

PLUMBING THE DEPTHS: A RECOVERY OF NATURAL LAW AND NATURAL WISDOM IN THE CONTEXT OF DEBATES ABOUT EVOLUTIONARY PURPOSE

by *Celia Deane-Drummond*

Abstract. I argue that the theological traditions of natural law and wisdom offer helpful meeting points in discussions about evolutionary “purpose” and contingency in relation to theological purpose, and serve to form the basis for a theology of nature. Natural law offers a way of describing the ordered action of God toward complexity in a contingent world without using the language of either “design” or “progress.” The theological tradition of wisdom as implicit in the natural world, learned in the human community, and received as gift of grace offers a further means of interconnecting biological reality with spiritual experience, while retaining distinctions. Wisdom and natural law intersect inasmuch as natural law is participation in Eternal Wisdom, although the latter makes sense only from the prior perspective of faith.

Keywords: Thomas Aquinas; contingency; design; evolution; natural law; purpose; wisdom

Theologians have wrestled long and hard with the implications of the seeming purposelessness of evolution implicit in biological theories, especially of the kind promoted by Stephen Jay Gould. The assumption is that contingency understood as aimlessness is the most important feature in the evolutionary trajectory, and that this contingency implies purposelessness, so that accommodation with transcendent notions of purpose becomes virtually impossible. One way through this difficulty is to argue that contingency is not necessarily synonymous with purposelessness, although most

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biologists would argue that any idea of purpose is unnecessary in order to understand the process of evolution. Some go even further and suggest that purpose is not simply unnecessary; it is “illusory,” created by human minds in order to serve an adaptive function—in other words, it has survival value (Foley 2008). All religious beliefs would similarly fall into this category of being useful in evolutionary terms. However, while it may be possible to argue that psychological tendencies toward religious belief have biological roots, the content of such beliefs cannot be fixed through crude biological or even cultural determinism but operates at levels of understanding that are beyond simple biological analysis. This is much the same as saying that evolutionary biology cannot be reduced to physics or mathematics, even if physics or mathematics illuminates in a descriptive way something about the way evolutionary biology works. Simon Conway Morris’s alternative evolutionary hypothesis that puts far greater weight on the phenomena of convergence points toward the possibility of a form of evolutionary “purpose,” though it is perhaps more accurate to speak of a “restrained contingency” (Conway Morris 2003; 2008). The intention of this article is not so much to enter into biological debates about which theory of evolution is the most reasonable as to engage from a theological point of view using natural law theory with Conway Morris’s hypothesis.

It is important to say at the outset what this article is not doing. It is not attempting to recover notions of design in the universe as a way of demonstrating the existence of God. These versions of natural theology have historically run aground on the twin horns of theological determinism or Humean skepticism (Knight 2004, 20–36). Michael Ruse (2003) has argued that design is a helpful metaphor in order to remind us about classic arguments to complexity. I am less convinced that design language is all that constructive, even if qualified in metaphorical language, for while I agree with Ruse that notions of God as the divine designer directly intervening in the world are untenable, notions of design even when used metaphorically can conjure up unhelpful models, such as that of intelligent design, that he also equally anxious to refute. In arguing for a recovery of natural law I am not intending to argue that more naturalistic versions of natural law have a specific *requirement* to be linked with contemporary evolutionary theory. This article asks a different, more modest question: What might be possible ways of thinking theologically that are compatible with current ideas about evolutionary convergence? Are there avenues for finding some common ground with such ideas without arguing for a full-fledged natural theology that traditionally has sought to argue for evidence for the existence of God through contemplation of the natural world? Traditionally Christian theology has sought to distinguish between natural theology, which seeks to find God through reflection in the natural world, and revealed theology, which insists that God can be known only through divine revelation, more specifically understood as the revelation of God in the

person of Christ. Theological reflection arises afresh in each new generation, even though it is deeply embedded in historical traditions. Theology may be developed from a faith perspective, as faith seeking understanding, but not inevitably so. And, given the eye of faith, what kinds of resonance might such evolutionary ideas have with theological considerations about divine providence and wisdom? I draw particularly on Thomas Aquinas's theology in this article, since he was a pioneer in his incorporation of a range of different areas of knowing in arriving at a synthetic approach to the truth about existence. Although he used Aristotle's philosophy most extensively, he was open to the most contemporary versions of scientific thinking available at the time and sought to respond to its truth claims in the light of the theological tradition that he had inherited.

Theology's rootedness in history is one of its most important distinguishing marks compared with experimental science. While theology self-consciously looks back to the earliest origins of scripture and tradition, experimental science is less concerned with historical events and more concerned with the attempt to make new discoveries according to new paradigms or models. Theology, on the other hand, deliberately trawls the tradition (and scripture) in order to reinterpret them in a fresh way; hence it relies on a philosophy of interpretation or hermeneutics. Theology also incorporates scientific analysis of text into its hermeneutics, so it is perhaps more aware than evolutionary science of itself as a discipline that is culturally situated in a given historical context. The possibility of a link with evolutionary science is striking, because evolutionary science, unlike many other experimental sciences, necessarily concerns itself with history, looking back to the dawn of existence in order to look ahead. There are also some things that can be said theologically that are more appropriate from within a particular faith tradition and with frank acknowledgment of a starting point of faith.

Hence, while there are points of convergence between evolutionary and theological thinking, there also may be glaring gaps, and these need to be recognized as such. Karl Rahner has suggested that theology and science inevitably disturb and threaten the other (1983, 17). It is more likely in the present context that theology will be disturbed by evolutionary science than the other way around. However, this will depend on how much and to what extent scientists are willing to acknowledge the possibility that there may be other sources of knowledge and truth claims that are outside the boundaries of experimental analysis. Rahner also suggested that theology can serve to confront those sciences that attempt to engulf other strands within science, or in this context, different disciplines or models over others. Theology provides a more modest claim to remind those engaged in dialogue of the relative weight of different truth claims. Theology, in this scenario, is one set of claims alongside others instead of a master or queen of the sciences pitched in judgment against it.

CONTINGENCY AND "LAWS" OF NATURE

Wolfhart Pannenberg in *Towards a Theology of Nature* argues strongly that a theology of nature needs to relate nature in its entirety to God, which includes a scientific understanding of natural processes (Pannenberg 1993, 73). Note that he used the term *theology of nature*, which is a theological reflection on the significance of nature, unlike *natural theology*, which is an argument for God from contemplation of nature. Contemporary theologians, reluctant to "burn their fingers," have avoided dealing with the subject of nature. Pannenberg views any concept of ordered fixed regularity of the universe as resting on mistaken Greek notions of the cosmos; instead he suggests that the Hebrew notion of God is one that stresses the contingency of divine will. He asks if contingent occurrences in some sense also disclose regularity. The subject under discussion in this case was focused more on the "laws" of physics, but even these, he suggests, need to be considered under the category of contingency, for "only in this way would it be convincing that the order of the laws of nature on its part also is comprehended by the thought of creation and is not opposed to it" (1993, 79). The historical experience of Israel is of a God who acts powerfully in the midst of contingent events, so that, although connections in occurrences arise, these become visible only from the end. In other words, he excludes the idea of purposefulness that directs everything *from the beginning*, in the sense of entelechy, for he believes that such forms of purposefulness amount to a loss of contingency. At the same time he does allow for "partial development tendencies within the total process" (1993, 83).

Of course, his position means that in some sense the new enters from ahead rather than from the past, so that forms are "overformed" by the new rather than broken by them. This view is implicit in his suggestion that the direction in evolution toward greater complexity comes through "field effects" instead of being implicit within the evolving species themselves (1993, 47). The concept of field effects seems to be taken from scientists who are on the more speculative end of the spectrum and, in the biological sphere at least, are not very convincing. Pannenberg links field effects with spiritual energy, but this runs the danger of too close a marriage between a speculative scientific theory that is not well established and theology, a synthesis that he also criticizes in the theories of Pierre Teilhard de Chardin.

Pannenberg's theology of nature is successful inasmuch as it puts due emphasis on contingency in the natural world and could thereby be extended to include contingency in evolutionary processes. Such contingency is an accepted aspect of all evolutionary theory, so in this sense evolution is not a threat to theology as such. He also has managed to combine a theory about purpose with contingency by directing purposefulness from ahead rather than from the past. Yet it is worth asking if he has been too ready to

dismiss *any* understanding of directionality as implicit in the natural order, for his own rendering of purposefulness is necessarily transcendent, understood in eschatological terms, read into the history of nature in the light of experience. It also is worth asking if he has adequately considered the possible constraints within which evolution works, which is the subject of the present discussion. More particularly, we might ask if he has subsumed all understanding of general divine action of God into forms of special divine action. While the former makes more sense in the context of consideration of the natural world, the latter makes more sense in the context of human history. He is no doubt reacting to the opposite, more liberal tendency to deny any existence of special divine action.¹

LAWS OF NATURE AND NATURAL LAW

At this juncture I want to briefly draw a distinction between the laws of nature and natural law, and their respective meanings. Laws of nature may be interpreted as having a basis that is only partly described by the laws of science. It is worth reiterating that biologists do not view “laws” of nature in the same manner as physicists do, although the possibility of physical constraints within which evolutionary change takes place is also worth consideration. This is one factor in the kind of constraint that leads to convergence, but it is very unlikely to be the only factor.

There are broadly four possible definitions concerning the physical laws of nature (Saunders 2002, 60–72). From an analysis of these laws, one definition is that they are a simple account of regularity or patterns; but this is not normally accepted, as clearly identifiable regularities are not embedded in many physical laws. More instrumental accounts of laws of nature depict such laws as rational attempts to organize natural observed phenomena. Such an idea will lead to expectations of natural phenomena limited by the realm of possibilities open to the human mind. In other words, according to this view the origin of the laws is not in nature in an ontological sense but in the human mind. A third possibility is the necessitarian account of the laws of nature, which claims that physical laws ontologically determine which possibilities are open to the world and which are not. Observations achieved by science are reflections of this deep ontological structure of reality. Biologists tend to use the language of *necessity* in describing the patterning of the evolutionary process, though such a use of the term is somewhat careless, for it is very unlikely that they mean by this an ontologically structured “law” that pushes evolution in one direction rather than another. The final type of explanation is one that argues that laws of nature are irreducibly statistical in form; hence, the language of *probability* is one that fits most easily with scientific observations. Biologists have been far more reluctant to describe any of their observations in terms of laws, mostly because the level of predictability is far less than that

observed in physical science. One exception might be the Mendelian laws of genetics, but even these are subject to considerable variation and exception. Conway Morris's notion of convergence is more akin to the notion of directionality than a "law" of nature; it implies a measure of restriction within which evolutionary contingency operates instead of resting on a physical or mathematical law as such. This is not to say that it operates outside the laws of mathematics and physics—this would be impossible—but that there is more to be said about convergence than simply a description in terms of physical laws.

I suggest that natural law, at least as devised in the classic tradition, is more consonant with evolutionary convergence and theological purpose as compared with the laws of nature for a number of reasons. First, natural law is related specifically to a goal or teleology in a way that laws of nature are not. Although such a goal can be shorn of its theological origins, it makes sense in the context of the present discussion to consider such teleology from both a theological and a philosophical point of view. Second, natural law, at least since the late medieval period, acknowledges more specifically the element of interpretation by human beings, although of course the instrumental account of the laws of nature makes this claim as well. Third, natural law serves to set limits or boundaries for the activity of different forms of life, as explained further below. Natural law is not a fixed rule, so it has more in common with the way biologists understand "law" compared with the way physicists do.

What Is Natural Law? Natural law traditionally has been associated with ways of mapping the boundaries for human behavior rather than a way into reflecting theologically about evolutionary theory. Natural law becomes in these formulations particular ways of interpreting human experience and action rather than having its basis in ontological descriptions about the world. However, although contemporary versions of natural law have tended to isolate natural law and use it as a basis for legal theory or ground a philosophical basis for ethics, the classical tradition rooted natural-law theory very clearly in more general concepts about the intelligibility of the natural world. It is noteworthy that "new" natural-law theory has attempted to sever natural law completely from its basis in the natural order (Biggar and Black 2002). In theological terms, natural law is also related specifically to the doctrine of creation. The grounding of natural law in the doctrine of creation means that it has a clear ontological basis in the created order but also relies on the rational interpretive capacity of human beings. In this sense it could be said to be situated midway between philosophers such as Hilary Putnam who argue for an ethics without ontology and more classical versions that argued that ethical frameworks have an ontological basis. It is not my intention here to enter into debate about which version of natural-law theory is most appropriate for contemporary

ethics, be it naturalistic or existentialist versions. Rather, natural law, like natural theology and natural science, derives from a realist account of the world, which makes more sense when understood in a way that is integral to the doctrine of creation, not split apart from it. Once this is appreciated it becomes clear that reflection on natural law is suggestive of theological elements that are deep in the Christian tradition rather than merely superfluous adjuncts in order to justify ethical mandates.

Natural law brings together three areas of human reasoning: a study of biological nature as such, reason, and scripture. It is therefore highly suggestive of a way of mediating between theology and biological science in a manner that is not the case for more strictly philosophical concepts such as the laws of nature. The laws of nature are more useful in dialogue with cosmology or physics. Jean Porter suggests that natural law acknowledged the restrictions on human behavior as a result of biological limitations that pointed back to the earliest stage of human history prior to the formation of normative principles in conventions and customs. Thus: “These pre-conventional givens include the exigencies of our biological nature as well as reason, which is seen as setting both normative and practical restraints on human freedom, and Scripture, seen as a revelation of divine wisdom and will” (Porter 1999, 51). Such pre-conventional givens may include cultural traits that are found in species other than human beings. In other words, convention seems to imply an advanced level of cultural consensus that is not found among nonhuman species, while the notion of pre-conventional givens, in the light of more recent research on whales or corvids, for example, may well include social patterns found in species other than our own (Emery and Clayton 2004, 1903–7; Clayton and Emery 2008; Whitehead 2008). Yet while natural law as grounded in nature implies a sense of restriction at one level, it also allows for a flexibility of interpretation at a secondary level of specific precepts—thus it can be adapted to allow for new areas of understanding. This resonates specifically with the concept of convergence, where there is a restriction toward the evolutionary appearance of certain forms but also considerable flexibility in outcomes. In addition, natural law puts due emphasis on the continuity between animal and human behavior. This is not a form of naturalism, in the sense of reading human behavior *out of* that found in animals, but an interpretation of human morality as a rational purposeful expression of tendencies found more generally in animals.

There was considerable variation in the way natural law was interpreted even in the middle ages (Porter 1999, 76–77). It was associated with that which was common to humanity and animals but also included in some cases the laws of the nations, the divine law in the prophets, and Mosaic law, a human tendency to do good and avoid evil, and the concept of natural justice. It is important to emphasize that even at this stage the activities found in nature were considered to be reasonable; some even

defended the idea in summary by suggesting that “nature is reason” (Porter 2005, 71). For the purposes of this discussion the version of natural law defended by Thomas Aquinas is instructive, because he articulated his understanding of natural law in the context both of an awareness of the philosophical and scientific debates of his time and theological reflection. While his understanding of biology was severely limited by the knowledge of the period, which needs to be acknowledged, his interpretation of natural law still has elements within it that are of significance. The medieval scholastics also were much more prepared to admit the possibility of dispute than is sometimes presumed, their views far more open to the possibility of change than is often thought to have been the case. Public disputations allowed for the airing of all possible alternatives before arriving at a conclusion. Much of this is lost if we think of the medieval period as simply following rules and regulations, for the processes involved in arriving at these was far more contested than we might presuppose.

Aquinas believed that the purposeful behavior in nature was directed toward a good end, and such purposefulness was under the providence of God. His notion of primary and secondary causes allowed for a relative autonomy of the natural world, but it was one that ultimately was an expression of God’s goodness as Creator. The first principle of natural law is “that good is to be sought and done, and evil to be avoided; all other commands of natural law are based on this” (Aquinas 1966, Qu. 94.2). The secondary principles of natural law include, first, that the natural tendencies of human beings correspond with that found in the “laws of nature,” such as the tendency for self-preservation (Aquinas is referring here to all life forms, including plants); second, that there is a correspondence with that which “nature teaches all animals,” including drives toward reproduction and rearing of young; and third, that which is specific to rational animals, namely an appetite for the good in rational terms. There is nothing here to restrict rational animals to humans, although Aquinas had limited knowledge about this possibility in other species. He was prepared to suggest that at times humanity behaved in a way that was lower than “brute beasts,” so that although the hierarchy was intact, it had more fluid boundaries than we might imagine from his more negative mandates toward the treatment of animals. It is important to note both the distinctive characteristics that emerge at each level of complexity as well as the continuity. Of course, it is possible to redefine intelligence in such a way that plant life is included as well, as Anthony Trewavas elegantly points out (Trewavas in press). It seems that in the latter case the tendency for self-preservation is what this intelligence amounts to, a point also noted by the medieval scholars, but not expressed in such terms, for they were not aware of the sophisticated means and communication pathways through which this could come about. The ability to distinguish self from another, even at this level of organization, is remarkable. One might prefer to name this decentralized

intelligence *protointelligence*, because, while it has many of the features, including mobile transport of information commonly associated with intelligent action, it is not developed to the same extent or to the same level compared with other species such as mammals and birds. The main issue here is to note the way natural law is grounded in the biological structures of organization and behavior, right down to the simplest life forms.

Aquinas was prepared to admit that natural law could be changed in its particular formulations, apart from the first principle that good is done and evil is avoided. This would imply, of course, that it is entirely permissible to update his understanding of biological processes and the secondary principles of natural law in the light of contemporary evolutionary science. He used the most recent scientific understanding available at the time; it is his method that is worth particular attention, for he allowed all aspects of the debate to be considered before arriving at his distinctive theological position. Although this is closely related to natural theology, its intention is very different, for it is not simply about finding “evidence” in the natural world for God’s existence but a way of enlarging an understanding of God’s action in the world based on all forms of knowledge and in the light of revealed knowledge. It is a theology of nature rather than a natural theology. He also was particularly insistent that in the area of practical reason there is room for contingency, so that “the more we get down to particular cases the more we can be mistaken” (Aquinas 1966, Qu. 94.4). In addition, human sinfulness means that while natural law directs human beings toward the good to some extent, its application to particular acts always falls short, which shows that Aquinas was no moral naturalist (Aquinas 1970, Qu. 113.1).

It is important to understand what he meant by the good being sought. He seems to mean the good as perceived by a particular creature, as it seems to them, expressed both in terms of “purpose” (intention) and intelligibility. All living creatures pursue this good; even those who commit evil do so on the basis that it seems good as far as they are concerned. In this way natural law does not suffer the same problems as ideas about design, for it may seem incongruent that one creature is designed for attack and one for defense. The pursuit of what seems good and the avoidance of evil is the meaning of the first principle of natural law. Of course, it may be possible to undertake a psychological study in order to analyze scientifically how far those who commit crimes actually believe that they are in some way benefiting themselves. Yet to attempt this is to miss the point of natural law. The value of goodness is a philosophical good, even though recently authors such as Martha Nussbaum (2001) have challenged its ontological status. To try to force goodness and evil into the category of experimental science is to make the same kind of category mistake as finding evidence for God from the “design” or workings of the natural world. Theology and evolutionary science can come together in some respects, but

some questions are answerable only in one or the other category. Natural law provides a fragile bridge between the two areas, but the gap remains intact. Some, like natural-lawyers, prefer to keep theological discussion out of natural law. Others wish to sever natural law's links with biology as suffering from too close an affiliation with "naturalism."

The naturalistic fallacy long despised by philosophers ever since David Hume and G. E. Moore looms large—that is, the assumption that what is, is automatically good. Yet, there are three points to be made in response to this. The first is that the naturalistic fallacy is based on the premise that there can be a clear separation between descriptive accounts of being and evaluation, which itself presupposes a dualistic separation between subject and object. Philippa Foot has been arguing for a number of years against the reasoning that splits facts and values presupposed in the naturalistic fallacy (Foot 2001; 2002, 1–2). The acceptance of the naturalistic fallacy presupposes forms of dualism that follow from Enlightenment philosophy. The second is that the whole of the created order is not endorsed as having moral goodness in the manner anticipated by stronger versions of naturalism. Aquinas understood the created order to be both intelligible and good, but there were always elements of contingency and fallibility. Third, if we look more carefully at Aquinas's interpretation, it is clear that the goodness of natural existence is derived not simply from biology as such but from the relationship between God, understood as transcendent, and creature. In order to discover the way natural law was treated in the classic tradition, we need to ask, What is the manner in which natural law can become directed toward true goodness, which for Aquinas is a theological goal? This question can be answered only in relation to Eternal Law, for natural law is defined as participation in Eternal Law by rational creatures.

Eternal Law and the Wisdom of God. Aquinas allows for all life forms to share in Eternal Law or Reason through participation. It is here that Aquinas (and the classic tradition generally) parts company with those forms of evolutionary philosophy that view God as somehow emergent *from* the evolutionary process. However, rational creatures are able to share in Eternal Reason in a reasonable and intelligent way, which is impossible for nonrational creatures (Aquinas 1966, Qu. 91.1). Aquinas also associates the Eternal Law with divine wisdom, so that

Through his wisdom God is the founder of the universe of things, and we have said that in relation to them he is like an artist with regard to the things that he makes. We have also said that he is the governor of all acts and motions to be found in each and every creature. And so, as being the principle through which the universe is created, divine wisdom means art, or exemplar, or idea, and likewise it also means law, as moving all things to their due ends. Accordingly the Eternal Law is nothing other than the exemplar of divine wisdom as directing the motions and acts of everything. (1966, Qu. 93.1)

Such an understanding may seem to deny the possibility of contingency in the natural order, although Aquinas resists such a suggestion by his formulation of God acting in an *analogous* way to human laws acting in human hearts, so that “God impresses on the whole of nature the principles of the proper activities of things,” and “the impression of an inward active principle is to the things of nature what the promulgation of law is to men, for by this, as we have argued, a certain directive principle is imprinted on human acts” (1966, Qu. 93.5). Where natural processes seem to “fail,” this is the result of “interruptions” to ordered patterns of particular causes, not interruptions in universal causes. His notion of Eternal Law as the guiding principle under which all other laws are subsumed ensures that his understanding of natural law is both grounded in nature and at the same time thoroughly theistic.

Natural Wisdom and Natural Law. For Aquinas wisdom is a virtue that can be acquired as well as a gift of the Holy Spirit. True wisdom is knowledge of an ultimate good end, while false wisdom is fixed on material goods (Aquinas 1972, Qu. 45.1). The first stage of wisdom is to shun evil, and its last stage is to bring all things back to its rightful order under acts of charity (1972, Qu. 45.6). Of course, the order or Chain of Being in which Aquinas situated the place of humanity needs to be adjusted in the light of evolutionary knowledge and the more qualified role that humanity now has in the overall evolutionary process. This is where theological models that identify evolution with progress fall short. Ruse has criticized Holmes Rolston for equating evolution with progress, although such models are not inevitably anthropocentric (Ruse 2003, 308–11). The gradual increase in evolutionary complexity should not be equated with notions of progress, because this implies a linear direction for evolution that is scarcely tenable. Yet there is nothing intrinsic in Aquinas’s position that would prevent such adjustment. Even his understanding of Eternal Law, while perhaps suggestive of more Platonic notions of form, could be viewed in more probabilistic ways that put much more emphasis on the place and importance of contingency. Aquinas also distinguishes between the gift of wisdom, which operates in matters of faith, and the virtue of wisdom, which acts in matters of grasping first principles of thought. Both forms of wisdom are about rightness in judging according to divine norms. As gift wisdom arises from charity that unites the believer with God. Inasmuch as natural law represents participation in the Eternal Law, or Divine Wisdom, the virtue of wisdom and the gift of wisdom facilitate the movement toward the good purpose implied though natural law.

Aquinas restricts his discussion of wisdom to rational beings, for both the speculative virtue of wisdom and its practical counterpart in prudence (practical wisdom) are intellectual virtues. However, just as the Eternal Law can be said in a manner of speaking to be imprinted in some sense on

the whole of the natural order, so, too, a form of natural wisdom could be said to exist through his notion of participation by all creatures in the Divine Reason, or Wisdom, for “non-rational creatures . . . participate in the divine reason by way of obedience: the power of divine reason extends to more things than comes under human reason” (Aquinas 1966, Qu. 93.5). Indeed, one could say that all creatures are thereby given an imprint of the Trinity, so that “In all creatures, however, we find a likeness of the Trinity by way of trace in that there is something in all of them that has to be taken back to the Divine Person as its cause” (Aquinas 1967, Qu. 45.7). The use of terms such as law, or wisdom, in nonhuman creatures in Aquinas becomes figurative, for “non-rational creatures do not hold law as perceiving its meaning, and therefore we do not refer to them as keeping the law except by figure of speech” (1966, Qu. 91.2).

Yet it is also clear that for Aquinas wisdom represents a higher level of perception than that possible through *synderesis*, our natural reasoning processes. This applies more specifically to ethical action, so that judgments may be immediately obvious to human reason, while other judgments are the result of more careful consideration of the wise: “these indeed, belong to the law of nature, but as necessitating instruction on the part of ordinary people by the wise. . . . Lastly there are actions to judge of which human reason needs divine instruction, which teaches us about the things of God” (1969, Qu. 100.1). This hierarchy of thinking insisted that although natural reasoning can take us a certain distance, “what belongs to faith is above natural reason” (1969, Qu. 100.1). This is an important strand in his *Summa*, for it shows that natural law understood as participation in the Eternal Law makes sense only from the perspective of faith. Although elements may be obvious to the common reasoning of all rational creatures, including wisdom as learned, wisdom as gift is possible only from the perspective of faith, for “the gift of wisdom presupposes faith, since a man judges well what he already knows . . . piety is wisdom and for the same reason also is fear. If a man fears and worships God he shows he has a right judgement about divine things” (1972, Qu. 45.1).

SOME TENTATIVE CONCLUSIONS AND QUESTIONS

I began this discussion with consideration of Pannenberg’s emphasis on God as contingent, where the laws of nature become known in retrospect, superimposed as it were from the known future that is in God. His view fits more closely with the probabilistic understanding of the laws of nature that is compatible with current natural, physical science. Although debates in evolutionary theory are not sufficiently clear to be delineated into alternative laws, the schema is helpful in that viewing convergence in probabilistic terms makes more sense than patterning, deterministic, or instrumental alternatives. The idea of patterning is too suggestive of the concept of fix-

ity of design in the natural order, which is unhelpful as it is suggestive of a fixed cosmos. Of course, there are elements in the thought of Aquinas that do point to too great a fixity in the ordering of nature that many would feel uncomfortable with today. The strangeness of the medieval period with its very different understanding of cosmology needs to be acknowledged. However, any such accusations of "Platonism" need to be tempered by the realization that both Aquinas's belief in secondary causes and his notion of Eternal Law as analogous to human law are more suggestive of a framework within which contingency can move than anything more rigid. The question now is whether Pannenberg has overreacted against the possibility of God working through an ordering process implicit at the beginning of creation. I have suggested that the concept of natural law is helpful here, both because its meaning has been compressed and reduced in contemporary discussion, severed from the doctrine of creation, and because it provides a way of thinking positively about biological processes from a theological point of view.

The natural law in all creatures was associated with a purpose or *telos* toward the good end in God. Aquinas's understanding of the created order was in terms of a hierarchical chain of being. Such an understanding clearly needs to be challenged in the light of evolutionary theory. However, his concept of natural law links all processes of life with human life in a way that affirms the connectivity of all life forms and more specifically with the life possible through participation in God. He describes the work of the wisdom of God in the natural order in terms of an artist, bearing traces of the Trinity in its unfolding. While his biological understanding was outdated, his perception of God as one who makes impressions on the natural world is still compatible with evolutionary contingency. More important, perhaps, his notion of natural law, and by implication natural wisdom, provides a theological interpretation of the possibility of convergent forms and evolutionary "purpose." In addition, his understanding of the created order allows for its unfolding without an imposition of quasi-divine intervention; the sense in which God governs is through a bestowal of inherent properties that direct creatures toward a given end.

There are, of course, questions left unanswered that need to be addressed. First, how far is Aquinas's notion of seminal forms compatible with evolutionary contingency? In this I suggest that he had a biologically naive view, but it needs to be taken into account that he was writing in the twelfth century. His intention was to allow his theological reflection to stand up to scrutiny in the light of current biological knowledge, which in those days was intricately linked with philosophical reflection. It also is important to distinguish concepts from changeable realities. For example, the emergence of human beings on the evolutionary tree does not mean that human nature as such (or that of any other species, for that matter) does not exist but that each species has the potential to either change into something else or

become extinct. It is perfectly reasonable to accept that given characteristics for living species exist while arguing that biologically such forms may have derived from other forms or may even disappear in the future. Aquinas was not aware of the possibilities of extinction of forms, but that does not mean that the concept of species as such is now totally redundant. The existence of convergence and parallelisms show up significant similarities between evolving species, but their differences and individual characteristics ought not to be forgotten.

Second, is his understanding of wisdom too anthropocentric from the perspective of current biblical knowledge? The book of Proverbs invites his readers to “Go to the ant, you sluggard, See its ways and be wise” (Proverbs 6:7 JB). The seeing is not so much detailed observation of information about the ants, implied perhaps in Nigel Franks’s account of the workings of an ant colony (Franks in press), but, as Norman Habel suggests, perceiving the inner distinctive core of what it is to be an ant (Habel 2003, 281–98). In other places in wisdom literature the word “to discern” (*bin*) is used, often following the act of seeing, to describe the process of becoming wise. Discernment, therefore, is integral to what it means to gain wisdom. Discernment considers a range of options but ultimately lights on “the way,” understood not just as the alternative between two paths but also as the inner “driving” characteristic of something. It is noteworthy that for a number of contributors in the colloquium where this paper was first presented (Conway Morris in press), one had the impression that the biologists concerned were able to actively imagine what it might be like to be the organisms that they were studying—to engage in, as Barbara McClintock suggested in her long-standing relationship with maize plants, a “feeling for the organism” (Keller 1983). Significantly, in chapter 28 of the biblical book of Job the characteristic of finding wisdom also applies to God, as God “sees” the different components of creation. This suggests a degree of freedom to creatures and a form of natural wisdom that goes even further than that implied by the more top-down approach of participation in Eternal Wisdom that Aquinas suggests. Hence both contemporary biblical studies and biology suggest that more emphasis needs to be placed on the concept of organisms as separate selves, with their own degree of “wisdom.” Yet, I would hesitate to take this as far as Alfred North Whitehead does in his process philosophy, for his suggestion of a “mental pole” in all existence, even in the very fabric of material reality, does not connect readily with the common experience among biologists (myself included here) as to the crucial difference between life and nonlife. The advantage of Aquinas’s understanding of natural law is that it does make this distinction, even while acknowledging that all of creation, including the material world, is under the providence of God.

Third, is his belief that all of creation naturally orients itself to the good too idealistic? Or does it imply that purposefulness under divine provi-

dence amounts to progress? This is the philosophical alternative with its theological counterpart to the argument from design suggested by Ruse (in press). It is, nonetheless, incorrect to identify Aquinas with arguments from design, because his view of the relationship between God and nature was very different from that of William Paley. Aquinas also had little intention, contrary to what many of his commentators imply, of providing secure proof of God's existence from the natural world, in spite of his infamous "Five Proofs" that were written specifically with unbelievers ("Gentiles") in mind. Jean Porter acknowledges this difference:

Paley's argument turns on an analogy between artefacts and living creatures, whereas Aquinas, like Aristotle before him, insisted on a contrast between them. On their view, artefacts must be designed and assembled precisely because they do not possess their own intrinsic forms, or correlatively, their own internal orientation towards a purpose intrinsic to that form. . . . Aquinas' specific argument . . . does not appeal to the design of living creatures, but rather to the goal-directed character of natural operations, including, but not limited to the operations of living things. (Porter 2005, 87)

Aquinas wanted to take human reasoning as far as it could go toward God, but in the end he recognized clearly that a step of faith was always required in order to understand life in God. The purposefulness in the created order, as far as Aquinas was concerned, could have come from the realization of its own nature, inherent within it. In the human sphere, nature and grace were interrelated; grace builds on nature rather than denies it, as Rahner has expressed so clearly in his more contemporary theological analysis. Aquinas was also not writing out of the context of Enlightenment doubt, which was to follow much later in history. He is, however, optimistic in his account of the possibilities for human nature and of the value of all creatures more generally. The goodness in creatures was manifested to the extent to which it demonstrated purpose and intelligibility. Yet he insisted that the goodness in human nature could be discovered only through the grace of God and that such theological knowledge would always be outside human grasp because of human sinfulness. I suggest that his view that sinfulness makes evil seem good is realistic, not utopian. Even the perpetrators of the worst atrocities known to humankind have normally worked under the illusion that they are doing something that is a good, either for themselves or for the causes to which they are committed. He did not, however, have the knowledge of either psychology or evolution to recognize the full extent of what one might term natural evil. Clearly, such an account needs to be brought into an understanding of theodicy,² but it is not inherently more challenging than similar accounts that have to take on board humanity's inhumanity to itself and other creatures.

Fourth, is the possibility of a recovery of natural law as linked with the natural world and God possible in a postmodern context with its emphasis on the deconstruction of any essentialist notions of either God or nature?

Given the echoes of Plato in his notion of Eternal Law and Wisdom in God, how far is this compatible with contemporary understanding about God? What might be the meaning of the providence of God in this context? I suggest that biologists work from the presumption that what they are discovering does have some basis in ontological reality, and a theology of natural law reaffirms this assumption. In this, natural law and biology are on common ground. However, both theologians and biologists have to take into account the historical contingency of their work as being limited by context and situation. Having said this, there is no a priori reason to exclude as a matter of course those attempts to put tentative theoretical bones onto the debate—that is, to grope toward a theory that encompasses the natural world. We need to be modest, perhaps, about the role of the human mind in such constructions, but to assume that there is no contact with reality is equally presumptuous, as it makes the assumption of radical relativism. Perhaps the most we can be content with is to discuss the issue in terms of probabilities rather than certainties. In this the providence of God toward goodness is one that is accepted as probable on the basis of faith, always tinged with doubt, not “proved” through reflection on the emergence of evolutionary complexity. Such providence cannot be identified with human progress, either, for such a presumption assumes (falsely) that we know the mind of God in its entirety.

Fifth, is it permissible to recover medieval concepts isolated from their original context and concerns? What is the relation between natural law and natural theology? Given the arguments for a rerooting of natural law in a doctrine of creation and its resonance with theories of evolutionary purpose, what are the implications for debates about the relationship between evolutionary theory and moral agency? It clearly is not feasible to lift Aquinas’s teaching from its original context without some adjustment to contemporary beliefs and practices. It also is important not to come to too hasty an accommodation with contemporary beliefs.

However, I suggest that, although these questions do need to be addressed, they are not ultimately destructive of the thesis presented here, namely, that the concept of natural law provides one way of understanding in theological terms what evolutionary science is hinting at through notions of convergence and evolutionary “purpose.” It also offers considerable advantages over eighteenth-century alternatives that viewed the order in creation as analogous to a watch made by God or comparable forms of natural theology that identified too readily physical processes in nature with divine purpose and intention. Aquinas was always modest about the possibility of knowing fully the Eternal Reason in God. Such knowledge could not be attained in this life; only God and the blessed can know the Eternal Law, but all rational creatures can see its effects, understood in terms of natural law. In this it is vital to keep the apophatic tradition alive as well as the cataphatic tradition.³ Aquinas admitted that toward the end

of his life he believed that all of his previous intellectual work was “as straw” in the light of more mystical experiences of God that he had only dimly glimpsed. This is not to deny the importance of theological reflection but rather to qualify its place. In the end, our understanding and reasoning can take us only so far. This is inherent in Aquinas’s *Summa*, but the area of unknowing in God is not graspable—certainly not through a study of biological reality. God is always not so much something that can be arrived at through science as an existential Who that challenges those who seek to find such an encounter. In this, theology (literally, language about God) makes small steps to understand more about God, but, like biology, its area of knowing is always incomplete. Unlike biologists, who hope perhaps that one day it will be possible to know all there is to know about the natural world, theologians true to their task would do well to be far more modest, for, in the light of the infinity of God, finite human attempts to grapple with such reality may seem paltry indeed.

Perhaps the wonder of so much that is not yet known in the biological world can be seen in one sense as an implicit religious experience, reflecting that which biology has itself recommended as necessary for human survival. In this theology and biological science may converge from very different origins, for wonder, like intelligence, is integral to what it means to be human.

NOTES

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1. For a discussion of the distinction between special divine action and general divine action see Saunders 2002, 18–32.
2. Theodicy is the theological attempt to reconcile the belief in the goodness of God with the presence of evil in the world.
3. The apophatic tradition claims that we know God by stating what cannot be known of God. The cataphatic tradition is more positive in its claims about what can be known of God, such as: God is goodness and love.

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