development of a cumulative argument for the existence of God (Richard Swinburne, among others), and more recently in a different, *scientific*, setting with ‘Intelligent Design’. Whether this is an Indian summer for design or something more sustainable remains to be seen, however.

According to biochemist Michael Behe, nature offers to view features of ‘irreducible complexity’ that suggest they were designed.⁴⁵ He, like other Intelligent Design theorists, wants to continue to speak, with epistemic foundationalists, of ‘evidence’.⁴⁶ Explicitly with William Dembski this is the ‘evidence’ God ‘has given of his interaction with the world’.⁴⁷ Life is *evidently* the product of ‘intelligent design’, and this claim is supposedly scientific, and thus testable, rather being than religious as such.⁴⁸ And yet it is precisely something more than the process of observation (and observationally testable theorising) that Behe laments is missing from science: ‘Because they [viz., evolutionists] think that science should avoid a theory that points so strongly beyond nature, they want to rule out intelligent design from the start.’⁴⁹ Behe’s is, at least, a relatively modest claim that contrasts with Phillip Johnson’s and Dembski’s assertion that evolutionary theory is *necessarily* naturalistic.⁵⁰ For Dembski, even theistic evolutionism is an insufficiently theological product of ‘baptising’ (here meaning failing to transform) naturalistic Darwinian evolutionary science. On this he may not be entirely wrong, as critical reflections on a comment of John Haught’s suggest may be the case with his approach: ‘It is not yet evident that theology has thought about God in a manner consistent with the data of evolution.’⁵¹ Behe’s own critique is a warning to the likes of Dawkins and Dennett among

others over their grand and totalising discourses, the so-called ‘religion of evolutionism’, that cannot be sustained and supported *scientifically* since they covertly, or even in places explicitly, makes theologico-philosophical judgments.⁵²

Many critical responses to ID focus on the nature of the claim of design and the evidence for it – blood clotting and the eubacterial flagellum, for instance. Other critical responses ask Hume-like questions about the nature of the claim being made – is it really scientific or is there a non-scientific philosophy involved? Certainly what Intelligent Design does not do is challenge the epistemic hegemony of science, especially in its positivist mood. And there is something ironically materialist in this, in that ‘contemporary scientific theory is the source of solutions to philosophical problems’.⁵³ The suggestion is that for all the talk of the *science* of design it is really only quasi-science since it imports philosophico-theological assumptions. It is one thing to proclaim that scientific description is an incomplete way of engaging with the world – for instance a discussion of the biomechanical movements of the brain is a distinctly insufficient way of reflecting on the nature and significance of romantic love. But it is quite another matter to say that romantic forms of description are appropriate to science *qua* science. Here Midgley’s worry about Dawkins’ anthropomorphism serves as a warning – design, as with purpose, is not a simple observation of states of affairs but an interpretation. In that ID, despite its claims for some kind of scientific sophistication beyond religious or philosophical foundations, belongs firmly within the stable of older versions of the design argument, with all its difficulties concerning the nature of the analogy. For instance, do we have any way of comparing complex ‘natural’ systems with watches, or even bio-machines? But, particularly, do we know what to look for without *arbitrarily* evading those features more suggestive of dysteology?⁵⁴ Moreover, there is a further difficulty – if things had evolved without cosmic design then one would expect

existence to *appear* designed. That is the way things have come to be. In other words, Intelligent Design and all forms of the argument from design need to reflect more not only on how things appear, in a synchronic sense, but develop a deeper sense of the diachronic or, more simply, time, development, and change – ‘deep time’.⁵⁵

There still remains tremendous scope for pressing, and reflecting on, these critical considerations further. Simple assertion and rhetorical bluff will not work – more philosophical work needs to be done. But *philosophical* work and not scientific work is what enables the move from design to designer, lack of design to a cosmic ‘accident’, to work.

Yet too infrequently does one hear a more disturbing theological question: how does ‘God-talk’ function, and is it fittingly descriptive of the complex history of dogma? One cannot enquire into the ‘evidence’ for divine action without asking concerning what kind of ‘thing’ it is that one is speaking of with regard to the *divine* agency that one is looking for evidence of. That entails, moreover, doing some difficult and complicated theological work in conversation with the history of the usages of ‘God’ in Christian discourses.

Intelligent Design is suggestively less materially demanding than young-earth creationism, yet these two share one crucial element in common, and in fact do so with atheistic Darwinism – the action of God is something explanatory, and therefore conjoined with ‘ordinary’ talk of causality, particularly causal intentionality. Behe and others suggest that the invocation of God precisely does the kind of descriptive work that the sciences do, and examples of the likes of Dawkins, Kenneth Miller and Stuart Kauffman are offered of scientists who slip into attempting to make theological statements scientifically (also, Paul Davies and Frank Tipler could profitably be mentioned in this vein). Consequently, in effect, to contest the very theology (the Designer broadly conceived to be akin to other designers) that underlies the IDs’

evidentialism is to cast theological suspicion on the arguments that also drive the disputes between creationists and evolutionists.⁵⁶ So Nicholas Lash's theological questioning of Dawkins can be extended fruitfully to Johnson, Dembski, Behe, and company.

There are three main claims Lash makes against Dawkins' approach to the theological. Firstly, the Oxford evolutionist is insufficiently acquainted with the ethos and work of the disciplines and histories of the humanities. While this is a criticism of Dawkins' 'cavalier disregard for adequate description' it is simultaneously a charge about Dawkins' inability to deal fittingly with different subject matters, adopting instead a one size fits all approach. Not only does Dawkins' exhibit a pronounced 'ignorance of the literature', but his approach is then, Lash declares, an 'ideology'.⁵⁷

Secondly, Dawkins entirely misunderstands theology's subject matter. The 'God' of the *God Delusion* is 'a superhuman, supernatural intelligence who deliberately designed and created the universe and everything in it, including us.'⁵⁸ God here becomes 'a scientific fact about the universe'.⁵⁹ The reason, of course, for Dawkins' popularity is that his critique does indeed fit a considerable number of Christians, but only precisely because they have fallen into the same trap of undermining the complex history of theological grammar.

Thirdly, because of the way he understands the term 'God' Dawkins imagines that religion offers explanations, explanations of course that are now scientifically obsolete, as Laplace had famously informed Napoleon.⁶⁰ The problem, according to Lash, is that this is a distortion of the Christian confession of creation, changing into a story of origins, causes and effects, the story that begins with *nothing*. It has become here something less than a self-disposing story, what David Kelsey calls 'a self-involving utterance', orienting a distinctive way of life and being in the world fitting before the God confessed to be the Creator of all things.⁶¹

Only a deep critical engagement with what the traditions have been doing when confessing 'God' will suffice, recognising what Lash terms the intensive 'difficulty' of speaking of God.⁶² Without that, the use of 'God-talk', while thinly papered over with Christian discourse, will not ultimately be recognisable as much more than the baptising of ideas that bear little relation to their theological setting-in-life. The theological difficulty, then, is that which David Burrell detects in much modern philosophy of religion, that 'Without a clear philosophical means of distinguishing God from the world, the tendency of all discourse about divinity is to deliver a God who is the "biggest thing around"'.⁶³ It will be a materially problematic short-cut that will serve self-critical theological confession badly. 'How much more deadly to theology' in generating a superfluous God-of-the-gaps, Amos Funkenstein claims of several early modern philosophers, 'were such helpers than its enemies.'⁶⁴

To affirm the imperceptibility of *God's* action, then, becomes not a concession to modernity and thus to scientific reductionism. Even Hodge could admit in good conscience that the church's proper altering of her biblical interpretation in accommodating scientific discoveries 'has been done without doing any violence to the Scriptures or in any degree impairing their authority.'⁶⁵

Instead, crucially, it is reflection on the very nature of a prominent set of theological traditions in which divine agency is not reduced to the agency of some thing, whether that be a Thing plugging the gaps of scientific explanation or more broadly a Thing that is confessed through what is perceived about the features of the world. Moreover, an important flipside to this notion of divine incomprehensibility is the theology of the transformation of perception. So Piet Schoonenberg argues for 'a very radical correction of our representations'.⁶⁶ Such a claim is built from the Christian traditions maintaining that knowledge, all knowledge, is in some ways

illuminated knowledge. Moreover, it implies the disorder that distorts our attempts to know and make judgments without grace reordering our knowing, what John Calvin hyperbolically would call the mind as a factory of idols, or, with a whole set of other theological conditions in tow, what Luther would describe through the ‘theology of the cross’ that attests to the very *hiddenness* or *imperceptibility* of divine action in the world. Of course, these are complex theological matters, and the attempt to address them would need to be both lengthy and intellectually sophisticated. Yet debates on Darwinism tend not even to acknowledge their relevance.

For this reason there is considerable room for further fruitful reflections on the Thomistic discourse of ‘primary’ and ‘secondary’ causalities. The point is to provide an analogy between divine and human agencies, and because it is the operations of analogy (likeness-in-greater-*unlikeness*) it serves to *distinguish* the two. As ‘primary’ cause, God’s action (creativity) is the ground of all other actions (makings). But God is not merely the primary cause as the foundational event of establishing secondary causes as in Deism, the first cause only, but rather the primary cause *in each and every event*. According to Herbert McCabe, ‘Failure to grasp this difficult truth has ... accounted for a great deal of the muddle that western theology has got itself into during the last few centuries.’⁶⁷

Making such a theological claim, of course, may raise the spectre of two particularly thorny issues: determinism and the problem of unjust suffering or evils. The account, then, needs to provide a description of divine causality in a way that indicates that both sets of causes are present in any event while not negating each other. In this sense, helpful are Kathryn Tanner’s reflections on the non-competitiveness of divine agency, and Burrell’s on the qualitative form of divine difference, a difference neither like any difference specifiable among

creatures so that ‘God differs differently’ nor a difference that is simple indifference.⁶⁸ Moreover, the distinctions of ‘willing’ and the willing that is ‘non-willing’ in Barth’s broadly Augustinian account suggest that while all events are caused both by God and creature, nonetheless God does not cause, in any simple sense, wickedness. In a way, wickedness is not an action but a non-action, and thus non-willed by God. So Thomas claims,

Whatever takes place in the world proceeds from the plan of the divine intellect: except, perhaps, in voluntary agents only, who have it in their power to withdraw themselves from what is so ordained; that is what the evil of sin consists in. [*ST* 1a.17.1.96]

In other words, in all of this there is no sense of flattening divine action into a form of ‘monocausality’ that would enable either simple perceptibility or a causality among causalities or makings.⁶⁹ God’s intentionality cannot be simply read off what comes to pass, but relates differently to different features of occurrence.

This discourse is not an attempt to obfuscate embarrassing questions, or generate an esoteric metaphysics, but rather constitutes a reflection of what may be more theoretically appropriate to what is meant by ‘God’. And the theo-grammatical implications of this are pronounced, especially for understanding creation. God’s action is not speakably patterned univocally on creaturely action, does not compete for causal time and space, and cannot be identified with creaturely action. Consequently, Ingolf Dalferth, among others, argues, that creation – and by implication the dependency of the world on the agency of divine creativity – is not an object of possible experience, but ‘a reflective judgment that expresses an implication of the confession of creation, God is my creator’.⁷⁰ Thus it is a statement ‘of theological orientation ... [that] interprets everything as the place of God’s presence and so situates every created thing within the horizon of the work of God, whose intention is the best for his creatures.’⁷¹ Of course, this account will not be acceptable to those with a different understanding of ‘God’, those who

assume that the work talk of divine agency does relate to causal features of our world. Yet for a significant strand of the Christian tradition, that comes very close to what is named 'idolatry'. Consequently, this is something that requires concrete and detailed conversation of the type not yet occurring in the debates over 'Darwinism and the church'.

Darwinian Superabundant Life or Abundant Death?

Soon after the publication of *On the Origin of Species* Asa Gray claimed that the work was not a metaphysical treatise. Instead, 'The work is a scientific one, rigidly restricted to its direct object; and by its science it must stand or fall'.⁷² On the one hand, there is considerable sense in this proposal. Theological claims about creation are arguably not doing the same kind of work as scientific descriptions of the origins of the species, or of the 'Big Bang' or any other kind of cosmogenesis. Yet, on another it is somewhat naïve. Theology, while it needs to sit lightly to scientific fashion, cannot evade the implications of reflections on the phenomenal. Equally, as Dennett argues, there is no such thing as philosophically neutral, footloose and value-free science. There is, he claims, 'only science whose philosophical baggage is taken on board without examination.'⁷³ If it is a theological mistake to simply conflictualise the doctrine of creation and Darwinian evolution, the latter acting as the acid on theology's soft body, it is no less a theological mistake to simply conflate them, since in so doing a number of difficulties and value-judgments have been run roughshod over. Not least is the aseity of God and concomitantly the mysteriousness of divine action as non-categorisable among causes. And here are Dennett's mistakes, those which lead him to regard Darwin as not only scientifically revolutionary, but *directly* philosophically too, and which claims that evolution eats away the life

and existence of the theological. In fact, the relation between science and theology is neither one of conflict nor of studious avoidance, but something messier, more complex and more ad hoc and more difficult to detect.⁷⁴

However, this is far from being the very interesting and urgent intellectual work on the Darwinian controversy. Certainly Darwin, with his sense of species change, growth, adaptation and transmutation, aids in interrogating the ‘pop-up’ version of an instantaneous species creation too neatly offered both by many teleological accounts focused on ‘design’ and by those insisting on applying a modern historical hermeneutic to the ‘overexploited texts’ of Genesis 1-2.⁷⁵ Moreover, the form of the change, characterised by competition and death as it is, can help contest the glibness of appeals to *evident* design, supporting the critique by Hume. ‘What a book’, Darwin exclaims, ‘a devil’s chaplain might write on the clumsy, wasteful, blundering, low and horribly cruel works of nature’.⁷⁶ Of course, ‘cruelty’ in itself is an anthropomorphism, and consequently needs to be handled very carefully. But put most theologically promisingly, Alister McGrath contends, Darwin enables us to see that William ‘Paley was quite wrong to suggest that Christianity taught that things were created as we now find them.’⁷⁷ Paleyianism, along with the ‘damnable doctrine’ of the eternal punishment of non-believers, had caused the English botanist considerable theological trouble, especially when intensified with the personal turmoil caused by the early death of his beloved ten year old daughter Annie in 1851.⁷⁸

Yet, there is a glib progressivist Darwinism too, that of various biological and sociobiological accounts which claim that natural selection is responsible not only for shaping conduct, but for devising morality which is, in the end, that of self-interest, even if that be so-called ‘enlightened self-interest’.⁷⁹ As Gregory Radick argues, ‘Machines, competition, empire and progress fascinated the Victorians’.⁸⁰ Darwin’s work did not transcend this as some

culturally unconditioned set of observations, for, Radick continues, the theory of natural selection ‘tells of machine-like organisms that compete, colonise and improve.’ Darwin was, for instance, receptive to Alfred Russel Wallace’s argument that selection guaranteed that primitive peoples become extinct when encountering superior Europeans. And while the means of colonial conquest often appalled Darwin, nonetheless he believed that the results would be ultimately beneficial. In this regard, what is to be done by the connection, too frequently elided by Darwinian apologists, between Darwinian science and deathly eugenics programmes such as those most evident in the National Socialist regime in the 1930s and 40s in Germany?⁸¹

Arguably those progressivisms firstly, miss the general spirit of Darwin himself which, despite the occasional ambiguity, had learned readily from Thomas Robert Malthus’ 1798 *Essay on the Principle of Population*. Also, he frequently opposed Lamarkian progressivistic perfectionism. Moreover, he was sickened by, and deeply opposed to, the practices of slavery and understood his work as promoting the equality of the races.⁸² But equally, and secondly, Darwinian progressivisms depend upon the logical fallacy of making neat moves from empirical observation to normative metaphysics and subsequently prescriptive ethics, an evident projection, in Huxley’s and Spencer’s cases, of their own values.⁸³ Even so, Darwin himself does not always have the courage of his convictions and himself lapses into the kind of self-reflective judgment characteristic of *existential* statements, and thereby moves from observations to claims about emotional solace, a psychological version of the ‘naturalistic fallacy’.⁸⁴

At his best, Darwin raises the so-called problem of suffering in an intensive form without providing an anti-tragic perspective, such as that of Hegelian resolution of the tragic conflict, or certain theistic evolutionary accounts predictated on the non-coercive and ‘self-absenting’ kenosis of ‘divine pathos’ that involves the process of God’s ‘letting the world be itself’.⁸⁵ At its

worst, however, Darwin's account of natural selection becomes an ideology and thus a cultural value system, a surreptitious mode of power that proclaims a (concealed) ethical choice about what really is to count as 'human' (in self-interest survivalism).⁸⁶ So Stephen Jay Gould declares that 'Darwin transformed the paradoxical argument of Adam Smith's economics into biology.'⁸⁷ And earlier Engels understood Darwin to have adopted, among other things, Hobbes' doctrine of '*bellum omnium contra omnes*'.⁸⁸ In fact there is a question of whether Darwin himself has actually been arbitrarily selective in his identification of 'evidence'. For instance, several critics indicate that the numerous signs of co-operative species, even where there appears to be no apparent self-gain involved, complicate the Darwinian picture of natural selection.

Evolution can become, then, a way of exerting the dominion of a rational control that has the force of supporting an explanatory *worldview* that naturalises suffering and wickedness, even while it may lament such conditions, and of exalting conflictual survivalism (of self, or at best of the group) as ethically regulative. Moreover, there is the question of whether violence is written into its system, and thus becomes primordial. This goes not merely for Darwinism per se but also for much theistic evolutionism, such as that of Haught who speaks about the 'tragic aspects of divine creativity'.⁸⁹ Take the theodicy-like claim of Dawkins:

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..., nothing but blind pitiless indifference.⁹⁰

What is going on in the rhetoric of 'blindness', 'pitilessness', and so on. Midgley detects a philosophical fuzziness and laziness in the anthropomorphism: "Genes cannot be selfish or unselfish, any more than atoms can be jealous".⁹¹ McGrath, however, believes this to be only a weak argument about the nature of analogical talk. But this misses a deeper concern about the nature of the discourse – that it can enable, wittingly or unwittingly, metaphysical and moral

judgments to be made concerning the way things are. Looking ‘selfish’ is the way things appear to be, as Edward O. Wilson’s sociological argument from the non-human to the human indicates, and therefore a naturalistic ethic of self-interest is *legitimated* by the course of nature.⁹² Of course such reasoning is questionable in terms of G.E. Moore’s philosophical warning about the ‘naturalistic fallacy’. Yet the analogy can and does invariably tend to be heard as rhetorical and discursive.⁹³

The question is whether Darwinism, or at least whether many of its various forms, fails to understand and respond to, or weakens the sense of affront at the way the world currently runs. The ways in which the question remains needing to be asked has to do with forms of Darwinism that inappropriately verge on becoming theodicies and even harmartiodicies, and potentially close off the ethical question as confronted by issues of patterns of injustice, exclusion and impoverishment by resorting to pragmatic and utilitarian proposals, or at best the self-interest of the so-called ‘enlightened’. The issue, then, becomes one of how far it is appropriate to urge Darwin and Darwinians that the scientist tell stories of our past that will not elide matters of responsibility for shaping the modern moral imagination. The theological may become an important way of asking the likes of Dawkins, Dennett, Barrow, Tipler and Davies to be more honest about the contexts, nature and range of their discourse for the sake of a truth-telling ordered towards the ends of human flourishing.⁹⁴

On the one hand, social Darwinism is never too far away, even if it does owe as much to various forms of post-Hegelian progressivism as to Darwin. On the other, a form of Darwinism can equally move toward non-progressivistic late-capitalist neo-liberalism. It has become particularly ‘difficult for us today to discriminate between evolution as a scientific research program and evolution as a religious ideology.’⁹⁵ As Diane Paul argues,

Darwin's followers found in his ambiguities legitimation for whatever they favoured: laissez-faire capitalism, certainly, but also liberal reform, anarchism and socialism; colonial conquest, war and patriarchy, but also anti-imperialism, peace and feminism.⁹⁶

Given this, it is exceptionally glib, potentially irresponsible, and theologically misdirected to claim without qualification that 'the challenge by Darwin to theology ... may prove to be not so much peril as gift', as Haught does, or to assert with Peacocke that the thing that differentiates theologian from sociobiologist is belief in 'God as the agent in, with, and under this process of creation through time.'⁹⁷

According to Darwin, 'the theory of evolution is quite compatible with the belief in a God; but ... you must remember that different persons have different definitions of what they mean by God.'⁹⁸ That comment is perceptive, and it is suggestive of why generally the controversies over Darwinism have hardly even begun to scratch the surface of the intellectual issues requiring substantive critical reflection.

ENDNOTES

¹ Arthur Peacocke, *Theology for a Scientific Age* (Minneapolis: Fortress Press, 1993), 3. Cf. Peacocke, 'Biological Evolution and Christian Theology – Yesterday and Today', in John Durant (ed.), *Darwinism and Divinity: Essays on Evolution and Religious Belief* (Oxford: Basil Blackwell, 1985), pp. 101-130 (p. 102).

² Peacocke, *Theology for a Scientific Age*, pp. 6f.

³ John C. Whitcomb and Henry M. Morris, *The Creation Flood* (Grand Rapids: Baker Book House, 1961).

⁴ W.C. Wilson, 'Darwin on the Origin of the Species', *Methodist Quarterly Review* 43 (1861), p. 627, cited in Hans Schwarz, *Creation* (Grand Rapids: William B. Eerdmans, 2002), pp. 89f.

⁵ Similarly, Tom Frame, *Evolution in the Antipodes: Charles Darwin and Australia* (Sydney: UNSW, 2009), p. 153.

⁶ See Philip R. Sloan, 'The Question of Natural Purpose', in Ernan McMullin (ed.), *Evolution and creation* (Notre Dame, Ind.: University of Notre Dame Press, 1985), pp. 121-150 (p. 130).

⁷ Cited in Frame, p. 26.

⁸ See R.J. Berry, *God and Evolution: Creation, Evolution and the Bible* (London, Sydney, Auckland and Toronto: Hodder & Stoughton, 1988), pp. 31ff.

⁹ Hans Schwarz, *Theology in a Global Context: The Last Two Hundred Years* (Grand Rapids: William B. Eerdmans, 2005), p. 192. Cf. Robert T. Pennock and Michael Ruse, 'Introduction to Part I', in Robert T. Pennock and Michael Ruse (eds.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy* (New York: Prometheus Books, 2009), pp. 19-32 (p. 22). Nonetheless, it is important to recognise that evolutionary concepts of origins were not popular during Darwin's time. See Frame, p.28.

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- ¹⁰ “Professor Agassiz on the Origin of Species’, *American Journal of Science and Arts* (June 1860), pp. 143-7, cited in Karl W. Giberson, *Saving Darwin: How to be a Christian and Believe in Evolution* (London: Harper Collins e-books, 2008), p. 48.
- ¹¹ On saying that, however, according to Schwarz, Agassiz ‘rejected Darwin’s theory for strictly scientific reasons.’ [*Theology in a Global Context*, 215]
- ¹² Asa Gray, *Darwiniana: Essays and Reviews Pertaining to Darwinism* (New York: D. Appleton, 1876), p. 56.
- ¹³ So Frank Hugh Foster, *The Modern Movement in American Theology: Sketches in the History of American Protestant Thought from the Civil War to the World War* (New York: Revell, 1939), p. 38.
- ¹⁴ In Schwarz, *Creation*, p. 88.
- ¹⁵ ‘The Theistic Argument from Final Causes’, *Quarterly Review of the Evangelical Lutheran Church* 1 (April 1871), pp. 184f., cited in Schwarz, *Creation*, p. 91.
- ¹⁶ Citation from Lyman Abbott, *Reminiscences* (Boston: Houghton Mifflin, 1915), p. 460, alluding to the claim by John Fiske. See B.B. Warfield, in *Evolution, Scripture, and Science*, ed. Mark A. Noll and Daniel N. Livingstone (Grand Rapids: Baker books, 2000), p. 165.
- ¹⁷ Lyman Abbott, *The Theology of an Evolutionist* (Boston: Houghton Mifflin, 1897), p. 9.
- ¹⁸ Schwarz, *Creation*, pp. 98f.; George M. Marsden, *Fundamentalism and American Culture: The Shaping of Twentieth-Century Evangelicalism 1870-1925* (Oxford and New York: Oxford University Press, 1980), pp. 225f. Cf. D. MacKenzie, ‘Unnatural Selection’, *New Scientist* 166 (2000), pp. 35-39 (p. 35); John Hedley Brooke, ‘Darwin and Victorian Christianity’, in Hodge and Radick, pp. 192-213 (p. 193).
- ¹⁹ Thomas H. Huxley, ‘An Episcopal Trilogy’, in *Science and Christian Tradition: Essays* (London: Macmillan, 1894), pp. 126-159, cited in Alister McGrath, *Dawkin’s God: Genes, Memes, and the Meaning of Life* (Oxford: Blackwell, 2005), pp. 76f.
- ²⁰ Citation from Robert J. Richards, ‘Darwin on Mind, Morals and Emotions’, in Jonathan Hodge and Gregory Radick (eds.), *The Cambridge Companion to Darwin* (Cambridge: Cambridge University Press, 2003), pp. 92-115 (p. 92).
- ²¹ Cited in Marsden, p. 19.
- ²² Mentioned in Schwarz, *Theology in a Global Context*, p. 196.
- ²³ Charles Darwin, *The Life and Letters of Charles Darwin* vol. 1, 3rd edn. (London: Murray, 1887), p. 306. Cf. William Irwin, *apes, Angels, and Victorians: The Story of Darwin, Huxley, and Evolution* (New York: Time, 1963), pp. 144f.
- ²⁴ See McGrath, *Dawkin’s God*, pp. 53f.
- ²⁵ Charles Hodge, *What is Darwinism?* (New York: Scriber, Armstrong and Co., 1874), p. 41.
- ²⁶ See Mary Midgley, *Evolution as Religion: Strange Hopes and Stranger Fears*, rev. edn. (London and New York: Routledge, 2002), p. xiii; ‘The Religion of Evolution’, in Durant (ed.), pp. 154-180. Cf. Charles Darwin, *The Life and Letters of Charles Darwin*, ed. Francis Darwin, 2 vols. (New York: Basic Books, 1959), vol. 2, p. 312; *On the Origin of Species by Means of Natural Selection, Or the Preservation of Favoured Races in the Struggle for Life* (London: ElcBook, 1997), p. 149; Michael Ruse, *Can a Darwinian Be a Christian?* (Cambridge: CUP, 2001), p. 128.
- ²⁷ Schwarz, *Creation*, p. 93. Cf. Charles Hodge, *Systematic Theology*, vol. 2 (New York: Scribner, 1871), p. 15.
- ²⁸ Hodge, *What is Darwinism?*, p. 173.
- ²⁹ See Schwarz, *Creation*, p. 95; James McCosh, *The Religious Aspect of Evolution* (New York: Scribner, 1890), p. ix.
- ³⁰ Clifton E. Olmstead, *History of Religion in the United States* (Cliffs, NJ.: Prentice-Hall, 1960), p. 549.
- ³¹ Bryan, cited in Lawrence W. Levine, *Defender of the Faith – William Jennings Bryan: The Last Decade, 1915-25* (New York: OUP, 1965), p. 277.
- ³² See Ronald L. Numbers, *The Creationists* (Berkeley: University of California Press, 1992), p. 43f.
- ³³ See Ronald L. Numbers, ‘The Creationists’, in Pennock and Ruse (eds.), pp. 192-230 (p. 205).
- ³⁴ Cited in Numbers, ‘The Creationists’, p. 200.
- ³⁵ William Jennings Bryan, ‘The Origins of Man’, *In His Image* (New York, 1922), pp. 86-135, cited in Marsden, p. 169.
- ³⁶ William Jennings Bryan, *Seven Questions in Dispute* (New York: Fleming H. Revell & Co., 1924), p. 144.
- ³⁷ Citations from John Durant, ‘Darwinism and Divinity: A Century of Debate’, in John Durant (ed.), *Darwinism and Divinity: Essays on Evolution and Religious Belief* (Oxford and New York: Basil Blackwell, 1985), pp. 9-39 (p. 21); and Herbert Spencer, *Essays: Scientific, Political, and Speculative*, 3 vols. (London: Williams & Norgahte, 1890), vol. 1, p. 60. Cf. Herbert Spencer, *First Principles* (New York: De Witt Revolving Fund, 1958); Schwarz:

Theology in a Global Context, p. 224. Spencer's term 'survival of the fittest' Darwin adopted and used in later editions of *Origin*.

³⁸ Spencer, cited in Frame, p. 41.

³⁹ Herbert Spencer, *Social Statistics: The Conditions Essential to Human Happiness Specified, and the First of Them Developed* (New York: D. Appleton, 1864), pp. 414f.

⁴⁰ Citation from Francis Galton, *Memories of My Life* (London: Methuen & Co., 1908), p. 323. Cf. Schwarz, *Creation*, p. 99; Frame, pp. 99-103.

⁴¹ Schwarz, *Theology in a Global Context*, pp. 225f.

⁴² On the first of these, Sigmund Freud declared that 'the universal narcissism of men, their self-love' had suffered 'three severe blows from the researchers of science' – Copernicus, Darwin, and Freud himself [*The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. James Strachey, 24 vols. (London: Hogarth Press, 1959-74), vol. 17, p. 140].

⁴³ Brooke, p. 208.

⁴⁴ Richard Dawkins, *The Blind Watchmaker* (Harmondsworth: Penguin, 1988), p. 6. Cf. *The Selfish Gene* (Oxford: OUP, 1976), cited in Durant, p. 4.

⁴⁵ See Michael Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution* (New York: Touchstone/Simon Schuster, 1996), p. 39.

⁴⁶ William Dembski,, 'What Every Theologian Should Know about Creation, Evolution and Design', in William Dembski and Jay Wesley Richards, (eds.), *Unapologetic Apologetics: Meeting the Challenges of Theological Studies* (Carlisle: Paternoster Press, 2001), pp. 221-238 (p. 222).

⁴⁷ Dembski, 'What Every Theologian Should Know', p. 222.

⁴⁸ See Behe, *Darwin's Black Box*, p. 196.

⁴⁹ Michael Behe, 'Irreducible Complexity: Obstacle to Darwinian Evolution', in Dembski and Ruse, pp. 352-370 (p. 357).

⁵⁰ Cf. Phillip E. Johnson, *Defeating Darwinism* (Downers Grove, Ill.: IVP, 1997), p. 111.

⁵¹ John F. Haught, *God After Darwin: A Theology of Evolution* (Boulder and Oxford: Westview Press, 2000), p. 81.

⁵² Cf. Ruse, *The Evolution-Creation Struggle*, p. 275: evolutionism is 'a religious commitment'.

⁵³ Alex Rosenberg, 'Darwinism in Moral Philosophy and Social Theory', in Hodge and Raddick, pp. 310-332 (p. 310).

⁵⁴ Cf. Francisco J. Ayala, 'Design Without a Designer: Darwin's Greatest Discovery', in Dembski and Ruse, pp. 55-80 (p. 56); Ingolf Dalferth, 'Creation – Style of the World', *International Journal of Systematic Theology* 1.2 (1999), pp. 119-137 (p. 129).

⁵⁵ Behe at least does admit that ID, as he entertains it, has no need 'to doubt that the universe is the billions of years old that physicists say it is.' [*Darwin's Black Box*, p. 5] Cf. William Dembski, *No free Lunch: Why Specified Complexity Cannot Be Purchased Without Intelligence* (Lanham, Md.: Rowman & Littlefield, 2002), p. 314

⁵⁶ According to McGrath, 'The view that Dawkins [among others] demolishes becomes significant only in the eighteenth century, and is not typical of the Christian tradition as a whole.' [*Dawkins' God*, p. 60]

⁵⁷ Lash, p. 517.

⁵⁸ Richard Dawkins, *The God Delusion* (London: Bantam Press, 2006), p. 31.

⁵⁹ Nicholas Lash, 'Where Does *The God Delusion* Come From?', *New Blackfriars* 88 (2007), pp. 507-521 p. 50. Cf. Michael Welker, 'Creation: Big Bang Or the Work of Seven Days?', *Theology Today* 52 (1995), 173-187 (173f.).

⁶⁰ Dawkins, *The God Delusion*, p. 347.

⁶¹ David Kelsey, 'The Doctrine of Creation from Nothing', in Ernan McMullin (ed.), *Evolution and Creation* (Notre Dame, Ind.: University of Notre Dame Press, 1985), pp. 176-196 (p. 171).

⁶² Nicholas Lash, 'Considering the Trinity', *Modern Theology* 2 (1986), pp. 183-196 (p. 190). Cf. Colin E. Gunton, *The One, the Three and the Many: God, Creation and the Culture of Modernity* (Cambridge: CUP, 1993), p. 84.

⁶³ Burrell, p. 76.

⁶⁴ Amos Funkenstein, *Theology and the Scientific Imagination From the Middle Ages to the Seventeenth Century* (Princeton, N.J.: Princeton University Press, 1986), p. 8. Cf. p. 116.

⁶⁵ Charles Hodge, *Systematic Theology*, vol. 1 (Grand Rapids: Eerdmans, 1952), p. 573.

⁶⁶ Piet Schoonenberg, *Covenant and Creation* (London and Sydney: Sheed and Ward, 1968), p. 56.

⁶⁷ Herbert McCabe, *God Matters* (London: Geoffrey Chapman, 1987), p. 11. Linguistically, dual forms of descriptiveness are not uncommon in ordinary discourse (I am a conscious agent who loves my wife, and simultaneously I am a bundle of electrons colliding in a particular circumscribed space and time), or in ordinary

theological discourse (I am the son of my mother who gave me *birth*, but simultaneously I am a creature of the God who *created* me).

⁶⁸ Citation from Kathryn Tanner, *Jesus, Humanity and the Trinity: A Brief Systematic Theology* (Edinburgh: T&T Clark, 2001), p. 13.

⁶⁹ On modernity's flattening causalities into the ideal of monocausality, or the elimination of all but mechanical causes, see Funkenstein, p. 18.

⁷⁰ Dalferth, p. 130.

⁷¹ Dalferth, p. 137.

⁷² Gray, p. 56.

⁷³ Daniel C. Dennett, *Darwin's Dangerous Idea: Evolution and the Meanings of Life* (London: Penguin, 1995), p. 21.

⁷⁴ See Lash, 'Production and Prospect: Reflections on Christian Hope and Original Sin', in McMullin (ed.), pp. 273-289 (p. 277); Colin E. Gunton, *The Triune Creator: A Historical and Systematic Study* (Edinburgh: T&T Clark, 1998), p. 188.

⁷⁵ Citation from Phyllis Bird, 'Genesis 1-3 as the Source for a Contemporary Theology of Sexuality', *Ex Auditu* 3 (1987), p. 31.

⁷⁶ Darwin, cited in Frame, p. 79.

⁷⁷ Alister McGrath, *The Twilight of Atheism: The Rise and Fall of Disbelief in the Modern World* (London: Rider, 2004), p. 105.

⁷⁸ Citation from McGrath, *Twilight*, p. 104. Cf. McGrath, *Dawkin's God*, 74f.; John Hedley Brooke, 'The Relations Between Darwin's Science and his Religion', in Durant (ed.), pp. 40-75 (p. 67).

⁷⁹ See Patricia Williams, *Doing Without Adam and Eve* (Minneapolis: Fortress, 2001), p. 134.

⁸⁰ Gregory Radick, 'Is the Theory of Natural Selection Independent of its History?', in Hodge and Radick, pp. 143-167 (p. 143).

⁸¹ The Nazis obtained from Darwin a language that justified Nazi policy. Cf. Paul, p. 237.

⁸² See Richards, pp. 96ff.

⁸³ See Paul L. Farber, *The Temptations of Evolutionary Ethics* (Berkeley: University of California Press, 1994), p. 136.

⁸⁴ Equally, Darwin frequently makes aesthetic statements: 'from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved.' [*Origin*, p. 403]

⁸⁵ Cf. Darwin, *Life and Letters*, vol. 2, p. 311; Haught, pp. 112, 5.

⁸⁶ See Ted Peters and Martinez Hewlett, *Evolution From Creation to New Creation: Conflict, Conversation, and Convergence* (Nashville: Abingdon, 2003), p. 26.

⁸⁷ Stephen Jay Gould, *the Structure of Evolutionary Theory* (Cambridge, Mass: Harvard university Press, 2002), p. 59.

⁸⁸ F. Engels to P.L. Lavrov (12-17 November 1875), cited in Alfred Schmidt, *The Concept of Nature in Marx*, trans. Ben Fowkes (London: NLB, 1971), p. 47. Cf. Dennett, p. 453: 'Thomas Hobbes was the first sociobiologist, two hundred years before Darwin', with the notion of ethics as a group-survival vehicle, emerging from simple amoral competition.

⁸⁹ Haught, p. 5. 'The randomness, struggle, and seemingly aimless meandering that the evolutionary story of life discloses as the underside of its marvelous creativity is consistent with the idea that the universe is the consequence of an infinite love.' [p. 113]

⁹⁰ Richard Dawkins, *River Out of Eden: A Darwinian View of Life* (London: Phoenix, 1985), p. 133.

⁹¹ Mary Midgley, 'Gene Juggling', *Philosophy* 54 (1979), 439-58, cited in McGrath, *Dawkin's God*, 41.

⁹² See E.O. Wilson, *Consilience: The Unity of Knowledge* (New York: Alfred A. Knopf, 2000), p. 253.

⁹³ Diane B. Paul, 'Darwin, Social Darwinism and Eugenics', in Hodge and Radick, pp. 214-239 (p. 237). Cf. Richard Dawkins, *A Devil's Chaplain* (London: Weidenfeld & Nicholson, 2003), 10f.; *The Selfish Gene*, 2nd edn. (Oxford: OUP, 1989), pp. 200f.

⁹⁴ There is also an issue of power and responsibility among Christian creationist groups whose efforts and finances focus on the issue of biblical cosmogenesis. A letter to the *Scientific American* exclaims: 'the same energy that goes into the science-religion debate could be redirected to improving the world.' ['Letters to the Editors', *Scientific American* (Jan 2000), p. 6]

⁹⁵ Peters and Hewlett, p. 21.

⁹⁶ Paul, pp. 214f.

⁹⁷ Haight, p. 46; Arthur Peacocke, *God and the New Biology* (San Francisco: Harper, 1996), p. 111.

⁹⁸ Cited in Frame, p. 144.