

watchmaker. God endowed the world with a certain self-sustaining design, such that it could subsequently function without the need for continual intervention. It is thus no accident that William Paley chose to use the image of a watch and watchmaker as part of his celebrated defense of the existence of a creator God (see pp. 190-2).

So how does God act in the world, according to Deism? The simple answer to this question is that God does not act in the world. Like a watchmaker, God endowed the universe with its regularity (seen in the "laws of nature") and set its mechanism in motion. Having provided the impetus to set the system in motion, and establishing the principles which govern that motion, there is nothing left for God to do. The world is to be seen as a large-scale watch, which is completely autonomous and self-sufficient. No action by God is necessary.

Inevitably, this led to the question of whether God could be eliminated completely from the Newtonian worldview. If there was nothing left for God to do, what conceivable need was there for any kind of divine being? If it can be shown that there are self-sustaining principles within the world, there is no need for the traditional idea of "providence" - that is, for the sustaining and regulating hand of God to be present and active throughout the entire existence of the world. The Newtonian worldview thus encouraged the view that, although God may well have created the world, there was no further need for divine involvement. The discovery of the laws of conservation (for example, the laws of conservation of momentum) seemed to imply that God had endowed the creation with all the mechanisms which it required in order to continue. It is this point which is explicated in the mathematician and astronomer Pierre-Simon Laplace's famous comment, made in relation to the idea of God as a sustainer of planetary motion: "I have no need of that hypothesis."

A more activist understanding of the manner in which God acts in the world is due to Thomas Aquinas and modern writers influenced by him, which focuses on the use of secondary causes.

Thomism: God acts through secondary causes

A somewhat different approach to the issue of God's action in the world can be based on the writings of the leading medieval theologian, Thomas Aquinas. Aquinas's conception of divine action focuses on the distinction between primary and secondary causes. According to Aquinas, God does not work directly in the world, but through secondary causes.

The idea is best explained in terms of an analogy. Suppose we imagine a pianist, who is remarkably gifted. She possesses the ability to play the piano beautifully. Yet the quality of her playing is dependent upon the quality of the piano with which she is provided. An out-of-tune piano will prove disastrous, no matter how expert the player. In our analogy the pianist is the primary cause, and the piano the secondary cause, for a performance of, for example, a Chopin nocturne. Both are required; each has a significantly different role to play. The ability of the primary cause to achieve the desired effect is dependent upon the secondary cause which has to be used.

Aquinas uses this appeal to secondary causes to deal with some of the issues relating to the presence of evil in the world. Suffering and pain are not to be ascribed to the direct action of God, but to the fragility and frailty of the secondary causes through which God works. God, in other words, is to be seen as the primary cause, and various agencies within the world as the associated secondary causes.

For Aristotle (from whom Aquinas draws many of his ideas), secondary causes are able

to act in their own right. Natural objects are able to act as secondary causes by virtue of their own nature. This view was unacceptable to theistic philosophers of the Middle Ages, whether Christian or Islamic. For example, the noted Islamic writer al-Ghazali (1058-1111) held that nature is completely subject to God, and it is therefore improper to speak of secondary causes having any independence. God is to be seen as the primary cause who alone is able to move other causes. A similar idea is found in Aquinas, who argues that God is the "unmoved mover," the prime cause of every action, without whom nothing could happen at all (Barth, we noted the importance of this point in relation to the argument from motion; see pp. 187-8).

The theistic interpretation of secondary causes thus offers the following account of God's action in the world. God acts indirectly in the world through secondary causes. A great chain of causality can be discerned, leading back to God as the originator and prime mover of all that happens in the world. Yet God does not act directly in the world, but through the chain of events which God initiates and guides.

It will thus be clear that Aquinas's approach leads to the idea of God initiating a process which develops under divine guidance. God, so to speak, delegates divine action to secondary causes within the natural order. For example, God might move a human will from within so that someone who is ill receives assistance. Here an action which is God's will is carried out indirectly by God - yet, according to Aquinas, we can still speak of this action being "caused" by God in some meaningful way.

An approach which is clearly related to this, but differing radically at points of significance, can be found in the movement known as "process thought," to which we now turn.

Process theology: God acts through persuasion

The origins of process thought lie in the writings of the Anglo-American philosopher Alfred North Whitehead (1861-1947), especially his important work *Process and Reality* (1929). Reacting against the rather static view of the world associated with traditional metaphysics (expressed in ideas such as "substance" and "essence"), Whitehead conceived reality as a process. The world, as an organic whole, is something dynamic, not static; something which happens. Reality is made up of building blocks of "actual entities" or "actual occasions," and is thus characterized by becoming, change, and event.

All these "entities" or "occasions" (to use Whitehead's original terms) possess a degree of freedom to develop and be influenced by their surroundings. It is perhaps at this point that the influence of biological evolutionary theories can be discerned: like the later writer Pierre Teilhard de Chardin (whom we shall consider below), Whitehead is concerned to allow for development within creation, subject to some overall direction and guidance. This process of development is thus set against a permanent background of order, which is seen as an organizing principle essential to growth. Whitehead argues that God may be identified with this background of order within the process. Whitehead treats God as an "entity," but distinguishes God from other entities on the grounds of imperishability. Other entities exist for a finite period; God exists permanently. Each entity thus receives influence from two main sources: previous entities and God. Causation is thus not a matter of an entity being coerced to act in a given manner; it is a matter of influence and persuasion. Entities influence each other in a "dipolar"

manner – mentally and physically. Precisely the same is true of God, as for other entities. God can only act in a persuasive manner, within the limits of the process itself. God "keeps the rules" of the process. Just as God influences other entities, so God is also influenced by them. God to use Whitehead's famous phrase, is "a fellow-sufferer who understands." God is thus affected and influenced by the world.

Process thought thus redefines God's omnipotence in terms of persuasion or influence within the overall world-process. This is an important development, as it explains the attraction of this way of understanding God's relation to the world in relation to the problem of evil. Where the traditional free-will defense of moral evil argues that human beings are free to disobey or ignore God, process theology argues that the individual components of the world are likewise free to ignore divine attempts to influence or persuade them. They are not bound to respond to God. God is thus absolved of responsibility for both moral and natural evil.

The traditional free-will defense of God in the face of evil is persuasive (although the extent of that persuasion is contested) in the case of moral evil – in other words, evil resulting from human decisions and actions. But what of natural evil? What of earthquakes, famines, and other natural disasters? Process thought argues that God cannot force nature to obey the divine will or purpose for it. God can only attempt to influence the process from within, by persuasion and attraction. Each entity enjoys a degree of freedom and creativity, which God cannot override.

While this understanding of the persuasive nature of God's activity has obvious merits, not least in the way in which it offers a response to the problem of evil (as God is not in control, God cannot be blamed for the way things have turned out), critics of process thought have

was followed by *Le Milieu divin*, which was originally written in 1927 and appeared in French in 1957. The title is notoriously difficult to translate into English on account of the rich connotations of the French word *milieu*.

Teilhard de Chardin viewed the universe as an evolutionary process which was constantly moving towards a state of greater complexity and higher levels of consciousness. Within this process of evolution, a number of critically important transitions (generally referred to as "critical points") can be discerned. For Teilhard the origination of life on earth and the emergence of human consciousness are two particularly important thresholds in this process. These "critical points" are like rungs on a ladder, leading to new stages in a continuous process of development. The world is to be seen as a single continuous process – a "universal interweaving" of various levels of organization. Each of these levels has its roots in earlier levels, and its emergence is to be seen as the actualization of what was potentially present in earlier levels. Teilhard de Chardin thus does not consider that there is a radical dividing line between consciousness and matter, or between humanity and other animals. The world is a single evolving entity, linked together as a web of mutually interconnected events, in which there is a natural progression from matter to life to human existence to human society.

This clearly raises the question of how God is involved in the process of the evolution of the world. It is clear that Teilhard de Chardin places considerable emphasis on the theme of the consummation of the world in Jesus Christ, an idea which is clearly stated in the New Testament (especially the letters to the Colossians and Ephesians; see Colossians 1: 15–20; Ephesians 1: 9–10, 22–3), and which was developed with particular enthusiasm by some Greek patristic writers, including Origen. Teilhard de Chardin develops this theme with particular reference to a concept which he calls

"Omega" (after the final letter of the Greek alphabet). In his earlier writings he tends to think of Omega primarily as the point towards which the evolutionary process is heading. The process clearly represents an upward ascent; Omega defines, so to speak, its final destination. It will be clear that Teilhard de Chardin regards evolution as a teleological and directional process. As his thinking developed, however, he began to integrate his Christian understanding of God into his thinking about Omega, with the result that both the directionality of evolution and its final goal are explained in terms of a final union with God.

The overall vision that Teilhard de Chardin sets out is thus that of a universe in the process of evolution – a massive organism which is slowly progressing towards its fulfillment through a forward and upward movement. God is at work within this process, directing it from inside – yet also at work ahead of the process, drawing it toward its divine goal and its final fulfillment.

For many commentators, the real strengths of both process theology and the approach adopted by Teilhard de Chardin lie in their insights into the origin and nature of suffering within the world. Those strengths are best appreciated through an analysis of the various alternatives on offer within the Christian tradition concerning suffering – an area of theology which has come to be known as "theodicy," to which we shall presently turn. But first, we must explore the doctrine of creation, which sets the backdrop to these important discussions.

God as Creator

The doctrine of God as creator has its foundations firmly laid in the Old Testament

suggested that too high a price is paid. The traditional idea of the transcendence of God appears to have been abandoned, or radically reinterpreted in terms of the primacy and permeance of God as an entity within the process. In other words, the divine transcendence is understood to mean little more than that God outlives and surpasses other entities. Whitehead's basic ideas have been developed by a number of writers, most notably Charles Hartshorne (1897–2000), Schubert Ogden (born 1928), and John B. Cobb (born 1925).

It will be clear that process theology has no difficulty in speaking of "God's action within the world," and that it offers a framework within which this action can be described in terms of "influence within the process." Nevertheless, the specific approach adopted causes anxiety to traditional theism, which is critical of the notion of God associated with process theology. For traditional theists, the God of process thought seems to bear little relation to the God described in the Old or New Testaments.

Pierre Teilhard de Chardin: Point Omega

One of the most remarkable contributions to the twentieth-century debate over the relation of science and religion was made by the distinguished French paleontologist Pierre Teilhard de Chardin (1881–1955). Although he wrote extensively on the way in which God was involved in the world, these writings were never published during his lifetime, presumably because they were considered somewhat unorthodox by his superiors in the Society of Jesus. Shortly after Teilhard de Chardin's death in 1955, his first major work appeared, *Le Pliemène Humaine* ("The human phenomenon") was written during the years 1938–40. It finally appeared in French in 1955, and in English translation in 1959. This