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**Christ and Evolution: A Reinterpretation of Teilhard de Chardin's
Christology After Neo-Darwinism**

by

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**Thesis submitted
for the Degree of Doctor of Philosophy**

2015

Abstract

Darwin's theory of evolution by natural selection has provided perhaps the most significant challenge that Christian theology has faced in the last 150 years. Although many philosophers of religion have attempted syntheses of religion and Darwinism, comparably less attention have been paid to how Darwin's theory of evolution invites reinterpretations of the particular grammar and specific content of Christian doctrine. This thesis, an exercise in systematic theology, critically examines Christian belief in the Person of Christ in light of Darwinism, approaching key questions as topics for theological, rather than philosophical, reflection. After Darwin, traditional anthropocentric models of Christian doctrine, focussed on God's relationship with the human person in Jesus Christ, are found to be inadequate. Since the human being is continuous with the wider animal, vegetable, and geological realm, inextricably linked with the wider ecosphere, Christian theology should now focus on God's relationship to the whole cosmos in Christ, viewing the whole universe as made in the image of God. Likewise, traditional notions of Christian teleology need to be revised in light of Darwinism. This thesis represent a constructive theological revisioning of Christian doctrine – and specifically Christology – seeking to understand Christian faith in Jesus Christ in light of scientific knowledge. Since Teilhard de Chardin provided the most sustained and coherent attempt to revision Christian doctrine in light of evolution, the thesis provides a critical reading of his work, identifying areas of critical weakness in Teilhard's responses to theology's new challenges. Crucially, Teilhard's Lamarckian and Bergsonian assumptions are seen to render his theology of evolution questionable: the rise of neo-Darwinism has meant that his work has become outdated

and in need of revision. Although Teilhard asked many of the right questions, his solutions are now inadequate. Following a close reading of neo-Darwinist sources, the thesis provides a constructive corrective to Teilhard's cosmic Christology, which is both faithful to orthodox sensibilities and relevant to contemporary developments.

Christ and Evolution: A Reinterpretation of Teilhard de Chardin's Christology After Neo-Darwinism

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Chapter 1

Introduction

Christology – the study of beliefs in the person and work of Jesus Christ – lies at the heart of Christian theology; it is, after all, Christian theology. According to the Catechism of the Catholic Church, the end of catechesis is ‘to reveal in the Person of Christ the whole of God’s eternal design reaching fulfillment in the Person’ (CCC, 1997, p.107). Likewise, Karl Barth affirmed that ‘if we try to look away from the name of Jesus Christ even momentarily...Christian theology loses [its] substance’ (Barth, 1956, p.347). Therefore, in the Catechism and Barth, there are two remarkably influential sources both claiming precisely that Christian theology is impossible, or at the very least meaningless, without reference to the person of Jesus Christ.

Before Darwin theologians could assert that the human person was the pinnacle, or apex, of God’s creation. God had created the world for humanity. For Christian theology, therefore, it was only necessary to speak of God’s relationship to humanity, focused in the Person of Jesus Christ. As such, much Christological reflection concerned itself with what God had done for human beings in Christ. This meant that much of Christology was exclusive of the wider universe. After all, humanity was special, exclusively made in the image of God and transcended the rest of creation.

After Darwin, humanity has been displaced from its pride of place, relegated to the level of all other creation. Humanity is now nothing more than one result (and that accidental) of the laws of natural selection in the struggle for life. Humanity is

thus, now, continuous with all other animal life, continuous with the wider sphere of biological life, and essentially continuous with the wider universal environment, with all its chemical and physical processes. Darwin saw humanity as nothing more than one more manifestation of the animal kingdom. In doing this he radically redefined what it was to be human. Humanity, after the publication of *Origin of Species* and *Descent of Man*, was no longer the same.

Unfortunately, Christology has not kept up with the Darwinian revolution in anthropology (Raven, 1962, p.90). Christ is still understood as having relevance exclusively for humanity. The question that obviously presents itself is what happens to this exclusive preoccupation with humanity once the concept of humanity has been radically reinterpreted? Put differently, what does Christology look like when it is claimed that humanity is no longer valued exclusively by God? After Darwin, Christology cannot be undertaken in such a narrow and exclusive context. New, inclusive language must be used, and new, inclusive Christologies must be formulated. Without the 'entangled bank' of plantlife, birdlife, insectlife, and 'worms crawling through the damp earth', there could be no humanity, and, so Darwinism suggests, this 'entangled bank' is just as valued as humanity.

The most notable attempt to begin this reformulation of Christology was that of Teilhard de Chardin. After Teilhard, interest in 'cosmic Christology' (often drawing on early Patristic resources) has flourished. Teilhard saw that evolution meant that classical Christology was no longer tenable in modern theology, and sought to construct a broader, more inclusive cosmic picture of Christ. The problem however, is that Teilhard relied on an evolutionary paradigm that has since been shown to be incorrect. This thesis is concerned with reshaping Teilhard's contribution to fit a new updated paradigm. In doing so it will address two major concerns, one of

which Teilhard got right and the other of which he was mistaken. These concerns are: the centrality of Christ for Christian theology, and the necessity of addressing those concerns in the paradigm of neo-Darwinism.

Literature Survey

There has been a considerable amount of literature on theology in general and evolution, and a small, more limited amount of literature on the specific topic of Christology and evolution.

a. Theology and Evolution

Starting with the first category, this relationship has been approached in various ways.¹ John Haught, in his book *God After Darwin* (2000), notes three distinct categories that describe the approach to the question of the relationship of theology and evolution: opposition, separation, and engagement (Haught, 2000, pp.24-5; cf. Stenmark, 2010, p.278ff.). Essentially, Haught distinguishes between seeing theology and evolution as representing one epistemological position, in which case they must be opposed (i.e. they cannot both explain the one truth), as two epistemological positions, which are subsequently mutually exclusive, or as representing a middle-ground, i.e. two epistemological positions that are mutually influential.

¹ Harrison notes that the increasing popularity of attempts to answer this question is due to several issues, namely, ‘developments in the sciences themselves’ (which he explicitly distinguishes from ‘a recent upsurge in an aggressive, scientifically motivated atheism’), the ‘dramatic technological achievements in the biomedical sciences’, and persistent and growing ‘influential anti-evolutionary movements’ (Harrison, 2010, pp.1-3).

The first category, opposition, describes the ongoing battle between the New Atheist Movement and fundamentalist Creationists. Both sides agree that the book of Genesis must be interpreted as giving a literal, historical account of creation, yet one argues that it must be false and the other true. One side accepts that science disproves religion and the other that religion disproves science. Richard Dawkins (2006) and Daniel Dennett (1995), among others, represent one side of this argument, and writers such as John Whitcomb & Henry Morris (1961) and Ken Ham (1987), who is also the founder of the organization ‘Answers in Genesis’ and the ‘Creation Museum’, represent the other.²

Separatism argues instead that religion and science deal with completely different subject matter and as such use completely different methodologies. They therefore view religion and science as mutually exclusive; the conclusions of one do not impinge upon the conclusions of the other. In doing so they, inevitably, place limits upon what can and cannot be claimed by each method respectively. Thus, science cannot comment on religious matters and religion cannot comment on scientific issues.

There is a large spectrum of advocates of this position who, it can be said, have their own agenda for doing so. Fernando Canale (2009), for example, argues that this outlook means that science cannot disprove the basic outline of the Genesis narrative, and therefore uses it to affirm his ‘creationist’ position. In other words, he concentrates on the limitations of science. On the other hand, Stephen Jay Gould

² It is interesting that Harrison notes that “the conflict myth”, was largely the invention of two nineteenth-century controversialists, John Draper and Andrew Dickson White’ (Harrison, 2010, p.4). Whilst there are obvious instances of very real conflict – the Galileo affair for example – these are few and far between and do not represent the vast majority of attempts to describe this relationship.

(1999), who coined the term 'non-overlapping magisteria', argues that religion has nothing scientific to say and this leaves science as the only authority to comment on evolution. He concentrates on the limitations of religion.

Other advocates of this position include Haught himself who, in his later *Making Sense of Evolution* (2010), argues that religion and science represent different levels of explaining the same phenomenon (Haught, 2010, p.24). Science can only answer the how question and religion the why. Ian Barbour (1971), Charles Coulson (1958), and Holmes Rolston III (2006), all offer different variations of this same argument, as does the Thomist position of secondary causality (cf. Ryan, 2009, pp.49-50).

The problem with the first category is obvious: the Genesis narrative should not be taken as a literal, historical account and must be disregarded. This means that both sides of the conflict are working from an inadequate theology. The problem with the second category is less obvious. The problem here is that whilst it may be correct to point out that the subject matter and methodology of science and religion is distinct, any claim that God directs evolution (or that evolution does the work of God) does impinge upon the conclusions of science. Theologians who accept this outlook simply claim that there is a divine influence over science (and particularly evolution) but science cannot detect it (cf. Edwards, 1999, pp.46-7). Richard Dawkins astutely affirms this criticism writing that:

imagine, by some remarkable set of circumstances, that forensic archeologists unearthed DNA evidence to show that Jesus really did lack a biological father. Can you imagine religious apologists shrugging their shoulders and saying

anything remotely like the following? “Who cares? Scientific evidence is completely irrelevant to theological questions. Wrong magisterium!”... You can bet your boots that the scientific evidence, if any were to turn up, would be seized upon and trumpeted to the skies (Dawkins, 2006a, p.83)

In other words, this approach is only subscribed to as long as it contradicts religion; if science were to somehow support religion, so Dawkins claims, this approach would be conveniently forgotten.

Regarding evolution specifically, even though theologians claim ‘let science be science and let theology be theology’ (Haught, 2010, p.22), they still make assumptions about the evolutionary process that a strict neo-Darwinian interpretation does not allow, as this thesis will show. By claiming that evolution is set up or controlled by God, whether science can detect such an influence or not, places restrictions on what can and cannot be concluded by science. In other words, it contradicts the claim that the two spheres are mutually exclusive.

Often, the problem with this approach to theology and evolution is dissatisfaction with the sole sufficiency of natural selection to account for the diversity and apparent design in the universe. In other words, far from allowing science to be science, they argue that science does not give the whole picture. In their own way St. George Mivart (1871), Charles Coulson (1958), Karl Rahner (1966), Ian Barbour (1971), John Polkinghorne (1988), Philip Hefner (1993), Michael Behe (1998), Denis Edwards (1999), John Haught (2000), Arthur Peacocke (2001), Ted Peters & Martinez Hewlett (2003), Alistair McGrath (2005), Keith Ward (2006), Francis Collins (2006), Holmes Rolston III (2006), Celia Deane-Drummond (2009), Alejandro Garcia-Riveria (2009), Fernando Canale (2009), Charles Foster (2009), Ilia

Delio (2013), Synthia Crysdale & Neil Ormerod (2013), all claim that a blind natural selection of accidental genetic replicating errors³ is not enough. In one way or another they argue that some factors of the evolutionary process must be influenced by God, and attracted or guided towards some principle, almost always life and/or consciousness (cf. Monod, 1972, p.33).

Moreover, as this thesis will show, simple adherence to natural selection and genetic replication does not guarantee correct evolutionary theory. This thesis, following the neo-Darwinian synthesis, argues instead that evolution is ‘concerned’ with stability and preservation rather than change and progress, and, as such, the emphasis is on the blind and accidental nature of evolution. Evolution is neither designed nor is it a teleological process. This does not imply that evolution is not creative in the sense of being the way by which change occurs, but it cannot be creative in the sense that theologians claim it to be (i.e. the deliberate creation of something specific). In short, any attempt to see evolution as a process by which God causes new and better life is brought into being fundamentally misunderstands the Darwinian evolutionary theory. Any attempt to argue that God controls evolution, in any capacity, must be understood as more properly an expression of intelligent design and thus creationism. In other words, the acceptance that species are not static and have evolved over billions of years does not automatically safeguard against creationism (cf. Peters & Hewlett, 2003, p.103; Collins, 2007, p.183; Dupré, 2009, p.169; Numbers, 2010, p.137).

³ It must be noted, as will be clarified in later chapters, that the language of ‘mistake’, ‘accident’, ‘failure’, and ‘error’ should not be understood as pejoratives in the strictest sense.

John Hedley Brooke delineates the relationship between theology and evolution along similar lines yet he offers another important reason why these categories must be rejected. In his book *Science and Religion: Some Historical Perspectives* (1991) he notes that the definitions of science and religion have never been agreed upon and mean different things to different people (Brooke, 1991, p.6ff.) If a precise definition cannot be agreed upon, then it cannot properly be maintained that they deal with separate issues or are at odds with one another. Whilst he also criticizes treating science and religion as harmonious (Brooke, 1991, p.42ff.), it is clear that Haught's third category, engagement, must be the one that is explored. If theology and evolution are neither conflicted, nor separated, then they must be treated as being able to influence the conclusions of each other. The limitations of both science and religion are still admitted – there are still areas of theology that science cannot comment on and vice versa – yet ultimately the two must be seen as complementing each other; 'their work inevitably overlaps' (Torrance, 2001, p.6; Dobson, 1984, p.211). As Baelz simply puts it, 'if both [scientific and religious] languages are about one and the same world, what is said in the one cannot be irrelevant to what is said in the other...to distinguish is not the same thing as divorce' (Baelz, 1972, p.19). Theology must take seriously what neo-Darwinism, as the dominant theory, has to say.

That being said, many of the theologians already mentioned might disagree with their categorization here. They might claim that they do fall into the categorization of engagement, rather than separation as argued. However, as it has already been claimed, by not taking the neo-Darwinian synthesis as it is (i.e. they disagree with the sole sufficiency of blind natural selection), they cannot truly be said

to represent the category of engagement. There is thus a need to develop a theology that takes seriously the conclusions of the neo-Darwinian synthesis.

b. Christology and Evolution

The topic of Christology and evolution is less well treated yet, in light of the importance of Christ for Christian theology, it is by far the more important question. In many cases the theory of evolution simply replaces the Genesis narrative without any wider implications (cf. Klauder, 1971, p.77). In this way, the claim that the acceptance of evolution does not guard against creationism is supported. Haught, for example, claims to be providing a specifically Christian response to the question of evolution (Haught, 2010, p.xiv) yet he makes sparse reference to the role of the Christ. Another theologian, Keith Ward (2006), makes absolutely no mention of the incarnation whatsoever. Failure to take into account the incarnation fails to understand the importance of Christology for understanding all Christian doctrine (and betrays an understanding of Christology that separates Christ from the act of creation). In this way theologians, regardless of their own claims, do not offer Christian interpretations of evolution.

One possible reason for the exclusion of Christ from the issue of evolution and theology is that it is treated as a philosophy of religion question rather than a strictly theological, or indeed Christological, one. Whilst philosophical and metaphysical questions are of course important, this thesis will maintain that a specifically Christian response to evolution cannot be given without giving Christ a central location in that response.

There are, essentially, two distinct paradigms for understanding the relationship between Christology and evolution, which correspond to two ways of understanding the Fall of humanity. There are those who see creation as complete yet 'fallen', or at the very least in need of redemption (consistent with 'Western' theologians such as Augustine (cf. O'Grady, 1985, p.119), Anselm (cf. Robinson, 1926, p.200), and Luther (cf. Meyendorff & Tobias, 1992, p.21)), and those who see creation as incomplete, claiming that the fulfillment of creation is a future event (consistent with 'Eastern' theologians such as Irenaeus, Gregory Nazianzen, and Gregory Palamas (cf. Mattox & Roeber, 2012, p.109)).

As examples of the first paradigm, such writers as Jürgen Moltmann (1990), Christopher Southgate (2008), Alejandro Garcia-Rivera (2009), and Jack Mahoney (2011), emphasize the death and suffering intrinsic to evolution and the problem to theology that it presents. They see the process of evolution through natural selection as flawed. The world in evolution is therefore not representative of a world that God would have created (cf. Barrera, 2009, p.157; Peters & Hewlett, 2003, p.24, p.78) and is in need of redemption. Salvation is salvation from either the paradigm of evolution or a world in evolution.

Creation and redemption are thus understood as two separate concerns with the role of Christ, if not exclusively concerned with redemption, certainly facing that direction. To put the point differently, Christ is restricted to the limits of his role as saviour. However this narrow designation of saviour is a problem for Christological interpretations of evolution. The fact of evolution, regardless of what mechanism is used to explain it (e.g. Lamarckism, Darwinism etc.), demands one conclusion that is universally agreed upon among those who accept evolution: the Genesis narrative

cannot be taken literally. It follows that the fall of humanity was not an historical event, as Smith writes ‘the plain fact is that the evolutionist Weltanschauung does not admit a primordial state of perfection’ (Smith, 1988, p.138; cf. Peacocke, 2001, p.28; Mahoney, 2011, p.14), and therefore it is difficult to explain the reason for the need for salvation. Put simply, if there is no fall then there is no reason for Christ, and thus no Christology. Canale, too, argues that:

if creation week does not reveal how things actually happened, then there is not much reason to believe what it says about salvation or eschatology. If creation week did not take place then there was neither a first couple perfectly created nor an origin of evil by disobedience to the historical order created by God. Then how are we to understand sin and redemption? (Canale, 2009, p.135)

Regardless of how evolution is understood to proceed it cannot possibly accommodate a literal fall of humanity through the actions of a monogenetic couple (cf. Collins, 2007, p.126). Therefore Christ’s relationship to the universe cannot be seen as solely in the context of sin and salvation, as a ‘restitutio in integrum’ (Moltmann, 1979, p.115ff.). As such the classic question ‘if man had not sinned, would God have become incarnate?’ needs to be re-examined. Both Augustine and Aquinas gave negative answers to this question (cf. Thomas Aquinas, 1948, pp.2022-3). Post-evolution, however, a different answer must be given arguing for a more inclusive incarnation, having a wider scope and a broader relevance beyond the narrow focus of both humanity and sin.

Evolution, therefore, demands that the narrow ‘substitutionary’ Christ is replaced by a broader ‘cosmic’ Christ. Even though, therefore, the theologians

mentioned above do not limit that salvific paradigm to the misdeeds of a monogenetic couple, they still fall short of what an evolutionary Christology should look like by continuing to see Christ within this narrow category.

The second Christological paradigm focuses on the role of Christ as creator, rather than saviour, and sees the process of evolution as being the way that Christ brings creation to fulfillment, with a doctrine of deification usually being emphasized instead of salvation (Kärkkäinen, 2004, p.4). Exponents of this paradigm understand evolution not as something counter to the plans of God but as being directed towards a particular end, as the fulfillment of God's creating power. Peacocke, for example, (although not explicitly relating such an action to work of Christ) writes that:

all the evidence points to a creature slowly emerging into awareness, with an increasing capacity for consciousness and sensitivity and the possibility of moral responsibility and, I would affirm, of response to God. So there is no sense in which we can talk of a fall from a past perfection. There was no golden age, no perfect past, no individuals – Adam or Eve – from whom all human beings have descended and declined and who were perfect in their relationships and behaviour. We appear to be rising beasts rather than fallen angels – rising from an amoral (and in that sense) innocent state to the capability of moral and immoral action (Peacocke, 2001, p.78; cf. TeSelle, 1970, p.319).

Christ, according to this paradigm continues this work of creation, bringing to completion what was started at the beginning of time, with the initial act of creation.

Pierre Teilhard de Chardin not only falls into this category (cf. de Lubac, 1967, p.120) but he is by far its greatest exponent, the most prominent and influential theologian to have tackled the problem of the relationship of evolution and Christology (cf. Southgate, 2008, p.25; Corte, 1960, p.91). Teilhard writes that ‘the universe has ceased to be the formal garden from which we are temporarily banished by a whim of the creator. It has become the great work in process of completion which we have to save by saving ourselves’ (Teilhard de Chardin, 1971, p.91), clearly criticizing the first paradigm and arguing in favour of the second.

Whilst this thesis, following Teilhard, will essentially occupy this second paradigm, seeing the role of Christ as central and more inclusive as creator rather than saviour, ultimately both paradigms fall short of dealing with the conclusions of the neo-Darwinian paradigm. Both see evolution as a temporary phenomenon that must ultimately be transcended and that it is Christ that brings about that transcendence. Whether evolution is something that humanity needs salvation from or whether it is a divine process that needs completion, by claiming that it is only a temporary condition of creation fundamentally contradicts the neo-Darwinian synthesis.

Nevertheless, since Teilhard came closest to developing a Christological interpretation of evolution it will be his work that is concentrating on in developing a neo-Darwinian Christology.

c. Teilhard de Chardin

Much has been written about Teilhard’s life and theological approach. These can be categorized as simple biographies, detailed commentaries on specific aspects of his theology, general studies, and studies of his Christology.

There have been a number of biographies written about Teilhard's life, ranging from those who present a novelization of his life (Aczel, 2007) to those who present an exhaustive, scholarly study of his life and work (Cuénot, 1958). Other, more general accounts are also available (Barbour, 1961; Lukas & Lukas, 1977; King, 1996).

Publications that focus on Teilhard's thought and work have been written from various perspectives. Predictably, much of this work, especially earlier publications, was written by Jesuits (Raven, 1962; Mooney, 1966; de Lubac, 1967; Faricy, 1981). Other more recent works of equal merit have been written from outside the Jesuit order (Kenny, 1970; King, 1997; Grumett, 2005). Whilst many theologians, even by their own admission, seek to present introductions to Teilhard's thought, there are some who concentrate on certain aspects of Teilhard's thought, for example Biblical themes (Kropf, 1980), morality (Grau, 1976), or philosophy (O'Connell, 1982).

Many of the recent publications regarding Teilhard's work, which are mostly collections of essays, tend to focus on ecological questions (Fabel & St.John (Eds.), 2003; Meynard (Ed.), 2006; Deane-Drummond (Ed.), 2006).

Some theologians have contributed to Teilhardian scholarship, not by presenting an explicit commentary or treatise, but by using his theology to support their own interests (Fox, 1988; McFague, 1993; Garcia-Riveria, 2009). There is also a number of publications on Teilhard that deal with the comparison of his thought with Hindu theology, particularly that of Sri Aurobindo, but these lie beyond the scope of this thesis.

A number of theologians have also attempted to explore Teilhard's Christology without reference to his evolutionary theory (Maloney, 1968; Allegra, 1971; Hale, 1973; Lyons, 1982), as much as such an endeavour is possible.

In terms of the relationship of Teilhard to Darwin, the literature can essentially be divided into three groups, namely, those that argue Teilhard and Darwin are compatible (generally arguing that Teilhard is a Darwinian (Simpson, 1973; Dodson, 1984; Meynard, 2006; Aczel, 2007; Haught, 2010)), those who argue they are opposed (Medawar, 1961; Birx, 1972, 1991; Grumett, 2005), and those who find in Teilhard an improvement on Darwinism (Forsthoefel, 1961; Berry, 2003). However, no one has attempted to re-evaluate Teilhard's Christology in a neo-Darwinian context. Those that accept that Teilhard's evolutionary theory is incorrect simply discard his Christology along with his evolutionary theory without attempting to salvage it, and thus without recognizing his important contribution to the wider question of theological engagement with evolution. After all, as Garcia-Rivera writes:

any contemporary attempt to propose a theological cosmology must begin with the work of Teilhard de Chardin...his revival of the cosmic Christ tradition may be the only way the church will be able to make sense of her identity in an increasingly global and religiously interconnected world' (Garcia-Rivera, 2009, pp.50-1)

Method and Scope

a. Statement of The Problem

The question of presenting a Christian response to the challenges of evolution essentially requires two distinct foci: the need to take seriously the neo-Darwinian synthesis and the centrality of Christ for Christian theology. The majority of those

who have tackled this question ignore both. None of the theologians considered take neo-Darwinism as it is without criticizing some aspect of it, and of those that take the centrality of Christ seriously it is arguable whether any come anywhere near Teilhard de Chardin in terms of presenting a thoroughly thought out Christology. Teilhard stands out among these theologians as presenting an agreeable Christology, yet within an incorrect context. It is the task of this thesis to ask what Teilhard de Chardin's cosmic Christology, which is demanded from an evolutionary Christology, would look like when it is placed within the context of neo-Darwinism.

b. Theology

This thesis, being predominantly concerned with Christology, will necessarily engage in constructive systematic theology. More specifically, this thesis is concerned with the question of how the neo-Darwinian theory of evolution effects and changes Christological doctrine and the role of Christ in the wider sphere of Christian theology. As a Christological thesis it will take Teilhard's position of evolution demanding a cosmic Christology as axiomatic, along with the Chalcedonian definition of Christ's person. However, different understandings of the 'mechanism' of evolution lead to different interpretations of that cosmic Christ. It will therefore be concerned with replacing the Lamarckian context of Teilhard's Christology with a neo-Darwinian one. Thus, 'we must often be prepared to give [Teilhard] credit for what he tried to do even when we criticize the way that he did it' (Hansen, 1970, p.vii). Teilhard asked the correct questions, however he failed to provide satisfactory answers, because of his reliance on Bergson. This thesis will therefore argue that Teilhard's doctrine of a cosmic Christ can be a fruitful way of dealing with a specific Christian response to the question of the role of evolution in theology.

This means that it will employ a method of meaningful doctrinal interpretation in a scientific context. As a work of systematic theology this thesis is concerned with the re-interpretation of Teilhard's ideas, not with an interpretation of Teilhard in the context of the history of ideas.

This also means that textual interpretation and exegesis are not methods that will be employed in attempting this question of Christology in a Darwinian perspective. This thesis is not concerned with presenting a critique of Teilhard's corpus. It is not a textual study of his work nor an attempt to argue over contentious points of his work. Instead, Teilhard is used as an example, a case study, of a particular way of dealing with the question of theology and evolution, namely, the centrality of Christology for presenting a specifically Christian conversation with scientific accounts of evolution. As already claimed, Teilhard has an advantage over other attempts precisely because he recognized the centrality of Christ for presenting a Christian response. However, the science he engaged with has since been shown to be fundamentally flawed.

As a result, there are elements of Teilhard's corpus that lie beyond the scope of this study, and this means that not all of his work will be considered. Huchet Bishop argues that his work falls into three broad categories, his strictly technical contributions as a paleontologist, his scientific synthesis, and his Christology (Huchet Bishop, 1961, p.35). Only the latter two categories will be considered in this thesis. His some two hundred articles from paleontological journals (cf. Lane, 1996, p.12) are not relevant, many of them written after he was censored by his superiors and forbidden from writing on theological and philosophical issues. Likewise, his personal letters and correspondence will not be considered, as they are largely irrelevant to this project in systematic theology.

c. Philosophy

This is also not a philosophy of religion thesis. A philosophical method will therefore not be employed. Inevitably philosophical and metaphysical questions will be addressed and dealt with, most notably the question of Darwinian ontology. However, as it has already been claimed, one of the major problems with previous attempts to answer the question of the relationship between Christian theology and evolution is an over-reliance on philosophical, rather than Christological, categories. Any philosophical question that is addressed will be done so solely because it makes important contributions to the overall project of Christology in a neo-Darwinian context. Darwinian anthropology and a discussion of divine activity and influence are the only philosophical categories that will be considered as making a valuable contribution to this question.

d. Science

Stephen Jay Gould writes that Darwin's intention in writing *On the Origin of Species* was twofold: to present the fact of evolution and to suggest natural selection as its mechanism.⁴ However:

Darwin feared that people might confuse fact with mechanism, and cite the unresolved debate about natural selection as denigration for his greatest

⁴ It is important to note that the use of the word 'mechanism' here, and throughout this introduction, is in referring to the 'how' of evolution; how is that evolution happens. This term 'mechanism', however, should not be confused with the term 'mechanism' as a technical term used by Bergson (see next chapter) as an answer to this question of 'how' evolution happens. This chapter uses the term 'mechanism' in the sense of the 'method' or 'means' by which evolution happens, rather than in the sense of a 'machine', as does Bergson.

achievement in establishing the fact of evolution (Gould, 1982, p.xvii; cf. Birx, 1991, p.60, p.154)

His fear was entirely justified. Even in the twenty-first century, after 150 years of continued research and re-interpretation, the theory of evolution is still considered (by some) to be synonymous with Darwinism and is sometimes judged entirely on that basis. Thus (it is claimed by creationists) if natural selection is insufficient to account for the diversity and design in the world, evolution must be incorrect (or at least not the full picture (cf. Aczel, 2007, p.250; Smith, 1988, p.xiii, p.1; Lane, 1996, p.xi, p.60, p.88)). However, there is another problem that is created in this confusion: anyone who accepts evolution is thought to conform, by default, to the neo-Darwinian synthesis that is increasingly gaining support in the scientific world. This means, as eluded to above, that a number of theologians claim to be adhering to modern scientific data – and letting ‘science be science’ – simply by accepting the fact of evolution, yet in actual fact their description of evolution (and the model of evolutionary mechanism that they work with) is entirely incorrect.

This thesis will take seriously the neo-Darwinian synthesis. The biological reasons why this mechanism is better than any other will be glossed over, accepting the primacy of the neo-Darwinian synthesis as an axiom (cf. Weinert, 2009, p.96, p.173; O’Leary, 2007, p.132; Bynum, 2009, p.xlix; Peacocke, 2001, p.66; McCarty, 1976, p.131; Elliot, 2012, p.10; Dodson, 1984, p.150; Huxley, 1942, p.457ff.). Indeed, even Teilhard accepts that ‘neo-Darwinism at present holds the ascendancy in the eyes of biologists’ (Teilhard de Chardin, p.196).

This thesis, therefore, is not scientific in nature. It will use Dawkins’ definition of the difference between Darwinism and Lamarckism, that:

we give the name Darwinism to the theory that undirected variation in an insulated germ-line is acted upon by selection of its phenotypic consequences. We give the name Lamarckism to the theory that the germ-line is not insulated, and that environmentally imprinted improvements may directly mould it (Dawkins, 1999, p.167)

It is the former, Darwinism, that has won the day. However, it will not be concerned with arguing why that is the case, only with presenting an interpretation of that theory that highlights why it cannot be used as others have. It is then concerned with using this understanding to re-interpret Teilhard's Christology, replacing the Lamarckian influence that he inherited through Bergson.

Ultimately, of course, it may come to pass that the neo-Darwinian synthesis that is enjoying such support will itself become insufficient and a new evolutionary paradigm is needed (cf. O'Connell, 1982, p.168). At such time a new evolutionary Christology will be needed. However, this does not impinge upon the need to present a neo-Darwinian Christology now, nor that such an endeavour is not a worthwhile task (cf. Mooney, 1966, p.201). All it does mean is that scientific knowledge is provisional. Yet this scientific knowledge shapes theological discourse (assuming that Haught's third category, engagement, is adhered to), and therefore presenting a neo-Darwinian Christology is useful in its own right.

Outline of Thesis

The first chapter will present a brief overview of Henri Bergson's evolutionary theory as this provides the basis for Teilhard's own evolutionary theory. It will be

shown that Bergson's theory opposed Darwinism. Bergson is important because he provides the context in which Teilhard developed his own evolutionary theory and Christology.

Chapters two and three will discuss Teilhard de Chardin's evolutionary theory, exploring the similarities that he shares with Bergson, as well as the major themes that dominated his large corpus. Of these themes the role of matter and spirit is of special importance, and includes the idea of panpsychism. The role of what Teilhard calls "critical thresholds" – a manifestation of evolutionary direction – and the role of vision – the tension between nature and the supernatural – will also be explored. It will be shown that Teilhard de Chardin attempted to combine a Darwinian and Lamarckian theory of evolution that argued that evolution was the complexification of creation. With the complexification of matter comes a complimentary complexification of spirit and consciousness, directed towards God. In fact, it will be shown that, for Teilhard, evolution was primarily concerned with the ascent of spirit towards God, and the complexification of matter was nothing more than the outward manifestation of such an ascent. For Teilhard, this rise in consciousness means that humanity ultimately has a part to play in the continual evolutionary ascent to God – the more conscious life becomes, the more directed evolution becomes – and this is what Teilhard calls 'vision', humanity's realization that evolution is deification, and its active attempt to quicken its coming.

In chapter four it will be shown that for Teilhard this coming deification coincides with the second coming of Christ. This means, therefore, that the evolutionary ascent is the building of the body of Christ. Evolution, which is both creation and deification, is God creating a body for Christ. This means that, for Teilhard, Christ is unmistakably at the centre of his evolutionary theory. It will be

shown that the incarnation – the historical body of Christ – is for Teilhard the catalyst of evolution, the guiding force behind evolution, and the affirmation that the end of evolution is approaching. One of the more important Christological doctrines that Teilhard developed in this context is the postulation of a third Christological nature – the cosmic Christ – which Teilhard argued for in order to distinguish the historical incarnation from the sacramental or mystical body of Christ, assumed at the Parousia, when God will be all in all.

Following the discussion of Teilhard, this thesis will move onto a discussion of the neo-Darwinian synthesis together with its characteristic denial of teleology and direction within evolution. It will show that evolution is neither directed nor even a process, but simply the result of imperfect replication and copying. With reference to a number of important biologists and geneticists it will be shown that evolution is more concerned with preservation than with change, and that change only occurs when preservation is imperfect; change is an accidental byproduct of this imperfect replication. The very same deleterious effects on genes caused under laboratory conditions that cause imperfect replication are precisely the same effects noticed in nature, leading to the conclusion that evolution is only the accumulation of blindly selected errors of replication. This means that evolution is not change into something but change from something, it is always a backwards looking phenomenon rather than a forward-looking one. This leads to Jacques Monod's important conclusion, supported by Dawkins and Dennett, that the appearance of design is always a retrospective application of value from hindsight. This chapter will also consider the contributions of Stephen Jay Gould and Simon Conway Morris as representatives of arguments over the relative frequency of evolutionary change and the number of

possible mutations that are open to evolution, and the recent discipline of epigenetics, which some claim argues in favour of Lamarckism.

Such an understanding of evolution leads to a number of important philosophical and metaphysical conclusions that need to be affirmed before a reinterpretation of Christology is attempted. These issues will be a reinterpretation of anthropology and a doctrine of humanity, and a reinterpretation of theology⁵ and a doctrine of God. The primary focus of these considerations is the rejection of teleology from evolutionary theory, and the affirmation that God does not treat humanity any differently to the rest of creation. If evolution is not an advance (and humanity are not in need of salvation) then there is nothing to separate humanity from the rest of creation; if humanity is 'saved' through Christ then all of creation is. Such a position is also affirmed, it will be argued, by 'scientific' deism. In other words neo-Darwinism makes important suggestions for anthropology and theology, and these help provide a unified creation in which God is relevant to all creatures equally.

The penultimate chapter of the thesis will then consider what a reinterpreted doctrine of the cosmic Christ must look like when the old Lamarckian evolutionary theory is replaced with a neo-Darwinian one, built around the framework of the philosophical considerations discussed in the preceding chapters. It will be shown how these themes can be reinterpreted to make Teilhard's doctrine of the cosmic Christ very much relevant to modern theology. Some of the more important issues that will be tackled revolve around the constitution of the God-Man, and how a reinterpretation of the hypostatic union grounds this Christology. Likewise, and as a result of this reappraisal of the hypostatic union, the Teilhardian theme of vision will

⁵ 'Theology' is used here to refer to doctrines of God as opposed to Christology (doctrines of Christ) and pneumatology (doctrines of Spirit) or 'theology' as a wider subject area.

be reinterpreted to affirm the subjective and relative dimensions; dimensions that are supported by the neo-Darwinian synthesis.

Lastly, it will be shown that the conclusions reached in the discussion of neo-Darwinian Christology are not alien to contemporary Roman Catholic theology. Using Karl Rahner as a conversation partner, it will be shown that the themes are issues relevant to this discussion, and the problems encountered are precisely the same themes and problems that have been at the centre of Roman Catholic discourse in the late twentieth century. This helps to contextualize this discussion and show how a neo-Darwinian Christology, so expounded, can make meaningful contributions to the wider debate in Roman Catholic theology.

Chapter 2

Henri Bergson and the Theory of Evolution

As Teilhard de Chardin is so important for understanding the role of evolution in modern theology it is important to contextualize his ideas. Such a context can be found in the writing of French philosopher Henri Bergson. Birx confirms: '[Bergson's Creative Evolution] had a profound influence on Teilhard's thought' (Birx, 1972, p.5), and that 'Bergson's far-reaching influence is especially noticeable in the evolutionary synthesis of Pierre Teilhard de Chardin' (Birx, 1991, p.175; cf. Birx, 1972, p.34; Grim & Tucker, 2006, pp.64-5; Tharakan & Maroky, 1981, p.130).⁶ Teilhard himself points to his indebtedness to Bergson, referring to himself as both a Lamarckian and a Bergsonian (Teilhard de Chardin, 1965a, p.130; cf. Corbishley, 1971, p.25). He also suggested that Bergson should be used as an evangelistic tool in making Christianity appealing to the Far East, further supporting the central role that Bergson played for Teilhard (Cuénot, 1958, pp.214-5).

Grumett notes that Bergson's influence on Teilhard was far reaching, and probably extends to well before Teilhard began his intellectual career as a Jesuit. According to Grumett, 'it is likely that the [Teilhard] family, via [Emmanuel,

⁶ Other influences such as Gottfried Wilhelm Leibniz (Grumett, 2005, p.109ff; de Lubac, 1967, p.86), Maurice Blondel (Raven, 1962, p.101; de Lubac, 1967, p.178; Marnette, 1981, p.134f.), Edmund Husserl (Grim & Tucker, 2006, p.64; Cuénot, 1958, p.376; de Lubac, 1967, p.169), Maurice Merleau-Ponty (Grim & Tucker, 2006, p.64), Pierre Duhem (O'Connell, 1982, p.14, 59), John Henry Cardinal Newman (Cowell, 2006, p.193ff.), Pierre Rousselot (O'Connell, 1982, p.41; Lukas & Lukas, 1977, p.120), Ferdinand Prat (Lyons, 1982, pp.148-59) and Joseph Huby (Hale, 1973, p.36) are also suggested. However, Bergson, who directly influenced Teilhard's evolutionary position, can be seen as more important to the question at hand.

Teilhard's father (cf. Cuénot, 1958, p.3)], would have been exposed to early Bergsonian ideas' (Grumett, 2005, p.79-80). Teilhard's development from a curious child to a respected academic, even though he spent some of it in exile in the South of England, would have happened in an environment that was very receptive to Bergson's ideas. It is easy to forget that Bergson was a Nobel Prize winner of international repute, who resided near Teilhard's family (cf. Grumett, 2005, p.79). Indeed Hanson is probably right to observe, 'Teilhard could not help being influenced by him' (Hanson, 1970, p.169). Teilhard may have been swayed by Bergson's book *Creative Evolution* (1911), however the geological interests of his father, which probably first exposed Teilhard to Bergson's ideas as a child, could have provided a fertile base for Teilhard's final acceptance of evolution.

Whilst Bergson wrote a number of important works, this chapter will concentrate only on *Creative Evolution*, with the exception of a brief mention of *The Two Sources of Morality and Religion*. In this second text Bergson explicitly claims to be going beyond the theory he espoused in *Creative Evolution*, adding a religious dimension (Bergson, 1935, p.219). This thesis will set to one side Bergson's treatment of other metaphysical subjects such as time, duration, and memory, and criticism of Einstein's theory of relativity (cf. Birx, 1991, p.174), as such topics lie beyond the scope of the study.

This chapter will therefore expound the major themes of Bergson's evolutionary theory, providing a context in which Teilhard's own evolutionary theology can be explored. It will provide a brief summary of the main points of Bergson's evolutionary theory without offering much in the way of critical analysis. The important thing here is not to assess the thought of Bergson himself, but to

provide a context for the discussion of Teilhard, where Teilhard came from and in what system of thought he based his ideas.

Evolution as Progress

There are two important themes when discussing Bergson's evolutionary theory: progression, and the unity of nature. For Bergson evolution is progress, an irreversible process necessarily providing the offspring of life with a better 'set of characteristics'. To be more evolved is to be better than one's predecessor. According to Bergson:

the history of the evolution of life, incomplete as it yet is...shows us...a more and more precise, more and more complex and supple adaptation of the consciousness of living being to the conditions of existence that are made for them (Bergson, 1911, p.ix)

'Experience, then', he continues, 'shows that the most complex has been able to issue from the most simple by way of evolution' (Bergson, 1911, p.25; cf. Bergson, 1911, p.59), thus 'the essential thing is the continued progress indefinitely pursued' (Bergson, 1911, p.28). Evolutionary change is not just change but progressive change, it has a specific direction, and that direction is always towards the more complex.

This evolutionary change also provides a biological argument for the assertion that there is an essential and fundamental unity to nature; a unity that causes Bergson ultimately to claim that any teleology present in the universe must be objective (cf. Bergson, 1911, pp.43-6).

Bergson continues that ‘by following the new conception [i.e. of modern science] to the end, we should come to see in time a progressive growth of the absolute, and in the evolution of things a continual invention of forms ever new’ (Bergson, 1911, p.364). Novelty, creative novelty (in other words speciation or evolutionary change), Bergson claims, ‘arises from an internal impetus which is progress or succession, which confers on succession a peculiar virtue or which owes to succession the whole of its virtue’ (Bergson, 1911, p.360). It is difficult to find a more succinct expression of Bergson’s evolutionary theory.

Although he did not postulate a teleological end to evolution, and, indeed, criticised “finality” as a means of understanding the function of evolution, Bergson nevertheless understood the process of evolution to be progressing in a certain direction. The role that he ascribed to humanity only furthers this interpretation. He wrote that ‘everywhere but in man, consciousness has had to come to a stand; in man alone it has kept on its way. Man, then, continues the vital movement indefinitely, although he does not draw along with him all that life carries in itself’ (Bergson, 1911, p.280).

a. The Paradigm of Change

Essentially the overall ontological paradigm in which this whole theory is contained is one of change. The opening chapter of his *Creative Evolution*, which in many respects can be understood as a summation of his previous philosophical works on time and memory,⁷ is mainly concerned with placing the phenomenon of evolution within the context of a universe undergoing change. Change, or *durée* (i.e. duration), is the primary mode of existence. He wrote that

⁷ See, *Time and Free Will* (1910), *Matter and Memory* (1911). See also Pilkington (1976) and Birx (1991, p.167ff.) for a concise review of their main themes.

duration is the continuous progress of the past, which gnaws into the future and which swells as it advances...we are seeking only the precise meaning that our consciousness gives to this word “exist” and we find that, for a conscious being, to exist is to change, to change is to mature, and to mature is to go on creating oneself endlessly (Bergson, 1911, pp.5-8)

A little later, he continued that ‘the more we study the nature of time, the more we shall comprehend that duration means invention, the creation of forms, the continual elaboration of the absolutely new’ (Bergson, 1911, p.11). It is this preoccupation with ‘the absolutely new’, ‘invention’, and ‘novelty’ that came to dominate his evolutionary theory. It is precisely because of these features that he argued against both Darwinism and Lamarckism, neither of which, he perceived, could explain this ‘novelty’. Thus it was his notion of change, change as the ever creating of something new, which provided the philosophical groundwork for his evolutionary theory. There was only one objective mode of existence, and that was to change. All existence participated in the one duration.

b. “Mechanism” and “Finalism”

Bergson distinguished his theory of evolution on the one hand from what he labelled Darwinian “mechanism”,⁸ and, on the other, from Lamarckian “finalism”. Thus Bernard notes ‘Bergson articulates a fascinating understanding of evolution, one that offers an intriguing “third-way” between intelligent design theorists and neo-

⁸ Again, Bergson’s use of ‘mechanism’ should not be confused with the use of ‘mechanism’ by Gould and used in the introduction. ‘Mechanism’ is used by Bergson to suggest the image of a ‘machine’ that dispassionately goes through a process, not, as it was used in the introduction, simply to refer to the ‘how’ of evolution.

Darwinians' (Bernard, 2011, p.270). However, Bergson recognizes that he has to incline towards "finalism" in categorising his theory, writing that 'the theory put forward in this book will therefore necessarily partake of finalism to a certain extent...if there is any finalism in the world of life, it includes the whole of life in a single indivisible embrace' (Bergson, 1911, pp.42-6). In other words, Bergson saw himself to be closer to Lamarck than Darwin. He argued that any teleology must necessarily be objective (cf. Lacey, 1989, p.177).

For Bergson, one of the primary reasons for criticising "mechanism" and "finalism" was because neither "mechanism" nor "finalism" allowed for any real creation or novelty because the 'whole is given' (Bergson, 1911, p.40-1). In other words, the whole evolutionary process relies on the interaction between previously given postulates. For Bergson the fact that "mechanism" worked with previously given 'stuff', through which it changed into something else, meant that there could never be any real invention or the 'absolutely new'. The same criticism applied for "finalism". Thus there was no real change, only different configurations of the same 'stuff'. As such the concept of duration could not apply. For Bergson only something that changed could exist, and if neither Darwinism nor Lamarckism could allow for real change then they couldn't explain existence.

According to Bergson, "mechanism" simply repeats what is already postulated. As such, it is a 'merely negative influence', a 'passive adaptation', and 'mere repetition' (Bergson, 1911, p.58, p.62). It is only the following of a specific blueprint, so to speak. The same, he claimed, can be said of "finalism", which is simply 'mechanism in reverse' (cf. Birx, 1991, p.54). In the case of "finalism", since the universe is proceeding towards a final goal it is never allowed the freedom for invention or the absolutely new because it is following a 'prearranged plan'. For

“mechanism” the whole is given at the beginning whereas for “finalism” it is at the end (and, in that sense, present throughout). This means that for Bergson both Lamarckism and Darwinism represented the same problem, of not allowing for real creativity, novelty, or invention.

Whilst Bergson understood his own evolutionary theory to be opposed to these two understandings of evolution, this chapter will show that despite his arguments to the contrary it is more appropriate to see Bergson as significantly closer to Lamarckism (Bergson, 1911, p.42). In fact, it could even be claimed, whilst acknowledging that there are some nuances, that Bergson is a Lamarckian (Chettany, 1981, p.119), especially since he acknowledged an ‘internal push’ to explain evolution (Bergson, 1911, p.107; cf. Elliot, 2012, p.7), and an objective teleology (Bergson, 1911, p.180). This leaves Bergson with no option but to resort to vitalism (cf. Haight, 2000, p.61; Monod, 1972, p.34), despite his explicit criticism of it (cf. Pilkington, 1976, p.19).

c. Criticism of Darwinism

Perhaps somewhat strangely, therefore (since Bergson was critical that for Darwinism ‘the whole is given’, i.e. that everything is already determined), one of his most important criticisms of Darwinism was the accidental nature with which it ‘progresses’. In precisely the same way that many creationists and anti-Darwinians argue, so Bergson argued that it is unreasonable to suggest that the same evolutionary solution can be achieved by two divergent species, separately, solely by accident. Using the classic example of the evolution of the eye, he asks how is it possible that:

by two entirely different series of accidents being added together, two entirely different evolutions will arrive at similar results?...[Darwinism] has great difficulty in accounting for the progressive and, so to say, rectilinear development of complex apparatus such as [the eye]. How much greater will this difficulty be in the case of the similar structure of two extremely complex organs on two entirely different lines of evolution!...how could [both the vertebrate eye and the mollusc eye] have been preserved through natural selection and accumulated in both cases, the same in the same order, when each of them, taken separately was of no use...we wish merely to point out that if the variations invoked are accidental, they do not, whether small or great, account for a similarity of structure such as we have cited...how can accidental causes, occurring in an accidental order, be supposed to have repeatedly come to the same result (Bergson, 1911, pp.57-9, p.68, p.67, p.60)

In other words, without an evolutionary effort to cause life to develop an eye (i.e. vitalism), without evolution being directed by an underlying cause pushing it in a certain direction, there is no possible way for such organs to appear in multiple species by accident. He wrote that:

such convergence [of effects which combine to form a functioning eye] does not appear possible in the Darwinian, and especially the neo-Darwinian, theory of insensible accidental variations...[thus] where we fail to follow these [neo-Darwinian] biologists, is in regarding the difference in the germ as purely accidental and individual (Bergson, 1911, pp.80-90).

There is a distinct suggestion of ‘intelligent design’ behind these words (cf. Bernard, 2011, p.270). Bergson did not, importantly, argue in favour of irreducible complexity, he accepted that, for example, the eye was able to evolve over a certain period of time. However, he took issue with the Darwinian doctrine that such an evolution can happen solely by accident. Bergson acknowledged that Darwinists were ‘probably right in holding that evolution takes place from gene to gene rather than individual to individual...[but] are probably wrong when they make evolution of instinct an accidental evolution’ (Bergson, 1911, pp.179-80). Bergson simply could not accept that any change whatsoever, let alone change that produced such complex structures and life forms that is seen today, could be the result of purely accidental processes. Change is not just change but directed change, and always a change towards a greater complexity. He wrote that

it is one thing to recognise that outer circumstances [i.e. natural selection] are forces evolution must reckon with, another to claim that they are the directing causes of evolution. This latter theory is that of mechanism. It excludes absolutely the hypothesis of an original impetus, I mean an internal push that has carried life, by more and more complex forms, to higher and higher destinies (Bergson, 1911, p.107)

For Bergson, the impetus to evolve comes from within – pointing, in his terms, to the objective *durée*, or consciousness, of which all life is an offshoot. By contrast, strict Darwinism argued that all change is the result of outside influences (in the sense that natural selection is a passive force that shapes evolution), with the individual

contributing, for all intents and purposes, nothing whatsoever to the process (in terms of provoking evolutionary change).

d. Proximity to Lamarckism

Such a disagreement with Darwin clearly puts Bergson closer to Lamarck, however Bergson still nevertheless criticized Lamarckian “finalism”. Bergson’s disagreement with Lamarck is essentially the same as his criticism of Darwinism. Lacey writes that, according to Bergson, “finalism” ‘commits the same sin [as mechanism], for it “implies that things and beings merely realize a programme previously arranged”; it excludes invention, creation, and the unforeseen...it is “inverted mechanism”’ (Lacey, 1989, p.178). If there is something in the future to which evolution is heading then this teleological goal already constricts the universe into the forms that it is able to manifest itself in. Indeed, even more so than “mechanism”, there is no room for novelty and real change because the universe is following a pre-set, or directed, plan (rather than the pre-set rule of Darwinism).

Bergson continued that Lamarckians were probably wrong ‘when they regard the effort from which instinct proceeds as an individual effort’ (Bergson, 1911, p.180). By this he implied that effort played a part in the evolutionary process only when it is taken as an objective, rather than a subjective, function. In other words, his problem with the Lamarckian appropriation of evolution was that it was too subjective; it had too much emphasis on the individual. The duration, or *durée*, was, for Bergson, an objective consciousness, it was an objective element, and therefore the change that was responsible for evolution could not be an individual effort. For Bergson, if the consciousness that guided the selecting and passing on of acquired characteristics was objective, such that all individuals were merely offshoots of one

stream of duration, then this passing on of acquired characteristics could not be due to an individual effort. In other words, the giraffe did not evolve a long neck because individual giraffes strained to reach the tall trees, but because there was something objective that was causing all giraffes to do so. Thus, Bergson's problem with Lamarck was that he was too subjective. In one sense, therefore, Bergson's theory was an objective Lamarckism rather than a subjective one.

On the other hand, Lamarck's own concept of "erethism" (that an objective principle, filtered through an individual, is responsible for evolution (Lamarck, 2012, p.113, p.28)) bears comparison with Bergson. For Lamarck, the movement that produced the use of characteristics acquired and passed on was due to an outside influence, namely the vital impulse, or what Lamarck calls the caloric fluid (cf. Grumett, 2005, pp.199-200). This not only suggests that Bergson's criticism of Lamarck was incorrect, but also, in doing so, it places Bergson's own theory much closely to Lamarck's than Bergson was happy to admit.

e. Bergson's Theory of Evolution

The clearest exposition of Bergson's own theory of evolution was in his metaphor of a canister holding a jet of steam. He wrote:

let us imagine a vessel full of steam at a high pressure, and here and there in [the canister's] sides a crack through which the steam escapes in a jet...evolution of living species within the world represents what subsists of the primitive direction of the original jet (Bergson, 1911, pp.260-1)

Bergson argued that evolution is the result of a distinct vitalism within the world, which caused the continuing creation of the world. There was a vital impetus and principle present in the world (the jet of steam), which was duration and consciousness, and it was this impetus that both caused and guided evolution, that propelled life forward. The cracks in the canister represented speciation; the higher up the canister, the more complex. It was this vital impetus that was ultimately responsible for the universe as it is. Bergson called this 'élan vital', or 'vital momentum', the driving force behind evolution; 'the élan vital, for Bergson, is the ceaselessly creative cosmic consciousness...which propels the universe forward' (Bernard, 2011, p.235). Every different phylum of evolutionary development represented an 'offshoot' of this original vital force, responsible for the 'effort' of life to evolve. Each individual of evolution was a 'vessel' through which this 'steam' was filtered. Bergson's vision of the 'objective effort' behind evolution meant that he could explain it without reference to mechanism or finalism. Instead, to exist was to change, therefore evolution was a natural result of this duration, this conscious push forward. According to Bergson:

at a certain moment, in certain points of space, a visible current has taken rise; this current of life, traversing the bodies it has organised one after the other, passing from generation to generation, has become divided amongst individuals without losing anything of its force, rather intensifying in proportion to its advance (Bergson, 1911, p.27)

This provides more evidence of his vitalistic tendencies.

According to Bernard, 'Bergson claims that the "consciousness or supra-consciousness" is the creative cosmic vitality that continuously creates new worlds from a dynamic centre of being' (Bernard, 2011, p.235). The important thing here was the emphasis on unity. There was a single 'dynamic centre of being' which created change because it was duration, and duration was change – all life was an 'off-shoot' of this 'dynamic centre'. Chaudhary likewise confirms that 'Bergson regards vital impulse as the real cause of cosmic evolution...life is nothing but the very élan vital, it is pure consciousness' (Chaudhary, 1985, p.42). The unity of life was paramount; all life is just different manifestations of the same conscious, changing, objective force.

Birx also makes it clear that such a vitalism was not only the correct interpretation of Bergson's evolutionary theory, but also placed him within a Lamarckian context (cf. Lamarck, 2012, p.31). He wrote that:

vitalism has been advocated by authors of biologically oriented systems of evolution, but is best represented in the world of Lamarck and Bergson...[and Lamarck] assumed that a pervasive power in evolving nature has been propelling life toward increasing complexity and greater perfection, resulting in a branching hierarchy of zoological forms ranging from a simple protozoan up to the human species...[labelling Lamarck a] quasi-vitalist (Birx, 1991, p.32, p.54)

Thus, whilst Bergson notes that his theory of evolution tended towards finalism, his criticism of Lamarck's evolutionary theory was unfounded, since he inadvertently

ended up arguing for a Lamarckian theory himself; a nuanced Lamarckian theory of course, but Lamarckian nonetheless.

Pilkington, too, criticized Bergson for failing to take heed of his own criticisms.⁹ He wrote that ‘it is difficult to avoid the conclusions that such a use of “life” [i.e. consciousness and *élan vital*] as a cosmic principle is open to the fatal criticism levelled by Bergson himself at the attempts of philosophers to reduce everything to one animating principle’ (Pilkington, 1976, p.19), and thus in precisely the same way that Bergson criticised Darwinism and Lamarckism for reducing the evolutionary principle to the ‘whole being given’, everything in Bergson’s evolutionary theory is reducible to the *élan vital*. The same criticisms that he levelled at mechanism and finalism, at Darwinism and Lamarckism (namely that of the need for real change and novelty and the rejection of vitalistic teleology), become precisely the same criticisms applicable to Bergson’s own theory.

f. Theological Interpretations of Bergson’s Theory

However, what was more important than this ascription of evolutionary change to a life force that penetrates all of life, was the idea that this life force, this *élan vital*, was God. Bergson, ‘in a rare use of theological language, explicitly labels [this *élan vital*] “God”’ (Bernard, 2011, p.235) – i.e. ‘God is unceasing life, action, freedom’ (Bergson, 1911, p.262) – which it has already been established was change, duration, and novelty. Pilkington also commented on this aspect of Bergson’s work, writing that ‘the term God in Creative Evolution comes effectively to denote no more

⁹ It is interesting that Elliot notes that Lamarck, himself, ‘repudiated altogether a “vital principle”’ (Elliot, 2012, p.18), in other words he recognized, as did Bergson, that appealing to a vitalistic principle was incorrect, yet, again like Bergson, could not develop a theory without one.

than the world itself in its dynamic aspect' (Pilkington, 1976, p.25). All change, all duration, all consciousness was now identified as God, or as the action of God.

In his later work *The Two Sources of Morality and Religion*, Bergson returned to the question of how God fit into his theory of creative evolution, explicitly stating that he added to, or went beyond, the theory he outlined in his previous work (Bergson, 1935, p.219). He wrote that love, specifically the love of the Christian mystic (which is 'a creative energy which is love' (Bergson, 1935, p.220)), coincided 'with God's love for his handiwork, a love which has been the source of everything' (Bergson, 1935, p.200). Moreover, 'its direction is exactly that of the vital impetus [i.e. *élan vital*]; it is this impetus itself, communicated in its entirety to exceptional men [i.e. mystics] who in their turn would fain impart it to all humanity' (Bergson, 1935, p.201). This love was God himself. He was not separate from his love (Bergson, 1935, p.216), thus God himself caused evolution to happen, he was the driving force behind it, he was the effort that was needed that caused life to evolve into greater and greater complexity and more concentrated consciousness. God was the *élan vital*; this meant, therefore, that Bergson implicitly, and in a rather elementary form, expounded a doctrine that would later come to be known as theistic evolution: that it is God who causes evolution to happen, and directs its cause through varying degrees of influence (cf. Bernard, 2011, p.270). Evolution is how God creates.

Bergson also understood that this life force represented the consciousness of the individual. Along with pantheism (that the objective consciousness or *élan vital* was God), he also argued for panpsychism (that one objective consciousness that propels evolution and was 'filtered' throughout the universe, becoming the

individual's own effort to change and evolve (cf. Birx, 1972, p.37; Grim & Tucker, 2006, pp.64-5)). Bernard writes that Bergson:

posit[s] the active, creative presence of a cosmic consciousness within each one of us. It is very clear, for him, that our personal consciousness is a direct manifestation of the *élan vital*. It is equally clear that the *élan vital*, for Bergson, is that which seemingly effortlessly coordinates and directs and impels the countless, astonishingly intricate physiological activities that come to make up all living organisms, including our own (Bernard, 2011, p.235)

Every single individual of nature was an extension of the one guiding consciousness of the universe, a consciousness that determines the history of the universe, and this consciousness was identified with God. Bernard continued that 'in Creative Evolution, Bergson equates consciousness with the *élan vital*, making our own consciousness into simply one rather limited instantiation of a vaster, quasi-divine, cosmic evolutionary impetus' (Bernard, 2011, p.217), hence the objective nature of duration.

All life, all change, the whole course of evolution, was directed by God, who was the vitalistic impulse itself. The 'jet of steam', which escaped from cracks in the canister, was God (or at the very least the love of God), and all life was an off-shoot of this main stream, all matter was animated by this jet of stream and this jet of stream was God. It was a manifestation of that objective, single, stream of consciousness. Bergson wrote that 'it is consciousness, or rather supra-consciousness, that is at the origin of life...[consciousness] is the name for that which subsists of the rocket itself, passing through the fragments and lighting them up into organisms' (Bergson, 1911,

p.275). Consciousness was life itself, it was the guiding principle of evolution and it was life; consciousness and life were synonyms, where life as consciousness presides, and one was alive to the degree that consciousness (or for Bergson the *élan vital*) was present in them. This objective *durée*, the objective duration, was the consciousness of all life. In this way, the impetus to evolution, the process of evolution itself, was caused by life, it was the effort of life and nature itself to evolve, the opposite to Darwin's theory of accidental genetic change, thus supporting the interpretation that actually Bergson's evolutionary theory was more inclined towards Lamarckism (cf. Lamarck, 2012, p.95).

Thus, despite Bergson's protestations to the contrary, his philosophy cannot shake the label of pantheism. Pilkington acknowledged that Bergson understands that this "creative energy" ...is God himself" (Pilkington, 1976, p.22). He could not both argue a) that God was synonymous with the life impetus, that the cause of all life and evolution was God directly, and b) that this God was also separate and autonomous from his creation. It is important to note that Bergson did not explicitly identify himself as a pantheist. The inclusion of God into Bergson's theory was more of an afterthought. However, the identification of a postulated objective stream of consciousness means that Bergson could not escape the charge of pantheism.

Consciousness: Panpsychism and Pantheism

Bergson's idea of an objective stream of consciousness, that was responsible for guiding and directing the evolutionary movement, was equated not just with a divine influence, but also with God himself. Consciousness for Bergson, therefore, leant towards panpsychism. However, Bergson did not stop there. Consciousness came to occupy a much larger role in the way he described and understood the

mechanics of evolution, and, perhaps more importantly, how this objective *durée* came to be manifested in the individual.

a. Panpsychism

For Bergson, consciousness was separate from the brain. Or more precisely, consciousness did not originate in the brain, which was only a 'vessel' through which consciousness was filtered. He wrote that

consciousness does not spring from the brain; but the brain and consciousness correspond because equally they measure, the one by the complexity of its structure and the other by the complexity of its awareness, the quantity of choice that the living being has at its disposal (Bergson, 1911, p.277)

Bernard clarified that 'while our subconscious levels of awareness may be filtered in and through the brain (thus creating wide-ranging cerebral effects), these subconscious levels of awareness are not produced by the brain' (Bernard, 2011, p.219).

For Bergson, although consciousness did not originate in the brain, the degree to which consciousness was exhibited in the individual directly correlated to the size of the brain:

the increasing complexity of the organism is therefore due theoretically (in spite of innumerable exceptions due to accidents of evolution) to the necessity of complexity in the nervous system (Bergson, 1911, p.256)

In this way, there was a primitive manifestation of what Teilhard would later call the law of complexity-consciousness; the more complex the brain, the more consciousness it can appropriate.

Although the cause of consciousness was external to the nervous system, the degree to which the individual was conscious and aware was dependent on the nervous system. Bergson was explicit in this regard, writing that ‘in animals with a nervous system, [consciousness] is proportional to the complexity of the switchboard on which the paths called sensory and the paths called motor intersect – that is, of the brain’ (Bergson, 2011, p.275).

In noting the causal and correlative relationship between matter and consciousness, between the ‘complexity of its structure’ in one and the ‘complexity of its awareness’ of the other, it is also important to remember that consciousness was the primary of the two. Bergson continued that ‘the whole history of life until man has been that of the effort of consciousness to raise matter’ (Bergson, 1911, p.278). It was consciousness that gave matter the impetus to raise itself. Consciousness was the cause of evolution, as was noted above. Evolution was the effort, not of the individual, but of the ‘collective consciousness’ to force evolution ‘upwards’ to force it to change, and it was this that had a causal effect on matter and evolution. Such was the content of Bergson’s criticism of Lamarck.

Elsewhere Bergson wrote that

neither this mobility, nor this choice [of the *élan vital*], nor consequently this consciousness involves as a necessary condition the presence of a nervous system; the latter has only canalised in definite directions, and brought to a higher degree of intensity (Bergson, 1911, p.116)

To be conscious does not require the process of cephalisation and the formation of complex nervous system such as have occurred in humanity. However, the presence of such a system intensified and concentrated consciousness to a greater degree. An example of this could be the relationship that the sun has with a magnifying glass; the sun does not need the glass to shine its light on the world, but through the filter of the glass its rays are intensified.

Again, Bergson wrote that, ‘the truth is that the nervous system arises, like other systems, from a division of labour, it does not create the function, it only brings it to a higher degree of intensity and precision’ (Bergson, 1911, p.116). Thus, again, there is this sense of a progressive evolution, and such a progression was manifested in the intensity of consciousness, in the concentration of consciousness. There is a distinct emphasis on the benefit to the individual of a more complex nervous system. Yet, whilst noting that the presence of such a system is not the sole requirement for the possession of consciousness, all matter, all extension (cf. Bergson, 1911, p.199), has consciousness to some degree. There was a definite direction to Bergson’s postulation of panpsychism. Thus, the direction in evolution, the complexification in evolution, was judged entirely on the basis of the manifestation of consciousness. It was consciousness that permeated through matter, that extended itself in the universe, and in certain evolutionary directions, concentrated itself. Indeed ‘life [is] consciousness launched into matter’ (Bergson, 1911, p.191), and therefore ‘life is of the psychological order’ (Bergson, 1911, p.271).

One of the important elements of Bergson’s panpsychism, necessitated by the fact that consciousness was seen as separate from the nervous system, was that

consciousness, in manifesting itself as life in proportion to the nervous system, was also manifested in proportion to movement; in other words, not only is there a causal relationship between the concentration of consciousness in the degree that certain evolutionary off-shoots have developed brains, but there was also a causal relationship between the development of a central nervous system and the potential for movement that such a direction has developed. According to Bergson, 'in organisms unprovided with a nervous system, [consciousness] varies according to power of locomotion' (Bergson, 1911, p.275). Bergson continued:

the humblest organism is conscious in proportion to its power to move freely...[and that] from this standpoint, and in this measure, we should define the animal by sensibility and awakened consciousness, the vegetable by consciousness asleep and by insensibility...[and that consciousness] probably awakens in the vegetable that has regained the liberty of movement, and awakens in just the degree to which the vegetable has regained this liberty (Bergson, 1911, p.117-8)

The vegetable, therefore, is not 'actively' conscious. It is probably not aware of its environment (due to the lack of sense organs and nervous system), and it is almost certainly not self-aware. It is certainly not conscious in the same way that animal life is. However, that does not negate the possibility that it has a rudimentary potential for this form of consciousness. In this direction it is perfectly reasonable to suggest that were plants to eventually develop a need and a means to move, such a movement would be a precursor to the development of a nervous system. It may even be possible to suggest, in this direction, that as some plants 'follow' the path of the sun, so they

have a correlative consciousness – just as there is a direct correlation between complexity and consciousness, so there is a direct correlation between movement and consciousness.

b. Panpsychism and Lamarckism

Once again, behind Bergson's theory of consciousness was a latent Lamarckism. The idea that a nervous system would always develop in any life that has developed the capacity for movement is a clear example of the internal and conscious effort of the *élan vital*, and certainly a primitive doctrine of acquired characteristics. Bergson would claim that since Lamarck attributed the evolutionary effort to the individual there is no such problem, for he himself attributed evolutionary effort to the vitalistic principle (Bergson, 1911, p.107) – it is not the individual that is striving but the *élan vital*.

However Lamarck observed that:

I soon perceived that the intelligent acts of animals are, like their other acts, phenomena of animal organisation, and that they take their origin from the relations existing between certain moving fluids and the organs which produce these wonderful acts (Lamarck, 2012, p.137)

Therefore, the likeness between Lamarck and Bergson, the common ground they share, can be seen. Lamarck, like Bergson, attributed evolution to a vitalistic principle, a vitalistic principle that may tentatively be understood as God (cf. Lamarck, 2012, p.39, p.49). If there is a difference between Lamarck and Bergson, it

is a difference of emphasis. Bergson was more explicit in expressing the objective element of both systems.

Bergson wrote:

it is impossible to consider some of the special instincts of the animal and of the plant, evidently arisen in extraordinary circumstances, without relating them to these recollections, seemingly forgotten, which spring up suddenly under the pressure of some urgent need...we shall suppose that it is by an effort, more or less conscious, that the living being develops a higher instinct (Bergson, 1911, p.176, p.179)

According to Bergson, Lamarckians are probably right in 'saying that at the origin of instinct there is an effort' (Bergson, 1911, p.179). Once more, there is a clear description of a vitalistic principle, a single objective consciousness, which caused the evolutionary movement through change and duration, and thus also caused a higher concentration of intelligence and consciousness.

Panpsychism is at the bottom of this theory of evolution. In fact, not only does Bergson's evolutionary theory not work without panpsychism, but also, in its final manifestation (i.e. in *The Two Sources of Morality and Religion.*), it cannot work without pantheism either. The love of God moves matter, and in moving it, gives it extension and locomotion, gives it duration. In doing so this love of God, this élan vital, this consciousness, becomes more concentrated and intensified, leading eventually, but not finally, to humanity, in whom alone consciousness has emerged in

an individual mode. 'Man then continues the vital movement indefinitely' (Bergson, 1911, p.280).

c. Consciousness and the Survival of Death

Bernard also notes that precisely because there is a distinction between the nervous system and consciousness there is the possibility to suggest that consciousness can survive biological death. He writes that

if this is true and consciousness actually is not dependent upon the brain for its existence, but instead has its own independent, flowing, continuous existence, then it seems to me that after the death of our physical body we should perhaps expect a radical change in the form of our consciousness, but not its utter disappearance (Bernard, 2011, p.261)

Indeed, if consciousness is not dependent on the brain for its formation but only its manifestation, then it may be possible to suggest that such consciousness can survive death. However, if consciousness is simply the manifestation of an objective stream of consciousness then that survival cannot be an individual survival. Whilst Bernard touches upon an important point the question remains as to whether there is a survival of personal identity. In other words if consciousness is objective, such that Bergson cannot escape the criticism of pantheism, then he cannot escape the criticism of the loss of the individual either. Ultimately, the individual is lost to the objective consciousness.

The loss of the individual, the exclusion of the individual from any survival of death, was always going to be a problem when panpsychism was appealed to,

especially when such a panpsychism was linked to the evolutionary process and a doctrine of intelligent design of theistic evolution.

Conclusion

Bergson must be considered a 'pantheistic evolutionist', who was sympathetic to intelligent design and theistic evolution. He was a panpsychist, separating consciousness from the nervous system and believing it to permeate all matter. For him, life is nothing but the manifestation of consciousness. Indeed, consciousness/life is the *élan vital*, the life force or impetus. The more concentrated this impetus became, the more complex life or matter became, thus betraying a vitalistic evolutionary theory.

In this way, Bergson must be considered a Lamarckian, despite his own criticism of Lamarck and neo-Lamarckism. Although he attributed the *élan vital* to a collective consciousness rather than the individual consciousness (Bergson, 1911, p.250), it was still the effort of creation or life itself that propels and moves evolution, especially when he explicitly notes that evolution is directed by particular needs of life.

The life impetus that causes evolution, however, was as much God as it was life itself, and thus he must be labelled a pantheist as well. This "evolution/God" also served to push life forward, to the more complex forms of life, and humanity represented the crowning achievement of evolution so far – 'everywhere but in man, consciousness has had to come to a stand; in man alone it has kept on its way. Man, then continues the vital movement indefinitely, although he does not draw along with him all that life carries in itself' (Bergson, 1911, p.280).

Bergson thus represents a progressive evolution centred upon the rise and evolution of a correlative progress of consciousness and complexity, caused by the effort of a pantheistic conception of nature, life and God. It is not too much to claim that “all” Teilhard did was expound an overtly Christian interpretation of this very idea.

Chapter 3

Teilhard de Chardin's Theory of Convergent Evolution

Teilhard de Chardin, born in 1881 in the Auvergne region of France, grew up in an intellectual environment in which Bergson was a leading and world-renowned academic. It was inevitable that Teilhard would come to be influenced by his evolutionary theory, rather than the Englishman Darwin (cf. Grim & Evelyn Tucker, 2003, p.18; Cuénot, 1958, pp.214-5).¹⁰ What set Teilhard apart from Bergson, however, was that Teilhard held a very definite and explicit religious conviction that informed his evolutionary theory. Although Bergson did, eventually, interpret his *élan vital* along religious lines, his God was the impersonal God of the philosopher, not the personal God of Christianity. For Teilhard de Chardin, on the other hand, the role of God was primary, and he therefore interpreted the distinctly French progressive evolutionary theory of Bergson (Galleni & Scalfari, 2006, p.161) and Lamarck (Midgley, 2002, p.7) from a Christian, specifically Roman Catholic, perspective (Teilhard de Chardin, 1968a, p.57). Teilhard de Chardin, therefore, represents what Bergson would have looked like had he been Roman Catholic.

Unsurprisingly, therefore, the role of evolution in Teilhard's theology is much as it is in Bergson's philosophy. Evolution dominated Teilhard's theological outlook, and everything revolved around this locus of dynamic change. For Bergson, evolution dictated the changing nature of the universe, and this led him to formulate his anti-

¹⁰ It may also be important that Teilhard was, professionally, a paleontologist, and Huxley notes that paleontologists are more likely to come to a Lamarckian theory of evolution as orthogenesis because of the nature of the fossil record (cf. Huxley, 1942, p.31 & p.38).

platonian notion of reality as change (cf. Bergson, 1911, p.8). Teilhard accepted this principle with only one slight nuance; he replaced the idea of 'change' with 'union' (de Lubac, 1967, p.198). For Teilhard, therefore, 'fuller being is closer union' (Teilhard de Chardin, 1959, p.31). Change, for Teilhard, is not just something new or different, it is uniting; change is change into something more united. 'The whole of evolution', wrote Teilhard, is 'reduced to a process of union (communion) with God' (Teilhard de Chardin, 1978, p.144).

This chapter will present Teilhard's evolutionary theory, showing the similarities and differences with Bergson and, at times, with Lamarck (Forsthoefel, 1961, p.106). This discussion will be divided into a number of sections, outlining the important elements of Teilhard's theory. The most important of these elements are the understanding of evolution as a progression and complexification, and seeing evolution as convergence rather than divergence. Understanding evolution as a convergence leads to Teilhard's doctrine of 'critical thresholds', which will also be explored. This discussion will provide the foundation for the next two chapters in which the relationship between matter and spirit and the role of Christ will be explored respectively.

Method: Teilhard as Scientist

Before Teilhard's evolutionary theory is discussed, a few comments need to be made regarding what Teilhard thought he was doing and on his methodology. In the opening paragraph of Teilhard's most famous work, and the only work in which he offers a sustained, book-length, systematic treatment of his evolutionary theory, he wrote that:

if this book is to be properly understood, it must be read not as a work on metaphysics, still less as a sort of theological essay, but purely and simply as a scientific treatise (Teilhard de Chardin, 1959, p.29)

This does not mean that Teilhard always understood what he was doing as science, but it does mean that he saw the evolutionary theory that will be presented in this chapter as ‘purely’ scientific.¹¹

Perhaps one of the reasons behind such an assertion is the fact that ‘in September, 1947...[Teilhard] was told to write no more philosophy’ (Cuénot, 1958, p.266). Teilhard, always respectful of authority, would have been very keen to show his superiors that he was obeying their commands and that he was not attempting to converse on topics of theology or philosophy, but was adhering to their mandate of writing only on science.

However, many commentators have questioned the scientific ‘badge’ that has been placed on this work. It is interesting that when Harper and Collins conducted a survey of the most important spiritual books published in the twentieth century, ‘Teilhard’s *The Phenomenon of Man* was found to be number one’ (Salmon, 2011, p.2). McCarty also evidences the non-scientific nature of Teilhard’s work, writing that because Teilhard’s projections are based upon non-laboratory work, ‘this has caused many orthodox biologists to reject Teilhard as non-scientific and his program as fantasy’ (McCarty, 1976, p.131).

What Teilhard did, rather, was to take what he knew about the past ‘scientifically’ and use it to postulate a future ‘theologically’ (cf. Lane, 1996, p.19; Smith, 1970, p.47; Blair, 1970, p.95; Cuénot, 1958, p.146, p.212; McCarty, 1976,

¹¹ For a discussion of Teilhard’s science see McCarty, 1976, p.36ff, pp.130-3; Kropf, 2006, p.144; Teilhard de Chardin, 1959, p.47n1.

p.83; Maroky, 1981, p.20; O'Connell, 1982, p.135). 'The past', Teilhard claimed, 'has revealed to me how the future is built' (de Lubac, 1967, p.97). Already there is comparison with Bergson, who once claimed that 'the extent of our future is very much dependent on how far back we go into the past' (Fox, 1988, p.107). If the process of evolution reveals certain elements about the world now, then it is reasonable to postulate a future in which such evolutionary processes continue. Most of Teilhard's theological conclusions, with specific reference to his eschatology, were, he believed, the result of purely scientific arguments. Teilhard did not separate science and religion into separate spheres, he clearly saw them as informing one another; science informed theology.

There has, therefore, been some scholarly debate as to how to properly categorize Teilhard. Most scientists criticize Teilhard for failing to espouse a pure science, yet theologians and philosophers also likewise reject him. Francoeur observes that Teilhard's theology 'is not what we should ordinarily call "science" and yet it does not fall into the category of metaphysics or theology' (Francoeur, 1961, p.11). Lane, noting this criticism, therefore prefers to understand Teilhard primarily as a mystic (Lane, 1996, p.30).

However, Teilhard himself acknowledged that 'I am neither a philosopher nor a theologian, but a student of the "phenomena" in the old Greek sense' (Reilly, 1961, p.51). O'Connell agrees that Teilhard should be considered a scientist in the same way that Aristotle was (O'Connell, 1982, p.170). In this way, especially noting that Teilhard thought that 'as we draw nearer to the whole, physics, metaphysics, and religion strangely converge' (Teilhard de Chardin, 2004, p.119), it is difficult to understand exactly what Teilhard considered himself to be. Nevertheless, this thesis

will understand Teilhard as a theologian, as someone who attempted to incorporate evolution and theology, acknowledging that, whilst there may be other elements to his work, it is the theological elements that are of concern. Taking this into account, this chapter will focus only on his theological conclusions and the contribution he made to the conversation of religion and science.

Evolution as Progression: Some Preliminary Points

With an understanding of what Teilhard thought he was doing, i.e. present a theory that draws on both science and theology with a strong mystical bent, it is necessary to present some preliminary points regarding this theory itself before it is considered in some detail.

a. Progress

The most important comment that can be made regarding Teilhard's evolutionary theory is that it is concerned, almost exclusively, with progress. 'Progress...[is] perhaps the essential element in [Teilhard's] philosophy' (Turk, 1970, p.11). Indeed, 'Teilhard was absolutely dedicated to the idea of progress...[and] all of this was, to his mind, identified with and supported by the emergent evolutionary process' (Berry, 2003, p.58). Evolution is not a neutral process; it is not something that simply happens to the universe. Evolution drives creation into something that is inherently better and more complete. Evolution is the process by which creation is brought to its completion. Evolution is not just a creative process; it is the process of creation.

Bergson wrote that 'no doubt there is progress, if progress means a continual advance in the general direction determined by the first impulsion' (Bergson, 1911,

p.109). Teilhard takes over this outlook. He wrote that ‘those who look reality in the face cannot fail to perceive this progressive genesis of the universe, and with a clarity which leaves no room for doubt’ (Teilhard de Chardin, 2004, p.3). For Teilhard, this observation of progress in the world was unmistakable, it was obvious; no one could look at the world around them and fail to see this progress.

b. Teilhard as Creationist

Teilhard also took over Bergson’s assertion that God controls this evolutionary process (McCarty, 1976, p.55). If evolution is the act of creation, and it is God who creates, then it is God who guides evolution (cf. Faricy, 1981, p.56; Brix, 1991, pp.26-7). ‘A creation of an evolutionary type’, wrote Teilhard, ‘has for long seemed to some very great minds to be the most beautiful form imaginable in which God could act in the universe’ (Teilhard de Chardin, 1966, p.154).

This means that Teilhard’s evolutionary theory falls into the category of theistic evolution or intelligent design (as did Bergson’s). Evolution is a tool by which God creates, as Teilhard writes ‘[we] can see only one way in which it is possible for God to create – and that is evolutively, by process of unification’ (Teilhard de Chardin, 1975, p.198). Peters and Hewitt confirm such a categorization of Teilhard’s thought. Both in terms of accounting for divine action in the world and in terms of positing a causal explanation for the world they place Teilhard nearer to the category of intelligent design than any other category of explanation for creation. They write that ‘Teilhardianism is somewhat more gradual than ID; yet both find divine design embedded in nature’ (Peters and Hewitt, 2003, p.32; cf. Rescher, 2009, p.106). Although there are differences in rhetoric, the basic underlying principles are the same. Teilhard never understood himself as an advocate of intelligent design in the

modern sense of the term (cf. Weinert, 2009, p.139ff.), nor did he argue for the presence of irreducible complexities, however, because he saw the process of evolution as being controlled by God to bring about his creation, the principle behind the two views is the same.

Evolution is how God creates. Evolution is thus completely guided by God (Mortier, 1973, p.52). As such, he must be categorized as an exponent of intelligent design; the world has been designed by an intelligent mind, and that mind uses the process of evolution to bring about such design.

This categorization of Teilhard as an exponent of intelligent design also means that, referring to the discussion in the introduction (cf. Peters & Hewlett, 2003, p.103; Collins, 2007, p.183; Dupré, 2009, p.169; Numbers, 2010, p.137), Teilhard is an exponent of creationism. Any doctrine of intelligent design or theistic evolution is, in principle, a form of creationism (Hale, 1973, p.81). By claiming that God creates – that evolution is simply a means to the end of creation – Teilhard is essentially a creationist; certainly he is not a ‘young-Earth’ creationist, nor a denier of evolution, but a creationist nonetheless.

Teilhard's Evolutionary Theory as Complexification, Consciousness, and

Convergence

There are essentially three main facets that characterize Teilhard's theory of progressive evolution. These are a) complexification, b) the role of consciousness, and c) convergence. These will be treated in turn before the role of what Teilhard called ‘critical thresholds’ is explored. This last element of Teilhard's theory is properly a part of the discussion on convergence, but can be seen as incorporating all three of these main themes.

Complexification

a. Complexification as Progression

The progressive evolution of the universe, for Teilhard, took the form of the increasing complexification of the universe; from simple beginnings evolution produces all the intelligent life in the world. Teilhard wrote that ‘matter has obeyed from the beginning that great law of biology to which we have to recur time and again, the law of “complexification”’ (Teilhard de Chardin, 1959, p.48).

For Teilhard, complexification is not just a phenomenon of nature; it is a fundamental law of nature that cannot be disobeyed. For Teilhard, evolution is not just about the changing form of the universe, it is not just about producing different manifestations of life. Evolution is not a directionless process. Rather, evolution has a definite direction. Evolution is a process that produces more complex manifestations of life. Teilhard argued that life does not just multiply, but this multiplication is also an ‘ascent’ (Teilhard de Chardin, 1959, p.109). This was the way that Bergson understood evolution. For Bergson, evolution was not just change for change’s sake, it was change in a definite direction.

Teilhard also termed this complexification in a definite direction ‘additivity’. In the *Phenomenon of Man* he wrote that matter ‘add[s], one to the other, and their sum increases in a pre-determined direction’ (Teilhard de Chardin, 1959, p.108). Teilhard also claimed that this ‘complexity increases in geometrical procession’ (Teilhard de Chardin, 1959, p.60). This means that evolution is a process of adding ‘bits’ to one another, forming more complex ‘bits’. The more evolved is more complex because it is made of more ‘bits’ of matter. This becomes important in the

following chapter when the role of spirit is considered, but for now it is important to note this aspect of evolution for Teilhard.

However, the most common term that Teilhard employed when discussing complexification was ‘orthogenesis’. Teilhard described ‘orthogenesis’ as ‘the manifest property of living matter to form a system in which “terms succeed each other experimentally, following constantly increasing degrees of centro-complexity” (Teilhard de Chardin, 1959, p.108n1), confirming that he saw it as a synonym for complexification in a certain direction. However, in his lexicon of Teilhard’s work, Cowell provides a more helpful definition of what Teilhard meant by the term ‘orthogenesis’. He writes that:

in a biological sense, [it is a] cumulative series of small anatomical (and psychic) mutations oriented in the same direction, thereby constituting a phenomenon of continuous growth in the same direction...in a phenomenological sense, [it is a] a fundamental shift according to which the stuff of the universe seems to shift towards corpuscular states of increasing complex material arrangement – states that, psychically, are increasingly interiorized (Cowell, 2001, p.137)

This process of ‘orthogenesis’, therefore, characterizes evolution for Teilhard.

Evolution is a ‘cumulative’ process of growth in the same direction that leads to an ascent of matter.

‘Orthogenesis’ also has a purpose behind it. As it has already been claimed, evolution is not a directionless process but has a definite direction and purpose to it. McCarty notes this element of ‘orthogenesis’ writing that ‘orthogenesis says that

change is not completely random but there is purpose working in every change of species and phyla' (McCarty, 1976, p.70). This gets to the heart of the matter for Teilhard. Evolution is neither a random, nor an accidental, process; it is being driven in a certain direction, and that direction is an ascent to God. In short, 'orthogenesis' affirms direction rather than randomness, and purpose rather than accident.

In this direction Mooney notes the importance of the word 'genesis' itself for Teilhard's evolutionary theory. He writes that 'we are not simply face to face with "change" in the world but with the "genesis", which is something quite different' (Mooney, 1996, p.51). The word 'genesis', or, more specifically, the French word 'genèse', 'applies to any form of production involving successive stages oriented towards some goal' (Mooney, 1966, p.51). In other words evolution is not simply change, or even directed change, it is teleological change; evolution is progression towards a specific goal. This means that evolution is only a means to an end. Evolution is not a continuous ascent or an infinite progression; it has an end, a goal to which it is heading. Creation will be complete at a future point in time. Teilhard called this point the 'Omega Point'.

b. Orthogenesis as Bergsonian Novelty

Essentially, the concept of orthogenesis is a reinterpretation of the Bergsonian idea of novelty (cf. O'Connell, 1982, pp.156-7; Simpson, 1973, p.93), although Bergson did not postulate an end to the evolutionary process as Teilhard did. In *Phenomenon of Man* Teilhard wrote that 'without orthogenesis life would only have spread; with it there is an ascent of life that is invincible' (Teilhard de Chardin, 1959, p.109). Without 'orthogenesis' life would have only multiplied, it would not have changed, it would not have progressed and complexified. However, with

‘orthogenesis’ real novelty is possible; evolution produces something new. Evolution, as for Bergson, does not simply produce different aggregations of the same matter; evolution produces something that is really new. In much the same way that Bergson criticizes mechanism and finalism for failing to account for novelty and newness, so Teilhard argues that without ‘orthogenesis’ the same problems are present, there can be nothing new.

Forsthoeffel also notes this element of Teilhard’s evolutionary theory. Pointing to Mendelian genetics (which will be considered in the chapter on Darwin below) he writes that

Teilhard asserts that orthogenesis is the dynamic and only complete form of heredity, and that heredity conceived as involving only the recombination and shifting of characters according to Mendel’s laws brings about nothing really new (Forsthoeffel, 1961, p.108)

According to Teilhard, following Bergson, Darwinism cannot produce anything new. Darwinism can only account for change, not for progression. ‘Orthogenesis’ represents this idea of dynamism for Teilhard, and thus forms an integral part of this evolutionary theory. Indeed, ‘orthogenesis’ is the reason there is evolution in the first place. ‘Orthogenesis’ is the real change that life goes through. That change, for Teilhard, was one of complexification and geometric addition.

Consciousness

a. Consciousness as Progress

The second principle of Teilhard's evolutionary theory, again following Bergson, is that the complexification of the universe is correlative to an increasing concentration and deepening of consciousness. 'Life', for Teilhard, 'is the rise of consciousness' (Teilhard de Chardin, 1959, p.153), and that 'evolution is an ascent towards consciousness' (Teilhard de Chardin, 1959, p.258). This means that, if there is a correlation between complexification and consciousness then, as Teilhard argued, it is consciousness that is first and foremost the 'marker' of complexity; the more conscious the individual then the more complex and the more evolved.

Maroky, in his book *Convergence*, asks whether there is 'an objective standard of complexity that can be applied to all organisms?' acknowledging that 'Teilhard believes that there is...[namely] the development of the brain-centred nervous system' (Maroky, 1981, p.13). In *Phenomenon of Man*, Teilhard asked by what reason 'can we say that a mammal, or even a man, is more advanced, more perfect than a bee or a rose?' following that 'I believe I can see a direction and a line of progress for life' (Teilhard de Chardin, 1959, pp.141-2). Cerebralization, Teilhard wrote, 'provides a direction; and therefore it proves that evolution has a direction' (Teilhard de Chardin, 1959, p.146). For Teilhard, the emergence of increasingly greater centres of consciousness proved that there was a direction to evolution, just as it did for Bergson before him. It is consciousness that provides the 'test' of how complex evolution has become, and, therefore, that evolution is progressing in a definite direction (Teilhard de Chardin, 2004, p.56).

Teilhard likewise wrote that 'we shall then see that a vast evolutionary process is in ceaseless operation around us, but that it is situated within the sphere of consciousness' (Teilhard de Chardin, 2004, p.6), and that 'it is better, no matter what the cost, to be more conscious than less conscious...this principle, I believe, is the

absolute condition of the world's existence' (Teilhard de Chardin, 1971, p.108). Not only is evolution characterized by an increase in consciousness, but this increase is also explicitly seen as progress. There is a significant judgment value placed on the increasing consciousness of life. Evolution is always progress into something better.

There is clearly a link here with Bergson, who himself argued that the increasing progression of evolution was manifested in the increasingly complex nervous systems of individuals (Bergson, 1911, p.277). For Bergson, the consciousness of the individual was due to the *élan vital* being filtered through the brain. This meant that the more complex the brain, the more conscious the individual. For both Bergson and Teilhard, this led to a doctrine of panpsychism, which will be dealt with in the next chapter. For the purposes of this chapter it is important to note the relationship between consciousness and complexity, and the comparison between Teilhard and Bergson.

b. Teilhard as Synthesis between Lamarck and Darwin

As well as the ideas of complexification and 'orthogenesis', Teilhard also used the concept of 'groping' to explain this process of directed evolution. 'Groping', wrote Teilhard, 'is directed chance' (Teilhard de Chardin, 1959, p.110). The more conscious life is the more focused and directed evolution is. In the early stages of evolution, before self-conscious beings emerged, chance dominated the evolutionary process. However, this chance was not random chance, as it is for Darwinism, but chance informed by instinct or habit. This chance was not 'mere' chance, it was not 'blind luck', but chance directed towards a specific goal. Thus, Teilhard '[differentiated] his own theory from the classical Darwinist conception by telling us that it would be a mistake to interpret "groping" as mere chance' (Smith, 1988, p.11).

At the 'lower' stages of life "mechanism", i.e. Darwinian chance, is the dominant influence on evolution; evolution 'gropes' forward rather than thrusts forward with conviction. As evolution continues, as life becomes more complex and conscious, this 'groping' becomes less and less open to chance, and more and more definite in its direction. At some point in the evolutionary process, that point at which humanity emerged, evolution became 'conscious of itself' (Teilhard de Chardin, 1959, p.221), and consciousness became so dominant that there was no longer any luck involved in the evolutionary process, or at least a negligible amount of chance. Teilhard wrote that

in pre-human life... [consciousness] appears but still has only a slight influence on the growth of [material arrangement], which is still mainly automatic.

Starting with man...[consciousness], now reflective, takes over to a large extent the function of developing the progress of [material arrangement] (Teilhard de Chardin, 1965, p.207; cf. 1966, p.235; 1959, p.308; 966a, p.108)

The more conscious the universe becomes the more directed evolution becomes. Thus, O'Connell can write that 'human inventiveness points to some measure of groping "ingenuity" at work in the prehuman phase of evolution' (O'Connell, 1982, p.88).

As well as becoming more and more directed, evolution also speeds up as it becomes more complex. The more convergent and united evolution becomes the more it accelerates, thus Klauder can write that 'the great technological advancements of today point to the acceleration of evolutionary time...evolutionary time is changing with the speed of evolution, which is constantly and more rapidly accelerating'

(Klauder, 1971, pp.120-2; cf. Teilhard de Chardin, 1975, p.148; Alioto, 1973, p.57).

Once evolution sets itself on a particular path it accelerates; the closer it gets to the ‘Omega Point’, the faster it becomes.

Cuénot, in his comprehensive biography of Teilhard, furthers that

Teilhard, although a vitalist – or, more exactly, a supporter of orthogenesis – did allow mechanisms their part (their great part, particularly in early forms of life), but he credited them with only a minor role in complex life – man above all – and maintained that life is, at bottom, psychic in character’ (Cuénot, 1958, p.35 (cf. Fullman & D’Aoust, 1961, p.146, p.150; Bruns, 1961, p.175; Grumett, 2005, p.198)).

This means that the process of evolution is composed of two separate elements of chance and direction in indirect correlation to each other, yet, importantly, never completely separate from the other. No matter how directed evolution is there is still an element of chance or ‘groping’, and no matter how open to chance evolution is it is still directed. This led Teilhard to understand himself as a synthesis, or ‘symbiosis’ (Teilhard de Chardin, 1959, p.149n1), between Lamarckism and Darwinism.¹² ‘In general’, writes Kenney, ‘Teilhard tries to steer a course between the Darwinian or chance explanation and the Lamarckian or inner-directedness explanation. In part he does this by his concept of “groping”’ (Kenney, 1970, p.86).

In *The Appearance of Man*, Teilhard wrote ‘however Lamarckian or Bergsonian we may be, we must admit that even hominized life only advances tentatively, by the effect of great numbers and the play of chance’ (Teilhard de

¹² For a discussion of ‘groping’ and the relationship between Lamarck and Darwin see Dodson, 1984, pp.132-3, p.147ff; Sproxton, 1971, p.80ff.

Chardin, 1965a, p.130). More explicitly, in *Phenomenon of Man*, he wrote that ‘I shall be accused of showing too Lamarckian bent...[but] an essential part is left to the Darwinian play of external forces and chance’ (Teilhard de Chardin, 1959, p.149n1). Regardless of how directed evolution is, no matter how evident the ‘plan’ of evolution is, there is always a role for chance and for uncertainty.

Whereas Bergson consciously distances himself from both Lamarck and Darwin, Teilhard understands his own theory as a synthesis between them. Bergson dismissed both Lamarckism and Darwinism as being incorrect, neither being able to account for real novelty, whereas Teilhard understands them, not as being incorrect, but as incomplete. On their own they miss something, their focus is too narrow, but together they complement each other. What is manifested as chance on the outside is the result of a direction inside, one Darwinian and the other Lamarckian (King T, 2006, p.21).

Convergence

The third aspect of Teilhard’s evolutionary theory, however, is arguably the most important, and certainly the most controversial (in that it is the least scientifically verifiable assertion of his theory). This idea is that evolution, as it complexifies and becomes more conscious, also converges upon itself and becomes more united (cf. Rolston, 2006, p.246). ‘The ultimate explanation of life’s movement is that the universe is converging upon God’ (Mooney, 1966, p.56; cf. Teilhard de Chardin, 1959, p.259). God waits at the end of evolution pulling everything towards him; the ‘Omega Point’ at the end of evolution is an ‘attractive’ state, drawing all matter towards it through evolution. It is God who directs the process of evolution, and this he does by drawing everything towards him, unifying it, through the process

of evolution (cf. Cuénot, 1958, p.288; Kenney, 1970, p.34). For Teilhard, ‘to create is for God to unite’ (Teilhard de Chardin, 1978a, pp.262-3; cf. Grumett, 2005, p.44-5). Creation and unification are synonyms; God creates by uniting. Yet this process of unification happens through evolution. God does not unite by physically drawing existing matter together; God creates through evolution, by creating more unified matter. This means that the process of complexification, the process of geometric addition, which is judged by its corresponding consciousness, is achieved through a process of unification and convergence.

In ‘Social Heredity and Progress’, Teilhard writes that

in the passage of time a state of collective human consciousness has been progressively evolved...to which each generation adds something...sustained certainly by the individual person but at the same time embracing and shaping the successive multitude of individuals, a sort of generalized human personality is visibly in process of formation upon the earth...[therefore] human endeavour, viewed in its ‘natural’ aspect, is tending towards some sort of collective personality, through which the individual will acquire in some degree the consciousness of mankind as a whole (Teilhard de Chardin, 2004, p.23)

If consciousness is that by which complexity is judged, and complexity is now understood as a convergence of geometric addition, then it is also through consciousness that such a convergence is judged. In other words, evolution produces more and more unified centres of consciousness.

This inevitably means that, at some point in the future, a time will be reached when all of matter will have converged upon itself completely (hence Teilhard’s use

of the image of a cone (cf. Maloney, 1968, p.195; Teilhard de Chardin, 2004, p.87)). This point of full convergence represents the end of evolution and is what Teilhard termed the ‘Omega Point’, which can be seen as synonymous with the Pauline ‘Pleroma’ (Kropf, 1980, p.61). The ‘Omega’ of evolution is the end of evolution. This is the moment when evolution has reached its conclusion, when the complex and the conscious have completely converged upon each other (Grumett, 2005, p.220). At this point, at the tip of the cone of convergent evolution, consciousness is truly collective. This consciousness is not a unity of many consciousness’, but simply one consciousness. Likewise, at this point the world is not just a collection of persons, but is simply person – and that person is Christ (Teilhard de Chardin, 1968, p.145).

Evolution, therefore, is the ‘gradual discovery...not only of something but of someone, at the summit produced by the convergence upon itself of the evolving universe’ (de Lubac, 1967, p.181). Dodson explains this by writing that ‘personality is convergent, the personal centres organize in relation to each other and mutually converge; and omega is that centre toward which all other centres converge’ (Dodson, 1984, p.196). The universe is creating one body, one consciousness, and one person: Christ (Teilhard de Chardin, 1965, p.79).

If the end of evolution is explicitly identified with Christ, then evolution is as much a process of deification as it is of creation. Creation and deification become synonymous; they are simply two ways of looking at the same process (Audy, 1973, p.259; Grumett, 2005, p.9; King T, 2003, p.38). If ‘to create is to unite’, then complete union lies at the end of creation, and such a union is deification. As Smith remarks of Teilhard’s evolutionary theory, ‘heaven is neither “above” nor “within”, but ahead of us in time’ (Smith, 1988, p.34). This will be explored in greater detail in the following chapter.

In 'Life and the Planets', Teilhard called this convergent consciousness an 'organicosocial supercomplex'. He wrote that:

we are now at the beginning of a third phase, the formation of an organicosocial supercomplex...mankind, born on this planet and spread out over its entire surface, coming gradually to form around its earthly matrix a single, major organic unity, enclosed upon itself; a single, hypercomplex, hypercentred, hyperconscious arch-molecule, coextensive with the heavenly body on which it was born [i.e. Earth] (Teilhard de Chardin, 2004, p.108)

However, it is again in Phenomenon of Man where this idea is given its fullest and most explicit expression. He wrote that:

We are faced with a harmonized collectivity of consciousness equivalent to a sort of super-consciousness. This idea is that of the earth not only becoming covered by myriads of grains of thought, but of becoming enclosed in a single thinking envelope so as to form, functionally, no more than a single vast grain of thought on the sidereal scale, the plurality of individual reflections grouping themselves together and reinforcing one another in the act of a single unanimous reflection (Teilhard de Chardin, 1959, p.251)

For Teilhard, the evolution of a collective consciousness was not simply the harmony of 'myriad grains of thought' but really and truly the evolution of a single consciousness.

Henri de Lubac, when treating this aspect of Teilhard's thought, reaches the same conclusion. He writes that 'the time came when the human mass formed one single bloc. This was when the fluid mass "set"; from this resulted this "great monad"' (de Lubac, 1967, pp.48-9). The use of the term 'monad' is particularly important as it confirms that for Teilhard this convergence forms, not a collection of individuals, but one single being (Teilhard de Chardin, 1965, p.52), one 'supercomplex', one person, which is outcome of evolution; 'the whole world [is] one being' (Savary, 2010, p.97).

For Teilhard, as matter pulls itself together, converging upon itself, through evolution, consciousness is allowed to grow and expand, to plummet to greater depths of awareness, until such a union becomes so centred and concentrated upon itself that the Earth becomes itself person and evolution can go no further; 'one single thing is being made in creation: the body of Christ' (Teilhard de Chardin, 1971, p.74).

Critical Thresholds, Emergence, and Qualitative Progression

For Teilhard, the process of convergence through evolution is not one single process of convergence; evolution goes through a number of stages each of which represent a qualitative leap towards the Omega. Each stage in evolution represents that point at which something entirely new emerges from what was previous.¹³ In Teilhard's view, according to Raven, 'for mankind emergence effects not a mere difference of degree as between the anthropoid and human, but a real novelty' (Raven, 1962, p.156). Teilhard called these stages 'critical thresholds'.

Mooney confirms that "critical points" are of great importance in Teilhard's thinking, for they always mark a profound change in nature by which something

¹³ For a discussion of 'Teilhard and Emergent Evolution' see (Raven, 1962, p.142ff.).

totally new is produced' (Mooney, 1966, p.39). As creation converges upon itself, creating ever increasing complex forms, certain moments are reached where the tension and pressure of convergence becomes so great that completely new, qualitatively different, manifestations of evolution are produced – from matter, to life, to consciousness (cf. Teilhard de Chardin, 2004, p.108). Such key moments of change represent an irreversible ascent towards God (McCarty, 1976, p.112), which, as has already been noted, ends in deification.

These 'critical thresholds' may also represent moments of special creation by God. Forsthoefel notes that, whilst it is not an explicit aspect of Teilhard's theory, he 'could not, however, object if a philosopher operating on a supraphenomenological level of explanation feels obliged to invoke the intervention of an extrinsic cause (God) to bridge the gap between inert and living matter' (Forsthoefel, 1961, p.102). In other words, to add further to the idea that God uses evolution to create, at certain moments in evolutionary history special acts of creation need to be invoked to account for these 'critical thresholds', when something radical new emerges in evolution. This lends support to the argument that Teilhard's theistic evolution is a reformulated doctrine of creationism.

In *The Phenomenon of Man*, Teilhard writes that '[animals] are separated from [humanity] by a chasm – or a threshold – which it cannot cross. Because we are reflective we are not only different but quite other. It is not merely a matter of change of degree but of nature' (Teilhard de Chardin, 1959, p.166). The difference between human and non-human life is not one of degree but kind; there is a qualitative difference between the two. Not only is there a difference in kind, but this difference is explicitly noted in terms of consciousness.

Raven, too, writes that ‘man represents a species which has jumped forward biologically: self-consciousness has emerged in him’ (Raven, 1962, p.156). Francoeur also notes that ‘somewhere among this mass of primates an instantaneous mutation took place and evolution jumped to a new and higher form of life’ (Francoeur, 1961, p.19). Evolution reaches points at which it makes qualitative leaps, it jumps forward, and something entirely new emerges from it.

There is then, once again, a possible comparison with Bergson, who argued that ‘evolution appears as a series of sudden leaps...it may well be that the appearance of the human species was due to several leaps in the same direction (Bergson, 1977, p.116). Both Teilhard and Bergson argued that there is such a difference between humanity and the rest of creation that there is a real qualitative difference. The one cannot come straight from the other. There are too many differences between humanity and non-human life that a real leap must have been made; something truly new has emerged.

a. From Biosphere to Christosphere

Teilhard deployed a variety of technical terms to explicate his understanding of critical thresholds, however there are essentially three ‘major’ moments of real qualitative novelty. These moments Teilhard termed ‘biogenesis’, ‘noogenesis’, and ‘Christogenesis’. In fact, ‘Christogenesis’ may very well be understood as the overall process, synonymous with evolution in which ‘biogenesis’ and ‘noogenesis’ contribute (Lyons, 1982, pp.38-9). Teilhard understood these moments of ‘genesis’ to produce corresponding ‘spheres’ that build up the earth: the ‘geosphere’, the ‘biosphere’ (King, 2006, pp.81-2), the ‘noosphere’ (King, 2006, pp.82-3; Skehan, 2006, p.22), and the ‘Christosphere’, which is the ‘Omega Point (cf. McCarty, 1976,

pp.51-2; Weigel, 1961, 158-9; Lukas & Lukas, 1977, p.159ff). These spheres refer, respectively, to the physical Earth, the life that inhabits it, the self-reflection of humanity (Teilhard de Chardin, 1959, pp.165-6), and finally incorporation and deification in Christ. The end of evolution, ‘Omega Point’, deification, is the last ‘critical threshold’.

Each ‘threshold’ adds another layer to the Earth so that now, in the ‘noosphere’, the Earth is covered by an envelope of thought, gradually converging upon itself. As it has already been claimed, this envelope of thought will continue to converge until a point is reached where the pressure and tension of this convergence is so much that a single consciousness is formed. Since this will be a moment of complete union, no more union is possible, and thus evolution will be finished.

Implications of Teilhard’s Theory of Evolution

Teilhard’s theory of convergent and progressive evolution led him to affirm certain conclusions that shaped his theology. These implications of his evolutionary theory will now be considered before some of the more important criticisms of his theory will also be considered.

a. The Primacy of Humanity

This understanding of evolution, as one of qualitative progression, leads Teilhard to claim that ‘man is unquestionably situated at the topmost point’ (Teilhard de Chardin, 2004, p.58). ‘To consider man as anything else but the principal aim of cosmic development’, writes Mooney, ‘is unthinkable’ (Mooney, 1966, p.41). If evolution is a progression, then humanity is at the top. In his study of Teilhard, de Lubac claimed that in ‘The Phenomenon of Man [Teilhard] takes over the idea of

universal evolution and restates it completely in such a way as to restore to man his dignity' (de Lubac, 1967, p.84). Such a 'restatement' leads Birx to argue that 'from this new perspective the writings of Teilhard represent a regression in modern thought' (Birx, 1972, p.55). In this way, Teilhard's thought goes directly against Darwinian evolutionary theory.

Whilst Teilhard still accepts that humanity evolved from simple beginnings, as does Darwin, he keeps with the traditional supposition that man is fundamentally and essentially different from the rest of creation. More importantly, the claim that humanity occupies such a privileged position is an indication for Teilhard that evolution is close to its end. In humanity the 'Omega Point' is within sight.

b. The Role of Death

For Teilhard, however, the emergent self-reflection that represents humanity is not the only qualitative difference that results from the crossing of 'critical thresholds'. The primacy of man is not the only outcome of 'noogenesis'. Another important qualitative change to life is the role of death; death no longer plays such an important part, it no longer has a sway over creation. Instead, writes Mooney, the function of death is to 'act as a metamorphosis between stages of personality' (Mooney, 1966, p.112).

In *The Phenomenon of Man* Teilhard writes that in death the animal returns to the earth whereas the human is liberated from the earth and ascends higher to God; death for humanity is profoundly different than death for non-human life, and it is because humanity have crossed an evolutionary threshold (Teilhard de Chardin, 1959, p.272). The place that death occupies in this process is still important; on a number of occasions Teilhard speaks of the importance of going through death (Teilhard de

Chardin, 1968, p.80ff). However what is of greater significance is the fact that human death is of a profoundly different order than that undergone by the rest of the animal kingdom. It is not that death no longer happens, but that its effect on the individual has been radically changed. Death is now an ‘agent of transformation’ (Teilhard de Chardin, 1968, p.88; cf. Teilhard de Chardin, 2004, p.116).

c. The Evolution of Evolution

Another important qualitative change that happens as a result of evolution is that evolution itself, the actual ‘mechanism’ of evolution, changes as well, thus Teilhard could write that ‘biological evolution itself begins to change its general mechanism’ (Teilhard de Chardin, 1966, p.207). ‘Science has suggested that human evolution in the future will be different than that of other species’, notes Galleni, ‘thinking creatures have developed cultures, new aspects of evolution, that allow for the rapid transmission of acquired characteristics’ (Galleni, 2011, p.71). As the manifestation of life goes through qualitative changes, so evolution has a profoundly different effect on life. Now that the ‘noosphere’ has been reached evolution becomes more concerned with the evolution of consciousness rather than with biological evolution; ‘the future of evolution is not to be looked for in the realm of biological transformations in or of man’ (Kenney, 1970, p.140).¹⁴

Klauder writes that ‘after the development of the massive brain and intricate nervous system in the primates, this species ceases striving for exterior development and allowed the “within” itself to develop’ (Klauder, 1971, p.21). This ‘within’ will be treated in more detail in the next chapter, but for now it is enough to note that this

¹⁴ Another interesting aspect of this, although not essential for this argument, is the role of sex and chastity. Teilhard seems to argue that as evolution, as a process, changes so sex will be replaced with chastity. See Madelin, 2006, p.33 & Grau, 1976, p.145.

essentially means that consciousness becomes more dominant. Weigel makes the same point, writing that ‘Teilhard supposes on grounds of observation that each new sphere was a once-for-all event. Once matter had achieved a higher stage of complication it did not bother to continue the process on the lower levels’ (Weigel, 1961, p.159).

In other words, once evolution had discovered a higher level of being, it ‘ignores’ the previous levels and concentrates on converging and complexifying on a higher level. ‘Properly speaking’, writes Mooney, ‘from now on the evolutionary process continues its development not so much in the sphere of life, the “biosphere”, as in the sphere of mind and spirit, the “noosphere”’ (Mooney, 1966, p.67). Now that life has made a qualitative jump forward, so the mechanism of evolution has taken a qualitative leap as well. If life is now fundamentally different, then what evolution does must likewise be fundamentally different. According to Galleni and Scalfari, this fundamentally different effect of evolution in the ‘noosphere’ is more cultural; it is a cultural evolution. They write that ‘cultural evolution is for the noosphere what speciation is for the biosphere’ (Galleni & Scalfari, 2006, p.167). Evolution, originally concerned with speciation, with biological progression, once it goes through ‘noogenesis’ and life becomes fundamentally and qualitatively transformed, is now concerned with cultural progression, with the progression of consciousness.

In this direction, O’Connell observes that

the law of “growth” detectable through the observation of human societies, their stops and starts, their sideways leaps, their long periods of apparent stability before another leap takes place, are the same laws, fundamentally, as those

which operate in the “mutations” of plant and animal populations (O’Connell, 1982, p.83)

Evolution is still concerned with doing the same ‘thing’, it is still the ascent of life towards the ‘Omega Point’, but what is affected through it has changed. Evolution is still evolution but qualitatively transformed.

Not only does this support the interpretation of a supposed convergence of Darwin and Lamarck – i.e. after the emergence of the ‘noosphere’ the chance mutations of Darwinism do not contribute to evolutionary change and instead Lamarckian ‘acquisition of characters’ takes over¹⁵ – but it also means that a social Teilhardism comes to the forefront of the continuing process of evolution.

d. The Role of Politics

With the affirmation of a cultural and social aspect of evolution, and that such an aspect of evolution becomes dominant with humanity, a discussion of politics becomes inevitable (cf. Grau, 1976, p.216ff; Ferber, 1973, p.195ff; Young, 1973, p.210ff). Some commentators see support for the idea that society is a part of the biological evolution of the world in the fact that the world is becoming more and more interdependent. If evolution is first and foremost a process of convergence then,

¹⁵ In his *Zoological Philosophy* Lamarck writes that ‘it might then be perceived how needs, at first absent and afterwards gradually increasing in number, have brought about an inclination towards the actions appropriate to their satisfaction’ (Lamarck, 2012, p.31), in other words the more ‘needs’ that life has the greater the effort to evolve. This is remarkably similar to Teilhard’s argument that as consciousness increases so does its ability to direct evolution, especially since Lamarck continues that nature ‘was able by a further elaboration of the animal organisation to convey that power right into the interior of these being, and that finally she reached the point of placing that same power at the disposal of the individual’ (Lamarck, 2012, p.29). As complexity increases, therefore, nature has more control and influence over the vitalistic principle.

when evolution becomes more concerned about ‘culture’ and consciousness in the ‘noosphere’, then it is logical to expect a cultural convergence. This is exactly what Teilhard thought he saw.

Grau writes that ‘the globe itself, not merely one part of it, is becoming crowded with people who are increasingly bound with ever-more-complex ties of economic and political dependence’ (Grau, 1976, p.34). McCarty, too, notes that ‘industrialization also produces dependence of nation upon nation. This inner network of interdependence will help to bring a universality of thought and life to every part of the world’ (McCarty, 1978a, p.36). This increasing interdependence of the globe, it is postulated, has a direct influence on ‘thought’ and ‘consciousness’. Thus, once again it is consciousness that is seen as the ‘marker’ of progress, it is the production of a more universal consciousness that results from this cultural convergence (cf. Mooney, 1966, p.44; Turk, 1970, pp.24-5). This universal consciousness is continuing to converge, forming, eventually, just one, single, universal consciousness.

The social and political convergence of humanity now becomes the dominant phase of evolution, humanity are gradually coming closer and closer. Teilhard saw evidence of this in institutions and organizations such as United Nations and UNESCO (Klauder, 1971, p.21). However there is also support for this aspect of Teilhard’s evolutionary theory in the increasingly faster travel and communications (such as the internet) available to humanity (Teilhard de Chardin, 1978a, p.36).

e. The Role of Technology

With evolution shifting focus to cultural convergence, the role of technology also becomes paramount for Teilhard. With ‘noogenesis’, Teilhard claims that ‘biological evolution has reached it’s ceiling: in reflecting upon itself life has become

stationary' (Teilhard de Chardin, 1959, p.305). Biological evolution, in other words evolution in the biosphere, has finished – life has reached its upper limit – now the noosphere takes over and thought continues the evolution progression towards God, converging upon itself. Therefore, 'most probably, the external human type will not change again' (Teilhard de Chardin, 1966, p.74), 'the osteological differentiation of man may well have reached its limits' (Teilhard de Chardin, 1966, p.252); hence the 'evolution of evolution'. However, 'there is fortunately another dimension in which variation is still possible, and in which we continue to evolve' (Teilhard de Chardin, 2004, pp.6-7), namely, technologically.

O'Connell, writing about the 'biological ceiling' that humanity has reached, writes that

the human group did not need to evolve physically (literally) to become the variety of interrelated and interdependent specialists – burrowers, climbers, fliers, and all the rest – into which every previously successful "branch" of the tree of life found it necessary to "diverge" and "radiate". Every human being has the power now to "be" a climber, underwater swimmer, or flier, without undergoing the physical transformation which would enslave him to this or that unique and limited specialization (O'Connell, 1982, p.98)

Humanity has not evolved a 'specialty', or what Teilhard called 'blind alleys' and 'organic imprisonments' (Teilhard de Chardin, 2004, p.158). Humanity has not evolved into a specific 'tool', but has evolved to a point whereby they can incorporate every specialty and tool. O'Connell continues to ask 'is there no "deeper linkage" whatever between the evolutionary transformation of reptile into flyer, and the human

group's invention of the airplane?' (O'Connell, 1982, p.98). There is no difference between a bird evolving biological wings and a pilot evolving technological ones; 'Teilhard connects the vertebrate growing extra limbs, covering itself with feathers and the aviator providing himself with wings' (Kenney, 1970, p.98; cf. Teilhard de Chardin, 1969, p.116). In other words, technology is actively continuing the biological convergence. Evolution has fundamentally changed, and now, technology, the result of human achievement and progression, is continuing the process of evolution. 'For humankind', furthers O'Connell, 'the artificial has become the natural' (O'Connell, 1982, p.98).

Teilhard wrote that there are

profound connections between the ship, the submarine, the airplane and the animal reconstructions which produce the wing and the fin...[and that] air routes, postal channels, wires, cables, pulsations...[are not] merely communications for business or pleasure...[but] the creation of a true nervous system for humanity (Teilhard de Chardin, 1966, pp.57-9)

It is technology that is now forming a convergent, universal consciousness. 'What [Teilhard] means, quite plainly', notes Smith, 'is that a radio transmitter is not just analogous (in certain respects) to a nervous system, but that it is a nervous system (or more precisely, a part of one)' (Smith, 1988, p.177). The technological advancements that are truly converging the globe are not to be taken metaphorically, as Smith notes 'while for the most part, certainly, he speaks in metaphor, he does also on occasion employ the term [convergence] unmistakably in its primary spatial sense' (Smith, 1988, p.81). Technological advancements are truly, literally, adding to and continuing

the same evolutionary process from which humanity emerged in the first place. In other words, culture (i.e. art (North, 1968, p.32) and war (Sproxton, 1971, pp.42-4)) and technological advancements mean that humanity furthers its evolutionary progress, not on the previous biological level, but a fundamentally transformed one, a level on which thought and personality play the major role. ‘It was the “organic-machine” that first released thought in the human body’, continued Teilhard, ‘why should it not be the industrial machine that will release it a second time in humanity’ (Teilhard de Chardin, 1969, p.81).¹⁶

Predictably, such an understanding of the role of technology, and its relationship to non-human evolution, is influenced by Bergson. Bergson asked whether ‘an unintelligent animal possess tools or machines?’ answering that it does, ‘but here the instrument forms a part of the body that uses it’ (Bergson, 1911, p.146). For Bergson, this represented a difference between instinct and intelligence. ‘Instinct perfected is a faculty of using and even of constructing organized instruments’, wrote Bergson, whereas ‘intelligence perfected is the faculty of making and using unorganized instruments’ (Bergson, 1911, p.147). Instinct develops in correlation to biological instruments, whereas intelligence to technological instruments.

Bergson continued that

instinct is therefore necessarily specialized, being nothing but the utilization of a specific object. The instrument constructed intelligently, on the contrary, is an imperfect instrument...[and that] above all, [the tool] reacts on the nature of the

¹⁶ It is interesting to question what Teilhard would have made of climate change and the idea that technological advance and industrialization are continuingly damaging the planet to such an extent that its eventual inhabitable environment is somewhat inevitable. For Teilhard, such industrialization is the proof of his theory of evolutionary progress; for climate change scientists, it is responsible for the destruction of much of the planet.

being that constructs it; for in calling on him to exercise a new function, it confers on him, so to speak, a richer organization, being an artificial organ by which the natural organism is extended (Bergson, 1911, p.148)

It is clear that Teilhard's own theory of technological tools as being 'artificial organs' builds upon this idea. Of course, Teilhard did not understand this 'artificialness' of technology to be in any way a criticism. Just because an organ was artificial did not mean that it was lesser than something natural, in fact quite the opposite. If an organ was natural it belonged to the 'biosphere', if an organ was artificial it belonged to the 'noosphere' which built upon and improved the 'biosphere' and pushed evolution towards the 'Omega Point'.

Whilst Teilhard did not take over Bergson's use of instinct, the role of consciousness in Teilhard's evolutionary theory means that he did acknowledge a role of intelligence. As a result of this there was an important role for education.

f. The Role of Education

There is no doubt that the most important element of Teilhard's theory of 'critical thresholds' is the fact that there is a connection between 'biological' evolution and 'cultural', 'social', or 'technological' evolution. The latter is truly a continuation of the former. This meant that evolution itself, as a process, underwent a qualitative change; the actual mechanism of evolution becomes radically transformed. It is here that education becomes important as with education 'heredity become[s] socialized in a special way' (Grau, 1976, p.252; cf. Teilhard de Chardin, 2004, p.16ff, pp.157-8).

Grau continues that Teilhard's fundamental theme about education is that

its primary function is to operate as a special form of biological development through addition to serve as an essential organic process of transmission of vital development in evolution of human collective consciousness...[and] he concludes that education is not artificial, accidental, or accessory, but an essential, natural form of biological additivity (Grau, 1976, pp.252-3)

In other words, education is for the 'noosphere' what genes became (after Mendel) for the 'biosphere'. Technology, along with culture, answers the question of 'what' evolution is in the 'noosphere', but education answers the question of 'how' of evolution.

Such an affirmation of the role of education is perhaps the most obvious reference to the Lamarckian influence on Teilhard's theory. It is through education that 'acquired characteristics', which for Teilhard are culture and technology, are passed on to the next generation. There is clearly nothing random or accidental about this process of heredity. The groping chance of 'genetics' (although Teilhard would have been unfamiliar with the field of genetics as it is today) has been replaced, or, better, transformed into a more directed notion of heredity; evolution is guided by human consciousness.

However, what is more important than this affirmation of Lamarckian influence is exactly what Teilhard deems this education to be. For Teilhard, whilst there is obviously room for what could be termed 'academic education' (i.e. science, history, etc), it is primarily the Church that Teilhard is referring to when he discusses education. Haught confirms that:

the most characteristic way in which the search for the centre – which has always been going on in the universe – continues now is that of religion. Religion fits into the evolutionary universe as the way in which conscious life carries on the search for the centre...for Teilhard, religion is the way in which the universe, now that it has reached the level of self-awareness, continues its ageless search for centre (Haught, 2011, p.17)

It is therefore in this direction that Teilhard understands the role of revelation. The revelation of God in Christ is primarily how Teilhard understands the educational role of the Church as the heredity of the ‘noosphere’.

g. Revelation: The Christological Significance of Education

If education is the mechanism of evolution in the ‘noosphere’, and this is primarily seen in the Church, then Christ comes to be understood as a teacher. Kropf agrees that the ‘phyletic’ character of Christianity

seems not to have been intended simply as an extrapolation in terms of Christianity as a historical phenomenon, nor simplistically as an application of biological laws to the ‘organic’ reality of the body of Christ, but as a direct extension of these same laws in the realm where evolution now must be active on this planet – in the collective convergence of reflective human consciousness, that is, the ‘noosphere’...such development [of doctrine] goes beyond a mere reflective elaboration on dogmas that remain fixed in their formulations for all time (Kropf, 1980, pp.265-6)

In other words, revelation is not a fixed epistemological category but, like everything else, is in a process of progression. Revelation, like life, consciousness, and even the mechanism of evolution itself, evolves (Lane, 1996, pp.71-2). 'If there is any room for a period in which revelation will stand as complete', continues Kropf, 'this era would have to begin with the final Parousia [which Teilhard identifies with the 'Omega Point' (see Chapter 5)]' (Kropf, 1980, p.283).

However, it is in and through the Church whereby this revelation is made available to humanity. If revelation acts as the education that is the heredity of the 'noosphere', it is the Church that acts as a vehicle of that revelation. It is the Church that passes on, through education, the hereditary characteristics of evolution. It is the Church, therefore, that carries on the evolutionary progress. All religions achieve this, to a limited degree, but it is only through the Roman Catholic Church that this process reaches its fulfillment. For Teilhard, therefore, all other religions represent so many evolutionary 'dead ends'; they represent real progress, but can only progress so far. It is only through the Roman Catholic Church where this evolutionary progression has any real future; it is only through the Roman Catholic Church that the 'Omega Point' can be reached.

It is for this reason that Teilhard can call the Church a 'phylum', understood as a 'zoological group of branch' (Mooney, 1966, p.156), and more specifically the 'phylum of love'. By this Teilhard means that 'the whole orientation of evolution...is towards the formation of the human phylum', however, now, 'the Church also acts as a phylum, or more precisely, that it acts as a phylum of love growing within the human phylum and moving in the same direction' (Mooney, 1966, pp.156-7). This, therefore, leads to a discussion of the evolutionary role of the Church.

h. The Role of the Church

For Teilhard, evolution proceeds in a very particular and definite direction. That direction has led through all the various forms and manifestations of life, through 'biogenesis' and then 'noogenesis', and has arrived at humanity. However, the continuing process of evolution not only continues through humanity but a particular humanity. This future evolutionary trajectory continues through Western man (O'Brien, 1973, p.35), and, more specifically, the Church.

In a letter quoted by Cuénot, Teilhard wrote that 'the majority of oriental thought-patterns are [nothing] but outmoded and obsolescent, fated to disappear along with the human type to which they are native' (Cuénot, 1958, p.137). Therefore, Teilhard believed that 'there are some races that act as the spearhead of evolution, and other that have reached a dead end' (Cuénot, 1958, p.301). This does not mean that Teilhard argues there is no value in other races. Even though he claims that 'one could say that in more accentuated form [lemurs and tarsiers] stand to present day apes as Australian Aborigines and Negrillos [sic] do the white human race' (Teilhard de Chardin, 1965a, p.36), he is keen to clarify that he is not a racist (Cuénot, 1958, p.301). He did not argue that other races and religions were lower (or more primitive) than white Europeans, but that the future of evolution is only through that race, or more specifically, through the Roman Catholic Church.

In Phenomenon of Man Teilhard likewise wrote that

in truth, a neo-humanity has been germinating around the Mediterranean during the last six thousand years, and precisely at this moment it has finished absorbing the last vestiges of the Neolithic mosaic...the proof of this lies in the

fact that from one end of the world to the other, all peoples, to remain human or to become more so, are inexorably led to formulate the hopes and problems of the modern earth in the very same terms in which the West has formulated them (Teilhard de Chardin, 1959, p.212)

However, as it has already been claimed, it is not just Western man who represents the continuing progress of evolution, but specifically Western man in the Church. Thus Corbishley, quoting Teilhard himself, writes that

if Christianity...is indeed destined to be the religion of tomorrow, there is only one way in which it can hope to come up to the measure of today's great humanitarian trends and assimilate them; and that it is through the axis, living and organic, of its Catholicism centred on Rome (Corbishley, 1971, p.100)

The Church, therefore, is formed evolutionally, through a particular phylum (cf. Binns, 1968, p.119ff). This being the case, the theological dimensions of Teilhard's evolutionary theory come to the fore. If 'one single thing is being made in creation: the body of Christ' (Teilhard de Chardin, 1971, p.74), the Church, as the 'living continuation of the incarnation' (Binns, 1968, p.125), is that one thing being made. Maloney, referencing Ephesians 1.20-3, evidences that 'the Church is not merely a moral aggregate of members coming together to honour the historical person, Jesus Christ' (Maloney, 1968, p.62), Teilhard treats convergence in spatial terms (Smith, 1988, p.81).

With the affirmation of the future of evolution happening through the phylum of the Church a discussion of Teilhard's evolutionary theory comes to an end.

However there are a number of criticisms that must be highlighted at this point that help to further clarify some of the points that dominate his theory: the eternity of matter and the loss of the individual.

a. Eternity of Matter

If Teilhard's theory of evolution was dominated by a concern for convergence, which ultimately led him to postulate a future point at which no more convergence was possible, a point he termed the 'Omega Point', then this leads to the conclusion that, running the process of evolution backwards, there is a possibility of an infinite divergence of matter (Teilhard de Chardin, 1971, p.41). Such a conclusion is compounded by the fact that for Teilhard creation was union (hence 'un-creation' is 'dis-union'). De Lubac, noting this problem, asked 'should we not, then, conclude...that he postulated some element, as diffuse as you care to imagine, that pre-exists the creative act?' (de Lubac, 1967, p.196)

If God's act of creation is one of union, there must have been something alongside God for God to begin to unite. The only possible way to deal with such a comment is to postulate an eternity of matter. Lane is certain that 'Teilhard espouses a veritable materialism when he speaks of "eternal matter", denies a temporal beginning to creation and suggests that Divinity is somehow dependent upon matter' (Lane, 1996, p.46). Kenney, too, observes that for Teilhard 'there is no absolute beginning of anything' (Kenney, 1970, p.89). Put simply, the idea that 'to create is to unite' compromises the doctrine of *creatio ex nihilo* (de Lubac, 1967, p.195).

Teilhard appeared to confirm such criticisms when he wrote that ‘the universe is no longer endless in space alone. In all its strands, it now unfolds interminably into the past’ (Teilhard de Chardin, 1971, p.78), and that ‘just as we cannot imagine any limit to stellar or interatomic space, so we cannot see any absolute beginning to temporal series’ (Teilhard de Chardin, 1968a, p.162). Such quotations seem to be entirely damning.

However, this does not take into account the whole picture. For Teilhard, the formula ‘to create is to unite’ is not simply a doctrine about creation but one of ontology. Teilhard does not mean that God creates only by pulling together diffuse matter that is pre-existent; God is not reduced solely to formal causality. Instead, for Teilhard, to be created is to be united. Thus, Teilhard writes that ‘to be more is to be more fully united with more...to be more, is more fully to unite more’ (Teilhard de Chardin, 1965, p.45), and that ‘to be – to unite oneself or to unite others (the active form)...[and] to be – to be united and unified by another (the passive form)’ (Teilhard de Chardin, 1975, p.193).

In other words, Teilhard is not strictly making a claim here about the work of God but about the ontological standing of creation. Teilhard is simply claiming that ontology is better understood as dynamic unity rather than as a static concept of being. In fact, it could be claimed that this is simply his attempt to reinterpret the Bergsonian notion that to be is to change. Teilhard replaced a metaphysics of being with an ‘ultraphysics of union’ (cf. Reilly, 1961, p.54; Grau, 1976, p.55ff).

b. Pantheism and The Loss of the Individual

However, perhaps the most important criticism of Teilhard is his pantheism and the relegation of the individual.¹⁷ Passmore writes that Teilhard is concerned with ‘the perfecting of the universe; to this climactic event the perfecting of man is only a preliminary’ (Passmore, 1970, p.257). As such, perfection lies in the progress not of individuals but of mankind as a whole’ (Passmore, 1970, p.252). Evolution may have culminated in humanity, but this is not the final stage, and, as it has already been noted, this further convergence evolves into just one person; all but one individual are excluded from the ‘Omega Point’.

Grumett, too, notes that it is not the individual that will ultimately be united with God at the ‘Omega Point’, but the collective, convergent, soul that is the outcome of evolution. He writes that:

it is the world as a whole that will present a likeness to God, rather than individual elements within the world...[and] in the unification of souls with

¹⁷ Another criticism of Teilhard’s theory, which is an aspect of his pantheism, is the fact that God now becomes mutable; if the world is God, and the world is the process of completion, a process that will provide a body for Christ, as will be seen in the next chapter, then God becomes effected by this process too – ‘God also is the name given to the consummated being’ (Teilhard de Chardin, 1969, p.67). Smith, in his highly critical book on Teilhard’s theology, acknowledges this problem. He writes that ‘from the outset Teilhard was bent upon blurring the fundamental distinctions between God and the world’ (Smith, 1988, p.106). He continues that, for Teilhard, ‘not just the world, but God, too, is changing, and becoming more perfect...the conception of a mutable or “evolving” God is entirely in line with Teilhard’s rejection of the traditional Christian doctrine concerning creation and participated being, and his famous theory of “creative union” which is supposed to replace these “antiquated” ideas’ (Smith, 1988, pp.104-5), and that ‘Teilhard wants God to be both the evolver and that which ultimately evolves...the biblical “I AM” turns out to be misleading: God should rather have been “I shall be”’ (Smith, 1988, p.117).

Klauder also notes that the relationship between matter and spirit also provides further evidence for the fact that Teilhard expounded a process theology; ‘Whitehead would say that there is a basic constituent of every existing thing (organism) whose intensity of life is of different degrees, and that evolution is an evolution of organisms of ever-increasing organization with more organization comes a greater participation in consciousness. This is exactly identical to Teilhard’s law of recurrence – the law of complexity-consciousness’ (Klauder, 1971, p.89; cf. Thekumkal, 1981, p.149ff).

each other, a common soul is being formed..[and] it is this common soul, rather than individual human souls, which will ultimately be unified in Deo (Grumett, 2005, pp.190-1; cf. Teilhard de Chardin, 1966, p.46; McCarty, 1976, p.101; Mooney, 1966, p.202; Smith, 1988, p.179)

Teilhard's emphasis on creation as union also suggests his exclusion of the individual from the 'Omega Point'. The process of convergence is one that takes place through evolution not through a physical bringing together of matter; God does not create by pulling existing matter together physically, but by creating more united and centred matter evolutionally. Teilhard thus wrote that 'creation is brought about by an act of uniting; and true union cannot be effected except by creating [i.e. through evolution]' (Teilhard de Chardin, 1968a, pp.155-6; cf. Teilhard de Chardin, 1975, p.198). Put very crudely, union is not the same 'bits' in a new aggregation, but the creation of 'new bits' in a closer aggregation (hence his and Bergson's criticism of Darwinism and Lamarckism and the emphasis on orthogenesis and novelty). Union is creation, and God creates 'evolutively', which means that God unites not by physically bringing together the matter of the universe but by evolving more united individuals, until one individual results. Thus, Teilhard can write that 'in a real sense, only one man will be saved: Christ, the head and living summary' (Teilhard de Chardin, 1968, p.143).

Essentially, for Teilhard, any individual who does not represent the end of evolution is not a part of God's creation; the end of evolution culminates in only one person, Christ: 'fundamentally – since all time and forever – but one single thing is being made in creation: the body of Christ' (Teilhard de Chardin, 1971, p.74). If evolution has not yet finished (Teilhard de Chardin, 2004, p.81 & 106), then the

common soul has not yet finished either, and thus anybody who is alive today does not form part of this 'Omega Point'. 'One cannot help wonder', notes McCarty, 'what Teilhard might have felt had he recognized that he was a by-product of evolution to be cast off as a dead-end street in the world process' (McCarty, 1976, p.136); Teilhard must have realized that this only served to exclude himself from the beatific vision of the 'Omega Point', even if it did not bother him too much:

in itself, to be frank, the problem of personal survival does not worry me greatly. Once the fruit of my life has been gathered up into an immortality, a self-centred consciousness of that fact or enjoyment of it matters little to me (Teilhard de Chardin, 1971, p.115)

It is important, therefore, to note that Teilhard was well aware of the pantheistic overtones of his work (cf. Faricy, 1981, p.101). In *Christianity and Evolution*, for example, he wrote that:

what I am proposing to do is to narrow that gap between pantheism and Christianity by bringing out what one might call the Christian soul of pantheism or the pantheist aspect of Christianity...however individual our salvation may be from many points of view, it is in consequence accomplished only in collective fulfillment (Teilhard de Chardin, 1971, p.56, p.67)

Teilhard allowed for such pantheism by pointing out that this pantheistic union was not a unity of simplicity but of complexity (Teilhard de Chardin, 1975, p.56), and that actually union differentiates. De Lubac expounds this idea writing that:

in working out this doctrine, Pere Teilhard, we find, is careful to preserve the distinction between “individuality and personality”...he says, individuality decreases, as being now useless support, in proportion with the increase of personality (de Lubac, 1967, p.150; cf. Smith, 1988, p.143)

This difference between individual and person can be seen anticipated in the doctrine of the Trinity (Kenney, 1970, p.111), and what Teilhard is ultimately concerned with is the salvation of the person, not of the individual. However, regardless of the fact that it is important to distinguish between the person and the individual, what is evolving is one single person, a collective consciousness and a single soul – the ‘Soul of the Earth’ (Teilhard de Chardin, 1978, p.32). As such, ‘only Christ is saved’ (cf. Teilhard de Chardin, 1968, p.143). Regardless of semantic subtleties, it is still the case that the individual’s personal identity remains excluded from the Omega.

However, a more favourable assessment of Teilhard’s pantheism may see in Teilhard a doctrine of incorporation, or recapitulation, of all into the body of Christ. As Tremblay perceptively notes, ‘in fact Teilhard was only paraphrasing St. Paul’ (Tremblay, 1989, p.30). Teilhard’s pantheistic tendencies, in other words, come from a desire to appropriate and make sense of the Pauline phrase that God will be ‘all in all’ (NRSV, 1995, 1 Cor. 15.28). If Teilhard is a pantheist, Tremblay implies, so, too, must be St. Paul. Although Teilhard used strange language, he was essentially affirming a unity such as was expounded by St. Paul.

Conclusion

The Cultural and social progression of humanity continues the geological and biological evolution that began with the stars, planets, and the emergence of life. This is not a different process, but a new phase of the same process, which is punctuated by moments of real novelty, of real change, when something entirely new, qualitatively new, emerges. Biological evolution still happens, therefore, but it now happens on a qualitatively different level. This means that it is not quite as simple as suggesting that it is now only confined to creating social, economic, and political unity, humanity do not become mere cells in the body of the planet. Lane confirms that ‘the rapid social evolution witnessed over the past few hundred years will be paralleled in biological evolution’ (Lane, 1996, p.122).

Teilhard, too, wrote that ‘[humanity] tends to knit itself together materially and psychologically until it forms in the strict biological sense a super-organism of a definite nature’ (Teilhard de Chardin, 1966, p.265). This ‘duality’ of matter and consciousness represents another important element of Teilhard’s evolutionary theory, so important that it warrants its own chapter. This is where this thesis will now turn. For Teilhard, evolution is not just a process of material convergence but, in fact primarily, it is a process of psychological or spiritual convergence; and it is this process of spiritual convergence that guides the material convergence just described.

Chapter 4

The Relationship between Matter and Spirit: Teilhard's Interpretation of Nature and Grace

In the previous chapter Teilhard's evolutionary theory was expounded along two main lines, (a) a general treatment of the idea of progression and convergence and (b) what Teilhard termed 'critical thresholds' and the fact that evolution itself goes through qualitative changes. This led to a number of important considerations such as the role of technology, the role of education, the role of the church, and the loss of the individual. In this chapter another facet will be added to this understanding of Teilhard's evolutionary theory, namely, the role of spirit.

The relationship that Teilhard postulated between matter and spirit is so important that it holds his evolutionary theory together. It could be argued that the relationship between matter and spirit is the central issue of Teilhard's evolutionary theory (Grau, 1976, p.27). Whilst it is difficult to understand the biological or scientific understanding of evolution apart from the theological (thus leading to some commentators rejecting that what Teilhard offers can rightly be termed science at all), it is the explicit introduction of spirit into Teilhard's theory of evolution that gives this chapter a rather different complexion. This chapter represents a more theological approach to the question of evolution for Teilhard, and at times that theological approach is also unmistakably mystical (cf. Teilhard de Chardin, 1975, p.202).

However, to claim that this chapter simply represents a theological or mystical interpretation of the same themes that were outlined in the previous chapter is to

oversimplify the issue. Although it is true that Teilhard saw matter and spirit as ‘two sides of the same coin’, a spiritual dimension to Teilhard’s evolutionary theory adds not only meaning but also a ‘mechanism’ by which Teilhard’s convergent evolution happens; it is spirit that drives and guides evolution. This means that the introduction of spirit into the conversation truly contributes something important to Teilhard’s theory of convergent evolution.

One of the most important considerations of this theological evolutionary theory is that it displays Teilhard’s monism. For Teilhard there is only one thing in the universe, everything else is simply a manifestation of that one thing. This means that the process of evolution is concerned only with the progression of one thing, only with the convergence of the disparate elements of one thing. This ‘thing’, it will be shown, is spirit. Everything is spirit, and all diverse matter is simply differing manifestations of that one principle.

This chapter will be divided into a number of sections that deal with this element of Teilhard’s theory. Starting with what Teilhard terms the ‘within’ of matter, this chapter will consider panpsychism, synergia, Teilhard’s mysticism of attaining heaven through earth and ‘seeing’ or ‘vision’, which can be said to represent Teilhard’s understanding of the relationship between nature and grace.

The Religious Dimension of Evolution

One of the many important allusions to progress that appear in Teilhard’s work provides a particularly helpful insight into the religious implications of his evolutionary theory. In ‘The Salvation of Mankind’, Teilhard writes that ‘futurism...universalism, and personalism...are the three characteristics of the

progress that leads us on' (Teilhard de Chardin, 1965, p.137). Evolutionary progress is characterised as an irreversible march towards the future. There is 'no barrier to any possible development' (Teilhard de Chardin, 1965, p.135), fulfilled in the complete convergence of the universe as an organic unity, and deepening in the personal realisation of that unity. These were manifested in Teilhard's work as the 'Omega Point', that end of evolution in which the universe becomes complete, united in the body of Christ (Lyons, 1982, p.38). To this end, Teilhard makes a point of 'theologising' these specific points. He continues that

the guiding principles of Christ's religion are exactly the same as those in which we found the essence of human effort expressed: Heaven, Catholicity, the city of souls; in other words, futurism, universalism, personalism (Teilhard de Chardin, 1965, p.147).

The evolutionary progress has always had a religious realisation towards which it has been focused; the fulfilment of the evolutionary process of futurism, universalism, and personalism, has a theological end. Evolution is thus at every moment a religious doctrine that has religious concerns, or as Teilhard puts it, 'evolution is holy' (Teilhard de Chardin, 1968a, p.59); evolution ends in salvation, or more precisely, deification, the fulfilment of the universe's spiritual life.

The "Within" and "Without" of Matter

The reason that Teilhard can claim that 'evolution is holy', that evolution has a theological end, and thus can be seen as the work of God, is the role that he ascribes

to spirit and its relationship to matter. For Teilhard, there is a fundamental link between matter and spirit. There is a direct, positive correlation between the two such that an increase in matter causes an increase in spirit and vice versa. The more matter complexifies through the process of evolution, so the more spirit complexifies as well. This means for Teilhard, as has already been claimed, that the spiritual perfection of the universe (i.e. deification, the Omega Point) is precisely the same event as the end of material evolution.

This leads de Lubac to comment that Teilhard's Hymn to Matter 'is equally a hymn to spirit' (de Lubac, 1967, p.204). Matter and spirit, therefore, are not two ends of one process that leads from one to the other (cf. Maloney, 1968, p.223), but are two ways of viewing the same phenomenon. For Teilhard, the ascent to God, i.e. the Omega Point, is achieved through matter. Matter is always the vehicle of spirit, or, as will be seen below, matter is simply the outward appearance of spirit.

a. The Relationship of Creation and Deification

The process of evolution, therefore, has a spiritual goal, as King notes that 'the process of evolution is a process of growing spiritualisation through greater unification and complexity, through centering and convergence' (King, 1997, p.44). The implication of this idea is that creation and deification become the same act. Creation is only finished when it has become deified. Evolution – the process of spiritual perfection – ends in deification, when the universe participates in the divine nature, when God and the universe become united. Remember, that this is not the unification of individuals, a 'pulling together' of disparate material elements, but the creation, through evolution, of a single, completely centred, complex person: Christ.

Once it is accepted that there is an underlying spiritual presence in the world, and that evolution directs such a spirituality towards its perfection, then deification becomes a central doctrine – evolution is as much a doctrine of deification as it is of creation.

b. The “Within” of Matter as The Soul

Teilhard evidences this closeness of matter and spirit in *Phenomenon of Man*, writing that ‘spiritual perfection (or conscious “centreity”) and material synthesis (or complexity) are but two aspects or connected parts of one and the same phenomenon’ (Teilhard de Chardin, 1959, p.60). In the same book, he uses the terms ‘within’ and ‘without’ to talk about the spiritual dimension and the material dimension respectively (Teilhard de Chardin, 1959, p.53ff). ‘There is an inside of things’, writes Corte, which is ‘co-extensive with their outside’ (Corte, 1960, p.61). The two dimensions cannot, truly, be considered apart from one another, they form two parts of the same thing, two ways of looking at the same phenomenon.

Teilhard also uses the terms ‘radial’ energy and ‘tangential’ energy to describe the ‘within’ and the ‘without’ respectively. In fact, ‘physical (tangential) and psychic (radial) energy would probably be clearer, and their meanings are more obvious’ (Dodson, 1984, p.30). Smith writes that ‘radial’ energy is ‘the mysterious factor which according to Teilhard’s theory draws the organism to higher levels of complexity and consciousness, [and] is obviously but another term for soul’ (Smith, 1988, p.52). In other words, Teilhard denies an anthropic dualism of body and soul. If matter and spirit are simply two manifestations of the same phenomenon, then the body is simply the material appearance of the soul, which is the ‘within’ of matter, and is thus the spiritual dimension of evolution. As Teilhard confirmed, ‘the soul is

created through the grouping and co-ordination of materiality' (Teilhard de Chardin, 1968a, p.97). Thus, Faricy can write that 'complexity is a matter of organized multiplicity – not just complication, but complication around a centre' (Faricy, 1968, p.61). (Bearing in mind that Teilhard treated 'centre' and 'person' as synonyms (Kenney, 1970, p.231)).¹⁸

Baltazar also confirms this interpretation of the soul, writing that 'the human is a single reality in which the body is tangential energy and the soul is radial energy; these two energies are but [two aspects] of one and the same reality' (Baltazar, 2003, p.175). 'Tangential' energy and 'radial' energy, therefore, can be seen as synonyms for the 'without' and the 'within' respectively, the material and the spiritual dimensions of the same phenomenon.

c. The Increasing Importance of the "Within"

Writing about the relationship between the 'within' and the 'without' of things, Dodson claims that

at the atomic and molecular levels, the within is not detectable, but as the organisation of matter becomes more complex, the within becomes relatively

¹⁸ The theory of entropy plays a role in this relationship. '[Teilhard] believes that entropy only operates upon tangential energy and not radial energy...this makes it important for man to continue on to the next step toward which he is driven' (McCarty, 1976, pp.40-1; cf. Fullmen & D'Aoust, 1961, p.148). 'Teilhard tried to resolve the problem [of the tension between entropy & evolution] by postulating two kinds of energy, which he called tangential energy and radial energy. Tangential energy is characteristic of the without of matter...it is fully subject to the laws of thermodynamics...radial energy is the energy of the within of matter, it increases with the increasing complexity of matter...and is at least potentially independent of entropy' (Dodson, 1984, p.3). The more evolved one is, the more 'ordered' one is, the less effect entropy (disorder) has. The closer one is to God, the greater the pull of the divine, and the harder it is to fall away from him.

For a comprehensive list of Teilhard's references to entropy and evolution see (King T, 2006, p.183; O'Connell, 1982, p.84ff.).

more prominent, and at the cellular level it becomes visible as life, with all its properties (Dodson, 1984, p.156)

Here, Dodson reiterates what has already been stated regarding the relationship of matter and spirit, however there is the implication that the ‘within’ of matter becomes of increasing importance as it complexifies. When a ‘critical threshold’ is crossed, and evolution undergoes a qualitative change, so the ‘within’ of matter becomes manifested in qualitatively different ways. When Dodson continues that ‘consciousness [is] the most highly evolved expression of radial energy’ (Dodson, 1984, p.203), this is what he is referring to. As material evolution progresses, and pulls spirit together, so spirit becomes manifested in different ways, as life or as consciousness. At the human level the ‘within’ becomes more important than the ‘without’, hence the ‘evolution of evolution’.

d. Matter and Spirit as Darwinian and Lamarckian Synthesis

In this way the ‘within’ and the ‘without’ of things can be seen as indicative of the ‘synthesis’ of Lamarckian and Darwinian principles that Teilhard understood his theory to represent. ‘The “within” would correspond to a Lamarckian inner principle’, writes Mooney, ‘while the “without” of things would be Darwinian’ (Mooney, 1966, p.38). As it was argued in the last chapter, Teilhard thought that as matter was more diffuse Darwinian principles controlled the process of evolution but as matter became more centred so Lamarckian principles took over. That point when Lamarckian principles take over happens in humanity, when the ‘within’ of things becomes more important.

This means, therefore, that just as Teilhard claimed that Darwinism was ‘directed chance’ rather than ‘random chance’, so this is a result of the fact that he postulates a “within” to every “without”; there is not one ‘bit’ of matter that is not without a corresponding spirit to guide it.

e. The Primacy of Spirit

This leads to one of the most important considerations regarding Teilhard’s evolutionary theory: it is actually spirit that is evolving, not matter (cf. Savary, 2010, pp.20-1); just as consciousness was the primary element in Bergson’s own theory.

McCarty writes that

previously it had been thought that things were held together from below by the external which we call matter. However Teilhard saw this as an inversion of reality, because things are really held together from above, by spirit (McCarty, 1976, p.30).

It is spirit that is converging and complexifying, and matter that is pulled together as a result. The complex manifestations of matter that make up the observable world are passive constructions, the result of a more primary pulling together of spirit. ‘The true evolution of the world’, writes Teilhard, ‘takes place in souls and in their union’ (Teilhard de Chardin, 1965, p.48). Evolution is the evolution of spirit, of which matter is the external expression (Teilhard de Chardin, 1965, p.50). It is spirit that is being complexified, it is the perfection of spirit, i.e. deification, that is the primary goal of evolution, and matter only becomes complexified because it is

the ‘external manifestation of spirit’ (McCarty, 1976, p.37). In other words, it is not spirit that is the ‘within’ of matter, matter is the ‘without’ of spirit.

Teilhard’s Mysticism: To Heaven Through Earth

However, regardless of the fact that Teilhard argued for the primacy of spirit, the fact that Teilhard affirmed such a relationship between matter and spirit means that he could not conceive of a spiritual dimension that is without a material manifestation. The ascent to God is not one in which matter is left behind or escaped from, but matter is simply the outward manifestation of the spiritual ascent. The more unified souls become, the more unified their material manifestation, which is their outward appearance. There is thus a ‘communion with God through Earth’ (Teilhard de Chardin, 1968a, p.14).

In *The Heart of The Matter* Teilhard continued that the fundamental aim ‘is to attain heaven by bringing Earth to fulfilment’ (Teilhard de Chardin, 1978, p.47). The mystical effort is not one of trying to escape from the Earth, to deny one’s materiality, but to immerse oneself in the material, to see the fulfilment of the Earth as the fulfilment of one’s spiritual life. The two are not separate concerns; ‘heaven cannot dispense with the Earth’ (Teilhard de Chardin, 1978, p.47).

This means that, since there can be no spiritual dimension without a corresponding material manifestation, the complete spiritual union that is representative of the Omega Point (i.e. deification) has a corresponding complete material union, both attained through evolution. As spirit is pulled together, through evolution, towards God so matter is pulled together with it, and if there is a point to be reached at which spirit is completely unified, then there must be a point at which matter is likewise completely unified.

a. The Great Monad

If evolution produces just one monad, ‘the great monad’ (Teilhard de Chardin, 1968, p.145; cf. Teilhard de Chardin, 1978, p.182ff.),¹⁹ then this must be manifested as one materially convergent phenomenon (Teilhard de Chardin, 1965a, pp.238-9). If matter is the ‘without’ of spirit then the convergence of spirit into a collective soul (or consciousness) also means a convergence of a matter into a collective materiality. As such, Teilhard observed that

it is becoming more and more impossible for any step in material organisation to be taken on this earth which does not there and then call for an equivalent step in the psychic and spiritual domain, to balance, humanize, and complete it (Teilhard de Chardin, 1975, p.144).

Again, it is important to remember that the union of matter is not caused by a merging of disparate matter, nor a fusion of existing material, but by the production of more unified and spiritual matter evolutionally. This must be the case because evolution is how God creates (Teilhard de Chardin, 1975, p.198); this is how God pulls creation towards himself. It is impossible, therefore, to understand the convergence of matter that culminates in the ‘organicosocial supercomplex’ (Teilhard de Chardin, 2004, p.108) as a metaphor; if evolution produces one monad, one spiritual centre, then this must be manifested outwardly as one ‘bit’ of matter, which will come to be labelled as the body of Christ.

¹⁹ ‘One similarity between Le Roy and Teilhard is the employment of “monad” in the general sense of a unit of being, without commitment to the Leibnizian notion of a totally enclosed entity’ (Lyons, 1982, pp.176-7).

Relationship of Matter and Spirit as the Relationship between Nature and the Supernatural

If the relationship between matter and spirit is such as Teilhard argues then this corresponds to the relationship that is posited between nature and the supernatural in modern Catholic theology. If Teilhard saw the term of evolution to be deification, complete union with God, and that such an end to evolution was also necessitated because he saw the material evolution of the universe to be only an outward manifestation of spiritual fulfilment, then understanding nature to have a supernatural end is inevitable.

Passmore recognises such a conclusion when he writes that while the mystical union with God may be ‘supernatural in character, [it] is at the same time the natural outcome of evolution’ (Passmore, 1970, p.252). The ‘biological realities’ of evolution are the ‘supernatural realities’ of ascent to God (de Lubac, 1967, p.189). The natural progression of the world is identical to the supernatural progression of the world. This leads Mooney to write that Teilhard’s overriding concern was:

to create a living unity between the movement of supernatural faith in God which rises upwards and the movement of natural faith in man which advances forward...he thereby postulates a connection between the natural evolutionary process and the supernatural consummation of mankind (Mooney, 1966, p.32, p.68)

Thus, Mooney continues, evolution was:

situated squarely within the total supernatural movement from creation in Christ to final pleroma...since in Teilhard's thought the natural evolutionary process is clearly destined to reach a supernatural termination (Mooney, 1966, pp.206-7)

Deification is completely synonymous with the historical process of the world – natural fulfilment and spiritual fulfilment are one and the same event (Teilhard de Chardin, 1968a, p.50).

a. Teilhard's Anticipation of Late Twentieth Century Catholic Theology

Such a tension between materiality and spirituality can be seen in Henri de Lubac's *A Brief Catechesis on Nature and Grace*, written in the wake of the Second Vatican Council. De Lubac writes that:

on the one hand we use a noun "nature", and on the other an adjective "supernatural"...in reality we have here is not...two juxtaposed realities (two "natures"), or, if one prefers, two realities the second of which would be superimposed on the other, while both remained exterior to each other (de Lubac, 1980, pp.33-4)

Instead:

the supernatural, one might say, is that divine element which man's effort cannot reach (no self-divinization!) but which unites itself to man "elevating" him as our classical theology used to point out and Vatican II still says,

penetrating him in order to divinize him, and this becoming as it were an attribute of the “new man” described by St. Paul (de Lubac, 1980, p.41)

For de Lubac, the supernatural is not separate from nature, but is that which is ‘in’ man, which brings him to his fulfilment. The fulfilment of man, his divinization, is supernatural in character.

This relationship is precisely that found in Teilhard’s relationship between matter and spirit. In fact, in a footnote to his essay ‘Super-Humanity, Super-Christ, Super-Charity’, Teilhard explicitly writes that ‘the prefix “super” is used...to indicate not a difference of nature but a mere advanced degree of realisation and perception’ (Teilhard de Chardin, 1965, p.151n1), thereby even coming close to using the same language that de Lubac does (or, better, de Lubac comes close to using the language of Teilhard).

It is therefore in the relationship between nature and the supernatural that Teilhard’s whole evolutionary theory lays (cf. Teilhard de Chardin, 1965, p.212ff). The relationship between matter and spirit is the relationship between nature and the supernatural (Schäfer, 2006, p.113); the more conscious and spiritual creation becomes, the more supernatural its disposition.

In this way, ‘[Teilhard] anticipated the thought of Vatican II. We can even venture to assume that this influence was at work there, in the person of such periti as Henri de Lubac, who shared Teilhard’s cosmic view’ (Binns, 1968, p.134; cf. Vollert, 1968, p.147ff). Lane even goes so far as to claim that ‘Gaudium Spes embodied Teilhard’s thought, though without explicit reference to him’ (Lane, 1996, p.89), as does Faricy, who claims that Teilhard’s ideas influenced the Pastoral Constitution on the Church in the Modern World (Faricy, 1981a, p.xv).

b. The Continuing Need For Grace

‘Nevertheless’, clarifies de Lubac, ‘[Teilhard] is equally clear, when necessary, to emphasize the distinction [between nature and the supernatural], which only God’s gift can eliminate the two’ (de Lubac, 1967, p.122). Such a comment can clearly be seen as an attempt to reaffirm that Teilhard’s understanding of the supernatural term of evolution does not mean that grace is no longer required. The Pelagian heresy has not returned under a new guise. The relationship between nature and the supernatural still relies completely upon God’s grace, and it relies completely on the role of God in the evolutionary process, and the love of God.

Panpsychism

a. A Convergent Consciousness

It has already been expounded in some detail that for Teilhard the complexification of matter had a corresponding complexification of consciousness; the more evolved one is, the more conscious one is. However, the relationship that Teilhard posited between matter and spirit, such that every ‘bit’ of matter has a ‘within’, i.e. a spiritual dimension, also leads to a doctrine of panpsychism, the belief that everything from humanity to elementary particles has a corresponding consciousness.

It was claimed above that the process of evolution can rightly be called a process of spiritualisation, that the material progression of evolution is nothing more than the outward manifestation of the more important process of spiritual perfection, i.e. deification. However, by the term spiritualisation, Teilhard also meant ‘the increasing predominance in the human layer of the reflective (or “thought”) over

automatic reactions and instinct' (Teilhard de Chardin, 1975, p.183). In other words, as there is a positive correlation between material complexification and consciousness, and there is likewise a positive correlation between material complexification and spiritual complexification, so there is a relationship between spirituality and consciousness (Smith, 1988, p.27). The more conscious one is, the more spiritual one is, and the closer to God one is. If the spiritual dimension is simply the 'within' of matter, then this forms the basis of a doctrine of panpsychism.

In *The Future of Man* Teilhard wrote that there 'is a universal property common to all particles constituting the universe, but varying in proportion to the complexity of any particular molecule' (Teilhard de Chardin, 1959, p.123), explicitly underlying the correlation between material complexity and consciousness. Teilhard also stated in his *Phenomenon of Man* that:

the term "consciousness" is taken in its widest sense to indicate every kind of psychism, from the most rudimentary forms of interior perception to the human phenomenon of reflective thought (Teilhard de Chardin, 1959, p.57n1)

This means that Teilhard does not mean that everything is conscious in the same way, but that what is manifested in humanity as reflective thought, is also present, in a qualitatively different degree, in everything else. Just as evolution goes through qualitative changes, so what is termed consciousness, the 'within' of matter, does too. Hence, this does not mean that each atom is conscious, but 'there is something corresponding to consciousness even among the atoms' (Hanson, 1979, p.170).

Teilhard underlined this point in the rather obscure remark that ‘consciousness displays itself qualitatively as a spectrum of shifting shades whose lower terms are lost in the night’ (Teilhard de Chardin, 1959, p.60), meaning that the ‘within’ of matter, i.e. consciousness, becomes so fragmented as matter becomes more simple that it becomes undetectable. Even the most simple and diffuse of matter is still conscious but this does not mean that the consciousness manifested at these lower levels is of the same quality as human reflective thought. At one point Teilhard even postulates that magnetic forces have a corresponding consciousness (Teilhard de Chardin, 1965, p.146), which led Cuénot to suggest that ‘the universe of physical forces is only an exterior whose interior is psychic’ (Cuénot, 1958, p.352).

For Teilhard, if there is a definite process of convergence of consciousness into more complex forms, then there must equally be a reverse, a ‘looking back’ to a previous divergent consciousness. He wrote, therefore, that:

why not extend and generalize this law, duly documented in the human sector, to all the rest of the living world?...what is true on the level of man and anthropogenesis must be equally true (at least initially and proportionately) at any earlier stage of biological evolution (Teilhard de Chardin, 1965a, p.124)

However, it is not just consciousness and spirit that are treated as in some sense interchangeable, life, too, is part of this relationship. What is considered spirit, the ‘within’ of matter, is both life and consciousness. The more that life is manifested in the individual, the more conscious it is, and the more spiritual and closer to God.

b. Teilhard and Bergson

Teilhard's conclusion that 'all energy is psychic' (Teilhard de Chardin, 1959, p.64) is similar to that of Bergson who asserted that 'life is of the psychological order' (Bergson, 1911, p.271), further supporting the fact that Teilhard was heavily influenced by Bergson. However, that being the case, it is panpsychism that nevertheless represents one of the most important distinctions between Teilhard and Bergson.

For Bergson consciousness was a single, objective entity that was filtered through the brain. This meant that, although there was a direct correlation between the individual's brain and their consciousness, consciousness did not originate in the brain, which was only a 'vessel' for a separate consciousness (Bergson, 1911, p.256, p.277). Consciousness, therefore, was divergent; the single, objective consciousness diverges and is 'distributed' to individuals in correlation to the size of their brain.

For Teilhard, in contrast, consciousness is fragmented, each particle of matter having a corresponding consciousness (the 'within'), which converges and unites, evolutionally, forming ever greater and deeper centres of consciousness, directly correlating to the degree of biological development. Eventually, when the Omega Point is reached, what was once a fragmented consciousness becomes united and singular, forming one objective consciousness. The thresholds that evolution crosses correspond to those moments when the tension of converging spirit becomes too great and a 'jump' in the consciousness of the universe occurs. For Teilhard, consciousness, or spirit, is pulled together into the convergent centre of the universe that is the heart of Christ.

For Bergson, consciousness 'splits' and branches off into matter, the degree of individualisation being determined by the extent of participation in the *durée*. In other words, Bergson's panpsychism is divergent whereas Teilhard's is convergent.

Bergson and Teilhard both espouse panpsychism, and both attribute consciousness in correlation to biological development (although Bergson is more specific that neural tissue is needed, he still maintains there is potential for consciousness in all matter), Teilhard differs in that he sees the process of evolution as being concerned with the convergence of a divergent consciousness, rather than the continual process of a diverging consciousness. Thus, Teilhard's panpsychism is fundamentally bound up with his spiritualisation. Just as evolution is producing one united spirit, i.e. deification, so evolution is producing one united consciousness, which is Christ's, to correspond with the body of Christ, which is the material 'without' of the Omega Point.

c. Panpsychism and The Great Monad

If consciousness is the manifestation of the 'within', or, more accurately, matter is only the outward appearance of consciousness, then the convergence and union of one, collective, objective, consciousness – Christ's – must manifest itself as one, collective, objective, body as well; a body that is 'organically and psychically indivisible' (Teilhard de Chardin, 2004, p.281). One collective consciousness 'within' means one collective material 'without'.

Teilhard, in his Writings in The Time of War, supports this interpretation writing that 'if [Christ] is to be the soul of our souls, he must begin by being the flesh of our flesh' (Teilhard de Chardin, 1968a, p.268). Christ achieves this 'being the flesh of our flesh' through the continuing convergent evolutionary process in the phylum of the Church. As Cuénot confirms

if we want more mind, we must have greater arrangement of matter...there is nothing to stop us from admitting that the conscious superstructure is based on the material infrastructure (Cuénot, 1967, p.64, p.87).

If heaven is reached through the Earth, so that heaven cannot dispense with the Earth, and that the correlation between matter and spirit is upheld, there can be no other conclusion than this: a completely unified soul is manifested as a completely unified body.

God, Panpsychism and Vitalism

In much the same way that Bergson went on to correlate the consciousness that drives evolution with God, Teilhard also links the spirit that drives evolution with God (Lane, 1996, p.145). The spirit that eventually converges upon itself to become the body of Christ is identified with God (cf. McCarty, 1976, pp.57-8). If consciousness, the objective consciousness that is being united through evolution, is the consciousness of God, and remembering that evolution is always, no matter how weakly, directed through consciousness (see Teilhard's 'synthesis' between Darwinism and Lamarckism), then evolution is a process that is directed by God. As evolution progresses, and this consciousness becomes more converged and united, then God has more control of the evolutionary process through the actions of humanity (see synergia below).

The postulation of a 'within' to matter that guides the evolutionary process betrays a vitalistic understanding of evolution. There is a principle within nature that guides it along the path of evolution to its fulfilment, and that principle is the consciousness of 'within', which is God. Thus, Klauder writes that

evolution is the creative power and intelligence of God working from within his creation to the manifestation of his glory...the “thrust” in the universe is the created dynamic force which manifests God’s immanence and creative power in nature. Since radial energy is that form of energy which accounts for cosmic evolution towards the more complex, the more aware, the more spiritual, it would seem that in its basic form it is the creative power of God (Klauder, 1971, p.15, p.23)

The fact that consciousness is seen as a manifestation of spirit, and the guiding force of evolution, means that Teilhard is an exponent of vitalism. In this way, it becomes explicit that the energy of the creative process is that of God. God pulls spirit towards him, unifying matter.

In his essay ‘The Zest for Living’, Teilhard writes that ‘a zest for living, the zest for living – such, when we get to the bottom of the problem, would appear to be the fundamental driving force which impels and directs the universe along its main axis of complexity-consciousness’ (Teilhard de Chardin, 1978a, p.235). This zest for living is none other than life/consciousness/spirit, which is also the guiding force of God in Christ.

a. God as Attraction

At times, Teilhard also refers to this vitalistic movement of evolution as ‘attraction’ (Teilhard de Chardin, 1978, p.205; Teilhard de Chardin, 1968a, p.254). It is God who pulls matter, through spirit, towards him. Teilhard ‘was careful to make it clear...that that ascent [to God, through evolution,] should be attributed not so much

to an impulse from below as to an attraction from above' (de Lubac, 1967, p.121).

The process of evolution is one of unification, but that unification is one of passive attraction rather than active movement.

This means that Teilhard can write that God pulls creation not from above but from ahead (Teilhard de Chardin, 1978, p.53; cf. Smith, 1988, p.34). God waits for evolution to finish (Teilhard de Chardin, 2004, p.71), pulling creation towards him not spatially but temporally, through evolution.

b. Teilhard's Understanding of God As Bergsonian Élan Vital

Bergson's élan vital is a clear influence here. Balek, in his essay 'The Birth and Life of Consciousness' writes that

Teilhard conceives of a purely mechanistic description of the development of the universe – a continuous evolution from inorganic matter to life and even consciousness without the intervention of a vitalistic force. His requirement is that this spiritual force exists from the onset in simple, unorganized matter (Balek, 1961, p.92-3).

In other words, the vitalistic principle is not something separate from matter, it exists in simple, unorganized matter; Teilhard is not a vitalist because he postulates something else to evolution, he is a vitalist because he sees evolution as being guided by an active principle. This is precisely what has already been concluded regarding Teilhard's notion of the 'within' of matter.

Forsthoefel agrees that 'there is no room in [Teilhard's] idea for an entity residing in the midst of matter which is alive, essentially separate from matter'

(Forsthoefel, 1961, p.104). Teilhard does not postulate a ‘something else’ as the vitalistic principle. The guiding principle of evolution is not separate from or outside of that which it guides. The consciousness of matter is responsible for its own impetus to evolve. The guiding principle of evolution is the attractive pull of converging consciousness, which is nothing other than the ‘within’ of matter.

There is a clear comparison here with Bergson’s *élan vital*. Bergson attributed the consciousness of the individual to the filtering of the *élan vital*, which was identified with God, through the brain. Thus, for Bergson, the consciousness of the individual was a participating in the objective consciousness of God. This *élan vital*, or vital principle, was also responsible for evolution, leading to the conclusion that God directed evolution. This is precisely how Teilhard understood the role of consciousness regarding evolution (cf. Teilhard’s tension between Darwin and Lamarck). The relationship in Teilhard between matter and spirit is similar to the relationship between creation and the *élan vital* in Bergson, with the exception, already outlined, that with Teilhard this objective consciousness of God is a future reality, the conclusion of a convergent evolutionary process. Consciousness is the fragmented consciousness of Christ, gradually being pulled together by consciousness itself, gradually being completed, and this completion coincides with the completion of the body of Christ, since matter and spirit are directly linked and have a positive correlation.

c. The Vitalistic Principle as Love of God

McCarty, in support of the interpretation of this chapter, writes that Teilhard’s notion of love is comparable with Bergson, writing that ‘love as energy is the “withness of things” and is closely comparable to Bergson’s *élan vital*’ (McCarty,

1976, p.56). Therefore, Teilhard's understanding of divine love furthers this interpretation of his evolutionary theory (cf. Grau, 1976, p.322ff). For Teilhard, love, the love of God, is synonymous with the evolutionary guiding principle of creation; it is also, therefore, synonymous with consciousness and spirit. It is love that best describes the zest for life that causes creation to evolve to higher and higher degrees of complexity and interiority (cf. Mooney, 1966, p.55; Corbishley, 1971, p.55; Faricy, 2006, pp.127-8; McCarty, 1976, p.33; McCarty, 1976, p.56; Grim & Evelyn Tucker, 2003, p.8; Tremblay, 1989, p.49; Grau, 1976, p.132). Kropf writes that:

a note of July 20th 1946 suggests that love is the dynamic source of consciousness or that consciousness is but the first vague wave of love and that as a consequence the noosphere will be fully activated only to the extent that its affective unifications is "dynamized" or transformed through "Christification" (Kropf, 1980, p.269-70)

Faricy, too, writes that for Teilhard:

what binds creatures together is love. The interior mutual attraction that runs through nature, that binds particles to make atoms, atoms to make molecules, cells to make bodily organs and whole bodies, when found at the level of human consciousness is what we most properly call love (Faricy, 2006, p.128)

Thus, the 'within' of matter, the spirit of which matter is the physical manifestation, is the consciousness of God and the love of God. In *Human Energy* Teilhard is explicit that 'in its most primitive forms, when life was scarcely individualized, love is hard to

distinguish from molecular forces' (Teilhard de Chardin, 1969, p.33) and that 'soon, however, the pull of the living can be felt: in the lower forms it is almost a mechanical process, but in the human heart it becomes the infinitely rich and formidable power of love' (Teilhard de Chardin, 1965, p.48). There is a clear correlation between how Teilhard treated consciousness, which is postulated in all and undergoes qualitative changes, and how he treats love. For Teilhard, therefore, the love of God is also the 'within' of matter, it is that which pulls matter together into more complex and convergent material.

In *The Future of Man* Teilhard wrote that:

for the Christian, if he be truly Christian, [love] is life itself, life in the integrity of its aspirations, its struggles and its conquests, that he must embrace a spirit of togetherness and personalising unification with all things (Teilhard de Chardin, 2004, p.71)

De Lubac also draws attention to this theme. Love, according to de Lubac, is so central that it is the unifying principle of the universe (de Lubac, 1971, pp.86-7). It is love that unites, therefore it is love that creates, and if evolution is how God creates, then the love of God is the vitalistic principle. It is the love of God that is the 'within' of matter, that makes up the consciousness of the individual, thus it is the love of God that guides evolution, that is slowly building the body of Christ. Even the attractiveness between atoms at the centre of chemistry is due to the unitary force of love. It is through the love that God creates; it is the love of God that guides evolution. The love of God, then, that is the vitalistic principle.

Nature and Grace

With the close relationship between matter and spirit, comparable to the same relationship between nature and the supernatural in modern Catholic theology, which in many respects Teilhard can be claimed to anticipate, Teilhard postulates a particular mystical outlook. As has already been alluded to, if nature and the supernatural are the same phenomenon then the tension between them, if it can be called a tension, becomes blurred. Although there are definite thresholds that are crossed, whereby entirely new manifestations of matter and spirit are manifested, there is no real distinction between where creation ends and deification begins. In fact, because matter and spirit are the same, there is not a point when creation ends and deification begins, the two are different ways of explaining the same phenomenon.

a. "Seeing" and "Vision"

It is therefore only faith, only by 'seeing' with eyes that can see,²⁰ that can understand the supernatural end to nature, that can see the world and evolution for what it truly is: the love of God working in and through the world, perfecting it, deifying it, forming the body of Christ. 'Seeing', writes Hale, 'is in fact the key source for [Teilhard's] theology of the universe' (Hale, 1973, p.60).

In *The Divine Milieu*, the book where such an understanding is most explicit, Teilhard argues that it is common to accept that there is a divide between time spent in the world and time spent engaging in ecclesial activity. He writes that:

²⁰ It is in this direction that O'Connell notes Rousselot's influence on Teilhard. 'Rousselot in 1910 published his famous essay on how the believer's "eyes" could see signs of God's working which escaped the eyes of others' (O'Connell, 1982, p.41).

a few moments of the day can be salvaged for God, yes, but the best hours are absorbed, or at any rate cheapened, by material care...under the sway of this feeling large numbers of Catholics lead a double or crippled life in practice (Teilhard de Chardin, 1968, p.65)

The reason that large numbers of Catholics feel this way is that ‘much of the so called “spiritual” writing in the Church has...treated those two orders [of nature and the supernatural] as if they were like oil and water, one superimposed on the other but never interpenetrating it’ (Corbishley, 1971, p.85), a sentiment that can be attributed to the success of Thomism (cf. Cooper, 1989, p.28). However, Teilhard claims that this is incorrect. There can be no separation of nature and grace, because matter always has a spiritual ‘within’, therefore there can be no situation in which humanity is not in touch with their supernatural end in God; ‘by virtue of the creation and, still more, of the incarnation, nothing here below is profane for those who know how to see’ (Teilhard de Chardin, 1968, p.66).²¹

²¹ ‘Jesus’ often shocking parables have as their primary purpose to get people to behold, to get people to wake up and see, to behold what is already in their midst...[and] what is it we are always being told to behold in Jesus’ parables? The divine presence everywhere’ (Fox, 1988, p.70). (‘The reason I speak in parables is that “seeing they do not perceive...but blessed are your eyes for they see”’ (NRSV, 1995, Mt 9.14, 16), ‘do you have eyes, and fail to see?’ (NRSV, 1995, Mk 8.18)).

Maloney writes that Maximus the Confessor understands that ‘the ordinary person reads Holy Scripture and sees nothing but the letter...but the person with the gift of contemplation sees the deeper meanings...the same applies to man in relation to other men...the man of interior vision can see beyond to the inner logos. He can pierce through the phenomenal, the physical appearance of the sensible order, as unimportant and enter into an interior vision, that allows him to see others in God’s light’ (Maloney, 1968, pp.173-4).

There is a similarity, therefore, between Teilhard’s understanding of the relationship of matter and spirit and the Palamite understanding of the Thoboric light. For Palamas, and subsequently Eastern Orthodox theology, the light of Christ of the transfiguration, and the light of deified individuals and mystics, is only perceivable to those who themselves are deified. The story of the transfiguration of Motovilov and Seraphim of Sarov (Jakim, 2009, p.255) provides a good example of this. In this story

The language of ‘seeing’ or ‘vision’ is central to this understanding, and what humanity must ‘see’ is ‘the inner presence of the resurrected Christ bringing the world to consummation’ (Maloney, 1968, p.189). Teilhard continues by asking ‘which is the more precious of these two beatitudes, that all things are means through which [humanity] can touch [God], or that [God himself] is so “universal” that [humanity] can experience [him] and lay hold of [him] in every creature’ (Teilhard de Chardin, 1968, p.127). These two beatitudes, however, essentially make the same point: there can never be a situation whereby creation is not the means whereby God is experienced and attained.

This means that when humanity come to realise the close connection between nature and grace there will be ‘no need to fear that the most trivial or the most absorbing of occupations should force us to depart from him...there will be little to separate life in the cloister from the life of the world’ (Teilhard de Chardin, 1968, pp.66-7). The path to God is not in separation and escape from it but through it. Humanity only has to recognize that nature always and at every moment has a supernatural end to acknowledge that their natural life becomes supernatural in character – the end of evolution is experienced now (Grumett, 2005, p.150).

However, perhaps more importantly, Teilhard explicitly relates this idea of vision to his evolutionary theology of union. He writes that ‘fuller being is closer union...[and] union increases only through an increase in consciousness, that is to say

Motovilov complains of not being able to look at his master because of his transfiguration, however Seraphim replies that this is only because he has become transfigured himself, it is only he that has eyes that can see who can recognize the supernatural end to nature. It is only because Motovilov was himself deified that he could perceive that deification of Seraphim of Sarov. (Likewise at the Transfiguration of Jesus the change is not one that happens in Christ but in the disciples (cf. Maloney, 1968, p.246, Lossky, 1975, p.61)).

vision' (Teilhard de Chardin, 1959, p.31). The more evolved one is, the more consciousness one has, then the more united to God one is, and the more that one can experience the supernatural end to evolution. The more evolved creation becomes, the closer to deification it becomes, and the greater the ability to 'see' the world for what it truly is. As will be seen below when synergia is considered, the mystical activity of recognizing the supernatural end of life in the here and now actually fastens the 'Omega Point'.

b. "Seeing" as Faith

It is in this direction that faith comes to hold an important role. De Lubac asks 'how, then, should we sum up Pere Teilhard's optimism? No one, surely, (no believer, that is,) could reasonably see it as anything but a victory of faith' (de Lubac, 1967, p.46). 'Seeing' the world for what it truly is, with such a close connection between nature and supernatural, is an act of faith. It is with faith that the individual can perform their duties, no matter how mundane, and still be sure that they are living with the supernatural.

This means that faith becomes for Teilhard an evolved category. The more evolution progresses, and the more spiritual it becomes, especially when it crosses the threshold of humanity and the spiritual becomes more prominent than the material, so faith becomes more central.

c. Teilhard's Jesuit Spirituality

It is true that Teilhard reached this conclusion regarding the role of spirit in matter from Bergson, but it is also a result of his Jesuit upbringing, an outlook that he attained as a student (Cuénot, 1958, p.5). Grumett, in his *Teilhard de Chardin*:

Theology, Humanity, and Cosmos, notes this feature of Teilhard's intellectual upbringing writing that 'the vision of the cosmos spiritually transfigured performs an analogous function for Teilhard to that of imagination in the Ignatian Spiritual Exercises' (Grumett, 2005, p.228).

The Ignatian spirituality was concerned, in the first place, with finding 'God in all things'. Teilhard spent his entire academic life in Jesuit institutions; he joined the order at eighteen, and spent his adult life giving retreats. It is therefore obvious that he was steeped in Jesuit spirituality. This provides the perfect complement to Bergson's *élan vital*. Where Bergson developed an evolutionary theory based on a vitalistic principle in all things, evolving them, and bringing them to consciousness, Ignatius taught his disciples to see God in all things. It comes as no surprise therefore that Teilhard embraced this Bergsonian evolutionary theory and used it to develop his own evolutionary theology.

Teilhard saw God in everything, and he saw evolution as the creating action of God in the world, uniting everything together in the body of Christ. The more evolved the individual was the easier it was to see this supernatural evolution, and to 'see' God in the world. The more evolved one was, the closer deification was, and the more faith the individual had.

d. Synergia

It has already been commented that Teilhard's understanding of the relationship between matter and spirit led to his mysticism of attaining heaven through Earth, not by abandoning it. This means that, although it is the spiritual dimension that is primary, any attempt to hasten material progression will likewise hasten the Omega Point, due to the correlation between the two. This, obviously,

leads to a doctrine of synergia. Although many commentators note that ‘action’ plays an important part in Teilhard’s thought,²² very few, if any, explicitly refer to it as synergia.

In his *Christianity and Evolution* Teilhard wrote that humanity must:

make [their] way to heaven through Earth. There is a communion (the true communion) with God through the world, and to surrender oneself to it is not to take the impossible step of trying to serve two masters (Teilhard de Chardin, 1971, p.93).

There is no longer a separation of nature and grace, no longer an activity on earth that is separate from (whether positively or negatively) the path to deification. Teilhard therefore contends that no matter how ‘monotonous, commonplace, [or] boring’ his worldly duties may be, he can carry them out ‘in the consciousness that I am effectively collaborating in the absolute evolution of Being’ (Teilhard de Chardin, 1968a, p.43).

²² It is in this area that it is argued that Blondel provided a big influence on Teilhard. Most notably, Blondel argued that ‘even by our own action we try to produce something outside us, we find that we grown in the process. So action builds up our personality’ (Marnette, 1981, p.137); for Blondel it is in the field of action that the category of becoming happens, it is only in action that humanity can come to know itself and the world, and more specifically, or importantly, God. Marnette continues that ‘if we open ourselves to wider horizons of action, we attain a destiny in which we become the collaborators of God and even are ready to receive the generous help of grace’ (Marnette, 1981, p.143), clearly showing a comparison with Teilhard’s theory. However, as Lyons notes, ‘it was not until August 1919 that [Teilhard] became aware, in conversation with Valensin, of Blondel’s “pan-Christism” and of its similarity to his own view on the relation between Christ and the world’ (Lyons, 1982, p.159). This happened after Teilhard, in his essays written during the First World War, had already elaborated his Christology, therefore Blondel cannot be considered to be responsible for this idea in Teilhard. See also Hale, 1973, p.51ff; Grumett, 2005, p.44ff; Raven, 1962, p.101; Mooney, 1966, p.20.

In *The Divine Milieu* Teilhard places a big emphasis on the importance of human action in relation to creation's relationship with God, and he is clear that human action makes a positive contribution to the progress of evolution. In other words, human action brings 'fulfilment to Christ'. Teilhard continues that 'each one of our works, by its more or less remote or direct effect upon the spiritual world, helps to make perfect Christ in his mystical reality' (Teilhard de Chardin, 1968, p.62). If the Omega Point coincides with the completion of the body of Christ, then it is unmistakable that Teilhard here is claiming that human action contributes to the direction and progress of evolution.

Again, in his essay 'A Note on Progress', Teilhard writes that Christ 'fulfils himself gradually through the ages in the sum of our individual endeavours' (Teilhard de Chardin, 2004, p.13). The Lamarckian implications of Teilhard's evolutionary theory have already been commented upon and therefore it is unnecessary to return to such a debate. It is enough to point to how this understanding of the role of human cultural and social progress (Teilhard de Chardin, 2004, p.14) helping to complete evolution follows from Lamarck's own theory of acquired characters, albeit through Bergson's own interpretation. With the onset of the noosphere, and the contention that the spiritual has now superseded the material in terms of importance, so consciousness, manifested in human culture, has significant influence over the evolutionary process.

The affirmation of the role of synergia for Teilhard therefore becomes the logical conclusion of his evolutionary theory of complexity-consciousness. The more complex creation becomes, and the more conscious it becomes, then the greater influence this consciousness has on the further progress of evolution. Synergia, the working with God to complete evolution is directly correlated to the

complexity/consciousness of the individual. The more conscious and complex life is, the greater the responsibility they have for submitting to the will of God. Or, in Lamarckian terms, the more conscious one is, the greater influence they have on the evolutionary direction.

e. The Role of the Scientist

Further to the role of synergia in evolution, and with reference to the role of technology in the last chapter, Smith notes that ‘what mainly complexifies the world, according to Teilhard de Chardin, is the progress of science and technology’ (Smith, 1988, p.171). For Teilhard, whilst all human action plays an important part in bringing about the end of evolution, the advancement of science and technology plays a particularly central role. It is for this reason that Teilhard can claim that the monks of the future are scientists (Schmitz-Moorman, 2011, p.115). It has already been seen that Teilhard saw little to separate the cloister from the rest of the world, but now it may be claimed that the laboratory holds a special place – the lab becomes the cloister, where those who set themselves apart from the world dedicate their lives to bringing the kingdom. It is the scientist who fastens the supernatural fulfilment of the world, not the monk.

In this direction Grau remarks that what Teilhard ‘was thinking of first and foremost seems to have been the, to many, startling equivalence of scientific research itself with adoration of the divine’ (Grau, 1976, p.347). Scientific research becomes the new prayer of creation. Sproxton agrees that ‘research thus pointed more and more to a divine centre’ and that Teilhard claimed ‘that science and technology have essentially a spiritualizing role’ (Sproxton, 1971, p.103). This quote has added significance when it is remembered that for Teilhard evolution is nothing if it isn’t a

process of spiritualization. If science and technology have a spiritualizing role, then it is science and technology, specifically, that influences the progress and direction of evolution. When evolution reaches the threshold of humanity technology takes over from biological evolution, continuing the process towards the Omega Point.

Cuénot, too, writes that for Teilhard 'scientists feel obscurely that to know more is to be more, that a growth of consciousness also promotes an ontological growth' (Cuénot, 1967, p.69). There is clearly an allusion to the role of 'vision' at the heart of Teilhard's mystical evolutionary theory. To know more is to be more, the more conscious one is the fuller being they have, and the more they know that the natural process of evolution has a supernatural end.

It should come as no surprise that science and technology lay at the heart of Teilhard's theory. It is scientific progress that represents the summit of human action. It is scientific endeavour that first and foremost brings about human progress. Technological progress influences biological evolution and brings about the 'organicosocial supercomplex'.

However, what is important about this contention involving the role of science, a contention that few commentators pick up on, is that the role of the Church is significantly downplayed.

Of course, it must be remembered that Teilhard saw the continuing evolution of creation as happening within the phylum of the Church, and in that respect no evolution can happen outside of the influence of the Church, yet there is definitely room for the possibility of grace outside the Church. Perhaps Teilhard meant that science should be conducted within an ecclesial environment; for those who have 'eyes that can see' the Church has no boundaries, the world is the Church. This would

surely be the interpretation of his famous sacramental essay 'The Mass on the World', in which he makes precisely these sorts of comments. However it is not clear that this is where he saw the role of the scientist, nevertheless Teilhard's work at least allows for the discussion of the possibility of grace outside the Church to take place.

f. The Role of Love

Another important element of synergia for Teilhard is the role of love. If the love of God is the 'within' of matter, and is that which unites the world, pulling it together to form the body of Christ, then the love of humanity, imitating this love of God, works with the love of God, hastening the Omega Point. If love directs and progresses evolution, then the love of humanity compliments this love, helping to direct and progress evolution. Grau is explicit in this regard, writing that 'love is to be exercised in accord with the framework of discernable, organic ties binding men together in the evolutionary task' (Grau, 1976, p.180). The work of evolution is union, and when men unite themselves together, the Omega Point comes closer.

In the same way that consciousness, according to Teilhard, is postulated 'backwards' so that there is something that equates to consciousness even in the atoms, so there is something that equates to love in all matter. Teilhard wrote that 'morality is consequently nothing less than the higher development of all mechanics and biology' (Teilhard de Chardin, 1969, p.105). This means that even the actions of atoms and elementary particles, let alone non-human life, in their own way, contribute to the human effort to work with God and create the body of Christ.

This means that, when creation loves, it really, truly, is doing the work of God, which is uniting through evolution. Of course, the love of creation is only ever an imitation of the love of God, and could never be considered equal to the role of the

love of God, but if the love of God is the ‘within’ of matter, then the love of creation can only help this spiritualization and evolution.

g. The Role of Passivities

Another element of the role of synergia in Teilhard’s thought is the place that passivities or diminishments play. What humanity does, it has been argued, plays an important part, but what happens to humanity also plays an important part, and forms a sizable portion of The Divine Milieu. Through love and scientific progress humanity work with God to bring about the Omega Point at the end of evolution. However, the submission of humanity to that process is equally important to allow evolution to continue unhindered (Teilhard de Chardin, 1968, p.123).

De Lubac evidences this writing that the part played by ‘passivities’ is more important than that played by ‘activities’, and that ‘passivities’ are ‘immeasurably the wider and deeper part, and the most indispensable [part]’ of humanity’s contribution to evolution (de Lubac, 1967, p.34). De Lubac continues that Teilhard’s ‘passivities are analogous, in their function of purifying and finally divinizing, to the “nights” of St. John of the Cross’ (de Lubac, 1967, p.56).

Grumett also notes the importance of passivities, writing that ‘the quest for a response to the human experience of suffering lies of the heart of Teilhard’s theology’ (Grumett, 2005, p.75). Suffering lies at the heart of the evolutionary progression, and that suffering plays an important part in shaping the body of Christ that is the Omega Point. Grumett continues that ‘at the ultimate kenotic, self-surrendering moment of death, humanity becomes open to the transforming power of Christ’ (Grumett, 2005, p.100). Humanity must be open to the love of God and surrendering to that love through a kenotic love of their own is the best way to do so. Human love is nothing if

it isn't a surrendering to the other. It is therefore death, the ultimate surrendering to God, that this love is best seen.

Teilhard is most explicit in this regard when he writes that 'one cannot progress in being without paying a mysterious tribute of tears, blood, and sin' (Teilhard de Chardin, 1978a, p.247). Science and technology may very well contribute to the evolutionary progression of the world, but tears and diminishments always accompany that progress.

Original Sin and the Need for Christ

It is in this direction that a Teilhardian doctrine of original sin can be found.²³ Despite the fact that Delio writes that the reason for Teilhard's censoring by his Jesuit superiors was 'because he rejected original sin in light of evolution' (Delio, 2013, p.xvi), Cuénot is correct that 'Teilhard in no way ruled out the historical existence of individual faults. He asserted that all men have been, are and will be, tainted by sin' (Cuénot, 1967, p.55), in other words what Teilhard offered is not a complete rejection of original sin, but a different appropriation of original sin.

a. Sin as Statistical Necessity

Smith notes that:

one has the impression that Teilhard would like to [jettison original sin] very much...yet he does the next best thing: instead of discarding the concept of

²³ For a discussion of Teilhard's relationship with original sin see Smith's chapter 'Biblical Fall and Evolutionist Ascent' (1988, p.133ff.); Mooney, 1966, p.104ff; Grumett, 2005, p.15ff; O'Connell's 'Crisis and Faith: In Evolution' (1982, p.115ff.); Grau, 1976, p.315ff.

original sin, he recasts it in strictly evolutionist terms. And this suffices to remove the sting of the ancient doctrine (Smith, 1988, p.138).

Rather than being a legal category, or an ontological ‘stain’ as a result of a past human error, ‘sin, that is to say conscious and deliberately willed evil, the rejection of the love of God, therefore results from a cosmic structure, since it is evolutive’ (Cuénot, 1967, p.57; cf. Bruns, 1961, p.182). Teilhard saw this sin to be the result of a necessary statistical probability (Teilhard de Chardin, 1965, p.161); a dynamic world in a state of evolution is inevitably going to lead to failure at some point. Cuénot continues that ‘evil is a by-product of evolution’ (Cuénot, 1967, p.87). This means that Teilhard can claim that ‘the cross is the symbol of the arduous labour of evolution – rather than the symbol of expiation’ (Teilhard de Chardin, 1968a, p.71). There is an explicit downplay of understanding the role of Christ in terms of sin and salvation, and an emphasis on seeing Christ as creator, as being responsible for evolution (which is how God creates); the cross is no longer expiation but explicitly linked to the ongoing work of evolution.

Kenney affirms that ‘the statistical aspect of sin tends to be the only aspect investigated. A process of evolutionary ordering necessity involves disorder’ (Kenney, 1970, p.204), as does North, who writes that ‘sin is in fact as inevitable in the human part of the evolutionary process as failure is in any other’ (North, 1968, p.31). Klauder also evidences this element in Teilhard’s theology writing that:

ultimate progress is incompatible with a global and voluntary rejection of God...the point is that free men must work towards the goal of human unity and

God's glory, overcoming opposing forces, yet knowing that there is no natural assurance of the immediate outcome of this effort (Klauder, 1971, p.116)

Kropf, too, notes that:

[Teilhard's] own particular vision of the man as the summit of biological evolution led him to a more theologically sound agreement with the scriptural view that the destiny of the material creation is more or less consequent upon man's fidelity to God's redemptive plan for him (Kropf, 1980, p.104)

The culmination of the evolutionary progress cannot happen without humanity's consent, they must join their 'Amen' with Mary's submission to the proclamation of the Angel Gabriel, 'let it be done to me according to your will' (supporting the idea that human passion is more important than human action). Failure to do so, humanity's 'voluntary rejection of God', therefore comes to be seen as the pride of original sin.

Essentially, Teilhard is reinterpreting what it means to sin in the light of his theology of convergent evolution.²⁴ The more evolved evolution is, the more

²⁴ Grau notes that Teilhard's 'position has remarkable resemblance...to the Roman Catholic thesis that it is morally impossible for a human person to avoid serious sin, without any destruction to the integrity of human freedom, unless assisted by the grace of God' (Grau, 1976, p.92); in other words the tension between finished and unfinished creation in the thought of Teilhard is comparable with the classical doctrine of original sin and the reliance of God. He continues that 'what complicates matters from the standpoint of Teilhard's ethics is the apparent inconsistency of holding, on the one hand, a position that says sin cannot really destroy evolution, and, on the other hand, exhorting people to fight against evil, to recognize their responsibility to take control of evolution or it will be destroyed' (Grau, 1976, p.317). However, it is important to note that, whilst this may be a criticism of Teilhard's theory, it is likewise a criticism of the traditional, Augustinian formulation of it, in that all good deeds come from God but all bad deeds from man, confusing the idea of

conscious it is, and therefore the more responsibility it has. Faricy notes such an interpretation writing that

in non-living things, this waste takes the form of disharmony or decomposition...in living beings it appears as suffering and death...and in the moral order, in the realm of human freedom, this waste and failure takes the form of sin (Faricy, 1981, p.53).

Teilhard wrote that ‘non-being, pain, sin – ontological evil, sensibly experienced evil, moral evil – these are three aspects of the same evil principle’ (Teilhard de Chardin, 1968a, p.103). The more conscious creation is, the greater the responsibility to build the earth, but the greater the possibility of failure (Cuénot, 1967, p.108). North puts the same idea differently, ‘sin is evolutionary dropout transferred to the level of freedom’ (North, 1968, p.35). In the same way that unfavourable evolutionary changes tend to stunt progress, so sin (which is interpreted as evolutionary changes on the level of humanity, remembering that now evolution has undergone a fundamental qualitative change in the noosphere) stunts progress. Teilhard himself points to freedom as a category for understanding sin, writing ‘yes, there is suffering, and its amount is directly related to the extent of “consciousness” and thus to man’s freedom’ (Sproxtton, 1971, p.95). In other words, the more consciousness that creation manifests the more responsible it is for the building of the earth, the more open to sin and suffering it is. In the same way that there is a

divine determinism and human freedom. Humanity has a responsibility to work towards and bring about the end of evolution, yet the process of evolution (and indeed, therefore, human consciousness), is controlled and directed by God. Any inconsistency in Teilhard’s version of original sin is only a re-appropriation of this very paradox (For a discussion of the problem of determinism and freedom see (Grau, 1976, p.90ff.)).

correlation between complexity, consciousness, and deification, so there is a correlation between complexity, consciousness, and responsibility to build the earth and the possibility for sin and failure.²⁵

b. The Role of Christ

Teilhard's solution to the problem of original sin is to be found in the tension between humanity's striving towards the Kingdom of God and Christ's assurance that it will be reached (Teilhard de Chardin, 1968a, p.105). If what the 'sin' of original sin is changed, then the nature of Christ's 'redemption' must also be changed. Christ's reversal of original sin is not understood now as judicial category, renewing humanity's relationship with God, but as an assurance that evolution will be completed – Christ is no longer saviour in the sense of being the remedy for sin, but in terms of being the creator.

'Christ saves the world', confirms Mooney, 'in the sense that, without him, man's effort would be without ultimate hope of success, and this would mean that man would inevitably lose his taste for life and abandon altogether his task on earth' (Mooney, 1973, p.158). If sin is the possibility, or even the inevitability, of failure and the selfishness of humanity not to work towards building the kingdom, then salvation from this sin consists in the assurance that this Kingdom will be built, and, as the next chapter will show, that is the role that Christ takes. Through his resurrection he assumes the cosmos, and his person becomes the catalyst of the coming end of evolution.

²⁵ Savary, in his *New Spiritual Exercises*, notes the parable of the talents (Matt 25: 14-30) as an example of the implications of what happens when synergia is not adhered to, the sin of omission. He even goes so far as to claim that failure to work with God in the bringing about the omega is devolution (Savary, 2010, p.58).

Humanity still have to work towards the Kingdom, but now that Christ has come, now the Incarnation has happened, such an end has been assured, it is inevitable now that this process will not end in failure, thus sin is defeated, the possibility of failure is defeated and human selfishness, sin, no longer has an effect. If this is so, if sin is human selfishness to synergia and the statistical probability of failure, and Christ makes the Omega inevitable, then the relationship between sin and salvation is nuanced to a tension between failure and success; the paradigm of sin and salvation becomes one of the failure and success of creation, as Blair writes

It could be said that whereas Orthodox Christianity hangs on the three main points, creation, restoration, and a final climax, Père Teilhard's general concept hangs on two only: it stretches from creation directly to the final climax (Blair, 1970, p.101).

This comparison of Teilhard to Eastern Orthodoxy will be furthered in the next chapter.

Essentially, therefore, Teilhard provides a doctrine of original sin without the fall. His idea of 'statistical probability of failure' allows for the fact that humanity, or nature, is inherently sinful – i.e. selfishness, pride, the rejection of the need to submit to the grace of God – and still allows the postulation of Christ as 'remedy' to that sin, as the defeater of sin, without appealing to a literal fall in order to anchor that doctrine. It was such a doctrine that ultimately got him into the most trouble, not that he denied original sin itself, but that he denied the event on which it was based, however it was such a position that was necessary for his evolutionary theology.

It is at this point, therefore, the point where Christ becomes most important in Teilhard's evolutionary theory, that a discussion of Teilhard's evolutionary theology is left and a discussion of his Christology is turned to. In the next chapter it will be shown how Christ fits into this understanding, expanding on the comments made in this chapter.

Chapter 5

Teilhard de Chardin and the Cosmic Christ

It was seen in the last chapter that Teilhard makes a connection, an identification, between the God of Omega and the Christ of revelation (Faricy, 1968, p.59). For Teilhard the person of Christ is both the end point of evolution and the guide of that process. Christ “uses” evolution to make himself a body, which is being completed in the phylum of the Church. At the same time, the end of evolution has already been anticipated and experienced in Christ. This chapter focuses on this reinterpretation of the role of Christ.

The following discussion will explore a number of different important themes in Teilhard’s Christology including the role of Pauline theology, the rejection of judicial categories, participation, and the postulation of a third Christological nature. In this analysis, these themes are separated into two distinct categories: first, the role of Christ as the sustainer of nature, as the principle that holds nature together, as *élan vital*; second, Christ as the end of evolution, as the *telos* of evolution, that which nature is travelling towards. For Teilhard, Christ is both the force that drives evolution forward and the end of that process (Mooney, 1966, p.54). ‘Through his Incarnation’, writes Mooney, Christ ‘has achieved in his body-person the purpose of the whole evolutionary process: the unity of humanity with God in and through a purification of matter’ (Mooney, 1973, pp.157-8). The doctrine of the Cosmic or Universal Christ²⁶

²⁶ It is, perhaps, worth pointing out that up until very recently, any appeal to the cosmic sense of Christ would have been still fairly localized to this planet, i.e. it is only with Copernicus, Galileo, and modern space exploration, that ‘cosmic’ or

takes the discussion of Christology away from legal categories and makes Christology the object of evolution.

For Teilhard, as was seen at the end of the previous chapter, evolution necessitates a reinterpretation of the role of Christ in which the static, exclusive doctrine of salvation that became the dominant interpretation of the Western Church is replaced with an inclusive doctrine of deification. The juridical Christ is replaced with a universal or cosmic Christ, a Christology that ‘Teilhard was manifestly in love with’ (Kropf, 1980, p.155).²⁷ This new conception of Christ will be considered in this chapter. Such a new conception sees Christ as being primarily concerned with creation, not salvation, and with his resurrection, which provides the setting for his taking over the process of evolution and thus ensuring its ultimate success.

This chapter will start by focusing on Teilhard’s rejection of legal and juridical categories in Christology, and explore his interpretation of Pauline themes. Moving on to the fundamental elements of his cosmic Christology, it will explore his interpretation of Christ as the bond of matter. This manifested itself, for Teilhard, in a reinterpretation of the doctrine of participation. Building on this, Teilhard postulated a third nature of Christ, distinct from his divine and human natures; Teilhard felt this third nature was needed to allow for Christ to be viewed as the guide, culmination and result of evolution. Finally, this Christology allows Teilhard to see the Parousia of Christ as synonymous with the end of evolution. Before that discussion, however, his Jesuit influences need to be discussed.

‘universal’ functions of Christ can include the whole universe. For the Early Fathers a universal Christ was still confined to this planet. In the modern world of multi-dimensions or multi-verses, this universal Christ may have an even wider scope of inclusion.

²⁷ See Lyons, 1982, pp.220-1 for a list of the uses of the phrase ‘cosmic Christ’ in Teilhard’s corpus.

The Starting Point of Teilhard's Christology

a. Teilhard and Ignatian Spirituality

If the previous chapters saw Teilhard inherit his scientific heritage through his father, an amateur scientist, then this chapter will explore a heritage that Teilhard inherited through his mother (Skehan, 2006, p.15-6), a pious and devoted Catholic, who instilled in her son a love for the church and devotion to the Sacred Heart of Christ (Corbishley, 1971, p.27), a devotion that was a distinctive part of French culture and identity (Grumett, 2005, p.95).²⁸ Boyd writes that Teilhard takes

Catholic theology for granted and seeks to build upon that foundation, even though he is not uncritical of its traditional formulations, especially where they conflict with the modern view of the world (Boyd, 1970, p.121)

Teilhard was not attempting to reformulate theology in light of modern scientific advancement, but to present a Roman Catholic theology that was sensitive to the values of evolution.

More specifically, Teilhard was a Jesuit, and was a member of the order for the majority of his life: he attended a Jesuit college at the age of 12 before entering the Jesuit order as a novitiate at the age of 18, thus all of his theological training was conducted by Jesuits (cf. Cuénot, 1958, p.4f). One of the key influences on Teilhard's Christology, therefore, was the mystical theology of St. Ignatius of Loyola, who developed a doctrine of 'seeing' God in all things in conjunction with his Spiritual Exercises (Kenney, 1970, p.46). Corbishley thus notes that

²⁸ See Boyd, 1970, p.113ff. for a comparison of Teilhard's theology with modern Protestant thought, particularly that of Bonheoffer and Tillich.

during the whole of his life henceforward [from his novitiate in 1899] he would be under the influence of the Spiritual Exercises, that great instrument of ascetic and religious formation which, after the bible itself, is the book most familiar to Jesuits...Teilhard de Chardin was to add immeasurably to the content of such ideas [as found in the Spiritual Exercises] (Corbishley, 1971, pp.29-30 (cf. McCarty, 1976, p.31))

Likewise, Cuénot notes that, along with the Spiritual Exercises, ‘one only has to look through the Constitutions of the Jesuit Order to find in it the framework of Teilhard’s spirituality’ (Cuénot, 1958, p.405). De Lubac, too, observes that ‘anyone who is familiar with the Spiritual Exercises of St. Ignatius will have no difficulty in recognizing in Pere Teilhard’s teaching an echo, enriched by modern overtones, of Ignatius’ Foundation’ (de Lubac, 1967, p.32).

As a Jesuit Priest Teilhard was also expected to give retreats and act as spiritual director (cf. Lobo, 1981, pp.204-6 & Grau, 1976, p.83ff), and it is in this capacity that Jesuit spirituality came to influence his thought. As Cuénot notes his retreats ‘treat[ed] such topics as “life and matter”, and “the religious value of the world”, and following the theme of *Le Milieu Divin*’ (Cuénot, 1958, p.88). Cuénot, further, notes that in his capacity as spiritual director he also used the principles of the Jesuit Order to influence his advice, quoting one of his letters ““only one thing is necessary – finding God in the everyday walks of life. This you have known a long time in theory; try to put it into practice” (1 Jan 1934)’ (Cuénot, 1958, p.104).

However, as a number of theologians have noted, Teilhard's Christology also has significant links to Franciscan Christology (cf. Allegra, 1971). Most significantly, Teilhard took the side of Duns Scotus in the Scholastic debate on the question of whether Christ would still have become incarnate even if Adam had not sinned. Teilhard had good reasons for this, not least because it emphasized the creative rather than the redemptive work of Christ.

b. *Teilhard's Reading of Ferdinand Prat's Theology of St. Paul*

It was as a Jesuit student that Teilhard encountered probably the most enduring influence on his Christology: Ferdinand Prat. In his book *Teilhard: Theology, Humanity and Cosmos*, David Grumett suggests that it is possible to trace Teilhard's Christology back to his time as a student of Biblical studies in Hastings, while the Jesuit Order was in exile from France. Grumett writes:

during Teilhard's four years residence at the Jesuit theology scholasticate, important new approaches to Pauline studies were being devised in French Catholic Biblical scholarship, and Teilhard lived in community with three figures of decisive importance in this movement: his tutors Ferdinand Prat and Albert Durand, and fellow student Joseph Huby (Grumett, 2005, p.114; cf. Cuénot, 1958, p.6ff)

Prat, in particular, was important. According to Kropf, 'of all the exegetes contemporary with Teilhard Ferdinand Prat, S.J, whose influence can be seen in the encyclical of Pius XII "Mystici Corpus", is probably the most important' (Kropf, 1980, pp.140-1). Lyons also recognized this point, and argued that 'Teilhard had

derived his appreciation of St. Paul from Ferdinand Prat's *The Theology of St. Paul*' (Lyons, 1982, p.43).

This book explored the theme of the mystical Christ in Paul's theology, and saw Christ in terms of a cosmic being. According to Prat, 'the natural Christ, the word made flesh, the priest and victim of Calvary, is a part, and indeed the principal part, of the mystical Christ; but he is not the whole mystical Christ' (Prat, 1945, p.300).

Moreover, it is important that Prat went on to argue that 'the mystical Christ, composed of the church, and its head, aims to become a perfect man; which is to be understood as a collective personality' (Prat, 1945, p.306). Phrases such as 'perfect man' and 'collective personality' clearly prefigure Teilhard's understanding of the role that Christ took as the Omega Point, the end of evolution and the fulfillment of creation. Further, Prat's explicit reference to the Church also prefigures aspects of Teilhard's evolutionary theology. In much the same way that Teilhard could be seen as a Catholic interpreter of Bergson, so he may also be seen as an evolutionary interpretation of the new Jesuit Christology that was being formulated around him during his formative years at college. It is pertinent that at the time that he was coming to accept an evolutionary world-view he was also coming to accept an interpretation of Pauline theology that emphasized Christ's cosmic role against his juridical one; these two influences, more than anything else, helped to shape Teilhard's own evolutionary Christology.

Such considerations have allowed Raven to argue that:

Teilhard in his whole Christian vision of the process of cosmogenesis and Christification is actually and avowedly restating for us the theology of St. Paul

as this came to its fullest expression...[and] it is the unity of all life in Christ that gives its coherence to his outlook (Raven, 1962, pp.159-60)

Punchekunnel also confirms this view of the importance of St. Paul to Teilhard, writing:

if one were to say that all that Teilhard did was to present in modern scientific idiom Paul's vision of the world centred on Christ, he will not be far from the truth (Punchekunnel, 1981, p.183)

Indeed, it must be remembered that the conclusion of the chapter on Teilhard's evolutionary theory stated much the same thing, namely, that if Teilhard is criticized as a pantheist, then St. Paul must be as well.

On the other hand, Mooney warns that:

what [Teilhard] is now dealing with is no longer the thought of St. Paul, but the thought of St. Paul incorporated into his own hypothesis of a converging universe (Mooney, 1966, p.88).

Kropf makes a similar point regarding Teilhard's use of Paul, writing that Teilhard's quotations of St. Paul 'serve only as so many springboards to deductive leaps of frightening depth and dizzying complexity' (Kropf, 1980, p.62). Teilhard was no biblical scholar, and he never intended to offer a re-interpretation of Pauline theology; instead, he used the theology of St. Paul as a starting point, as a framework upon

which to hang his evolutionary theory.²⁹ Nevertheless if ‘Teilhard truly intended to reinterpret St. Paul, still, in his own eyes, he remained entirely faithful to the spirit of the Apostle’ (Kropf, 1980, p.225).

However, as Kropf continues, such a use of scripture invites criticism from Biblical scholars. He writes that

systematic theology has had much the same criticism leveled against it by exegetes and biblical theologians as that leveled against Teilhard...[namely,] the tendency to use scripture by taking words and phrases out of context and reading into them historically conditioned thought forms in the attempt to achieve an existential understanding meeting the specification of the theologian’s own system (Kropf, 1980, p.230)

Such criticism is important, however this chapter is not primarily concerned with Teilhard’s use of scripture. It is more important to note that the seeds of Teilhard’s own evolutionary Christology can be found in the scriptural studies of his Jesuit tutors.

c. Teilhard’s Acceptance of Eastern Christology

In this direction, the doctrine of the ‘cosmic Christ’ is not just a scriptural category but also one that permeates the tradition of the church (although the actual term ‘cosmic Christ’ seems to be a relatively recent one (Lyons, 1982, p.1)). If Teilhard de Chardin must be criticized for using Pauline theological categories to construct a new Christology, then the early church fathers must also be criticized for

²⁹ This thesis, therefore, can be seen to treat Teilhard as Teilhard himself treated St. Paul, i.e. as a ‘springboard’ to a neo-Darwinian Christology.

precisely the same. De Lubac writes that ‘such an attitude [, namely, the cosmic Christ], which is by no means confined to Teilhard, would be more frequently endorsed by tradition than might be imagined’ (de Lubac, 1967, p.62; cf. Fox, 1988, p.75ff). This cosmic Christology is altogether a broader category than a simple sin-centred one; it is a Christology that is concerned with creation. As Cuénot explicitly recognizes, ‘it is worth noting that Teilhard was interested in Eastern Christianity because it had preserved the cosmic sense’ (Cuénot, 1958, p.251; cf. Deane-Drummond, 2006, pp.7-8), and de Lubac again that Teilhard ‘regretted the too one-sided Augustinianism of theological tradition as established in the west, and liked to dwell on the views of Clement of Alexandria, for example, or even more St. Irenaeus of Lyons’ (de Lubac, 1967, p.120).

Pelikan, also notes such a Christology in his book *Jesus Through the Centuries*, in which he devotes a whole chapter to the idea of the Cosmic Christ in the Church Fathers, finding allusions to it in Athanasius and Gregory of Nazianzus. He writes that the Greek Fathers ‘interpret[ed] [Jesus] as the divine clue to the structure of reality (metaphysics) and, within metaphysics, to the riddle of being (ontology) – in a word, as the Cosmic Christ’ (Pelikan, 1985, p.58).

Grumett also notes that Teilhard’s Christology can be found anticipated in the Church Fathers. He writes that:

[Teilhard’s] use of the concept of divinization should not be considered controversial, because it is fundamental to both the Patristic and Byzantine mystical traditions of the vision of God and participation in the divine life...[and that] Teilhard appropriates, more specifically, the cosmology of

Irenaeus of Lyons, in which he identifies an “astonishing anticipation of our modern views of progress” (Grumett, 2005, p.187, p.227)

Indeed, ‘among the Greek Fathers none is, perhaps, closer to Teilhard than Irenaeus’ (Maroky, 1981, p.186), who is famous for providing the key definition of deification.

Deane-Drummond also notes that

it seems that Teilhard was influenced more directly by writers of the early church, including Irenaeus of Lyons, Origen of Alexandria, Gregory of Nyssa, and Gregory of Nazianzus...aspects of their thinking including the divinization of the cosmos and the stress on apophatic theology has become embedded in [Teilhard’s] work (Deane-Drummond, 2006, pp.7-8).

Berry, likewise, writes that ‘the cosmic Christ of St. John, St. Paul, and the Orthodox Churches of the East becomes identified in Teilhard’s view with an emergent universe’ (Berry, 2003, p.60). As does Corbishley who writes that

Teilhard...tak[es] issue with the traditionalists who, neglecting the teaching of St. Paul and the Greek Fathers, have disregarded what he calls the “organic” side of the Incarnation...[and] the reluctance of the theologians to consider the purely physical relationship existing between the incarnate word and the material creation... (Corbishley, 1971, p.79)

However, Kropf argues that Teilhard’s use of the Greek Fathers may not have been so direct, writing that:

while Teilhard does not seem to have explored further the thought of the Greek Fathers through any personal first-hand study, certainly Newman's conviction that the Incarnational principle stood at the very core of Patristic theology and that its corollary in the sacramental view of matter found its natural complement in the Athanasian theme of the divinization of man through grace could not but have helped convince Teilhard that he stood on solid and traditional ground in his own realistic interpretation of these doctrines (Kropf, 1980, p.260)

It is not just the Patristic Fathers who held to this view. Grumett writes that 'Teilhard identifies his theology of the cosmic action of Christ on the world with Scotist Incarnationalism' (Grumett, 2005, p.121), Duns Scotus' alternative approach to Scholasticism, which argued for the primacy of Christ, can be seen as a continuation of Eastern Orthodox themes. Klauder also attempts to relate Teilhard's Christology in the context of Duns Scotus, 'who cannot conceive [creation] without the incarnation' (Klauder, 1971, p.80). Therefore, 'in Teilhard's viewpoint, this vision shared by Duns Scotus must be seen in the context of evolution and cosmogenesis' (Klauder, 1971, p.79).

However, in the modern world, it is Teilhard who takes this idea seriously more than any other theologian and sees it as the natural, logical, conclusion to his evolutionary theory; 'it was Teilhard who reawakened an awareness in modern times of the ancient doctrine of the cosmic Christ' (Cousins, 2011, p.46). Lyons supports such an assertion in that even though there was an explicit link of incarnation and evolution before Teilhard, such authors

employ cosmic-Christ terminology very sparingly, at times as little more than a labeling device. But with Teilhard it multiplies in both frequency and form, to become a complex instrument for exploring, systematizing, and then generating further an expanding field of discourse, which involves not only his intellectual position but also his personal spiritual life...[yet] Teilhard developed cosmic-Christ terminology as no other author has done...[and] it was Teilhard, however, who suggested more forcibly that the recovery [of the cosmic Christ idea] is due to the modern scientific world-view, even though he made the point with his own view of convergent evolution in mind (Lyons, 1982, pp.37-8, p.46, p.56).

In this way, it can be argued that throughout the history of the church, there has always been a tendency to see Christ in this inclusive role of creator, rather than as forgiveness of sin. Through the Patristic theology of the early church, the mediaeval theology of Duns Scotus, and now with Teilhard de Chardin, this Christology has always been present. Tracing a lineage through St. Paul, the Patristic Fathers, and the Franciscan Scotists there has always been an attempt to widen the scope of the incarnation, and Teilhard claims that it is this tradition that best fits the evolutionary paradigm.

d. The Rejection of “*Western*” *Juridicial Categories*

Teilhard’s Christology, therefore, is a rejection of judicial Christological categories. His criticism of the preoccupation of legal sin-centred interpretations of Christ meant that the role that Christ had to occupy necessarily had to be more

inclusive of other concerns. Teilhard, in his essay 'Christology and Evolution', wrote that:

without being unjust to the Latin Fathers, might one not blame them for having overdeveloped the Rabbinical and legalistic side of St. Paul in their theology?...under their influence the Christian history of the world has assumed the appearance of a legal trial between God and his creatures...[the universe] has ceased to be the formal garden from which we are temporarily banished by a whim of the creator. It has become the great work in process of completion which we have to save by saving ourselves (Teilhard de Chardin, 1971, pp.89-91; cf. Agourides, 1964, p.210)

Likewise, Teilhard wrote:

the principal obstacle encountered by orthodox thinkers when they try to accommodate the revealed historical picture of human origins to the present evidence, is the traditional notion of original sin (Teilhard de Chardin, 1969, p.36).

In other words, Teilhard rejects the Western notion of sin as the relationship between Christ and creation as 'exaggerating the effects of the fall and promoting a too-negative image of the cross' (Lane, 1996, p.73), and accepts the Eastern paradigm of seeing Christ as creator, as completing and bringing to fulfilment the process of creation.

Christ as Bond of Matter

The obvious question is what is it that makes Teilhard's re-appropriation of this doctrine unique? It is important to note that, following the Eastern tradition, the role of Christ was no longer one of saviour but of creator, and for Teilhard creation was unification. Therefore, the most important of these new elements is the fact that Teilhard saw Christ as the bond of matter, the 'centre of the entire universe' (Teilhard de Chardin, 1965, p.14). In other words, Christ is the principle of unification in the universe. If Christ is the guide of evolution, if it is he that acts as the attraction that causes the convergence of matter, then it follows, for Teilhard, that Christ is the bond of matter, that which holds it all together;

Teilhard unites the physical body of Christ, the physical³⁰ centre, the personal present, the cosmic centre, into the one body of Christ. This becomes the true centre of the cosmos that actively radiates its divine energy to all men in an activity of transformation and deification (Maloney, 1968, p.206)

a. Christ as Vinculum Substantiale

For Teilhard, drawing on the Leibnizian vinculum substantiale (Cuénot, 1958, p.121), which is 'a substantial thing added to a group of monads and whose addition guarantees the real union of the monads of a composite substance' (Look, 2000, p.217), the unity of body and mind and, also, the sacramental unity, is Christ himself (an idea he may have found in Blondel (Lyons, 1982, p.162)). Lyons, too, notes that 'the word incarnate is the vinculum substantiale of creation, the bond which gives

³⁰ 'Perhaps "reality" or "ontological reality" would be a better way to translate Teilhard's sense of physical, for it signifies not only a given being in its present existence and metaphysical constitutive parts but above all it includes the total being in its dynamic progression towards fulfillment' (Maloney, 1968, pp.204-5).

unity to multiple created being' (Lyons, 1982, p.161). This means that the universe is literally held together by Christ; 'Christ was not just a historical person, Jesus of Nazareth, but that he is the whole inner energy of the universe and the goal to which all of the universe is moving' (McCarty, 1976, p.27).

Grumett also notes that, 'this vinculum substantiale...is a unique and ubiquitous entity unlimited to any particular union or set of unions who provides the ground for them all, and whom Teilhard identifies with Christ' (Grumett, 2005, p.111). The important point is that Teilhard understood the bond of nature, the bond of substance, and indeed any and all unity (in fact unity itself) to be entirely dependent upon the presence of Christ, a presence that is the result of the incarnation.

Grumett continues that 'matter, by virtue of the incarnation, is transformed, spiritualized, and directed towards the final end of the word' (Grumett, 2005, p.120). This means that the incarnation takes on the role of directing evolution, as understood in this sense of the complexifying and centering life in Christ. The incarnation, therefore, represents the coming of the end, the coming to fruition of the Omega Point and the formation of the body of Christ, as 'Teilhard viewed the whole history of the world as being that of "the progressive information of the universe by Christ"' (Kropf, 1980, p.116), and not just metaphorically or 'mystically', but literally. As Kropf continues, 'the body of Christ should be understood in a fully organic sense in respect to the whole universe' (Kropf, 1980, pp.131-2). The incarnation, therefore, is not concerned with forgiveness of sin, but with union of nature, and if to unite is to create then it is Christ who is the creator because he is the unifying principle in the world, he is the unity of creation, and he results from the unity.

b. Christ as *Élan Vital*

This inevitably means that for Teilhard the *élan vital* is Christ himself.

Teilhard takes over Lamarck and Bergson's understanding that there is a driving force of nature that is the cause of evolution, and he explicitly identifies this force with Christ. Christ, therefore, performs the same function in Teilhard's evolutionary theory as the *élan vital* did for Bergson. Teilhard writes that:

Christ...put himself in the position to subdue under himself, to purify, to direct, and superanimate the general ascent of consciousness into which he asserted himself...he aggregates to himself the total psychism of the earth (Teilhard de Chardin, 1959, p.204)

More explicitly, Teilhard wrote that 'Christ is the goad that urges creatures along the road of effort, of evolution, of development' (Teilhard de Chardin, 1968a, p.209).

Thus, all the categories that were important for Teilhard's evolutionary theory find their fulfillment in the person of Christ. It is Christ's consciousness, Christ's cosmic consciousness, that is being formed through convergence, therefore it is Christ who is responsible for the pull of evolution, who waits for evolution to finish (Teilhard de Chardin, 2004, p.71).

The Jesuit principle of 'finding God in everything' is also clearly at work here. Not only does Teilhard's evolutionary theory rely heavily on Bergson and Lamarck but his Christological representation and interpretation of that evolutionary theory, especially as outlined here as seeing Christ as the bond of nature, and the *élan vital*, is also influenced by the spirituality of his order, a spirituality that would have been at the centre of his life.

c. Christ as Physical Centre of The Universe

It is also important to note that Christ's presence in the universe, especially in his function as the bond of matter, is eminently physical; it is not a purely intellectual category, but a real presence. Teilhard writes that 'the mystical body of Christ should, in fact, be conceived as a physical reality, in the strongest sense the words can bear' (Teilhard de Chardin, 1968a, p.51). This idea of a bond of nature is not a metaphorical category, nor, in labeling such a presence as mystical or sacramental, does it intend to remove any physical presence. In much the same way that the unity that is produced through evolution was emphasized in the previous chapters as being a real, physical, unity, so the presence of Christ in the world as the attractive centre is also physical.

This means that it is only in Christ that the process of evolution can happen. If creation is to unite, and it is Christ who unites, who is the bond of this unity, then it is only in Christ that evolution can happen, Christ is, to use one of Teilhard's titles, 'the Evolver' (Teilhard de Chardin, 1971, p.138).

The link and comparison with the role of the incarnation in the Eastern thought of Athanasius and Nazianzus demands attention. For them it was the fact that Christ entered the world that was important, it was his physical presence that was the all important element, thus his influence was seen to extend mechanically and automatically (cf. Finch, 2006, p.106; Williams, 2007, p.38). The role of Christ is similar for Teilhard. He writes that '[Christ] sanctifies human flesh by a specific contact' (Teilhard de Chardin, 1968a, p.64); it is his presence in the world that fastens and controls evolution, attracting and uniting matter, and bringing it together into his body. Christ, therefore, is that which grounds matter, that which provides it with its

substance, and that which pulls it together. Indeed, if to be created is to be united, and it is Christ who represents the bond of this unity, if it is Christ who is the bond of this unity, then creation is impossible without Christ; ontology is entirely dependent on Christ. This leads to the idea of participation as being a key category for understanding Teilhard's theology.

Participation

The fact that Christ is understood to be the bond of nature, the bond of substance, and therefore creator and evolver (which, of course, are now understood to be completely synonymous terms) also means that the category of participation is important for understanding the role that Teilhard assigns to Christ. Since there is no way to be created in Teilhard's theology other than to be united, the only possible way to be created is to participate in the presence of Christ, or, differently, participation in Christ's presence unifies. As Grumett notes 'Christ himself suffuses material substance and sustains it' (Grumett, 2005, p.131), thus evidencing that the doctrine of 'Christ as the bond of nature' becomes synonymous with a doctrine of participation.

a. Teilhard's Use of Participation

There is disagreement about whether Teilhard's use of participation is comparable with that of the Scholastic usage. Lobo, for example, claims that Teilhard 'took seriously the scholastic ideas of the creature's relationship to God by analogy and image and thence the value of participated being' (Lobo, 1981, p.203). However, Mooney disagrees, writing that Teilhard was 'completely unsympathetic with Scholasticism as he understood it' (Mooney, 1966, p.189; cf. Teilhard de Chardin,

1971, p.226). Nevertheless, it will be argued that this is a good way to categorize Teilhard's thought.

Teilhard's understanding of participation, and his use of the term 'participated being' is to be understood, like the rest of his Christology, in relation to the idea of unity (Teilhard de Chardin, 1965, p.186). Mooney writes that 'Teilhard defines being in terms of a movement indissolubly associated with it, that of union' (Mooney, 1966, p.171), and Cuénot writes that 'creation, then, [Teilhard] considered above all an act of union; and it is this union that produces being' (Cuénot, 1958, p.39). Lyons, likewise, writes that 'Teilhard's view of creation is correlated with a progressive concept of being. Being is not "to be" ("esse"), as in classical scholastic metaphysical, but "to unite" ("unire")' (Lyons, 1982, p.178).

In this way Teilhard's ontology is not a static category but a dynamic one. 'To be' is to become more united; 'to be' is to become more convergent upon Christ. Thus, participated being is being that participates in the union of the world, or the future body of Christ. Participation is that which unites creation. In a very real sense, therefore, creation participates in Christ.

This also has the result that there can be no such thing as a 'hierarchy of being' in Teilhard's theology because such a hierarchy implies a static ontology, rather than a dynamic one of interrelated convergent unity. Beings are not separated from each other, but evolve into each other, thus the only difference between ways of being is that they become more centred and more united. They are not different ways of being, but a progressive, more united, understanding of being in general (Cuénot, 1958, p.39). Each 'being' does not 'be' for its own sake, but only as a process of

convergent union on Christ. In a very real way, therefore, all creation is simply a participation in the Being of Christ, eventually evolving into his body.

Teilhard writes that

God did not will individually (nor could he have constructed as though they were separate bits), the sun, the earth, plants, or man. He willed his Christ: and in order to have his Christ, he had to create the spiritual world, and man in particular, upon which Christ might germinate (Teilhard de Chardin, 1965, p.79)

This means that an individual of creation, a monad, cannot exist without reference to the completion of creation in Christ, and thus as a process of union. The ‘being’ of the individual is always viewed in relation to the end of evolution in the person of Christ.

To be participated being is, therefore, to participate not in the above but in the ahead. As Smith writes, ‘according to Teilhard’s theory, heaven is neither “above” nor “within”, but ahead of us in time: it is situated in the indefinite future’ (Smith, 1988, p.34). This is because the supernatural is the natural end of the universe, i.e. deification is the end of the evolutionary process. To progress ahead is to progress above, or, as Teilhard puts it, they ‘collide’ (Teilhard de Chardin, 1965, p.203). To participate in God, to participate in the being of God, is to be united in the body of Christ at the Omega point. To increase in being is to become more united, and this is achieved evolutionarily, forwards, progressively.

Participation, thus, becomes a temporal category, rather than a spatial one, precisely because God, who is the object of participation, is now a future being, and the only way to progress temporally is to unite (Teilhard de Chardin, 1965, p.203). As

Teilhard himself writes ‘a world that is being born instead of a world that is: that is what the phenomenon of man suggests’ (Teilhard de Chardin, 2004, p.80). To participate, to be participated being, is now no longer a ‘spatial’ category centred around the person of Christ but a ‘temporal’ one centred around the future fulfillment in Christ. The individual participates in Christ because through union (which is being) that individual forms, evolutionally (thus temporally rather than spatially), part of the body of Christ. Grumett confirms that

the entire cosmos participates in his fullness, and is complete only when doing. Christ’s body is the “active centre, the living link, the organizing soul”, or in the words of the letter to the Ephesians, the “fullness of him who fills all in all” (Grumett, 2005, p.113).

Certainly Teilhard’s most direct reference to this idea of participation, whilst it is important to reiterate that he does not explicitly use the language of participation per se, comes from his essay ‘The Mass on the World’, in which he sees the world itself as sacramental.³¹ In other words, Teilhard understood the presence of Christ in the world to be of such central importance – such that he was the principle of evolution and the end of such evolution – that when Teilhard found himself without the means to celebrate Mass he offered God the world, of which he saw himself a part, as a substitute.

Teilhard wrote:

³¹ For a discussion of Teilhard’s Eucharistic vision see Grey, 2006, p.197ff; Mannarkulan, 1981, p.32ff.

nothing, Lord Jesus, can subsist outside of your flesh; so that even those who have been cast out from your love are still, unhappily for them, the beneficiaries of your presence upholding them in existence. All of us, inescapably, exist in you, the universal milieu in which and through which all things live and have their being (Teilhard de Chardin, 1977, p.33).

The use of the phrase ‘in which all things live and have their being’ is clearly a reference to Acts 17.28 (which was used extensively by Teilhard (cf. Kropf, 1980, p.303ff)), and the cosmic Christ that is found in the Pauline letters of imprisonment, in which Paul writes that ‘in him all things hold together’ (NRSV, 1995, Col 1.17).

In such small quotations a whole host of ideas can be found in which Teilhard’s theological ideas can be fully expressed, namely, that Christ sustains the world, sustains creation, by indwelling it (in the sense that he is the bond of nature) and in being that in which the world dwells (in the sense that ‘outside’ of Christ nothing can exist (Teilhard de Chardin, 1977, p.25)). In both of these ways Christ can be seen as the vitalistic principle of creation, and indeed in Teilhard’s thought these two dimensions cannot be separated. Christ is the *élan vital* by holding nature together, by grounding its being, and by causing it to change, which is to unite, through evolution, bringing it to fulfillment in which everything will be one. Thus, everything will be Christ, precisely because ‘to be’ is ‘to unite’; to exist, to ‘be’, is to be united, and union is evolution. Thus, Christ sustains creation, keeps it in ‘being’, by evolving it – Christ’s act of sustaining creation is his causing it to evolve. In this way, whilst Teilhard does not use the rhetoric of participation, it is still a concept that can categorize his thought.

b. Participation as Divine Milieu

It is within this context that the idea of Teilhard's 'divine milieu' might best be understood. Christ, as the bond of matter – that which holds everything together – also becomes, and is, the divine milieu, 'that milieu in which all is made one' (Teilhard de Chardin, 1977, p.25). Hefner writes that Teilhard could have employed other images to that of mystical or divine milieu, 'another image might have been God as creative ground of our being, from which we emerge, and the foundation of our lives' (Hefner, 2011, p.85). In other words, Hefner is claiming that the divine milieu is a synonym for the idea that has just been expounded, namely, that Christ is the bond of nature and thus all creation participates in him and finds its being in him. Likewise, Mooney argues:

“omnipresence” is indeed the central theme of the whole work [i.e. *The Divine Milieu*], and the title itself is a synonym for the presence of Christ, who “through his humanity” is the active centre radiating all those energies which lead the universe back to God (Mooney, 1966, p.80)

Participation in the divine milieu is deification. Becoming participants in the divine nature is now participation in the divine milieu. However, it is more than this, it is also within the divine milieu that creation is sustained and given life because creation and deification are now two ends of the same event. Creation abides in the divine milieu, and it is the divine milieu that grounds creation. Indeed, 'all the cosmos is the divine milieu' (Farria, 2011, p.vi). Precisely because deification and creation are two ends of the same event, so participation in the divine milieu as deification must also include creation.

Hefner also explicitly links this divine milieu with the incarnation. It is the incarnation that establishes this divine or mystical milieu, writing that ‘Christ is incarnated in it all, and thus he and the material order he permeates can also be designated as the mystical milieu in which we have our being’ (Hefner, 2011, p.87). Raven makes the same point, writing that for Teilhard ‘Christ was and is le milieu divin, the light and life and love of the world... evolution, the cosmogenesis, is the christification of all things’ (Raven, 1962, p.186), arguing that for Teilhard it is not just enough that Christ sustains and holds creation together, literally, but that through his indwelling, he is pulling it towards him, incorporating it into himself, making the world his body.

The Teilhardian concept of *gènèse*, so important for defining the specific Teilhardian doctrine of evolution (Mooney, 1966, p.51), can help to further shape his doctrine of the divine milieu. Cuénot notes that Teilhard places the risen Christ in the divine milieu (Cuénot, 1958, p.307), and in doing so makes explicit the link between the divine milieu as participation in the divine nature, and the incarnation and resurrection of Christ (see the section on ascension below). This provokes the question of the role that evolution plays in giving rise to the divine milieu, that in which humanity has its being. In other words, in much the same way that the biosphere referred to that living envelope that exists in the world at the threshold of life, and the noosphere referred to such an envelope of thought, then the divine milieu is better thought of as that divine layer that envelopes the world, the result of the incarnation, the coming of Christ, and the catalyst that unites matter and pulls it into himself (Teilhard de Chardin, 1977, p.108). In the same way that the onset of thought

meant that evolution underwent an ontological change, so the incarnation cannot but result in such another ontological change.

The divine milieu becomes another critical threshold which creation crosses, as it did with the emergence of life and thought. Or, more precisely, the divine milieu is always present, yet the incarnation becomes a critical threshold that creation must cross, making the divine milieu permeating creation to greater degrees; the more evolved, the more one participates in the divine milieu, in Christ. If deification is the result of evolution, then the divine milieu is an evolved state, an evolved condition of life. Christogenesis, now, becomes the appearance of the divine milieu, and the Christosphere is this divine milieu. This means that the evolution of the world is just as much an evolution of Christ as it is of humanity, hence Teilhard's insistence on the Parousia as an event of significant importance (see below). However, the Parousia can only occupy such a role if the divine milieu is seen as another critical threshold, as indeed the Parousia is, and that this is responsible for the formation of Christ's body – 'one single thing is being made in creation: the body of Christ' (Teilhard de Chardin, 1971, p.74).

This means, therefore, that when Teilhard talks of Christogenesis, this is precisely what he is referring to, the emergence of the divine milieu in the world – the *genèse* of the divine milieu – which in turn will herald the complete convergence of the universe in the body of Christ, as Mannarkulan evidences 'the process by which the cosmic body of Christ is being built up is called "Christogenesis", this is seen as related to "cosmogenesis" and "noogenesis"' (Mannarkulan, 1981, p.39).

With the equation of the divine milieu with the presence of Christ and thus deification, the evolutionary process not only brings about the complete convergence of all creation, it does so within the body of Christ, within the presence of Christ;

‘through his Incarnation, [Christ] has achieved in his own body-person the purpose of the whole evolutionary process: the unity of humanity with God in and through a purification of matter’ (Mooney, 1973, pp.157-8).

Not everyone agrees with this interpretation, however. In her chapter on ecological implications of Teilhard’s theory, King writes that the noosphere is ‘quite wrongly spiritualized’ (King, 2006, p.83). However, she does not take into account the close tension between nature and the supernatural that Teilhard maintains, and more importantly, the correlation between consciousness and spirituality.

Drawing on the conclusions of the previous chapter, King’s criticism of a spiritual noosphere cannot be upheld. If the noosphere is the conscious envelope in the world, then it is likewise more spiritual than the geosphere and the biosphere. The Christosphere or divine milieu thus represents a continuing greater spiritual presence, a greater role to spirit, and a fastening, a speeding towards omega. If evolution is convergence, a convergence of matter that brings a complexity-consciousness that involves a ‘grouping’ together, and ‘enmassing’ of consciousness, the constant creation of deepening consciousness, then this also causes a greater spiritual awakening. Teilhard’s convergent and accelerating vitalism, which was so influential in formulating his evolutionary theory (whereby union of matter, consciousness, and spirit are seen in the one action), can only end in the conclusion that the divine milieu becomes a category of evolution, the result of the incarnation’s ‘injection’ into the universe and the resurrection’s placing Christ at the heart of the universe (cf. Cuénot, 1958, p.372; Kropf, 1980, p.150), Christ’s taking it over for his body; ‘by the resurrectional presence of Christ who fills all things, the whole of creation has a meaningful consistency’ (Maloney, 1968, p.192).

c. Participation: The Relationship between Nature and Spirit

This idea of participation also provides further evidence of the strong link between nature and grace, the ‘synonymity’ of deification and creation, and the employment of the concept of vision, as has already been hinted above. For Teilhard, creation is as dependent upon Christ for its being as it is for deification and the fulfillment of creation in him. Thus the tension between the categories of nature and the supernatural become collapsed upon each other, the one being only a furtherance of the other. As Passmore so helpfully put it, the mystical union with God may be ‘supernatural in character, [but it] is at the same time the natural outcome of evolution’ (Passmore, 1970, p.252). The only way to separate the two notions, therefore, becomes Teilhard’s doctrine of vision. It is through ‘vision’ – that is, he who has eyes and sees (cf. NRSV, 1995, Mk. 4.9; Mk 8.18 – that one is able to perceive Christ for who he is. It is through ‘vision’, therefore, that one is able to perceive the divine milieu, to see the world as the coming fulfillment of Christ, when God will be ‘all in all’ (NRSV, 1995, 1 Cor. 15.28). It is only ‘vision’ that is able to perceive the divine milieu, and thus it is only those who have eyes that can see who can understand that the world participates in the being of God, that creation participates in Christ.

King, in her chapter from Teilhard and the Future of Humanity, describes the divine milieu as ‘a deep faith in a divine centre and heart of the world that suffuses every context and environment with the energy, presence, and grace of the spirit whose dynamic action animates the entire universe’ (King U, 2006, p.16), and thus links the divine milieu with the category of ‘vision’ that was so important for Teilhard’s evolutionary theory. The incarnation establishes the divine milieu, the

principle that unites the world and thus creates it, and it is when one sees the world for what it is, when one is able to ‘see’ the divine vitalism that holds the world together, the attractive centre of evolution, that one participates in the divine milieu, which is deification.

Garcia-Rivera, again in reference to vision, writes that:

vision is a sensibility to union, which, in turn, is a growth in being, so in seeing, one also becomes united to what is seen...but what is seen? Teilhard answers: a divine milieu, a luminous world illuminated by Christ’s transfiguring presence...this divine milieu is the place where we live and move and have our being and becoming, surrounded, penetrated, and shaped by Christ’s divine loving presence (Garcia-Rivera, 2009, p.73)

It may be added that, in this way, evolution is the illumination of the world; the whole interpretation given in the previous chapter is the illumination of Christ that Garcia-Rivera mentions.

What is also interesting about this quotation, along with Grim and Evelyn Tucker who write that ‘the divine milieu, within which we live, and breathe, and have our becoming’ (Grim & Evelyn Tucker, 2003, p.9), is that the word ‘being’ from Acts 17:28 has been replaced by ‘becoming’, and thus conforms to the idea that Teilhard has been influenced by Bergson. However, they are thus both incorrect, as it has been argued that Teilhard went further, replacing the idea of ‘becoming’ with the idea of ‘unity’ – hence his reinterpretation of Bergson’s divergent evolution with a convergent one.

Nevertheless, in this way the Teilhardian concept of vision that was outlined in the previous chapter as being so important for the relationship between matter and spirit and the relationship between nature and the supernatural, cannot be separated from his doctrine of participation in the divine milieu. Everything that was described in the previous chapter regarding the tension between nature and the supernatural comes to be seen as synonymous with Teilhard's understanding of the divine milieu, and thus participation.

d. Participation, Divine Milieu, and Kingdom

It may also be suggested that a comparison can be made between the Teilhardian idea of divine milieu (which works as a doctrine of participation) and the biblical notion of the kingdom of God (Teilhard de Chardin, 1968a, p.137), as Thomas King notes that '[Teilhard] claims the Kingdom of God – a central theme of the Gospel – can be seen as “a prodigious biological operation”' (King T, 2011, p.27).

In Luke 17.21, the kingdom is said to be 'within', whereas in Matthew 7.21 the kingdom is implied to be a future reality, not to mention the parables in which Jesus likens the kingdom to a seed or yeast that must be fulfilled, indicating that the kingdom is not yet fulfilled. Such a notion of the fact that the kingdom of God is present yet not fulfilled fits with the Teilhardian teleology of unity of creation in Christ yet fuller unity through the continuing process of evolution, which has not yet reached its apex in humanity. The fact that the kingdom of God is present yet not fulfilled perfectly fits with the relationship and tension between nature and grace, as Teilhard understands it. The two are two sides of the same coin, such that those who have eyes can see, those who have the 'vision' see the world bathed in the light of God. Christ's body is not yet complete, he has not attained his fullness, although his

incarnation heralds that event, secures its success, and fastens its happening. De

Lubac confirms that:

like the Kingdom of God, [the divine milieu] has been with us since all time, even though our natural blindness has, practically always, made us exiles from it...further, as the Kingdom of God is within us as well as around us, so the divine milieu surrounds us on all sides, “so intimately and profoundly that nothing can make it apparent to us only a faith that is rooted deep in our lives can introduce us to it” (de Lubac, 1967, p.57).

Thus, de Lubac furthers this interpretation that synergia and submission to the will of God, which is faith and vision, the seeing God in all things, is coming into and finding oneself in the divine milieu. Indeed, it is recognizing that one has always been in the divine milieu.

However, there is more that can be said here. The fact that the divine milieu can be likened and compared with the biblical imagery of the kingdom of God means that more traditional or classical eschatological categories can be retained, or absorbed, by Teilhard’s theology, and re-interpreted to take on new meaning in the light of his evolutionary theology. Doctrines such as resurrection and deification are now implicitly pointed to by the divine milieu. This doesn’t necessarily point to a realized eschatology because, as much as the divine presence can be discerned in the world by those who can see, Christ’s body is not yet complete, evolution has not yet finished.

Participation, then, forms a major part of Teilhard's Christology. Christ completes evolution, and in completing it he takes it over, it becomes united to him. The resurrection now becomes of primary importance. It is by the resurrection, and the ascension as will be seen below, that Christ takes over the universe as his mystical body (which has clear ecclesial overtones (Binns, 1968, p.140)). Therefore, it is the resurrection that establishes the divine milieu, it is the resurrection that becomes the means by which participation in the divine nature happens, and the unity of creation is speeded up.

Cosmic Christ and Ascension: The Role of the Resurrection and The Holy Spirit

In his eco-theological book *The Garden of God*, in which Garcia-Rivera suggests that Teilhard's theological legacy can be used to construct an ecologically sensitive theology, he argues that the doctrine of the ascension can be used as a way to interpret the themes found in Teilhard's Christology. He writes that

it is the doctrine of the ascension that strongly implies the cosmic Christ...for him, ascension was not simply a movement upward but also forward. With Christ-the-Evolver at the helm, evolution is taking us upward and forward to the omega point...[and that] in the doctrine of the ascension we have the reverse of the incarnation (Garcia-Rivera, 2009, p.42, p.59)

Cuénot, too, writes

Teilhard is recorded as describing the Ascension as 'the most beautiful feast of the year and that we did not celebrate it with enough solemnity, since it is the

anticipated consummation of the universe returning to the Father in the heart of the glorified Christ (Cuénot, 1958, p.262)

In this way, Garcia-Rivera posits that the doctrine of the Holy Spirit can be a way of allowing Christ to be ‘at the helm’ of evolution. Christ, the ascended Christ, the Cosmic Christ, sends his Spirit to bring creation to its fulfillment. This means that the bond of nature, the bond of matter – which is Teilhard’s equivalent of Bergson’s *élan vital* – is not Christ himself, but the Holy Spirit, which is the Spirit of Christ; and it is the ascension which provides the context through which this happens. The ascension is when Christ takes up his place as cosmic Christ (see Christ’s ‘third nature’ below), and the Holy Spirit continues the work of pulling creation, through evolution, together forming this cosmic body.

Mooney supports this approach, writing that ‘For Teilhard the resurrection is that “tremendous cosmic event” which inaugurates the actual exercises by Christ as his function as physical centre by which, in the words of St. Paul, he “fills all things”’ (Mooney, 1966, p.147). Christ, in the resurrection and ascension, takes up the role of cosmic Christ (Klauder, 1971, p.42). The resurrection ‘marks Christ’s effective assumption of his function as the universal centre’ (Teilhard de Chardin, 1965, pp.63-4), and where he waits for the world to fulfill its evolution so that he may take up his body in the Parousia. The resurrection, and ascension, is the moment when Christ takes up his role of cosmic Christ. Faricy writes:

God was not “up there”, above, in some way distant, he was here, in Jesus risen, through the intense love that radiates out from the heart of Jesus, present to everything created, and to all of creation together, and to Teilhard, through the

love of the risen Christ for each creature and for all creation (Faricy, 2006, p.131).

The use of the Holy Spirit as the ‘Spirit of Christ’ is also suggested by Smith in his essay ‘God and Evolutive Creation’, in which he writes that ‘the “penetrating influence of Christ-Omega” is surely the Spirit of Christ. The “will of God”, active in all beings and causing them to develop towards the goal of personal union with God, is surely the Spirit of God’ (Smith, 1970a, p.50). Although Smith does not explicitly connect this idea with the doctrine of ascension, he does understand such an idea to provide a Trinitarian element to Teilhard’s work.

a. Teilhard’s Theology as Christocentric

This understanding of the role of the Holy Spirit within a Christic context means that Teilhard’s work is ultimately Christocentric. The fact that Teilhard’s theology is Christocentric, without a clear pneumatology, is one of the more pressing and concrete criticisms of his work (Grey, 2006, p.118), and the need to find a solution to it is certainly one of the more important avenues of Teilhardian interpretation needed. Not only this, but postulating that the role of the Spirit as the continuation of the role of the Son fits well with the Western Trinitarian tradition that led to Rahner’s famous claim that ‘the immanent trinity is the economic trinity’.

However, in many respects, this interpretation goes too far. Maloney writes that ‘in the ascension, Christ lost [his] determinate presence but only in order that through the Holy Spirit he could come into his disciple’s experience in a new and more effective way’ (Maloney, 1968, p.241). It is clear that such a view diminishes the person of the Spirit. If Maloney is correct, then the Spirit becomes a vehicle for

Christ, a new mode of his existence, or a 'third' nature, rather than a person in his own right. Indeed, such a criticism is used by many Eastern theologians to criticize the Western idea of the Holy Spirit. By understanding it as a continuation of the mission of the Son, or by seeing it as the relationship between the Father and Son, the personhood of the Spirit is diminished.

It must be noted that such criticisms are certainly valid, although this is not the place to deal with them. The arguments surrounding Trinitarian theology are vast and too detailed to be considered here. It must only be noted that in the ascension, in claiming that through the resurrection and ascension Christ takes on his cosmic function, the role of the Holy Spirit becomes prominent. It can be argued that it is when Christ sends his Spirit, as he promised in the Gospel of John, it is this Spirit that becomes the *élan vital*, it is the Spirit that guides and directs evolution, preparing Christ's body for when he returns in the Parousia.

b. Ascension and Sacramental Theology

In this way, Teilhard treats doctrines of the resurrection and ascension in a similar way to transubstantiation and sacramental theology; the universe, creation itself, becomes a sacrament. McCarty writes that, according to Teilhard 'what happened to the individual elements according to transubstantiation happened to the entire universe in the Incarnation' (McCarty, 1976, p.59), as does Mannarkulan, who writes that 'the event of transubstantiation does not end with the material species of bread and wine but extends to the whole universe' (Mannarkulan, 1981, p.35). Thus, when Christ takes over the world, when he takes over the evolutionary process, to complete it and create a body for himself, a comparable process to the epiclesis is happening (Lane, 1996, p.77). In the same way that the host becomes the body of

Christ, so the world becomes the body of Christ, and this process is evolution; evolution can now be likened to transubstantiation.

Teilhard's famous essay 'The Mass on the World', which has already been pointed to in support for his doctrine of participation, confirms this interpretation of his theology. In this sense, the process of evolution is taken over by Christ through his resurrection and ascension into heaven. Evolution, which has been, by itself, leading upwards towards humanity, now that it has been taken over by Christ, is being brought, through his Spirit, towards its fulfillment. In this way Mannarkulan writes that 'Teilhard de Chardin identifies the cosmic Christ with the Eucharistic Christ' (Mannarkulan, 1981, p.37). In other words, in the same way that the ascension of Christ means that he can take over his role as the substance of the host, so too he can take over the universe as his body, there is essentially no difference in his role as Eucharistic Christ and cosmic Christ (although, it must be said, some argue that Teilhard still maintained a difference between the sacramental presence of God and his deifying/evolving presence (Wildiers, 1977, p.13)).

Christ's Cosmic Function as Third Nature

The role of the ascension in Teilhard's theology leads to one of the most important and controversial elements of his Christology. With the resurrection and the ascension, Christ takes over his role as Cosmic Christ, Christ the evolver, and in order to distinguish this role from his incarnation, Teilhard argues that Christ assumes a new nature. Whilst this idea is central to Teilhard's Christology, there are only three places where Teilhard refers to it explicitly. In his essay 'The Heart of the Matter' Teilhard writes that:

hitherto, and in spite of the dominant position accorded to it by St. Paul in his view of the World, this third aspect or function – we might even say, in a true sense of the words, this third ‘nature’ of Christ (neither human nor divine, but cosmic) – has not noticeably attracted attention of the faithful or of theologians (Teilhard de Chardin, 1978, p.93)

Likewise, in ‘Christianity and Evolution: Suggestions for a New Theology’, he writes that:

hitherto, the thought of the faithful could hardly be said explicitly to distinguish in practice more than two aspects of Christ: the Man-Jesus and the Word-God. Yet it is clear that a third aspect of the theandric complex was left in the background...until today, I repeat, this third aspect of the incarnate word has been sufficiently distinguished from the other two (Teilhard de Chardin, 1971, p.179)

Again, in ‘My Fundamental Vision’, Teilhard writes that:

between the word on one-side and the man-Jesus on the other, a kind of “third Christic nature” (if I may say so) emerges – constantly to be found in the writings of St. Paul: it is the nature of the total and totalizing Christ (Teilhard de Chardin, 1975, p.198)

The allusion to St. Paul is, again, supremely important. Teilhard is claiming that he is not ‘inventing’ anything new here; he is merely following the thought of Paul in an

evolutionary paradigm. Thus in arguing that Christ is the bond of nature, i.e. the evolver, and that it is through the resurrection and the ascension that such a participation in the divine nature happens, he is pointing to this third function, or third nature, of Christ. It is this third nature that creation participates in. More precisely, this third nature is creation; it is slowly being formed through evolution before, through the Parousia, Christ returns to assume it.

In Lyon's book *The Cosmic Christ in Origen and Teilhard de Chardin* he presents a detailed discussion of this idea of Teilhard de Chardin. He writes that 'through his resurrection he assumes the cosmic role of Omega. As Omega, Christ is the supernatural goal of creation and the vinculum holding together everything from on high' (Lyons, 1982, p.180).

The resurrection plays an important role in this idea, as it has been claimed already. It is the resurrection whereby Christ takes over his new function. In other words, the resurrection may be said to be the event in which Christ assumes another nature, that of a cosmic nature, one in which he is the 'prime mover of the evolving universe' (Lyons, 1982, pp.185-6). Lyons also writes that:

the precise link between Christ's human and cosmic natures Teilhard locates in the resurrection. Indeed, even when he is not speaking in terms of natures in Christ, it is a common theme of his that Christ assumes his cosmic role through the resurrection (Lyons, 1982, p.187)

This confirms the interpretation of Teilhard's Christology in this chapter.

Lyons continues that 'what Teilhard appears to have in mind is a distinction in Christ between the word as Trinitarian person and the word as divine instrument of

God and cosmic principle in formation through the process of creation' (Lyons, 1982, p.189). In other words, Teilhard's intention in creating a new nature for Christ, a third nature, is that he can ascribe creation to him, since it is through Christ that everything is created. He thus has to make Christ the centre of the universe as an attractive centre, because 'to create is to unite', therefore if Christ creates then Christ unites. If Christ creates then he has to be that which pulls the monads together, hence vitalism, and this Christ does through his ascension and his immersion in the universe as the Spirit. Hence the Eucharistic link that Teilhard makes in 'Mass on the World'. Teilhard, therefore, 'creates' this third nature for Christ so that his function as creator is sufficiently distinguished from his divinity and his humanity. In the same way that Christ assumes a human nature in the incarnation so in the ascension, or more precisely at the Parousia, Christ assumes his cosmic nature, his role as creator, in which he pulls the universe together. Such a postulation of a third nature is needed to effectively describe Christ's role as creator.

a. Problems with Teilhard's Theory

However, there are obvious problems with this idea. If Teilhard is being literal, that there is a third nature of Christ, then he is clearly at odds with classical Christology. Mooney notes that

Teilhard himself was obviously aware that something was wrong with the word ['third nature']...its use here is rather careless, but its purpose is simply to emphasize once more the organic character of his final plenitude in Christ (Mooney, 1966, p.179)

Mannarkulan, too, writes that ‘Teilhard wanted in fact, only to stress the third dimension of Christ which is so evident in Pauline theology’ (Mannarkulan, 1981, p.36), again emphasizing the link with Pauline theology and his Jesuit heritage. In other words, Teilhard realizes that postulating a third nature for Christ is an unacceptable way of addressing the question of the cosmic Christ and he uses the term loosely to make a point about the way that Christ penetrates the universe following his resurrection.

Kropf notes that ‘the Christologically speaking heterodox suggestion [i.e. the postulation of a ‘third’ nature of Christ] is, taken in its context, more properly a soteriological preoccupation of Teilhard’ (Kropf, 1980, p.65). In other words, Teilhard does not postulate a third nature of Christ strictly or systematically but merely to emphasize that after the resurrection Christ’s mission is charged with greater significance and thus becomes the catalyst for the increasingly convergent evolution. Kropf continues that ‘[Teilhard’s] use of the word nature was directed more by lack of vocabulary than by any desire to invent heterodox formulas’ (Kropf, 1980, p.189).

Maloney agrees that ‘in his use of the terms cosmic or Christic “nature”, Teilhard did not intend to give a metaphysical definition of a new and distinct nature, existing outside of the gloriously resurrected Jesus Christ’ (Maloney, 1968, p.202). Nonetheless, his use of the word does betray a certain element of his thought, namely, that Christ after the resurrection is fundamentally different, and Lyons explicitly refers to

Teilhard’s concept that in Christ there are three natures: divine, human, and cosmic...it was suggested that, in proposing three natures in Christ, [Teilhard]

was attempting to combine a Chalcedonian with an Arian Christology. With Origen we find a similar situation. Some commentators read in [Origen's] doctrine of the Son in such a way that it does not conflict with Nicene orthodoxy. Others see it as looking forward to the subordination of Arius (Lyons, 1982, p.37, p.86)

This further affirms that Teilhard's Christology has major problems with its formulation. Lyons also writes that

the Son is also the first-born of all creation. In his use of this title Origen does not apply it to the Incarnate Christ, unlike a number of Fathers from Athanasius onwards, who do so in order to remove one of Arius's scriptural supports (Lyons, 1982, p.114)

Thus, whilst Lyons does not affirm the precise theory outlined here, he provides support for linking the act of creation with the historical event of the incarnation. By linking Teilhard with Origen, especially in linking Origen's 'twofold doctrine on the Son' (Lyons, 1982, p.106), this Arian criticism can also be leveled at Teilhard. In other words, if Lyons can show that there is significant similarity between Origen and Teilhard in the postulation of a third 'nature' of Christ to correspond to his cosmic function, or as Lyons puts it '[Christ's] superior nature of first-born of all creation' (Lyons, 1982, p.141), then the Arian criticism of Origen can, and must, also be applied to Teilhard.

However, this does not mean that Christ as creator cannot be a viable interpretation of his role, only that seeing him as a creator in this evolutionary

paradigm leads Teilhard to make assertions that cannot be the case. Again, whilst Kropf and others comment that Teilhard is not referring to nature in the traditional sense, if Lyons is correct that ‘in his operation as Omega, what we immediately encounter in Christ is not his divinity or his humanity but rather his cosmic nature, through which he holds together the whole creation’ (Lyons, 1982, p.199) then it is clear that there exists between Christ’s cosmic nature and his other two a similar tension as that which exists between his divine and human natures. Thus the use of the word nature is appropriate to describe this third dimension or function of Christ.

b. Teilhard’s Neglect of the Historical

Another problem with this idea of Teilhard’s is that his reliance on the cosmic Christ neglects the historical. In other words, by focusing on the role of Christ as creator, and by understanding union as creation having to place Christ as the attractive centre of the universe, in which through his resurrection and ascension he takes over the process of evolution and through his Spirit, the historical person of Christ becomes irrelevant. By redefining the meaning of original sin, and by reinterpreting the role of Christ to be more inclusive, his scope becomes so wide that the specific historical context becomes unimportant; it becomes only a small section of the wider context of creation and deification. Kropf notes this problem, writing that

in a journal note of September 28 1953, where Teilhard admitted that he had not decided whether the historical Jesus was the “real Christ” or more of less a projection of the “Trans-Christ” in such a way that it can be said that Jesus has released or unleashed the (true) Christ (Kropf, 1980, p.284).

In other words, the historical Christ becomes only a means to an end. The incarnation becomes just a means to another end, rather than the focal point of the mission of Christ. However, Kropf writes that ‘of some seventy explicit quotations from the gospels, forty-three are from the synoptics. Thus Teilhard can hardly be charged with ignoring the historical Christ’ (Kropf, 1980, p.34). The issue, therefore, is not one of neglect of the historical but concentration on the cosmic.

Nevertheless, it is still important to affirm the unity of Christ, that even though he has different functions, it is still the same person who performs them; ‘Christ born of the virgin, and Christ risen from the dead: the two are one inseparable whole’ (Teilhard de Chardin, 1971, p.159). De Lubac qualifies his discussion of the cosmic and universal dimensions of Christ by writing that ‘there is no disjunction between the one state of Christ and the other: it is always the same Christ’ (de Lubac, 1967, p.63). That being said, there must be an equal act of distinguishing between the two natures, but keeping it clear that these two natures belong to the same person; thus, again, the relationship between Christ’s human nature and his cosmic nature is the same as that between his divine nature and human nature.

Omega Point as Parousia

The Parousia is undoubtedly one of the central categories of the whole of Teilhard’s Christological vision. As Mooney notes, ‘Teilhard was in fact preoccupied all his life with this relationship between the culmination of evolution and the Parousia of Christ’ (Mooney, 1966, p.61). Indeed, E. Borne described him in his eulogy as ‘a man of the Parousia’ (Cuénot, 1958, p.394). For him, the Omega Point that was discussed in the previous chapter that represented the end point of evolution, the point at which all of life and matter converges upon itself, and spirit is

concentrated most intensely, is the second coming of Christ. Thus the evolutionary process, in a very real sense, is the coming into being, the becoming, of Christ's body. When evolution has finished, when Christ's body has been completed, then he comes back to take it over for himself. In this way the Parousia becomes a 'second incarnation'; in the first, Christ assumes an historical human nature; in the second, he assumes creation itself, now complete through the process of evolution, or his cosmic nature.

Teilhard writes that

when the end of time is at hand, a terrifying spiritual pressure will be exerted on the confines of the real, built up by the desperate efforts of souls tense with longing to escape from the earth...it is then, we may be sure, that the Parousia will be realized in a creation that has been taken to the climax of its capacity for union (Teilhard de Chardin, 1964, p.309)

In this respect the convergence of matter and spirituality that has been taking place through evolution will reach a crescendo, a 'spiritual tension', due to the pulling of all matter towards Christ, that when this tension becomes unbearable Christ will burst forth, complete, fully formed, the end of evolution culminating in the completion of his body, which is the unity of nature in the Church (Teilhard de Chardin, 1975, pp.191-2). Mooney, too, refers to this element of Teilhard's thought, writing that Teilhard 'saw that one day the tension gradually accumulating between humanity and God would touch the limits prescribed by the possibilities of the world, and this would bring an end to time' (Mooney, 1966, p.32).

However, it is in his book *The Divine Milieu* where his doctrine of the Parousia is most explicit. He writes that

one day, the gospel tells us, the tension gradually accumulating between humanity and God will touch the limits prescribed by the possibilities of the world. and then will come the end. Then the presence of Christ, which has been silently accruing in things, will suddenly be revealed – like a flash of light from pole to pole (Teilhard de Chardin, 1968, p.150).

The Parousia, for Teilhard, therefore represented the final stage in evolution. It was the event that evolution was heading towards, and thus it was the event that evolution was set in motion to achieve; cosmogenesis is Christogenesis. Thus the supernatural fulfillment of the world is its natural conclusion, deification is creation; the last moment of the act of creation is the deification of the universe, when God will be all in all, i.e. the body of Christ. Mooney writes that

this system of [human] growth in Teilhard's system [i.e. evolution, noospheric union] is not a state which humanity reaches before the Parousia, but a critical point coinciding with the Parousia...to reach this supreme consciousness the human race may well have to pass another "critical point", a second threshold of reflection (Mooney, 1966, p.181)

The Teilhardian doctrine of critical thresholds is operative here; it is this idea of qualitative change through evolution that provided the grounding upon which Teilhard saw the end of the world. 'That moment', Mooney continues, 'when the

psychic temperature of the noosphere, in conformity with the law of complexity-consciousness, reaches its maximum of tension' (Mooney, 1966, p.182); that tension, that pressure caused by the convergence of human thought upon one another reaches a point whereby Christ is burst forth, Christ's body is the result of this psychic tension; 'Christ emerges when the universe converges' (Boissannat, 2006, p.103).

a. The Role of Synergia

It is here, therefore, that the role of synergia has its Christological aspects. In a letter quoted by Mooney, Teilhard asks whether 'without the human striving of every human cell to unite with all the others, would the Parousia be physically possible?' (Mooney, 1966, p.151), in which he answers negatively. Once the evolutionary process reaches hominization, once it has converged to produce the free, conscious, beings that are humanity, it was argued, it becomes impossible for the evolutionary process to be completed without their help, without their effort to build the earth, therefore the Parousia, too, becomes an event that is in many respects dependent on human action. Grau writes that 'the Christian has a call, from Christ, determinative of his very essence as a Christian, to build the body of Christ and bring the incarnation to fulfillment' (Grau, 1976, p.214); everything that was claimed in the last chapter regarding the role of human effort in evolution now has a specific object, the body of Christ.

However, it is also important that 'the terminal maturation of the evolutionary process did not mean that the Parousia was achieved within history by human effort alone' (Grau, 1976, p.340). In much the same way that synergia was criticized in the Pelagian controversy, so it must be made clear that the Parousia is an event that is caused by God, not humanity. As Faricy is keen to point out, as much as the Parousia

and the end of evolution coincide, ‘the Parousia is a supernatural event, a gift from God, a divine intervention. It is not the product of a natural progress of human effort’ (Faricy, 1968, p.65). The end of evolution and the Parousia are events that coincide, but one does not cause the other; the end of evolution is a condition of the Parousia but not its cause (Teilhard de Chardin, 1975, p.155). However, this does not stop the Parousia being a part of the evolutionary process, since ‘the Parousia is an ultimate critical point of evolution’ (Faricy, 1968, pp.65-6).

The close relationship between nature and the supernatural is evident here; regardless of how supernatural the Parousia is, it is a part of the natural evolutionary progression of the world.

b. The Rejection of Indefinite Progress

It is also important, therefore, as Klauder notes, that there is no ‘question of indefinite progress. Quite the contrary’ (Klauder, 1971, p.116). This means that the end of evolution, which is synonymous with the second coming of Christ, is an objective event in the future, it is something that will happen in time, not simply a subjective event that can be de-mythologized. The end of time is an event that will come to pass, when spirit has converged upon itself to such an extent that the final threshold is crossed and Christ takes up his body, then the world will be deified. Teilhard himself writes that evolution is ‘not an indefinite progress, which is an hypothesis contradicted by the convergent nature of noogenesis’ (Teilhard de Chardin, 1959, p.289).

Teilhard, therefore, denies the prospect of an indefinite progress precisely because his evolutionary theory is convergent; precisely because it is being pulled together means that it is a finite process, there will be a point in the future at which

matter cannot converge anymore. As it was noted in the previous chapter, the end of evolution, the unity of creation in the body of Christ is a real event, it is something that will happen in the future, and thus the participation in the divine nature is a participation in a future event, the Parousia.

Mooney writes that

Paul's thought on the "physical" relationship between Christ and mankind has received increased attention in recent years due to the modern trend towards a strong realism in explaining his use of the term "body of Christ". Far from interpreting it as a metaphor signifying the collectivity of Christians as an organization, Pauline scholars, Catholic and Protestant alike, explain it as a literal designation of the risen Christ in all his concrete reality...in the famous two-strophed hymn of Colossians 1.15-20 Paul goes back to the pre-existence of Christ with the Father, in whose image he is the source as well as the instrument and final end of creation (Mooney, 1966, pp.90, 96)

For Teilhard, the cosmic body of Christ is the physical end of creation. The fact that evolution is the creation of a body for Christ, it is the coming into being of the body of Christ – or as Sproxton writes, 'the universe constitutes Christ's cosmic body' (Sproxton, 1971, p.28) – means that God becomes a future reality, God creates from the future, pulling creation towards him, gathering creation up in him – 'the world is converging towards someone' (Cuénot, 1958, p.221). It means both that his theology is necessarily process (Hanson, 1970, p.175), and that Christ is attractive, God is attractive (in the same way that Christ comes to represent the *élan vital*, which is evolution, and that for Teilhard that vitalism, that evolution, is attractive, pulling

matter together in converging unity). God creates by pulling creation upwards, forwards, towards him (Mooney, 1966, p.55); God is the 'prime mover ahead' (Grumett, 2005, p.208). It is not a participation in the being of God who is 'above' or 'within', but participation in the future completion of God; to be participated being is to be united, and union is creation through evolution, thus a reality that always points to the future.

Conclusion

The Christological aspects of Teilhard's theology, therefore, are not separate from his evolutionary theory. Indeed, as it was mentioned above, the two form an indissoluble whole. However, what is important about this Christology is that, although Teilhard saw it as being necessitated by his evolutionary theory, it is, as commentators have argued, nothing more than a reinterpretation of a theology that has been implicit throughout the history of theology. Through Paul, the Greek Fathers, Duns Scotus, and now Teilhard, this idea of seeing in Christ a more fundamental role as that of creator, rather than that of saviour, has been a constant feature of theological discourse.

This thesis will argue, therefore, that this Christology is essentially correct, based as it is on firm foundations. However, the evolutionary context with which it is built needs correcting. This will produce a nuanced cosmic Christ; a cosmic Christ that to all intents and purposes is still Teilhardian, but with a neo-Darwinian context.

Chapter 6

Neo-Darwinism: Teleological Neutrality and Subjectivism

As has already been claimed, whilst Teilhard de Chardin is perhaps the most important theologian to tackle the subject of evolution, his evolutionary theory was incorrect. As Kenney succinctly writes, ‘orthogenesis is scientifically non-existent’ (Kenney, 1970, p.86; cf. Birx, 1972, p.53; Corte, 1960, p.61; King, 1997, p.140; Medawar, 1961, p.99). Likewise, there is widespread condemnation of Lamarckism as having no support among laboratory experimentation (McCarty, 1976, p.131; Elliot, 2012, p.10; Dodson, 1984, p.150; Huxley, 1942, p.457ff.). Importantly, though, Teilhard never claimed to be Darwinian (Teilhard de Chardin, 1978a, p.256; Teilhard de Chardin, 1966, p.136; Cuénot, 1958, p.292); his failure was not in backing the wrong horse but in hedging his bets. Instead, he tried to find a common ground between Darwinism and Lamarckism (Grim & Tucker, 2006, p.68). Such a synthesis, it will be shown in this chapter, is impossible. Regardless of how simple life is, Teilhard always postulated a direction to evolution. This chapter will show how such a teleology is altogether absent from evolution and completely incompatible with Darwinism.

Even though Teilhard claims to offer a synthesis of Lamarck and Darwin, he was, perhaps, always going to be unable to present a truly Darwinian account of evolution due to his intellectual environment. Lamarck, Bergson, and Teilhard were French, and therefore it is reasonable to suggest a predisposition to a particular interpretation of evolution based on nothing else but language parameters (cf.

Chettany, 1981, p.119; Grim & Tucker, 2006, p.69; Raven, 1962, p.33ff). Grumett writes that:

in France, Darwinian theory itself became generally known only during the controversies which followed the publication of Bergson's Creative Evolution in 1907, and even then was not accepted as fully as in the Anglo-Saxon world, Russia or Germany. The true context for Teilhard's study of evolution, crucially, is Lamarckian (Grumett, 2005, p.199)

Further, Domming writes that:

the French scepticism to Darwin is well documented...[and] from about 1903 to 1933 there seems to have been no Darwinian biologist in France...in short, Teilhard's background was not conducive to enthusiasm for the neo-Darwinism synthesis that was developing [around him] during his mature years (Domming, 2010, p.159, pp.190-1)

Simpson agrees that:

[Teilhard] betrayed a complete failure to grasp the theory that he called "neo-Darwinism", now often called "the synthetic theory"...[indeed] it is a French scientist, Georges Pasteur, who has recently (1971) declared that the French mentality in general is incapable of understanding natural selection (Simpson, 1973, pp.92-7)

Birx, in his discussion of the life and work of Darwin, also notes a tension between Lamarck and Darwin, writing that ‘[Darwin] was always unkind to Lamarck’ (Birx, 1991, p.145), and that ‘apparently, Charles Darwin did not take the writings of...Lamarck...seriously, he often ignored the important contributions of the French naturalists’ (Birx, 1991, p.116). Just as the French found it difficult to accept Darwinism, so Darwin found it difficult to accept Lamarckism. The two biologists represent opposite ways of understanding the mutability of species. Such a mutual criticism will be important for maintaining that Teilhard’s assertion that a synthesis between Darwin and Lamarck can be reached is untenable.

This chapter will attempt to outline the basic points of neo-Darwinism, and thereby reach some fundamental precepts with which to reinterpret Teilhard’s Christology. The most fundamental of these is undoubtedly the rejection of teleology. If Teilhard’s theory could be summarized in the term ‘progress’, then neo-Darwinism can likewise be summarized in the term ‘preservation’. The appeal to genetic mutation (by which is meant any change in gene structure (cf. Foster, 2009, p.9; Dobzhansky, 1982, p.39, p.114, pp.128-30; Huxley, 1942, p.21)), and natural selection as the mechanism by which change and diversity happens, does not in and of itself represent Darwinism. Instead, an emphasis on seeing change as an accidental³² occurrence in the continuing process of replication and copying – that nature does not want³³ to change – does.

³² Throughout this thesis the term ‘accident’ and ‘accidental’ (as well as ‘error’ and ‘mistake’), especially when used in relation to genetic mutation and evolution, will never have pejorative connotations. These words will be used solely as pointing to a contingent event, an event that happens without apparent determinative cause.

³³ The use of the ‘want’ here does not imply a conscious activity on the part of genes. The use of the word ‘want’ merely affirms that the primary function of genes is to replicate, and it is only the failure of this activity that produces change.

The universe, therefore, could be said to be mutable as opposed to dynamic (dynamism is a tendency to change whereas mutability simply accepts that change happens), and the diversity that appears in the universe is due to errors in copying and replicating, not because of an impetus towards change. To claim otherwise is a distortion of Darwinism (Medawar, 1961, p.103). Further, it may be argued that evolution is not a process at all (understood as a means to a particular end), but an ontological condition of creation. Evolution occurs, not because it is bringing something into being, but because the created world is mutable and open to change, because the copying process is not perfect but open to mistake.³⁴

Essentially, therefore, this chapter is concerned with the tension between teleology and teleonomy, or, in other words, a tension between, on the one hand, the goal orientated direction of a process that is inherent to it, and, on the other, the retrospective appearance of direction in a random and accidental sequence of events (cf. Davies, 1993, p.237, Dennett, 1995, pp.53, Dawkins, 1986, p.224, Monod, 1972, p.115). This chapter is concerned with a tension between seeing evolution as a forward looking process, looking toward what it changes into, and seeing evolution as a backward looking stand point, looking back at what evolution is trying to copy, between seeing design as a directed occurrence or as an accumulation of accidents

³⁴ This means that the evolutionary paradigm affects everything (Delio, 2003, p.xviii); it 'determines' the creation of the higher atoms, the formation of molecules and cells, to life and multi-cellular life. Whilst this chapter will mainly deal with the biological phenomenon of evolution as it was discovered and outlined by Darwin and his intellectual descendents, it must be borne in mind that what is concluded in this chapter applies just as well for both 'chemical' and 'physical' evolution, i.e. what is called genetic mutation in one discipline may be seen as comparable to elementary particle instability in another (cf. Delfgaauw, 1961, p.72; Delio, 2003, p.xviii; Corte, 1960, p.60; Huxley, 1942, p.125ff.). Mivart thus writes that "'natural selection" seems capable of application...beyond the biological domain altogether, so as possibly to have relation to the stable equilibrium of the solar system itself, and even the whole sidereal universe' (Mivart, 1871, p.22; cf. Jonas, 1996, pp.168-9; Rolston, 2006, p.93).

(much like a game of Chinese whispers). To put the point simply, evolution is never ‘into’ something, it is always ‘from’ something; life never evolves into something else, it always evolves from something. This may seem like a subtle difference but it is immensely important as it shows one of the main problems regarding conceptualizing evolution. Genetic mutation and natural selection are not the whole story; it is essential to Darwinism that it is not teleological but teleonomic.

The Development of Neo-Darwinism

a. Charles Darwin and the Emphasis on Preservation

Darwin did not invent the notion of evolution. The concept that the world was mutable had been around since at least ancient Greece. The fact of evolution is not new. However, Charles Darwin presented a new mechanism that radically reinterpreted what this fact meant. An exhaustive presentation of Darwin’s most famous work *On the Origin of Species* would be impossible in such a short space; however, a few important elements will be expounded here. Often over looked, it will be shown that these elements form the basis of Darwin’s own contribution to what would become the neo-Darwinian synthesis.

What characterized Darwin’s presentation of evolution was that such change did not present progress but was neutral. ‘In fact’, writes Gould:

evolution entered our language as the favoured word for what Darwin had called “descent with modification” because most Victorian thinkers equated such biological change with progress... Darwin initially resisted the word because his theory embodied no notion of general advance as a predictable consequence of any mechanism of change (Gould, 1997, p.137)

Not only does Darwin explicitly deny that there is any progress inherent in evolution, but he purposely avoids using the term so as not to confuse it with previous theories, such as Lamarck's, that did. Thus Darwin:

cautioned himself against writing "higher" and "lower" when discussing plants and animals. He always insisted that natural selection did not produce a perfect world, merely a world in which those organisms which survived were better adapted than those which had perished (Bynum, 2009, p.xlvi)

Continuing this point, Darwin wrote:

there has been much discussion whether recent forms are more highly developed than ancient...[yet] naturalists have not as yet defined to each other's satisfaction what is meant by high and low forms (Darwin, 2009, p.297)

No plant or animal, regardless of how many different variations and changes it has gone through, can be termed higher or lower. There is simply no inherent judgment value within the process of evolution (Delfgaau, 1969, p.113). It does not provide nature with a means to seek perfections, it does not describe the process by which the universe finds perfection,³⁵ and it is merely a 'process' by which life continues to adapt to its environment.

³⁵ The presence of homologies – traits that are similar not because they perform a particular function, but because they have been copied – proves this (Dennett, 1995, p.136). Dennett uses the example of what may be called the 'QWERTY phenomenon', namely, that there are other, and 'better' ways of arranging the keys on a keyboard, yet the QWERTY pattern will, probably, almost never be changed due to

In fact, even this is misleading; life does not actively adapt to its surroundings but is passively shaped by the fact that some individuals die and some survive thus giving the impression from hindsight of adaptation (Dawkins, 2006, p.183). Indeed, Darwin confesses, ‘I believe...in no law of necessary development’ (Darwin, 2009, p.310), everything, therefore, is completely accidental and arbitrary; ‘Darwinian evolution, at least, knows of no teleology’ (Deane-Drummond, 2009, p.229). This means that, although Teilhard criticizes neo-Darwinism for being the ‘mere spread’ of life without an ascent (Teilhard de Chardin, 1959, p.109), this is exactly what neo-Darwinism contends.

Lacey can highlight such an idea by misunderstanding the role of natural selection in evolution, writing that ‘natural selection may eliminate unwanted variations, but what guarantees that the right variations arise?’ (Lacey, 1989, p.180). The point of Darwinism is that there is no such thing as either an ‘unwanted variation’ or a ‘right variation’. The correct variation is the one that survives; every variation is potentially a correct variation.³⁶

Darwin also notes, something that becomes a significant theme in his work, that ‘natura non facit saltum’ (Darwin, 2009, pp.177-8), that nature makes no leaps. In other words evolution is a smooth process of accumulated small changes;³⁷ small

historical accident. The inference being, that, like the human eye, there are ‘better’ ways of designing particular organs, yet these will not be ‘found’ because evolution is not concerned with perfection, but with preservation (Dennett, 1995, p.122). Evolution does not seek out perfect solutions or perfect forms, but simply and relentlessly copies and replicates.

³⁶ Dawkins notes a certain tautology in that selection ensures that the correct variations survive but the correct variations are simply the ones that survive – what survives, survives because it survives (Dawkins, 1999, p.181).

³⁷ It must be noted that ‘smooth’ is meant to refer to genotypes not phenotypes. For example, individuals born with an extra digit (i.e. polydactyly) may be seen as a phenotypic leap but not a genetic one; species may not gradually grow a full new digit

copying errors are themselves copied, and it is the accumulation of these small errors that account for evolutionary change (Darwin, 2009, p.157). The production of all of life on the planet is the result of these accumulative changes through natural selection, passed on from generation to generation, creating only ever small, infinitesimally small (Darwin, 2009, p.93), change – ‘natural selection is daily and hourly scrutinizing, throughout the world, every variation, even in the slightest’ (Darwin, 2009, p.83). However, of course, it is only in reproduction that such ‘scrutiny’ is felt – such that all groups, all species, ‘all would blend together by steps as fine as those between the finest existing varieties’ (Darwin, 2009, p.378). Between any two individuals in existence there is a lineage of extremely small (so small to be almost undetectable) generational changes.

Darwin continues that:

slow though the process of selection may be, if feeble man can do much by his powers of artificial selection, I can see no limit to the amount of change, to the beauty and infinite complexity of the co-adaptations between all organic beings, one with another and with their physical conditions of life, which may be effected in the long course of time by nature’s power of selection (Darwin, 2009, p.104)

If humanity is able to selectively breed plants and animals to conform to their whimsical fancies, then why cannot nature, blind as it is, also make such selections (albeit in a passive sense)?

from a small bump all the way up to full finger but a full extra finger may grow after just one small genetic mutation.

Another problem with understanding Darwinian evolution can be illustrated by the argument of ‘form before function’. Smith writes that ‘what is still more damaging to the evolutionist, however, is that under Darwinist auspices...even in our age there should exist transitional forms, living species, therefore, which exhibit structures of a nascent kind’ (Smith, 1988, p.7). However, Smith fails to understand that Darwinian evolution is about passive accumulation of change, not active searching for solutions. Indeed, just as every variation is potentially a correct variation, so every single individual is a transitional form of some description. Organs, for example, arise from performing, or supporting, a different function to the one that they end up performing, slowly changing into something else and performing a different role. ‘There is a difference between the “origin or emergence of a thing and its ultimate usefulness”’ (Weinert, 2009, p.142), thus ‘the function is the effect, not the cause, of an organ. The organ and its structure develop before function’ (Weinert, 2009, p.162). Expecting to see animals that contain ‘half an organ’, or an organ in development, is completely to miss the whole point of Darwinian evolution.

Darwin himself offers an important example of this aspect of his theory. He writes that:

the illustration of the swim bladder in the fishes is a good one, because it shows us clearly the highly important fact that an organ originally constructed for one purpose, namely flotation, may be converted into one for a wholly different purpose, namely respiration (Darwin, 2009, p.174)

This has the effect of denying final causality, and thus teleology (i.e. it affirms that evolution is not into something but from something). Any one of the organs that an

individual possesses may become eventually useless or come to perform a completely different task.

This leads to another important element of Darwin's theory, often overlooked, that 'selection can only modify what it has been presented with'; in other words, natural selection cannot create, it can only preserve (Bynum, 2009, p.xxxviii), or, it cannot create, only eliminate (Crysdale & Ormerod, 2013, p.36). As Darwin writes, 'this principle of preservation, I have called, for the sake of brevity, natural selection' (Darwin, 2009, p.121), thus 'natural selection can act only by the preservation and accumulation of infinitesimally small inherited modifications' (Darwin, 2009, p.93). In fact 'Darwin sometimes thought that the expression "natural preservation" might be more suitable than "natural selection"' (Haught, 2010, p.32). Simply put, natural selection is not a creative process but a modifying one; natural selection does not add, it only shapes.

Darwin presents a number of situations that evidence this suggestion, for example, the tumbler pigeon and the pointer dog (Darwin, 2009, p.195), claiming that man would never have thought to select those features if nature had not first presented them. This means that nature does not actively seek out solutions to problems. The phenotypic problems of survival and reproduction do not influence the genetic mutation that causes such solutions. Natural selection can only work with what it has been presented with, it can only modify, not create. Natural selection must wait until a mutation accidentally happens before it can 'cultivate' it and make any 'progress', and if that mutation never happens, then natural selection cannot influence its appearance. Simply put, evolution is not concerned with creation or change, but with

the slow, gradual, accumulative modification of existing individuals due to the introduction of variation through slight replication errors.

The important elements of Darwin's presentation of evolution, therefore, are the absence of 'correct variations', the absence of 'intermediate individuals', and the 'un-creativity' of natural selection, all of which can be summed up in the idea that evolution is more concerned with the preservation of previous forms than with change, which is only an accidental occurrence. After all, the original title of Darwin's *On The Origin of Species* has been shortened and originally included the phrase *Or The Preservation of Favoured Species in the Struggle for Life* (Haught, 2010, p.2).

At the time that Darwin was introducing the world to his theory of evolution through natural selection, another biologist, the Augustinian monk Gregor Mendel, was conducting experiments that would provide an answer to the 'whatever' that was the cause 'of each slight difference in the offspring from their parents' (Darwin, 2009, p.157), namely, the gene and the modern scientific discipline of genetics. However, Darwin was unaware of this development and had no knowledge of Mendelian genetics (Weinert, 2009, p.113), and it was subsequently only in the twentieth century that genetics was rediscovered and incorporated into, and used as support for, Darwin's theory. The combination of Mendelian genetics with Darwinian selection is termed the neo-Darwinian synthesis.

b. Theodosius Dobzhansky: Experimental Evidence of Preservation

Theodosius Dobzhansky, in his seminal *Genetics and The Origin of Species*, presents one of the first attempts at this neo-Darwinian synthesis, confirming, and finding support for, the Darwinian contention that evolution is due to blind selection of accidental genetic change, writing that ‘evolution is a process resulting in the development of dissimilarities between the ancestral and the descendent populations’ (Dobzhansky, 1982, p.9).

One of the most important contributions from Dobzhansky, however, is evidence for preservation and accidental mutation. He contends that:

some critics have hastened to remark that since mutations and chromosomal changes can be induced by destructive an agent as x-rays, such changes bring about degeneration and not evolution. The logic of this criticism is certainly rather ludicrous...here, then, a beginning of a differentiation of species into geographical chromosomal races is witnessed (Dobzhansky, 1982, pp.82-3, 88; cf. pp.98, 118)

In other words, Dobzhansky criticizes the assertion that genetic mutation is a creative process of addition, and instead affirms that genetic mutation, the raw material of natural selection, is entirely due to deleterious occurrences in replication (Dobzhansky, 1982, p.83). What this means, therefore, is that there is direct evidence that evolution occurs when the genotype/karyotype fails to replicate properly; evolutionary change is the accidental occurrence in nature of deleterious effects in a laboratory. In other words, precisely the same kind of chromosomal and genetic changes that account for deletions in laboratory settings are precisely the same changes that are found in nature in terms of differentiation of individuals into species.

Precisely the same changes that cause performance inhibitions in genes are those that provide the 'random changes' (Dobzhansky, 1982, p.127) that are selected by blind natural selection, suggesting the conclusion that genetic mutation cannot account for 'objective' progress.

Thus, Dobzhansky also affirms that, just because genetic mutation is a mistake, this does not make evolution a regression. Evolution is teleologically neutral; in the same way that evolution does not represent progress so it does not represent regress either. Thus, Dobzhansky affirms, the 'classification of mutations into favourable and harmful ones is meaningless if the nature of the environment is not stated' (Dobzhansky, 1982, p.23). Evolutionary change can never be judged objectively because the same mutation may prove to be both beneficial and harmful (cf. Delfgaau, 1969, p.113). The deleterious occurrences that account for variations might prove to be favourable; from a biological point of view the process of replication is deleterious, but from the subjective point of view such deletions may be favourable.

Dobzhansky also highlights the role that isolation plays in evolution, noting that 'species formation without isolation is impossible' (Dobzhansky, 1982, p.229). On a simple level, when individuals become isolated geographically their respective genes do not have a chance to 'mix' with each other and thus form non-reproductive, isolated species – in other words, individuals that are unable to produce offspring with each other. All this means for the purposes of this chapter is to provide further evidence that historical accident plays an important part in the largely arbitrary process of speciation. In other words, there is no direction to evolution; instead, the individuals alive today are the result of historical accident.

c. Julian Huxley: A Further Attempt at Neo-Darwinian Synthesis

Julian Huxley, grandson of 'Darwin's Bulldog' Thomas Huxley, also attempted to defend the combination of Darwinian selection with Mendelian genetics, writing that:

evolution consists in the accumulation and integration of very numerous and mostly small genetic changes...but a large fraction of it is in a sense an accident, a biological luxury (Huxley, 1942, p.371-89)

Huxley continues that:

the fact that the genes and their arrangement normally remain constant, until altered by some kind of mutation (after which they again remain constant in their new form until a further mutation supervenes), accounts for the resemblance between parents and offspring. The fact of Mendelian recombination, by which new combinations of old genes are produced according to Mendel's second law (and to the rules of crossing-over), accounts for the great majority of differences between parents and offspring, and between members of a family or population (Huxley, 1942, p.51)

This provides further evidence for the primacy of preservation in evolutionary theory (that genes and their arrangements remain constant until a mutation occurs), and that when a mutation does occur it is accidental, in no way determined or guided towards a particular end (even if that end is temporary).

Thus Huxley defends the subjective nature of evolution. He writes that:

it was one of the great merits of Darwin himself to show that the purposiveness of organic structure and function was apparent only. The teleology of adaptation is a pseudo-teleology, capable of being accounted for on good mechanistic principles without the intervention of purpose, conscious or subconscious, either on the part of the organism or any outside power...[and that] just as the apparent purpose of adaptation is only a pseudo-teleology, so its apparent inner direction is only a pseudo-orthogenesis (Huxley, 1942, p.412, pp.465-6)

He continues that ‘in some cases mutations, which in what may be described as normal conditions are deleterious, may become advantageous in other conditions’ (Huxley, 1942, p.119). Likewise, ‘all that natural selection can ensure is survival, it does not ensure progress, or maximum advantage, or any other ideal state of affairs’ (Huxley, 1942, p.466), and all natural selection can work with is the genetic mutations and recombinations that are errors in copying (Huxley, 1942, p.54).

d. Jacques Monod: The Primacy of Preservation

Jacques Monod, a French Nobel Prize winning biologist (and exception to the quotation above that French biologists were incapable of understanding Darwinism), also provides evidence supporting the interpretation outlined in this chapter, namely, that ‘invariance necessarily precedes teleonomy...teleonomy [is] a secondary property deriving from invariance – alone seen as primary’ (Monod, 1972, p.32-3). To put that into simpler terms, if genes cannot preserve themselves (invariance), then any change that does occur cannot be accumulated in order to produce complex life –

i.e. the primacy of preservation over change. If Darwin is correct that evolution is due to the accumulation of small variations, then these accumulations must be able to be preserved for any change to be detected in the first place. Invariance, therefore, for Monod, is the primary focus of the evolutionary 'process'. He refers to

random chance caught on the wing, preserved, reproduced by the machinery of invariance and thus converted into order, rule, and necessity. A totally blind process can by definition lead to anything; it can even lead to vision itself (Monod, 1972, p.96)

Random, chance mutation causes blips in the ongoing and relentless copying, replicating, and preservation of genetic information, and this randomness is caught up and 'accidentally' preserved. Monod continues that

the Darwinian idea that the initial appearance, evolution, and continuous refining of ever more intensely teleonomic structures are due to disturbances occurring in a structure which already possesses the property of invariance – and hence is capable of preserving the effects of chance and thereby submitting them to the play of natural selection (Monod, 1972, p.32)

Not only these explicit claims, but also the rhetoric used by Monod, contribute to this interpretation. Monod regularly refers to genetic mutations and changes as 'disturbances' and 'perturbations', further evidencing Dobzhansky's contribution that the changes that occur in nature, which represent the raw material of evolutionary

change, are failures in replication, the same failures that can be reproduced in the laboratory using 'destructive' or 'deleterious' x-rays. Monod further continues that:

we say that these events are accidental, due to chance. And since they constitute the only possible source of modifications in the genetic text, itself the sole repository of the organism's hereditary structures, it necessarily follows that chance alone is at the source of every innovation, of all creation in the biosphere (Monod, 1972, p.110).

However, more important than any of these confirmations is his affirmation that:

it might seem then that by virtue of its very structure this system [of replication through DNA] ought to resist change, all evolution. This it certainly does...[however] living beings, despite the perfection of the machinery that guarantees the faithfulness of translation, are not exempt from this law [of physics that no microscopic entity can fail to undergo quantum perturbations (Monod, 1972, p.112)]...[the] mechanism of replication [cannot be] completely immune to disturbances, or accidents (Monod, 1972, pp.108-9)

This suggests that evolution cannot possibly be guided or set-up because not only is such mutation an accidental error, but the process of DNA preservation actively resists this accidental error (cf. Guttman, Griffiths, Suzuki, and Cullis, 2002, p.238); not only is the raw material of selection and evolutionary change an accident but it is actively resisted, thus supporting the contention that evolution is a backwards looking

phenomenon bent on preservation, rather than a forward looking one seeking change. Yes, that change sometimes brings about an advantage in survival, an increased 'success' ('success' is a tautologically subjective term itself (cf. Dawkins, 1999, p.181)), but the point is that such a change, and the 'happening to bring about an advantage', is entirely accidental. It is not what genes 'want' to do, and, further, such an advantage is only judged subjectively.

e. Richard Dawkins: Further Evidence for the Centrality of Preservation

In the late twentieth century, perhaps no biologist is more important, nor more famous, than Richard Dawkins, and he clearly supports the interpretation offered here. He writes

natural selection, the blind, unconscious, automatic process which Darwin discovered, and which we now know is the explanation for the existence and apparently purposeful form of all life, has no purpose in mind. It has no mind and no mind's eye. It does not plan for the future. It has no vision, no foresight, no sight at all. If it can be said to play the role of watchmaker in nature, it is the blind watchmaker (Dawkins, 1986, p.5)

Dawkins continues:

it is only when we look, with hindsight, at the large macromigrational pattern, that we can see a trend in the direction of the promised land (Dawkins, 1986, p.224)

Design is retrospectively attested, it is not inherent in the process itself, and as such can only be subjective.

Likewise, he also supports the slow, smooth nature of Darwinian evolution, writing:

we shall explain [complexity] coming into existence as a consequence of gradual cumulative, step-by-step transformations from simpler things, from primordial objects sufficiently simple to have come into being by chance
(Dawkins, 1986, p.14)

Change is so small that it is only over vast periods of time that any change can be detected at all. It is precisely because of this vast timescale that Dawkins can write that ‘a species never has a clearly defined beginning, and it only sometimes has a clearly defined end (extinction); often a species does not end decisively but turns gradually into a new species’ (Dawkins, 1986, p.264).

However, most importantly, on the subject of the preserving nature of evolution, Dawkins writes that ‘most of natural selection is concerned with preventing evolutionary change rather than with driving it’ (Dawkins, 1986, p.125). Natural selection is not concerned with the creation of new species but with the survival of the genetic make-up. Thus, Dawkins writes:

living organisms exist for the benefit of DNA rather than the other way around...each individual organism should be seen as a temporary vehicle, in

which DNA messages spend a tiny fraction of their geological lifetimes (Dawkins, 1986, pp.126-7).

Change is only an accidental occurrence that happens when the genetic code attempts to preserve itself, moving to ‘another vehicle’; evolution is not a ‘thing’ that nature does, it is the observation of a passive change wrought on it through mistake. But genes do not ‘want’ this to happen. The most successful genes, therefore, are the ones that have been around for a long time, i.e. that have managed not to succumb to accident, as Dawkins writes ‘a successful unit of natural selection...[must have] longevity, fecundity, and copying-fidelity’, in other words, long-living, reproductive tenacity, and freedom from mutation (cf. Gould, 1997, p.176ff).

““Good” genes, Dawkins continues

are blindly selected as those that survive in the gene pool...the gene pool will become an evolutionary stable set of genes defined as a gene pool that cannot be invaded by any new gene. Most new genes that arise, either by mutation or reassortment or immigration, are quickly penalized by natural selection: the evolutionary stable set is restored’ (Dawkins, 2006, p.86)

This further supports Monod’s claim that evolutionary change is actively resisted.

Dawkins states that

occasionally, a new gene does succeed in invading the set: it succeeds in spreading through the gene pool. There is a transitional period of instability,

terminating in a new evolutionary stable set – a little bit of evolution has occurred (Dawkins, 2006, p.86)

However, regardless of how much natural selection ensures that the ‘best’ variations are preserved, there must be variation to begin with. Dawkins confirms that ‘no matter how strong a potential pressure [i.e. environmental conditions] may be, no evolution will result unless there is genetic variation for it to work on’ (Dawkins, 1999, p.42). This variation, as has been claimed already, is due to the fact that the process of replication is mutable. Dawkins agrees that ‘no copying process is infallible...the mutation brings into existence a new kind of replicator which “breeds true” until there is a further mutation’ (Dawkins, 1999, p.85). Again, the only source of variety and material for natural selection is the relative efficiency of replication.

Contemporary Criticisms of Neo-Darwinism

Neo-Darwinism is not without its critics, even when it seems that there is so much experimental evidence in favour of it. However, these criticisms can help to further elucidate the neo-Darwinian synthesis and cement it as the dominant theory of evolution.

a. Stephen Jay Gould and Simon Conway Morris: Re-interpretations of The Neo-Darwinian Synthesis

Stephen Jay Gould and Simon Conway Morris are also important scientists to consider in a discussion of the development of evolutionary theory. However, neither are explicitly strictly neo-Darwinian. Whilst they both agree that Darwin is essentially correct they argue, respectively, that, on the one hand, the ‘Darwinian unit’ is not the

individual but the species (Gould, 2002, p.781, p.1004) – thus denying accumulative change, and therefore the primacy of preservation – and, on the other, that convergent evolution evidences the presence of certain values and directions that are inherently fruitful (Morris, 2003, p.297, p.309) – and thus present a certain direction to evolution. Although the general neo-Darwinian mechanism of blind natural selection of accidental genetic mutation can adequately account for all the variety, diversity, and appearance of design in the world, the rate at which change occurs, and the degree of difference possible, have been the subject of discussion.

Gould's theory of punctuated equilibrium argues that sparse fossil record evidences that the vast majority of evolutionary history is typified by stability, which is subsequently punctuated by 'moments' of rapid change (Gould, 2002, p.758). Whilst the relative sparsity of the fossil record may very well be explained by other factors, it is not unreasonable to suggest that, at least partly, this is due to an actual absence of change. However, this does not mean that speciation is actually rapid, as Gould claims, although it may certainly be relatively rapid compared to the periods of stasis.

Morris, on the other hand, argues that the phenomenon of convergent evolution, the discovery of the same solution to 'evolutionary problems' numerous times independently by different species argues that the number of possible changes are not as numerous as might have been assumed (Morris, 2003, p.12). It may be more accurate to say Morris claimed it is not that certain mutations are impossible but that the survival of certain mutations is impossible, which, if he meant that historical accident forever cuts off certain evolutionary paths (as does Dawkins (1999, pp.30ff)), may very well be the case. However, the fact that he argued, against Gould, that the replaying of the evolutionary tape would always yield intelligent life meant

that he claimed the survivability of certain mutations is objectively impossible, rather than subjectively impossible, which this chapter has argued cannot be the case.

Certainly the time and ‘selection’ of a particular mutation is entirely random and entirely dependent on historical accident, but this does not mean that a particular gene can mutate in an infinite number of ways. Morris, therefore, may ultimately require criticism, but it is certainly helpful to point out that there is a difference between random and infinite, and just because mutations are random does not imply that an infinite number of mutations are possible.

Both theories are not without problems, not least since they both take issue with a strict neo-Darwinian position (which this thesis takes as axiomatically correct), yet, assuming that a strict neo-Darwinian theory is kept, they may still make useful contributions to the neo-Darwinian synthesis. In other words, it may be that change does not occur as frequently as first thought, and when it does happen, the number of possible changes are likewise not as numerous.

b. Epigenetics: A Retrieval of Lamarckian Values

The relatively recent field of epigenetics has led a number of biologists to claim that Lamarckism has been unduly rejected. The reason for such a claim is that it has recently been discovered that there are chemical and hormonal effects on genetic expression. This means that evolution is not just as simple as DNA replication, it is also dependent on the chemical and hormonal environment in which that DNA is copied. Epigenetics is concerned with the transmission of acquired characteristics due to a consistent chemical environment.

However, significantly, this epigenetic environment is usually reset during genetic replication. Carey writes that:

wherever possible, a cell's default setting is to maintain the genome in its original state, as much as it can...the epigenome is usually reset in sexual reproduction, but...this process is occasionally subverted to allow the inheritance of acquired characteristics (Carey, 2012, pp.264-307).

Gorelick & Heng confirm that:

epigenetic reset reduces variation. Epimutations accumulate over the course of diploid and haploid³⁸ development, while epigenetic reset removes much of this epigenetic variation by restoring epigenetic signatures to levels that worked in the previous generations (Gorelick & Heng, 2010, p.1094).

This means that the failure of the epigenetic environment to reset to the default state of the genome becomes itself a 'Darwinian mistake'. The acquisition of characters due to epigenetics is itself due to an accidental occurrence.

Burggren also points to the Darwinian interpretation of epigenetics when he writes that:

epigenetic phenomena result from epigenetic mechanisms that are themselves heritable, selected for and part of speciation and evolution. For example, the ability of the DNA alpha helix to be modified by methylation is, in itself, a

³⁸ Haploid is when a cell has half the usual chromosomes and Diploid when a cell has paired chromosomes.

structural trait of the helix that is genetically copied for (Burggren, 2014, p.685).

Not only this, but he continues that ‘epigenetics is not independent of evolution’ (Burggren, 2014, p.685). Having already noted Lamarckism and Darwinism as distinct theories, at this point it is clear that Burggren is assuming that ‘evolution’ is itself synonymous with ‘Darwinism’. This provokes the inference that he does not consider ‘Lamarckism’ as contributing to the theory of evolution but only describing a separate phenomenon. ‘Epigenetics’ may be Lamarckian, but this is distinct from (but not independent of) ‘evolution’, which is Darwinian.

Whilst this is an important element of evolutionary biology, and it must be accepted that improvements in the understanding of this field may very well lead to radical reformulations of the neo-Darwinian synthesis, it must also be recognized that this chemical, physiological, and hormonal environments are, essentially, still random and accidental and therefore do not significantly alter the conclusion given here that evolutionary change is due to the deleterious effects of imperfect replication processes.

The Neo-Darwinian Synthesis

Essentially, therefore, there are two elements to the neo-Darwinian synthesis, namely, genetic variation and natural selection, each concerned, respectively, with the genotype and the phenotype. Mutation affects the genotype (and also the karyotype, i.e. the chromosome), which then has certain phenotypic expressions (Dawkins, 1999, p.83). Selection then affects the phenotype, such that ‘the greater the phenotypical change the easier the detection of a mutation’ (Dobzhansky, 1982, p.24) – natural

selection does not select genetic mutations, it selects the phenotypic expressions of those genetic mutations (Dawkins, 1999, p.83). Yet selection of phenotypes does not cause genetic mutation (cf. Dobzhansky, 1982, p.120; Huxley, 1942, pp.473-4; Monod, 1972, p.107; van Inwagen, 2009, p.110; Dawkins, 1986, p.312; Weinert, 2009, p.96.). Simply because more individuals are produced than can survive, any survival advantage is going to be passed on (because those that survive will have a greater opportunity to reproduce, and for their progeny to subsequently survive), hence Darwin claims that ‘natural selection follows from the struggle for existence’ (Darwin, 2004, p.168) – an idea that Darwin discovered from Thomas Malthus’ *An Essay on the Principles of Population* (Crysdale & Ormerod, 2013, p.61). This gives the ‘appearance’³⁹ of adaptation to surroundings or directed change. Genes are selected by their phenotypic expressions, but those expressions (and their subsequent selection) cannot influence mutation. ‘If Darwinism is about copying the instructions (genotype), Lamarckism is about copying the product (phenotype)’ (McGrath, 2005, p.127); it is only the genotype that is copied, but it is the phenotype that is ‘selected for copying’.

Environmental changes might cause selection to be ‘more selective’ (cf. Dodson, 1984, p.83) but selection cannot cause those mutations, it must wait for them. Change may be inevitable (cf. Morris) but it does not make it certain, and it especially does not make a particular change certain either.⁴⁰ In other words the onset of a new ice age may cause rapid evolution of thicker fur due to harsher selection

³⁹ Adaptation is only an appearance because the species or individual does not actively attempt to adapt, it only appears to adapt because everything else dies out, i.e. teleonomy. Species do not adapt to their surroundings, they are lucky (through historical accident) to fit into their surroundings, and only those who survive do. Adaptation is only due to teleonomic hindsight.

⁴⁰ It is inevitable that given enough rolls of the dice a six will occur, but this is not to say it is certain. See Gould’s idea of the ‘drunkard’s walk’ (Gould, 1997, p.149), and ‘left wall’ and ‘right skewed’ ideas of averages (Gould, 1997, p.169).

parameters (i.e. only those who have significantly thick fur will survive and thus can be said to be selected), but the individuals must 'wait' for those mutations to happen. If they don't, they will become extinct. Evolution (or more accurately natural selection) can only work with what it is given, it cannot create anything itself. That 'creation', that 'what it is given', is the subject matter of genetic mutation.

It thus needs to be maintained that, whilst genetic mutation is entirely random and accidental, natural selection isn't; 'selection is always relative to the environment' (Huxley, 1942, p.523). This doesn't mean that natural selection is guided or directed, it just means that, for example, a thick fur coat is not going to evolve in a desert environment – the random genetic mutations that allow for thick fur may well occur, but they will probably not survive, thus nature is not going to blindly preferentially 'select' them (cf. Guttman, Griffiths, Suzuki, and Cullis, 2002, p.258). Natural selection is not a real, actual selection process but only the 'differential survival of genes' (Dawkins, 1999, p.18), i.e. those that have a higher rate of survival can be said to be selected by nature. Thus, it is only a passive survival, not an active choice. This means, therefore, that natural selection only works in a population that contains difference (cf. Dobzhansky, 1982, p.150), but that difference only occurs due to random and accidental mutation (cf. Dawkins, 1999, p.21-3, p.195). Likewise, natural selection can only work if there is variance, but it can only have an effect if there is invariance – if genes don't attempt to preserve themselves then the results of natural selection won't have an enduring effect – the efficiency and fidelity of reproduction actually explains the diversity.

Evolution happens as a result of the interaction between these two principles. Without natural selection, 'intermediary species' will not become extinct (thus difference would be less perceptible), and without genetic mutation variation would

not occur (thus there would be nothing to select); both are needed to give the appearance of direction and adaptation.

Criticism of Teilhard

It should be clear that this interpretation of evolution is markedly different to Teilhard's in a number of ways, namely, the accidental nature of change, the lack of direction of such changes, and the rejection of the ontological emergence that happens as a result. If neo-Darwinism is correct, as Dobzhansky's evidence seems to strongly suggest, and that evolution is not only more concerned with preservation but actually resists change, then, quite simply, the process of evolution cannot be one used by God to create. Evolution is completely accidental, the result of differential survival of errors in preservation.

Further to this, there is no evidence that evolution always moves towards complexity. Smith writes that 'thus, tricked (as it would seem) by his famous law, Teilhard fails to recognize the obvious: that there are, namely, many kinds of complexity and many different modes of consciousness, and that not everything can be neatly parceled out on a numerical scale' (Smith, 1988, p.168). Gould also notes that 'no feature of such local adaptation [i.e. natural selection] should yield any expectation of general progress (however such a vague term be defined). Local adaptation may as well lead to anatomical simplification as to greater complexity' (Gould, 1997, p.139 (cf. Dodson, 1984, pp.146-8; Rolston, 2006, p.117; Weinert, 2009, p.116)).

This means that Teilhard's contention that evolution is a synthesis between Lamarckism and Darwinism must be incorrect. The fact that Teilhard argues for panpsychism, such that 'there is something corresponding to consciousness even

among the atoms' (Hanson, 1970, p.170) means that ultimately Teilhard always ascribes a direction, even at the very simple (or 'fragmented') level, as where there is consciousness there is a control of evolutionary direction. Therefore, Teilhard saw Darwinian 'chance' as being 'directed chance' (Teilhard de Chardin, 1959, p.110), or 'strokes of chance that are recognized and grasped – that is to say, psychically selected' (Teilhard de Chardin, 1959, p.149n.1). Teilhard saw Darwinism as a 'blind fantasy of large numbers with the precise orientation of a specific target' (Teilhard de Chardin, 1959, p.110), which neo-Darwinism explicitly denies; indeed, Teilhard's understanding of Darwinism can be seen as a Lamarckian appropriation of a Darwinian principle (Teilhard de Chardin, 1965a, p.140).

In short, this is not Darwinism. This means that Teilhard's theory can adequately be described, not as a synthesis of Darwinism and Lamarckism, but as solely Lamarckian, and thus at odds with the neo-Darwinian synthesis. Any appeal to direction, even a weak one, is against neo-Darwinism. In the last analysis, no synthesis is possible between Darwinism and Lamarckism, and whilst Teilhard's original attempt is intriguing it ultimately fails. Indeed, Huxley (1942, p.123) explicitly argues that orthogenesis and natural selection are two opposing mechanisms that cannot both be correct. If natural selection (i.e. Darwinism) is correct then orthogenesis (i.e. Lamarckism), by definition, is incorrect.

Not only does Teilhard postulate consciousness universally, thus never fully embracing the neo-Darwinian paradigm of random, accidental chance, but the fact that he argues for ontological leaps (which he calls critical thresholds), which serve to separate humanity from the rest of creation, means that he likewise fails to take seriously the small accumulative change of Darwinian theory. Darwinian evolution is

about accumulation of mistakes and, whilst new manifestations of life do come into being, these do not represent completely new, emergent properties – evolution is simply the spread of life, it is not an ascent. Whatever is new in evolution is not real ‘novelty’, as both Bergson and Teilhard would claim. It is not new in kind but in degree, and thus nothing really new ever happens in evolution but only new aggregations of existing genetic material – natural selection can only work with what it is given, and that is only ever-slight variation.

In short, no matter how much Teilhard, or anybody else for that matter, points to genetic mutation (even at the lower levels of evolution), the fact that he points to directionality – even if very vague – and ontological leaps, means that he is fundamentally opposed to the Darwinian synthesis. Quite simply, there can’t be a synthesis between the two theories, they are mutually exclusive, and by appealing to directionality, Teilhard must be labelled a Lamarckian – or more specifically a Bergsonian – and criticised as such.

Philosophical and Metaphysical Considerations

With the neo-Darwinian synthesis, and criticism of Teilhard de Chardin, new philosophical considerations need to be considered, around which a new Christology will be constructed. These philosophical considerations will be limited to what happens to understandings of humanity and what happens to understandings of God in the light of neo-Darwinism. It is obvious that the neo-Darwinian synthesis has important implications for humanity, but claiming that the ‘process’ of evolution has no goal and no director, it has important implications for doctrines of God. These new

considerations of humanity and God will therefore necessitate a new consideration of Christ, who was both truly man and truly God.

Doctrine of Humanity (creatures)

a. The Non-Uniqueness of Humanity

Neo-Darwinism, in rejecting teleology, also rejects the concept of a hierarchy of being. There is no such thing, objectively, as higher and lower; ‘the “tree” of life, then, is a shrub’ (Dodson, 1984, p.137). Moreover, the distinction between species is only a luxury from hindsight due to the fact that ‘intermediary species’ have died out; ‘there are no ontological separations in the evolutionary process, merely distinctions due to natural differences’ (Birx, 1972, p.75 (cf. Delio, 2013, p.52; Delfgaauw, 1969, p.26, p.111)). Darwin is emphatic that, were a perfect fossil record available, all individuals would blend together and the only possible way to separate individuals would be genealogically (cf. example of ‘herring gull/lesser black-backed gull ring’ (Dawkins, 2003, p.25)). He writes that ‘now all these modified descendents form a single species, [and] are represented as related in blood or descent to the same degree’ (Darwin, 2009, p.369 (cf. Darwin, 2009, p.165, p.378, p.392)). Dawkins, similarly, writes that:

to a non-punctuationalist, “the species” is definable only because the awkward intermediates are dead. An extreme anti-punctuationalist, taking a long view of the entity of evolutionary history, cannot see “the species” as a discrete entity at all. He can see only a smeary continuum...the extreme anti-punctuationalist sees “the species” as an arbitrary stretch of a continuous flowing river, with no

particular reason to draw lines delimiting its beginning and end (Dawkins, 1986, p.264).

This is clearly a criticism of Gould, and affirms that, as Darwin himself wrote, the species, far from being a unit of selection, is in fact completely arbitrary.

What this means therefore is that humanity no longer occupies a unique, theologically superior position in creation. Humanity is no longer on an exodus from heaven, but truly of the Earth (cf. King, 1997, p.4). Kenney ‘vehemently affirm[s] that the question [of humanity’s superiority] was unanswerable; all the varied living species equally solve life’s problem, so “who is to say that one form of life is superior to another”?’ (Kenney, 1970, p.65), as does Ayala, who is quoted as claiming that ‘maybe all complex forms of life will go extinct and only the microbial prokaryotic cells will survive. Nothing in evolutionary theory would prohibit such an outcome’ (Peters & Hewlett, 2003, p.119).

Strictly speaking, there is nothing, truly, that can be called ‘humanity’ any longer since the distinction of humanity from other life forms is only apparent. In any case, many see in Darwinism a relegation of human worth, that humanity have been removed from their vaulted pedestal in the universe (cf. Rolston, 2006, p.159), yet this negative outlook has a positive corollary: it is not humanity who have been removed from their pedestal, but the rest of creation that has been brought up to it.

Thus, God’s treatment of the rest of creation must now be equal – humanity is no longer uniquely in need of God’s grace nor uniquely favoured by him – as there is nothing that can distinguish humanity from the rest of creation. What God does for humanity, neo-Darwinism suggests, he does for all creation. The traditional

anthropological doctrine that humanity was made in the image of God must now be expanded to include all of creation; '[Christ] is the Logos, the image according to which not only man but all creation is fashioned' (Maloney, 1968, p.7).

The biological unity of creation is mirrored in the ontological unity in Christ, as de Lubac confirms: 'the unity of the mystical body of Christ, a supernatural unity, supposes a previous natural unity, the unity of the human race [or, now, creation]' (de Lubac, 1947, p.25). If humanity are brothers and sisters in Christ because of a unity that they find in Christ, a familial and genealogical unity, then the rest of creation, the whole of the universe are brothers and sisters in Christ as well (cf. Boff, 1997, p.211; Coulson, 1958, p.125; NRSV, 1995, Mk. 3.35), and thus what God does is equally relevant for all creation.

b. A New, Neo-Darwinian Ontology

The rejection of teleology from evolution also necessitates that a new ontology is posited. One of the common philosophical moves in the light of evolution is to disregard the category of 'being' in favour of one of 'becoming', as did Bergson. Haught confirms that 'a metaphysics of esse (or "being") [has] obscured the obvious fact of nature's constant "becoming" and its perpetual movement toward the future' (Haught, 2000, p.84). Neo-Darwinism, as expounded here, however, disagrees that 'perpetual movement towards the future' is not only not obvious but also incorrect!

A neo-Darwinian interpretation of theology completely removes direction and teleology from creation such that there cannot be an end, a finish, towards which creation is headed. Evolution becomes merely the observation of change, it becomes the principle of mutability in creation, as such it does not postulate something to which creation is changing into, in fact quite the opposite: 'becoming' is forward

looking, concerned with what evolution becomes, rather than concerned with preservation, and more concerned with what evolution has come from. As such, Darwinism strongly suggests that ‘becoming’ cannot be an adequate ontological category.

This ontology of becoming sets up an unhelpful distinction between finished and unfinished. Neo-Darwinians disagree with this distinction. If there is no point at which creation will be finished, no future fulfillment of creation towards which the universe is being created, then it cannot be claimed that creation is now unfinished (De Lubac, 1956, pp.150-1). However, neither does neo-Darwinism imply that creation is brought into being already finished, as it is still clearly changing (even if that change has no ontological value). Instead, neo-Darwinism argues that the whole dichotomy of finished/unfinished is completely inappropriate. Creation, as an action, is neither efficient causality nor final causality. God is unconcerned with ‘building the earth’ (as he was for Teilhard (King, 2006, p.87)), with the ‘stuff’ of creation.

Creation is not a process that will finish because evolution is not a process at all; the categories of creation and deification are thus to be dropped in favour of one of conservation – there can be no point at which nature is without a ‘supernatural finality’ (Rahner, 1966, p.217), nature is at every moment grounded in the supernatural. A new ontology must be posed that deals with this tension.

The modern (and Teilhardian) metaphysic of ‘becoming’ as an ontological position, then, is completely false. To change, yes, to be mutable, yes, but to become, no, precisely because to become has overtones of finality, or telos, that are completely rejected by the Darwinian position. Evolution is not a dynamic doctrine it is a mutable one. In this way, neo-Darwinism represents a sort of ‘half-fixity’ (cf. McCarty, 1976,

pp.65-6, p.121). Darwinism denies that there is no change at all, such that a static universe, the static universe of Aristotle and the Scholastics or the creationists, is denied, however, quite importantly, it also denies that the dynamic universe of Bergson and Teilhard as being equally false (cf. Monod, 1972, p.98).

When Teilhard writes that ‘without orthogenesis life would only have spread; with it there is an ascent of life that is invincible’ (Teilhard de Chardin, 1959, p.109), this is exactly what evolution does proclaim, that life does ‘just’ spread, and that there is no ascent. Darwinism is completely neutral, in the same way that Darwinism allows for no progress so it allows for no regress either. Evolution is just a spread of life, with change not being promoted but the opposite; change is actively resisted. Ontology, therefore, is one of ‘being’ not ‘becoming’ (or indeed ‘union’ as Teilhard would claim), but it is not a static ‘being’, it is a mutable one. This means that the whole universe shares an ontology – ontological equality – and that ontology is one of a spread of life with mistakes in such a spread providing different manifestations of this ontology.

Ontology is neither one of immutable being, nor one of dynamic becoming, but mutable ‘half-fixity’, the constant attempt to remain immutable and the ontological inability to do so.

Doctrine of God

It is obvious that neo-Darwinism has a big influence on the doctrine of man, or the doctrine of creatures as it should now be referred, but it also has important implications for the doctrine of God. In the introduction, it was affirmed that the languages of science and religion are not mutually exclusive and enjoy a certain commonality, thus neo-Darwinism can claim something about God, or better, it can

suggest ways in which discourse about God can be fruitful – ‘Scientific method will demonstrate that certain theological opinions are false’ (Grumett, 2005, p.234 (cf. Vogel, 1996, p.3, 25; Rolston, 2006, p.26; Mahoney, 2011, p.144; O’Leary, 2007, p.195; Cuénot, 1967, p.63; Delio, 2013, p.xxvi)).

a. Materialism

By acknowledging that blind natural selection of accidental genetic mutation is alone sufficient, evolution has strong tendencies towards materialism; nothing else needs to be appealed to. This means that categories such as spirit and soul have no place in a theological interpretation of evolution; there is no ‘soul’ that separates or distinguishes humanity from the rest of creation (cf. *Humani Generis*), and there is no ‘spirit’ that either guides or provides the telos for evolution. This means, quite importantly, that the vitalism that was so important to the understanding of Teilhard’s theology (and indeed any theologian who sees God as guiding evolution) must be completely rejected. There simply is no evidence that evolution works in this way. If anything, so this chapter has argued, the suggestion is that there is something that is preventing evolution from happening, but even this postulation of ‘something’ else preventing evolution is not supported by the evidence. There is nothing further to the blind selection of accidental mutations that can be appealed to in order to explain evolution.

However, this rejection of the Teilhardian role of spirit does not mean that the general framework of his theology is incorrect. In fact, the rejection of spirit means that Teilhard’s theory that heaven is attained through the Earth is even more applicable. The material is all there is; therefore, ascent to God must be through the Earth. This also means, therefore, that Teilhard’s relationship between nature and the

supernatural is also affirmed. Of course, as noted above, teleology is removed from the whole framework, however the same basic structure is the same.

b. 'Psychological' Materialism

This also means, perhaps more importantly, that a psychological materialism is also entailed. There is nothing called 'mind' that is separate from or transcends the brain (cf. Cooper, 1989, p.205ff). The history of modern psychology and neuro-biology has served to relegate the importance of consciousness, which is now nothing but one possible 'solution to the problem of survival'. There is nothing inherently valuable, nor ontologically distinct about consciousness – 'Copernicus struck a cosmological blow... Darwin struck a biological blow... and now, in Freud, we suffer a psychological blow' (Rolston, 2006, p.159 (cf. Jaki, 2005, p.220; Davies, 1993, pp.158-9; Wildiers, 1973, p.78, p.239; Pope, 2009, p.194; Dennett, 1995, p.374; Jonas, 1996, p.92; Gould, 1997, p.15)). The fact that humanity possess consciousness does not make them higher or better than any other life it just means that this is the path that its genes have been 'chosen' (passively) as a way of seeking to replicate themselves, nothing more (cf. Pannenburg, 1985, p.29). Jonas agrees:

the continuity of descent linking man with the animal world made it henceforth impossible to regard his mind, and mental phenomena in general, as the abrupt intrusion of an ontologically alien principle in the total stream of life (Jonas, 1996, p.63)

Neurons and neuro-tissue came into being by accident, as the result of selection pressure for other things (i.e. form before function), and then accidentally provided life, and eventually hominids, with high intelligence.

Consciousness, therefore, is not the central property that Teilhard claimed it to be. There is no support for panpsychism. This means that the noosphere, or at the very least, the noosphere as improvement upon the biosphere, must be rejected. The argument that consciousness adds anything to the universe – objectively or ontologically – is a fallacy that is not supported by neo-Darwinism. This means that, not only is it incorrect to argue that consciousness directs evolution (so there is a correlation between the degree of consciousness and the directness of evolution), but it is likewise incorrect to attribute consciousness, however fragmented, to all matter; orthogenesis and ‘groping’ have no support in science.

Many theologians, for example Haught (2000, pp.25-6), are unhappy about the assumption that neo-Darwinism leads to materialism, and claim that this is an a priori position, rather than a true conclusion. However, the point here is that, if evolution is about preservation, then any ‘spiritual’ dimension, any argument that God is controlling evolution ‘on another level’, would have to accept that such a spiritual dimension would be attempting to continue the preservation of the world – a task that it fails in because change happens. If consciousness is a result of this failure to preserve then it certainly cannot occupy the privileged position they ascribe to it. As it has already been claimed, even if it is affirmed that religion and science deal with different areas of knowledge, claiming that evolution is directed, on any level, undermines the conclusions of science and biology.

In the final analysis, therefore, the appeal to materialism is the affirmation that blind natural selection of accidental genetic mutations is alone sufficient. Materialism means that nothing else needs to be appealed to in order to account for anything in existence. Materialism, therefore, is simply a reaction against vitalism, intelligent design, theistic evolution, or evolutionary creationism and not (at least not wholly) an affirmation of reductionism.

c. The Non-Influencibility of God

This appeal to materialism ultimately means, therefore, that God has no influence on the world. God is ‘functionally redundant’ or has no ‘utility function’ (McGrath, 2005, p.57). God cannot have a causal relationship with the rest of the world⁴¹ because God is not a thing like other things (however, ‘even if the existence

⁴¹ Interestingly, this must include the tremendously improbable parameters that govern the conditions that make life possible in the universe; such conditions, which produce the so-called ‘Goldilocks region’, are likewise random accidental occasions. As Collins notes in his book *The Language of God* ‘the chance that all of these constants [i.e. speed of light, electromagnetism, gravity] would take on the values necessary to result in a stable universe capable of sustaining complex life forms is almost infinitesimal’ (Collins, 2007, p.74). Collins, however, as does Boff, argues that ‘only an organizing intelligence would be able to calibrate all these factors’ (Boff, 1997, p.18), and thus sees the infinitesimal chance of these conditions as proof as the existence of God, that God set up the universe to create for him.

However, the conclusions of Darwinism apply just as much to the Big Bang and the initial moment of the universe as they do to biological life. Jonas notes that ‘we have at first, therefore, an aimless disorder in the emergence of natural order. The foundation of all order in nature, of any nature at all, lies in the laws of conservation. But these have come to govern because it is only self-conserving reality that conserves itself. This tautology explains the lawfulness of nature as it is given to us: nature itself is already a result of selection, a universal result which then posits rules for further, more specific, and local selections. This means that the laws of nature arose through the emergence – also in the midst of disorder – of stable, relatively long-lasting realities that behave always (or for a very long time) in the same way and thus “succeed”. Here we have the most primordial and fundamental instance of “the survival of the fittest”. Order is more successful than disorder. That which has no laws and regularities, and obeys no laws of conservation, could have existed in some arbitrary multiplicity... thus there came about the formation and proliferation of protons and, as a result, the law of gravity and mechanics: from hydrogen atoms to the

of God is not necessary to complete a philosophy of nature...God may in fact happen to exist. Not everything that is true needs to be true in order to preserve the world's intelligibility' (Vogel, 1996, p.21)). God's complete transcendence from creation is supported, or at least suggested, by neo-Darwinism (Davies, 1989, p.ix).

The example of the discovery of neutrinos can help to set the tone as to what this means. The neutrino was elusive to scientists for so long because it was completely undetectable; scientists needed to wait until such sophisticated technology was available in order to observe interactions of neutrinos (Cox & Forshaw, 2009, pp.163-4). The problem of the 'observation' of God can, in many ways, be comparable. God can't be detected because God isn't a 'thing' and, therefore, can't interact with other 'things', from which observations may be made. Whereas with neutrinos sophisticated machinery was needed, with God no machinery will ever be

rise of the periodic table of elements and chemistry (including the beauty of the crystals) – in brief, to the whole realm of matter. Likewise from the initial radiation there arose the quantum structure of electromagnetic energy: in a word, the elementary particles, the four forces, etc. the laws of conservation and, along with them, strict causality as such and its cosmic predominance are products of development and selection...there was always enough "disorder" left over to occasion the formation of new characteristics (structural factors) by accidental, random events, and the momentary successes were subject to the process of selection with its criterion of survival by sheer numbers' (Jonas, 1996, pp.168-9), although it must be noted that he qualifies this by claiming that 'although there should be no plan in it – this we have rejected with good reason – we might ascribe to it a tendency, something like a yearning, which the chance opportunities of the world seize upon and the drive forward' (Jonas, 1996, p.173), which is obviously unacceptable from a strict Darwinian perspective (and somewhat similar to Teilhard's own idea of 'groping evolution'). Nonetheless, Jonas attests to the fact that (perhaps somewhat similar to the ontological proof of the existence of God), the fact that creation is mutable yet attempts to remain the same – the emphasis in evolution on preservation and an imperfect replicating process that makes change inevitable yet accidental (i.e. 'disorder') – which comes to demand an ontology of 'half-fixity' (see next chapter), means that it can spontaneously create itself out of nothing so long as it is mutable, i.e. susceptible to mistake, disorder, or instability. (It may be noted that the use of the tension between order and disorder as representing a Darwinian selection of accidental events, and the claim that 'there is always enough "disorder"', may suggest that the presence of entropy, and its use in physics, is evidence of a 'physical' Darwinism (although entropy posits a definite direction to physical systems).)

possible. God doesn't 'react' or influence anything therefore he will never be able to be detected; this doesn't mean that God cannot 'act' but it means that he cannot 'influence' creation.⁴²

Whilst it must be maintained that science cannot speculate on the nature of God it can, as it has just been shown, speculate on his relation to creation. More specifically, a re-appropriation of the relationship between eternity and space-time is needed.⁴³ Eternity, therefore, becomes not the simultaneous possession of all time and space, but the opposite of time and space. Eternity is literally no-thing.⁴⁴ The sentence 'nothing is eternal', therefore, has both negative and positive connotations. It means both that no 'thing' is eternal (i.e. nothing can exist without time and space and therefore nothing can be eternal) and that 'nothing' is eternal (i.e. whatever nothing 'is', it is eternal (time and space are absent)); 'something' or 'anything' is temporal and fleeting but 'nothing' is eternal. This is what God 'is'. God is nothing, God doesn't exist, God is not, God is nothing, God is no-thing. Thus, God creates from nothing (cf. Dirac, 1958, p.ix). God's being eternal (i.e. non-temporal and incorporeal), therefore, is not Platonic (nor Boethian or Thomistic) but scientific.

⁴² Polkinghorne writes that 'if all mental processes have brain correlates, and that is true of the operation of the unconscious ego, then God could not interact with the depths of our psyches without also interacting in some way with the material processes of our brains. If that is the case, one can then go on to enquire about the possibility of his interacting in a specific way with matter not organized into complex wholes supporting consciousness' (Polkinghorne, 1989, p.10). However, he understands this as support for God's ability to influence the world whereas this thesis will argue 'from the other perspective'. If God can influence human consciousness, and consciousness is 'material', then God can influence matter; however this thesis argues that if God cannot influence matter then, consciousness being 'material', he cannot influence consciousness either. God, it will be maintained, can only influence by himself becoming matter (cf. Barbour, 1971, pp.315-38).

⁴³ Due to the fact that space and time are fundamentally linked, 'eternity' will be taken as having just as many spatial connotations as temporal.

⁴⁴ Importantly, this is not simply 'immaterial'. Barbour notes that 'the term "immaterial" has misleading connotations of "mental" and "spiritual"' (Barbour, 1971, p.288).

However, neo-Darwinism also suggests that traditional doctrines associated with the eternal nature of God such as omnipotence and omniscience must be rejected.⁴⁵ God is nothing, and as such can neither do anything nor know anything (cf. Conee & Sider, 2005, p.40). He is completely separate from creation. This means that neo-Darwinism not only affirms the use of apophatic language (a tradition carried through writers such as Augustine, Gregory of Nyssa and Pseudo-Dionysius),⁴⁶ but strongly suggests that this ‘apophaticism’ is not just an inability of language but points to an ‘ontological vacuity’; language becomes incoherent about God because he really does not ‘possess’ any characteristic.⁴⁷

d. Deism

It is at this point that it becomes necessary to affirm deism (cf. Peters & Hewlett, 2003, p.130; Barbour, 2001, p.2; Wiles, 1986, p.40). Previously, with reference to Teilhard de Chardin, it was argued that evolution shows how God creates, and thus a doctrine of pantheism, or at the very least panentheism, must be appealed to. God doesn’t just create as a one off event, he continues to create, and evolution shows this continual creation. However, now, with the neo-Darwinian

⁴⁵ This rejection of omniscience, this rejection of a divine ‘mind’ or ‘intelligence’ is itself a rejection of intelligent design. Materialism, the affirmation that mind is a product of the brain; therefore, it is also a rejection of intelligent design, that an intelligent being is responsible for the world, since for God to be intelligent God would have to have a brain, i.e. be material.

⁴⁶ Nothing is an oxymoron in that it is a thing that is an absence of things, therefore it is not what it is, i.e. a thing; this points to and references the apophatic theology of Pseudo-Dionysius and contradiction of not being able to name God, yet even saying God cannot be named, names God (cf. Nelstrop, 2009, p.54).

⁴⁷ The second commandment can also be seen to demand such a claim. Even intellectual ideas about God are still idols; in fact in the concept of God is a human invention and cannot adequately be applied to God (cf. Hauerwas, 2004, p.142; Hafner, 1995, p.8.).

synthesis becoming increasingly adept at explaining the ‘mechanism’ of ‘creation’ without God, deism is once again the most appropriate explanation of the relationship that God has with creation, as David Brown defines deism as ‘little more than...“belief in a non-interventionist God”’ (Brown, 1985, p.5 (cf. Brown, 1985, pp.4-5, p.9)).

However, whilst it may be correct to label deism as a ‘non-interventionist theism’, at least one act of intervention is required. Deism does not claim that God doesn’t intervene at all; it claims that God intervenes only once. The caricature of the deist God is of one who creates and then leaves (cf. Peters & Hewlett, 2003, p.30, p.131, p.160). Deism, therefore, is not ‘non-interventionist’, it argues that God intervenes once, and, taking into consideration the absurdity of applying temporal categories to God (i.e. that one act of God cannot be ‘before’ creation), all that is being affirmed here is that God acts eternally (not continuously (cf. Torrance, 1978, p.53)). The act of creation is not a continual process, it is an eternal event (cf. Augustine, 1991, pp.225ff; Viney, 2010, p.77).⁴⁸

This appeal to the single act of God also supports the assertion that there is a unity, an equal value, among creation: ‘O truth, everywhere you preside over all who ask counsel of you. You respond at one and the same time to all, even though they are consulting you on different subjects’ (Augustine, 1991, p.201; cf. Lossky, 1975, pp.161-3). In other words, if God only does ‘one’ thing, then this ‘one’ act must be equally relevant to all creation, and thus humanity are no longer uniquely treated by God.

⁴⁸ Maurice Wiles also attempts to see the act of God ‘as a single divine act’, however Wiles’ single divine act is not ‘numerically singular’ but ‘a unity of intention’ (Wiles, 1986, p.54). What is argued here, again, is that God does not continue to do the same thing, but only does one thing.

Previously, it was claimed that the fact that God did something new in Christ was a stumbling block to deism, but now, taking seriously the eternal nature of God's activity, God cannot do anything new, because to do so would add temporal categories to his action (cf. Polkinghorne, 2001, pp.103-5; Peacocke, 2001, pp.46-7; Barbour, 2001, p.20). It can then be questioned, taking into account God's inability to influence creation, why that 'one act of intervention' cannot be identified with the incarnation, as Brown seems so adamant to deny (Brown, 1985, p.14). This means that God can't interact or influence his creation unless God became a thing like other things – 'God could not create [read 'influence/interact'] unless God was incarnate' (Delio, 2013, p.127 (cf. Torrance, 2001, p.68)), which can also be seen as the conclusion of the neo-Darwinian suggestion of materialism. The person of Christ is the sole meeting of divinity and creation, the person of Christ is the door through which the divine influence enters creation. In other words, the neo-Darwinian synthesis suggests something about divine influence, and that suggestion is precisely what Teilhard took from the 'Eastern' paradigm: it is Christ who creates. This, it will be argued, is the meeting place of Teilhardian Christology and Neo-Darwinian science, and it will be termed 'incarnational deism' – that God only does one thing (eternally), and that thing he does by becoming created – in Christ, 'the singular moment in the universal bestowal of grace' (Deane-Drummond, 2009, p.42). All that is being argued here is that the one act of God for the deist is eternal (thus not confined to a 'beginning') and it is identified with the historical body of Christ.

It now becomes necessary to reinterpret Teilhard's cosmic Christology in the light of these two philosophical implications of neo-Darwinism, namely, a nuanced

understanding of what it means to be a creature, and a nuanced understanding of what it means to be God.

Chapter 7

A Reinterpretation of Teilhard's Christology

In the last chapter it was argued that neo-Darwinism fundamentally disagrees with Teilhard's own evolutionary theory, and subsequently suggested a new way to understand humanity (as a part of the wider creation) and God (as having no influence on creation apart from the incarnation) respectively. If, as it was claimed in the introduction, the 'fact' of evolution demands a cosmic Christology, regardless of the 'mechanism'⁴⁹ appealed to, then the overall direction of Teilhard's Christology must still be correct, but it must be reinterpreted to account for this disagreement; the 'mechanism' of neo-Darwinism needs to be allowed to nuance this cosmic Christology. Teilhard was entirely correct to conclude that evolution demanded a cosmic Christology, but what he got wrong was the evolutionary foundation upon which he built such a Christology.

Essentially, the main criticism of Teilhard's evolutionary theory was the appeal to teleology. Neo-Darwinism rejects the notion that evolution is a forward-looking process that culminates in a future completion. Instead, neo-Darwinism affirms that evolution is a backward-looking 'process' with no comprehension of future or 'end'; 'perfection' is subjective. Secondly, it was argued that neo-Darwinism strongly suggests materialism, denying that there is 'something' else to matter, let alone something more important than matter. Thus, the basic principle of Teilhard's evolutionary theory, namely, a convergent process culminating in a unified spirit, is

⁴⁹ Again, 'mechanism' is used here to refer to the 'how' of evolution, rather than as a technical term as used by Bergson.

completely rejected by neo-Darwinism. If this is the principle upon which he builds his cosmic Christology then it is reasonable to assume that his cosmic Christology is likewise incorrect.

This chapter will attempt to reformulate Teilhard's cosmic Christology within a new, neo-Darwinian paradigm. This reformulation will return to the themes that were important for Teilhard and attempt to reconstruct a Christology based on the same themes yet built on a neo-Darwinian foundation. This should lead to a Christology that is capable of dealing with the scientific and philosophical demands of the twenty-first century, yet still taking the Chalcedonian definition as axiomatic. This in turn should help to form the basis of a theology that can seriously contribute to the ongoing conversation between science and religion, which is the overall intention of this thesis.

The Rejection of Western Juridical Christology and The Acceptance of Eastern Christology

In the introduction, two basic Christological paradigms were outlined: a Western paradigm with a focus on sin and salvation, and an Eastern paradigm with a focus on creation as a process with future completion. Evolution, it was claimed, deems that the first is incorrect. The fact that there is no longer any actual historical event on which to pin the reason for the incarnation means that 'Western' Christology is no longer possible. Teilhard agreed. In *Christianity and Evolution* he wrote that 'without being too unjust to the Latin Fathers, might one not blame them for having overdeveloped the Rabbinical and legalistic side of St. Paul in their theology?' (Teilhard de Chardin, 1971, p.89). This led to Teilhard de Chardin affirming Eastern

Christological values over and against Western, precisely because of the issue of ‘the traditional notion of original sin’ (Teilhard de Chardin, 1969, p.36).

a. The Eastern Christology

This Eastern Christology, following such influential writers such as Athanasius and Gregory of Nazianzus, focused not on Christ’s death but on his incarnation. For them, deification ‘extend[s] mechanically or automatically to all humanity...thus evacuating the need for Christ’s atoning death’ (Finch, 2006, pp.106-7). It is not the death of Christ that is efficacious but his incarnation.

It is with Gregory of Nazianzus, however, that this Christology obtains its most poetic expression. In a Letter Against the Apollinarians he famously exclaims ‘for that which he has not assumed he has not healed’ (Gregory of Nazianzus, 1954, p.218), therefore, if ‘[Christ’s] soul should be that of a horse or an ox, or some other of the brute creation...this, then, would be what he saves’ (Gregory of Nazianzus, 1954, p.219). The important point for Gregory is that Christ became a human; it is in the assumption of human nature that humanity is saved.

This led Williams to write that:

it is the sheer joining of divinity and humanity in a single person, Jesus Christ, which renovates the nature sickened by the fall...[thus it is] the union of fallen nature with the utterly holy divine nature [that] necessarily changes the unholy’ (Williams, 2007, p.38)

It is the sheer joining of creation and divinity that is efficacious. It is mere contact with divinity that is important, not what that divinity does subsequently. Volz, in the

same direction, confirms that ‘one’s growth in Christ is related to one’s exposure to the word of God’ (Volz, 1992, p.100). Teilhard, likewise, agrees that ‘[Christ] sanctifies human flesh by a specific contact’ (Teilhard de Chardin, 1968a, p.64).

This means that it is the incarnation itself, as an event (distinct from the crucifixion or the resurrection), that is alone important; ‘the word of God is the means by which we live in God, some call it “the word of life”...when God speaks, things come to be’ (Bianchi, 1998, p.24). Everything that Christ does is now seen in the context of his assumption of human nature, not in the context of his atoning death. Thus Aghiorgoussis can write that

everything that Christ did throughout his earthly life was based upon the presupposition that humanity was already saved and deified, from the very moment of his conception in the womb of Mary (Aghiorgoussis, 1992, p.41)

Likewise, Russell writes that

the unity of humankind, which Athanasius took for granted, means that the whole human nature is deified in principle when the human nature which the logos assumed is deified in him (Russell, 2004, p.172)

Henri de Lubac, who was himself heavily influenced Teilhard de Chardin, develops this interpretation, writing that

the word did not merely take a human body; his incarnation was not a simple ‘corporatio’, but, as St. Hilary says, a ‘concorporatio’...in making a human

nature, it is human nature that he united to himself, that he enclosed in himself, and it is the latter, whole and entire, that in some sort he uses as a body (de Lubac, 1947, pp.37-8)

What Christ achieved he achieved in the incarnation. Christ assumes not just an individual of humanity, but humanity itself (of course, it has been argued that there is now nothing so concrete as ‘humanity’, which will be dealt with below), and is coming into contact with divinity that humanity is transformed and deified.

This means that Kelly can write that ‘human nature was sanctified, transformed, and elevated by the very act of Christ’s becoming a man’ (Kelly, 1965, p375). Christ does not deify as man, he deifies by becoming man; Christ does not become man and then deify, it is his actual becoming human, that meeting of divinity and creation, that is efficacious. ‘It is not in the first instance what Christ does that saves us’, confirms Williams, ‘but who he is’ (Williams, 2007, p.38).

b. *The ‘Rejection’ of Eastern Christology*

However, as much as evolution suggests the Western paradigm is incorrect, so neo-Darwinism now suggests that this Eastern paradigm is also incorrect. The ‘fact’ of evolution rejects the Western paradigm because of the need to reject the ‘traditional notion of original sin’, and the ‘mechanism’ of neo-Darwinism further rejects the Eastern paradigm because of the need to reject the notion of a process of creation with future completion.

This is not a complete rejection however; it is more a shift of focus. Firstly, the focus is shifted away from the death of Christ to his birth. Secondly, the focus is shifted away from the incarnation as a part of a wider process to the event of the

incarnation as a once-for-all event. Any reference to a ‘completion’, or to the fact that the Christ event is part of a wider process of creation – an ‘addition’ or continuation of the ‘initial’ creation – must be rejected; the tension between complete and incomplete, between finished and unfinished, must be rejected. Likewise, any notion that in the incarnation God is doing something new must similarly be rejected as contradicting the suggestions of the neo-Darwinism synthesis.

Again, it is the ‘fact’ of evolution that makes the biggest impact; it is the ‘fact’ of evolution that makes the biggest demands on Christology. The ‘mechanism’ of evolution simply ‘streamlines’ what can be said; it is the ‘mechanism’ of evolution that clarifies what can be said of Christology after the role of Christ is re-cast. With neo-Darwinism the content of Christology is not the issue but the context; with a new understanding of humanity and a new understanding of God, the application of this Eastern paradigm is shifted.

To put the point differently, the teleology that is a feature of the Eastern paradigm needs to be removed; as it was claimed in the introduction, the problem with both the Western and Eastern Christological paradigms is that they see evolution as a temporary process.

c. Incarnational Deism

As it was claimed in the last chapter, ‘God could not create unless God was incarnate’ (Delio, 2013, p.127), and it is only the Son who becomes incarnate (Meyendorff, 1964, p.231). This means that the incarnation is not part of a wider process because God cannot influence the world unless he becomes incarnate; the incarnation is the creating act of God. Neo-Darwinism, therefore, does not completely reject the Eastern Christology; it further clarifies it. In other words, it is not so much a

rejection of the Eastern paradigm as a whole, but an Eastern paradigm that primarily understands Christ as creator without the teleology.

God does not need to ‘try again by this time becoming human’ (Mahoney, 2011, p.72), but by this becoming human he creates, for the first and only ‘time’. ‘Indeed’, Mahoney muses, ‘on reflection there may be something ridiculous, not to say mildly blasphemous, about the idea that Almighty God failed in his first attempt at creating human beings and had to try again by this time becoming human himself’ (Mahoney, 2011, p.72). The one act of God is the incarnation of Christ. This, it was suggested in the previous chapter, led to what is termed ‘incarnational deism’.

Everything that was said regarding the incarnation above is still affirmed, yet that incarnation is the one event of intervention and influence of deism (cf. Brown, 1985, pp.4-14). Thus, returning to Gregory of Nazianzus, now that the notion of salvation is being replaced with that of creation, it must be ‘that which he has not assumed he has not created’.

However, this one act of God is not temporal but eternal. This means that the ‘initial’ act of creation does not need to happen at the beginning of time, it can happen at any ‘time’, it only needs to happen. This is an incarnational deism, not a ‘traditional’ deism. This can be understood as a conflation of creation, conservation and deification. These are not three acts of God, not even three separate elements of the same act, but one act. Just as number cannot truly be applied to the Trinity, such that the affirmation of three persons in one God is only an analogy, so number cannot be applied to the acts of God (cf. Farrow, 1999, p.53). Vladimir Lossky, an exponent of the Eastern paradigm, writes that ‘in the one and the same act the Word assumed human nature, gave it its existence, and deified it...[thus] it is hard to distinguish between the first state of creatures and their union with God, their final end’ (Lossky,

1957, p.142). This not only confirms what has been claimed here regarding the role of the incarnation, but it also shows that the Eastern paradigm does not need to be completely rejected. Likewise, Haffner writes that:

some would say [about God's act of creation and his act of conservation] that there is no essential difference, because God is performing one act outside of time which 'maintains the whole temporal sequence from its first moment onwards' (Haffner, 1995, p.91)

Thus, as Radcliffe writes, 'to be a creature is to receive existence, not just at conception but at every moment' (Radcliffe, 2005, p.93). Creation and deification are not two parts of the same act, they are one and the same act, and both are achieved through the incarnation of Christ.

Webster confirms such an interpretation, writing that 'the human history of Jesus is the divulgence in time of divine grace' (Webster, 2011, p.32), as does de Lubac, who writes that 'the grace of Jesus Christ, [must] never on any account be thought of apart from the incarnation itself' (de Lubac, 1969, p.81). Such a Christology may also be read back into Teilhard when he recognizes that 'the incarnation is an act co-extensive with the duration of the universe' (Teilhard de Chardin, 1965, p.64).

Christ as Bond of Matter: A Reinterpretation

For Teilhard, the claim that Christ was the bond of matter was essentially an affirmation of unity. If 'to create is to unite', and Christ creates, then Christ is the principle of unity. For Teilhard, this unity represented a process of convergence in

which full union is always a future reality until the Parousia. However, this was also the biggest problem that Teilhard's evolutionary theory faced in the light of neo-Darwinism: there can be no teleology. This means that, although Christ can still be the principle of unity, this cannot be a future reality, it must be a present one.

a. Christ as "Form" of Creation

The role of Christ as creator, therefore, for Teilhard was to be the principle of unity. It is Christ who pulls creation together to form his body. For Teilhard, to conform to the Eastern Christological paradigm is to claim that Christ unites matter and causes its convergence. However, now that this forward-looking process is rejected, Christ's being the principle of unity must be conflated to one single event.

It was also argued in the last chapter that efficient causality must be rejected in favour of an emphasis on formal causality. The neo-Darwinian synthesis suggests both that teleology is rejected and that God has no efficient or final causality, both of which argue that God's action is one of formal causality. What God does is ontologically define the universe; he only has to account for 'mutability'. The rest happens by accident, simply because it is mutable.

Likewise, the rejection of a 'within' to matter also creates problems for a neo-Darwinian interpretation of Teilhard's Christology. Christ can no longer be the 'within' of matter, pulling it together. Instead he must be the form of nature. Christ's historical body is the ontological ground of all creation (Peacocke, 2001, p.175). Christ is the bond of matter, not pulling creation together from within, but the form of matter, uniting creation through being the ground of existence.

Teilhard seems to allow such an interpretation when he writes that ‘in Scripture Christ is essentially revealed as invested with the power of giving the world, in his own person, its definitive form’ (Teilhard de Chardin, 1968a, p.252). Again, all that is being argued here is that the teleological context in which Teilhard made such a comment must be reformulated. This means that a neo-Darwinian cosmic Christology suggests a God who creates through the event of the incarnation, once-for-all, and that the content of such creation is simply ontological grounding.

b. Incarnation as Proleptic Event

Understanding the role of the incarnation as responsible for unity has the effect of arguing that the incarnation is a proleptic event (not in the sense that it anticipates something future, but that it is an event that happens ‘before’ the first moment of time). It is not the moment at which God does something new, it is the only ‘thing’ that God does. The rejection of efficient causality, and especially the non-temporal nature of God’s act, means that such an event does not need to happen at the beginning of time.

Cullman makes a similar point when he writes that ‘the divine plan of salvation opened up in both a forward and backward direction’ (Cullman, 1962, p.107). As does Boff who claims that Christ is the ‘universal observer’. He asks

who [is] the universal observer who caused the universal wave to collapse and thereby enabled the universe to cease being probability and become reality as we have it today? There had to be a universal observer who could interact with the probabilities and possibilities and could pull them from that situation and draw them to concrete realization. The religious and sapiential traditions of

humankind give the name God to the principle that creates, sets in motion, and orders everything. Thus it was God who caused the universal wave to collapse; God is the creator and the organizer. (Boff, 1997, p.142)

Christ's incarnation therefore can be seen in this way, not as being responsible for the 'efficient' reason for creation, but for its 'formal' reason. Christ's incarnation is the act of God's 'observation'. The incarnation is an event that has as much relevance to the past as it does the future; i.e. God does not do something new in the incarnation because the incarnation influences all time.

Understanding the incarnation as a proleptic event, with only a 'formal' relationship with the world and not an 'efficient', also answers the 'problem' of cause and effect: how is it that a future event can have a causal relationship with a past one, and, more importantly, if Christ creates by coming into contact – since contact is the operative feature – how can Christ come into contact with something that hasn't been created yet? If creation is effected by assumption, how can Christ assume something that isn't already there?

c. A Christological Interpretation of TzimTzum

It is suggested here that understanding Christ's incarnation within the context of the Kabbalah-ic doctrine of Tzimtzum adequately deals with these new Christological demands: a single event, coterminous with the incarnation, which provides the 'reason' for mutability in the world, and thus being the ontological foundation of all creation through evolution. This doctrine of Tzimtzum can also be coupled with the Christian doctrine of kenosis, and in many respects they can be seen

as synonyms: the same doctrine, one from a Jewish perspective and the other from a Christian.

Essentially, the argument is that the emphasis of Christ's incarnation is not on his assumption of something else, but on the 'contraction' of his divinity; it is his 'emptying' of his divinity that is the 'coming into contact' so important for the Christology expounded above. The incarnation, in this sense, is a subtraction rather than an addition; the incarnation does not 'add' anything to Christ's person, it 'subtracts'. Christ is God, and 'when' he eternally 'empties' his divinity, creation results; this, it will be argued, is how the incarnation can be seen as the act of creation, i.e. how God creates (cf. Brown, 1985, p.231). What is created is the historical body of Christ, which 'remains' after his 'emptying', and that historical body is the ontological grounding of creation.

The doctrine of *Tzimtzum* was originally postulated as part of Kabbalah, a Jewish mystical sect, and therefore [even though it has been referenced by Christian theologians in the past, such as Moltmann (2001, pp.145-6), Polkinghorne (1988, p.61), Peacocke (2001, p.87), and Fiddes (2001, p.185)] it would be more appropriate for a Jewish philosopher to introduce it. Hans Jonas writes that:

in the beginning, for unknowable reasons, the ground of being, or the Divine, chose to give itself over to the chance and risk and endless variety of becoming. And wholly so: entering into the adventure of space and time, the deity held back nothing of itself: no uncommitted or unimpaired part remained to direct, correct, and ultimately guarantee the devious working-out of its destiny in creation...to view the world as left to itself, its laws as brooking no interference,

and the rigour of our belonging to it as not softened by extramundane providence...tzimtzum means contraction, withdrawal, self-limitation. To make room for the world, the En-Sof (infinite; literally, No-End) of the beginning had to contract himself so that, vacated by him, empty space could expand outside of him: the “nothing” in which and from which God could then create the world. Without this retreat into himself, there could be no “other” outside God, and only his continued holding-himself-in preserves the finite things from losing their separate being again into the divine “all in all” (Jonas, 1996, p.134, p.142)

God withdraws himself and in doing so makes room for creation; creation results from the withdrawal of God.

However, the problem with the doctrine of tzimtzum as presented by Jonas, and other Christian theologians who reference the doctrine, is that they apply it to God generally, rather than to Christ specifically (because, more often than not, they see the incarnation as being an event that happens later in time and represents God doing something new – God creates and then becomes incarnate). However, if creation happens through the incarnation as an event, then tzimtzum, as a doctrine of creation, can only be applied to the Son specifically. It is not strictly God who creates, but Christ. Or, put better, it is not the Father nor the Spirit who create, but the Son (cf. Polkinghorne, 1989, p.87).

This is not Tri-theism, the Father and the Spirit still share one nature and one will and so act through the Son (cf. Cabasilas, 1974, p.74; Meyendorff, 1964, p.215; Kelly, 1965, p.258; Lossky, 1957, p.53), but neither the Father nor the Spirit become incarnate (cf. Meyendorf, 1964, p.231; Lane, 1990, p.73), and if creation is a single

event, and this God does through the incarnation, since God must become himself created in order to influence creation, then it can only be the Son who creates. This is the natural conclusion to patripassianism, and the interpretation offered here can be seen as affirmed in the light of the Sabellian controversy.

This means that creation is a personal event not a natural one; it is not in God's nature to create but in Christ's person (cf. Meyendorff, 1964, p.231). It is not the divine nature that withdraws or empties but Christ's person (hence Christ being two natures in one person); or, more specifically it is the divine nature that is retracted, leaving 'space' for the created nature, but this retraction happens in the person of Christ.⁵⁰ This means that God does not become what he is not, God does not retract and leave a space, but Christ does – the sole meeting of divinity and creation happens in the person of Christ, not the divine nature (cf. Delio, 2013, p.127).

⁵⁰ This requires an exposition of precisely what is meant by the term 'person'. There is not the room here to discuss every issue, but something needs to be said regarding how the term 'person' is used. There is a sense in which the term 'person' is being used here as a 'vessel' into which both divine and human natures are poured, or more specifically human nature is 'empty' space in the 'vessel' when divine nature is removed. But this cannot be the case. The category of person is not something that works like this. Not least, the use of spatial language is entirely incorrect when discussing God, especially in relation to the personhood of God (cf. Torrance, 1978, pp.38-9). However, for this (and indeed for the Chalcedonian definition) to work, person cannot either simply be the presence of a particular relationship or condition such as 'self-awareness'.

This means that the 'retraction' of divinity, and the 'empty space' that remains, is purely an ontological category. This means that there can be absolutely no contradiction between claiming that creation is 'only' the creation of Jesus the man, and also seeing in him the whole of creation, because creation has nothing to do with 'materiality' but with 'ontology'; creation is not about making space for creatures in God, but about defining what it means to be created (i.e. mutable, temporal, corporeal etc.), it is not 'efficient' causality but 'formal' causality.

Of course, the application of language applied to God must be analogical, and claiming that God is three persons in one nature must mean something concrete. The term 'person', therefore, is being used here in an analogical sense, without a real definition (this being open to further consideration and research), but referring to something 'real' or 'concrete' in the same way that it must have meant for the early Fathers who approved the use of this language (cf. Lane, 1975, p.112ff).

Creation is therefore mutable because Christ is, not because God is. Christ empties himself, thus making Christ mutable, not God. This means that the creation of the universe, which is a conceptual space that is mutable, happens within Christ's person not God's nature. Christ's incarnation is not an efficient creation but a formal one; Christ's emptying of himself creates the ontological condition of mutability. Christ's human body is mutable and this creates the condition from which evolution can happen and the splendour of creation can flourish.

Thus the doctrine of *tzimtzum* can be seen as a nuancing of the Christian doctrine of *kenosis*.⁵¹ Indeed *kenosis* and *tzimtzum* can be seen as essentially the same doctrine, describing the same event in different ways. In the incarnation Christ does not 'give up' or 'sacrifice' his divinity; his emptying is not a complete surrendering of his divinity. The process of *kenosis*, the process of self-emptying, therefore, has the effect of a 'retraction' and this means that a 'space' is left. This space, of course, is not a physical space but an ontological one, as:

the relation between God and space is not itself a spatial relation...the "come down from heaven" which is predicated of the Son is not to be construed in any sense a journey through space... "from the heavens" must be interpreted in accordance with the statements that the Son is "God from God, light from light" (Torrance, 1978, pp.2-3)

⁵¹ Interestingly, Brown sees the 'Chalcedonian' and the 'Kenotic' as two distinct models of incarnation rather than two complementary components of the same model (Brown, 1985, pp.245ff), and that a model is only Chalcedonian if 'the two natures were simultaneously present in the one person' (Brown, 1985, p.228), i.e. *kenosis* means that Christ was God, then wasn't God, then was God again (Brown, 1985, p.103). However, it is not entirely clear that such a distinction is needed. The incarnation is not trying to put two things into the same space. Prat confirms that 'fundamentally, the *kenosis* owes its first origin to the difficulty of conceiving two complete natures united in the one person' (Prat, 1945, p.320), in other words, *kenosis* is not a separate model, but a way of dealing with Chalcedon.

The immutability of God is contracted and this leaves behind mutability. If the ontological space within Christ's person was immutable, and this is retracted, then what is 'left behind' is no longer immutable, it is mutable (cf. Haught, 2000, p.40).

Most importantly, this interpretation of the incarnation as *tzimtzum* means that the 'space' that is left after Christ's personal emptying can be Christ's historical body – 'nothing can subsist outside [Christ's] flesh' (Teilhard de Chardin, 1977, p.33). That 'space' is what Christ assumes in his incarnation, but that 'space' is the historical body of Christ. The *tzimtzum* is the assumption. The 'form' of creation is Christ's historical body. The ontological 'space' that is 'left behind' when the second person of the Trinity 'retracts' his divinity is Jesus-shaped.⁵²

There is therefore no contradiction between understanding the concrete historical body of Christ – the same body that walked around first century Galilee – to be the ontological grounding of the whole cosmos, or with being co-terminal with the whole cosmos, because the act of creation is 'reduced' to formal or ontological causality, and such an event is proleptic, stretching backwards and forwards through time.

The incarnation, therefore, is not Christ taking on another nature but the contracting of his divinity, and, by definition, his becoming created (i.e. that which is

⁵² 'Paul seems clearly to affirm a pre-existence for Christ, and apparently it is always the concrete, historical God-man of whom he is thinking, never the word independent of his humanity' (Mooney, 1966, p.170). When it is remembered that for the Gospel of John the pre-existent Christ is operative in creation, then it must be Christ in his humanity who is operative in creation. Kropf also points to this element, writing that 'Yet [Prat] admitted the temptation to understand "all things have been created by him" and "all things have been created in him" (Col. 1.15-16) as applying to the word made man, a tendency warranted by Origen and Hippolytus in line with the prologue of St. John's Gospel' (Kropf, 1980, pp.144-5).

not divine is created). The emphasis, therefore, is on Christ ‘giving up’ his divinity rather than his ‘taking on’ another nature. Christ’s assumption is not the ‘addition’ of something more, but the subtraction of something that is already ‘there’. Thus, Brown can write that kenosis – the ‘tzimtzum-ic’ incarnation – ‘reduces’ the ‘divine reality’ to a ‘human nature, initially no more than a foetus’ (Brown, 1985, p.231).⁵³ The use of the verb ‘reduces’ confirms that the incarnation must now be viewed from the opposite direction; creation results from a subtraction in the person of Christ, not an addition to the divine reality. Yet Christ does not sacrifice his ‘whole’ divinity (as if the divine nature can be compartmentalized), it is a contraction of his divinity. The ontological ‘space’ that defines creation, which is Christ’s historical body, is still ‘surrounded’ by his divinity – Christ is still a God-man (cf. Torrance, 1978, p.82). In other words, there is still a contact, a ‘sheer joining’ of divinity and creature in the person of Christ, but this joining is not achieved by the addition of something new but by the retraction of something already present.

d. Tzimtzum as Formal Deism

⁵³ This could be seen to support the Virgin birth. The incarnation is not an event that is contingent on anything else; in fact, the incarnation is primary. However, ‘the “firstborn” could mean the priority in time or rank, though most commentators prefer the latter, since the temporal priority is hardly what the author is trying to emphasize here’ (Deane-Drummond, 2009, p.105). Yet ‘the virgin birth story is not there to give information about gynecology any more than the story of the Fall is there to give information about primitive anthropology. It’s primary intention, as we have seen (though the New Testament writers were compelled to no such conscious antithesis), is not to assert discontinuity in the biological series (thus setting it directly against the genealogies that accompany it), but to make a positive statement at the level of spirit – to affirm the entire genesis of Jesus Christ as the act and initiative of God’ (Robinson, 1973, p.120). To claim that Christ was born of a Virgin, therefore, is not to assert the literal truth of that statement, but to affirm that Christ is the first born of all creation, and thus creation share in him ontologically; Christ does not share in our humanity, we share in his.

The incarnation is still the assumption of humanity by the second person of the Trinity, but now this assumption must be viewed from the other angle, it must be re-emphasized as the kenotic self-emptying of Christ. However, this does not mean that creation is physically Christ's historical body; this is not pantheism. Indeed, the doctrine of *tzimtzum*, by definition, completely rejects pantheism. The whole point of *tzimtzum* is that God creates something that isn't God; creation expands outside of God (Jonas, 1996, p.142). The 'absence' of God (i.e. eternity) means that time and space result, and with them comes mutability – if eternity (immutability) and time/space (mutability) are opposites, then the 'removal' of one necessarily means that the other is present. Likewise, if 'nothing' and 'something' are opposites, then the absence of one necessitates the other – 'nothing' is not the absence of 'something', 'something' is the absence of 'nothing'. If there is not 'nothing' (i.e. God), then there must be 'something' (i.e. creation). Creation is God becoming something he is not: 'something' rather than 'nothing'.

Once mutability is present creation expands and proliferates, not because it wants to or because this was the intention behind the incarnation,⁵⁴ but because now there is the possibility of change. Once there is the possibility of change it is almost inevitable, given enough time, that the manifold splendour of creation will result, as the last chapter on neo-Darwinism argued.

This means that Christ only needs to define creation as being mutable (i.e. not eternal) and, out of nothing, creation spontaneously comes into being (thus denying the eternity of matter). Strictly speaking there is not an act of 'efficient' creation,

⁵⁴ The intention of the incarnation is still creation, but creation understood as ontological causality not efficient causality. God is not concerned with creating the 'stuff' of creation, of 'building the earth'; creation is not a tension between finished and unfinished. Instead creation is defining the form of that creation.

there is only an eternal definition of what creation is. Stoeger confirms such an interpretation, writing that:

creation is not a temporal event, but a relationship – a relationship of ultimate dependence. Thus “cause” as applied to God should be conceived not as a physical force or an interaction, as it is in physics, but rather in terms of a relationship...it follows from this that creation is not about a temporal beginning of physical reality – although we cannot completely rule that out [although this thesis does on the basis of neo-Darwinism] – but about an ontological origin (Stoeger, 2010, p.181)

Jonas, too, claimed that God

had to contract himself so that, vacated by him, empty space could expand outside of him: the “nothing” in which and from which God could then create the world (Jonas, 1996, p.142)

However, now it is claimed that God does not create anything else in, or out of, this ‘nothing’, creation spontaneously springs forth of its own accord (Jonas, 1996, pp.168-9). Once God, in the person of Christ, removes eternity and immutability, nothing else needs to be done. God does not need to be the first mover, the universe does not need an efficient cause; absolutely no divine influence or direction is now needed (cf. Vogel, 1996, p.26). ‘The recent discovery of the Higgs Boson particle’, confirms Delio, ‘led some scientists to suggest that we no longer need to invoke God as prime mover’ (Delio, 2013, pp.58-9).

Stephen Hawking also makes it clear that divine influence is no longer required, writing that:

gravity shapes space and time...[and] because there is a law like gravity, the universe can and will create itself from nothing...spontaneous creation is the reason there is something rather than nothing, why the universe exists, why we exist. It is not necessary to invoke God to light the blue touch paper and set the universe going (Hawking, 2010, p.180)

Christ can still be called ‘the evolver’ as Teilhard termed him, but not because he actively and ‘efficiently’ guides evolution. Christ is the evolver because he is responsible for the conditions upon which evolution is based.

e. Incarnation as Divine Milieu

The incarnation, the eternal self-emptying of God in Christ, causes creation. This space, therefore, is the divine milieu. Teilhard wrote that ‘this cosmic body, to be found in all things, and always in the process of individualisation (spiritualisation) is eminently the mystical milieu’ (Teilhard de Chardin, 1968a, p.175). Now, however, this cosmic body is ‘outside’ all things and is not in a process of ‘completion’, which has no meaning for a neo-Darwinist.

Thus, it is the form of creation that now represents the divine milieu. Christ is still that which holds the world together; he is still the principle of unity, which is what the divine milieu is. Christ is still the principle that keeps the world in being, but now that principle is no longer a teleological category. The kenosis of Christ creates the divine milieu, that ‘universal milieu in which and through which all things live

and have their being' (Teilhard de Chardin, 1977, p.33), so that, even more so than for Teilhard, 'the light of the divine milieu "radiates from a historic centre"' (Teilhard de Chardin, 1968, p.177) – indeed, 'the [whole] cosmos is the divine milieu' (Farria, 2011, p.vi).

For Teilhard, the doctrine of the divine milieu was upheld and supported by a particular understanding of participation. Now that it has been established that, building on what Teilhard claimed, the doctrine of Tzimtzum can not only help to clarify what is meant by the incarnation causing the divine milieu, but also being able to make such a doctrine compatible with neo-Darwinism, the doctrine of participation must be considered.

A Re-exploration of 'Classical' Participation

For Teilhard, the concept of participation played an important part in how he understood the progressive Christological function. Participation was a dynamic category of evolution. The more evolved one was, the more spiritual, and thus the closer to God, hence greater participation. However, neo-Darwinism has effectively denied this dynamic nature; not, of course, that species do not change, but that this change is not as dynamic as Bergson or Teilhard thought. Likewise, the notion of a future-looking idea of participation must be rejected. The divine milieu, fundamentally linked to Teilhard's notion of participation, is not a future, evolved category, but an ontologically 'static' one, linked with the incarnation as a once-for-all event of creation. To put it simply, creation and deification are understood as participation in the divine milieu, which was established by the incarnation, but now the teleology that was central to Teilhard's Christology is removed. As it was affirmed at the end of the last chapter, this actually argues in favour of a return to a

more 'static' ontology, and this, in turn, leads to a return to a more traditional notion of participation, as understood by the Patristic Fathers (cf. Finch, 2006a, p.93; Kärkkäinen, 2004, p.20, Wood, 1998, p.7ff).

a. The "Traditional" Notion of Participation

The idea of participation for the early Fathers is almost a synonym for deification (cf. Keating, 2007, p.97, Mannermaa, 2005, p.2; NRSV, 1995, 2 Pet 1.4), and, as has already been claimed, if participation is deification, then participation must also be creation, as creation and deification are now, quite literally due to the rejection of teleology, the same event. Both Gregory Palamas (1983, p.95), and Thomas Aquinas (Williams, 1999, p.66) can attest to this use of participation as a notion of creation. Creation and deification are the same event, and thus if participation in the divine nature is what it means to be deified, then this must also be what it means to be created, as Keating explicitly maintains, 'we do not have an existence of our own apart from our participation in God' (Keating, 2007, p.99). If Christ's incarnation causes deification (Louth, 2007, p.36), then it also causes creation, and both are manifested as participation (Rahner, 1966, p.177, Lossky, 1975, p.118, Peura, 1998a, p.92, Tanner, 2011, p.71, Williams, 1999, p.66, Gregory Palamas, 1983, p.95).

Drawing on the necessity of God and the contingency of creation that characterizes participation, Keating continues that 'participation necessarily requires a relation between two things that are unequal and that remain unequal and distinct in the act of the one participating in the other' (Keating, 2007, pp.98-9). Participation in God means that there is always a relationship between the two that sets up a hierarchy of God and creation. Creatures are entirely dependent on God for their being, and

thus, not because of any failure of creation but by sheer logical necessity. 'Greater' participation is infinitely possible; it is always possible to be able to participate in God 'more'. Thus Keating can affirm that

the concept of participation, building on the language of participation in the New Testament, enables us to grasp how we are genuinely related to God and can partake of his life, without jeopardizing the infinite distance that distinguishes the uncreated Trinity from all creatures (Keating, 2007, p.103)

Although there is a 'similarity' between creation and God, necessitated by the fact that creation participates in his being, there is always a distinction (Keating, 2007, p.99). However, that distinction is always infinitely greater than our 'likeness' to God as being made in his image (cf. Williams, 1999, p.54). In this direction, Keating uses the word 'derive' to describe the relationship between creation and God; creation derives its Being from God. He writes that 'we share in [God's] being in that he gives us our created being by bringing us into existence. He has it essentially; we have it derivatively and by participation' (Keating, 2007, p.97).

b. Participation and the Relationship Between Nature and Grace

Such an understanding of participation as both creation and deification can only work if a particular understanding of the relationship between nature and grace is held in the background. If creation and deification are both participation in divinity then there cannot be a separation of nature and the supernatural. In this way, this notion of participation still conforms to a Teilhardian theological paradigm but without the teleological evolutionary element. For Teilhard, nature and grace were

two parts of the same thing, however, he saw this as a process that is played out in time. Neo-Darwinism disagrees with this notion of completion in time through evolution and thus a new exposition of this relationship needs to be attempted. The doctrine of participation outlined here, following, as it does, the rejection of teleology from Christology, and the conflation of that process into the one, single event of the incarnation, is that attempt. This doctrine of participation still represents a Teilhardian Christology. The themes of Christ as creator, creation as the body of Christ, participation in the divine milieu, are all present here, yet the teleological direction that was so important for Teilhard has been removed.

c. Participation as Christological Doctrine

By affirming participation as the way that God creates, as God's sole act of causality, there are some allusions to the concept of the divine milieu as it was outlined in the chapter on Teilhard's Christology. Teilhard wrote of the divine milieu that:

nothing, Lord Jesus, can subsist outside of your flesh; so that even those who have been cast out from your love are still, unhappily for them, the beneficiaries of your presence upholding them in existence. All of us, inescapably, exist in you, the universal milieu in which and through which all things live and have their being (Teilhard de Chardin, 1977, p.33)

God's act of creation is to create the divine milieu, but this is not a process. It does not have a teleological future completion, but is one act in Christ. This act, as it has already been explored, is the incarnation; the divine milieu is the ontological

‘space’ that is left after the divine nature is ‘retracted’ in the person of Christ – the divine milieu is the historical body of Christ in which all creation participates. The divine milieu is no longer a tension between finished and unfinished but is an eternally defined state of being (cf. Peter, 2012, p.87; Rahner, 1966, p.183).

Therefore, it is not God that creation participates in but Christ; it is not the divine nature that is participated in but the person of Christ. Such a reinterpretation is found in Teilhard. For Teilhard, participation is participation in the body of Christ, which is the only thing that is created. Christ’s body (his third nature) is creation, and thus to be created means to participate in this body. The same can be said for this reinterpretation of participation. It is Teilhardian in that it makes precisely the same demands of Christology, namely, that it is Christ who creates, and that creation is participation in his body. The only difference is that here a greater focus is put on the incarnation as an event, and the need to explicitly affirm that creation is something the person of Christ does, and therefore participation is a participation in the person of Christ, not in the divine nature (creation does not ‘inhabit’ the divine nature, it ‘cohabits’ Christ’s person with the divine nature, the two meeting in the person of Christ), precisely because neo-Darwinism rejects the teleological dimension of Teilhard’s own exposition.

d. Participation as Imitation

The concept of imitation can also further embellish the doctrine of participation outlined above. The manifestation of participation in the individual takes the form of an imitation; creation imitates Christ because creation participates in Christ. Keating framed the notion of creation’s participation in God with ideas such as hierarchy, and unequal relationships between the participating and the participated,

and it is precisely this language that is used to describe the relationship between the imitating and the imitated. The infinite degree of separation of creation from God that characterizes what it means to participate in God, through Christ, is exactly the same relationship that exists between Christ and those called to imitate him. In both imitation and participation there is a tension between necessity and contingency or derivation; God has Being necessarily and creation derives its being from God.

Castelli, in *Imitating Paul*, notes that one of the fundamental elements of the doctrine of imitation of Christ is the establishment of a hierarchy between a model and a copy. She writes that:

mimesis is constituted through a hierarchy in which the model is imbued with perfection and wholeness, and the copy represents an attempt to reclaim that perfection... [thus] Christ is to Paul as Paul is to the Corinthians; Paul asks for an act of *imitatio Pauli* which mirrors his own *imitatio Christi* (Castelli, 1991, p.86, p.112; cf. Tinsley, 1960, p.100)

There is a setting up of the leader as an example and the congregation as imitators. The community/congregation are called to follow the leader/Paul's own imitation of Christ. Imitation, therefore, 'presupposed a hierarchical structure: community/Paul/Christ/God' (Castelli, 1991, p.112; cf. Pseudo-Dionysius, 1987, p.221). Quite importantly, the congregation is not called to imitate God directly; they are called to imitate the community leaders who in turn imitate Paul, who in turn imitates Christ. As Paul himself exclaims, 'be imitators of me, as I am of Christ' (NRSV, 1995, 1 Cor. 11.1).

Yet the imitation of the model by the copy can never be perfect. Imitation is always a relationship of unequals, as Castelli continues

there exists in the notion of imitation this tension between drive to sameness and the inability to achieve it, an inability which creates a hierarchy...the model is imbued with perfection and wholeness, the copy represents an attempt to reclaim that perfection...mimesis becomes a derivative function, in that it attempts to reproduce an unattainable origin (Castelli, 1991, p.75, p.86)

The use of language such as 'hierarchy' and 'derivation' clearly puts this idea of imitation in the same category as participation, and therefore it is suggested that they can be used to describe the same phenomenon. The relationship between Christ and creation outlined in the doctrine of participation is the same relationship outlined in the doctrine of imitation. Participation in Christ and imitation of Christ are, for all intents and purposes, synonyms.

Castelli also highlights the role that unity plays in the relationship of imitation. She writes that

unity within the community constructs the community as "us who are being saved"; unity and sameness produce salvation, while difference ("those who are perishing", i.e. those who are not being saved, those who are different "us") is damned to folly (Castelli, 1991, p.99)

In other words, precisely because all are imitating the same perfect model, Christ, there is inevitably going to be a unity that exists between them, regardless of the degree to which imitation is happening. If every copy is imitating the same model then there is necessarily going to be some degree of unity. Imitation, therefore, creates unity, and if it is Christ who causes the imitation of creation then it is Christ who is the cause of the unity that exists in creation. However, this unity is not a future convergence, but an underlying, ontological grounding of creation. Imitation is as much a doctrine of creation as it is deification, not because the two represent two ends of the same process, but because they are two ways of looking at the same event.

However, there is also a unity, not with the rest of creation, but with God as well. Imitation does not just imply a unity between copies but a unity between the copies and the model. Montaignes, when discussing the doctrine of the analogy of being, notes that one way in which there can be said to be unity is ‘in the fact that creatures imitate God to the extent that they can’ (Montaignes, 2004, p.36). There is never a complete unity, because that would imply a degree of sameness that would destroy the tension between imitating and imitated; if creation became identical to Christ, they would no longer be imitating or participating in him, but would be him.⁵⁵

Thus, to participate in Christ is to imitate Christ. Creation depends on Christ for its existence and, because it participates in his life, creation can be said to imitate Christ. Deification is ‘achieved’ through imitation of Christ, but to be created is to

⁵⁵ This means that personal identity is also affirmed in the doctrine of imitation. Castelli continues that ‘imitation is then the celebration of identity, in the sense that sameness implies the quality of identicalness...[imitation] is the struggle to write the identity of the copy onto the model’ (Castelli, 1991, p.22). The individual’s personal identity is defined by their imitation of Christ. Whilst there is not the scope to explore this function of imitation further, it adds an interesting dimension to the question of a new neo-Darwinian ontology.

imitate Christ. Both creation and deification are the same ‘thing’, an interpretation made possible, it has already been suggested, because of the particular understanding of nature and grace that underpins this whole Christology.

e. Participation: A Neo-Darwinian Interpretation

However, perhaps even more importantly, the relationship that has been characterized by participation and imitation can also be understood as made necessary by the conclusions reached by neo-Darwinism. The ontology of ‘half-fixity’ that was argued to be the conclusion of the neo-Darwinian synthesis can be seen to fit this paradigm of hierarchy and unequal relationship. Both the Christological understanding of imitation and participation and the neo-Darwinian understanding of evolution work within a framework of model and copy, with the success of such a copying to be necessarily imperfect. Between the model and the copy, between Christ and creation there is an infinite gap whereby the copy attempts to imitate the model, the copy attempts to replicate the model, but can never do so perfectly.

Darwin himself pointed to the importance of imitation in the evolutionary process (Darwin, 2004, p.93, p.154), however, Dawkins explicitly uses the language of imitation to describe the role of genes in evolution. Dawkins writes that ‘the gene...[which is] the replicating entity that prevails on this planet...[is] a unity of imitation’ (Dawkins, 2006, p.192). Here the gene is explicitly being labeled as something that imitates. The ‘process’ of evolution, therefore, could be labeled as one of imitation. Dawkins reinforces this interpretation, writing that ‘if individuals live in a social climate in which imitation is common, this corresponds to a cellular climate rich in enzymes for copying DNA’ (Dawkins, 1999, p.110).

Even Dawkins' celebrated idea of the 'selfish' gene can contribute something to this understanding. The idea behind the selfish gene is not that the gene is only interested in itself – in the sense of 'it's me versus the world' (leading some to argue that Dawkins must be wrong because the presence of altruism 'disproves' genetic selfishness) – but that the gene 'wants' to replicate itself as faithfully as possible. The gene is not selfish in an anthropomorphic sense of disregard for others, but selfish in the sense that replication fidelity is the most important aspect. The paradigm of imitation underpins this idea.

Of course Dawkins' own atheist beliefs prohibit the imitation of Christ to be the context in which he claims there is a 'social climate in which imitation is common', but that does not mean that a comparison cannot be drawn. What happens in evolution can rightly be compared with what happens in Christology; just as creatures imitate Christ through a hierarchy, so genes imitate one another.

The diversity in the world is explained solely by the imperfect imitation by genes and chromosomes of their immediate ancestors. However, this diversity is not the intention of the 'process' of replication, quite the opposite in fact, as the last chapter on neo-Darwinism suggested. The diversity present in the universe is simply a by-product of the fact that the imitation of one by the other is never perfect.

Whilst there is no space to expound it fully, there is perhaps the possibility of a comparison of this idea of a neo-Darwinian understanding of Christological imitation and Dawkins' idea of the 'meme'. The idea of a 'meme' itself is not without its critics. It has been suggested, for example, that the Darwinian paradigm should be kept as a biological explanation and not be introduced into sociology (McGrath, 2005, p.119ff). It may also be criticized that, whilst genes replicate 'longitudinally', memes

(and 'Christological' imitation) can replicate 'horizontally' as well (Dawkins, 2003, p.142). However, the point is not that memes and genes are exactly identical, but that they both work in the same way, in other words the same ontological category can be applied to both. Dawkins makes this same point when he claims that the whole point of his work was to argue for 'universal Darwinism' of which the special example of DNA replication was one manifestation; the meme could be another (Dawkins, 2003, p.149). For Dawkins, the universe is characterized by a particular ontology that governs the way that genes replicate, and this can also be applied to cultural replication.

This thesis is making the same point. It claims that the ontology of imitation that comes into being because of the Tzimtzumic incarnation is sufficient to explain everything that was claimed about neo-Darwinism in the previous chapter; Christ, by his incarnation, creates an ontological space (co-extensive with his historical body) that is characterized by mutability (as opposed to dynamic change, and synonymous with the Christological idea of imitation) and which allows for the spontaneous self-creation of the universe from nothing and the subsequent evolution. Imitation by the individual of their ancestors, with all the possibility of error in imitation, works in precisely the same way as genes replication of each other.

There is, therefore, a definite connection, even an identity, between the theological understanding of participation and imitation and the neo-Darwinian understanding of genetics; there is an identity between how individuals imitate God and how genes replicate (cf. Dawkins, 2003, p.147). This leads to the conclusion that the neo-Darwinian understanding of genetic replication is precisely how one might expect evolution to happen from this theological position. Neo-Darwinian evolution is simply the implementation of participation and imitation of Christ in a biological

context. Likewise, the same tension can also be applied to physical systems (cf. Jonas, Mivart), in terms of instability producing change in ‘systems’ that are trying to remain stable. There is still this tension between model and copy and the inability of the one to ‘reproduce’ the former. In other words, the spontaneous springing of matter from nothing that is the beginning of the universe is due to the fact that the ontological space that was created by the incarnation is characterized by one of imitation (and the mutability that makes imitation imperfect).

This means that Teilhard’s affirmation that Christ is the evolver can still be true. For Teilhard this was as efficient cause, whereas now it must be as formal cause. However, this does not mean that evolution was the intention of the incarnation; God, in Christ, does not set up the conditions of the world to create for him – neo-Darwinism denies such an interpretation. However spontaneous creation, the result of instability in quantum fields was a possibility when Christ became what he is not, thus creating the ontological possibility of mutability. Teilhard’s Christ is still the Christ that is being appealed to, but with some nuancing of the context in which he appears.

f. Participation and Imitation: A Subjective Approach

This leads to a specific neo-Darwinian understanding of imitation and participation, which in turn argues for a subjective understanding of the relationship of creation to Christ. The important point for neo-Darwinism was an imperfect replication process and the fact that it was only a replication of the immediate ancestor, thus allowing for continual change and the denial of an objective element to evolution. The same criteria are present in imitation.

This means that if any judgment value is present in evolution, it is also present in imitation. More specifically, if the judgment of worth in evolution is entirely

subjective, then the judgment of worth in imitation of Christ is likewise entirely subjective. Just as the imitation of the gene is imitation of its direct ancestor, so imitation of the individual is imitation of their ancestors, rather than an objective principle. However, before this subjective relationship to Christ is fully worked through, something first needs to be said regarding the role of Christ as creation. For Teilhard this was in the shape of postulating a third nature, but this forward-looking, teleological dimension has now been removed and something new must be said regarding the constitution of the person of Christ; if neo-Darwinism provokes a new anthropology, and a new theology, then this necessarily implies that the constitution of the God-man will also look different. This does not mean that the Chalcedonian definition must be rejected, but the context in which it is found must be reinterpreted.

Christ's Cosmic Function as Third Nature

Teilhard accounted for the tension between the historical body of Christ and creation as the body of Christ by postulating a third nature, separate from his historical nature, which he assumes at the end of evolution. However, now, such a postulation is unnecessary. Creation is no longer a process with a future completion and the event of creation is no longer a drawn out affair. This means that the historical body of the incarnation performs the function that Teilhard needed a third nature for (when a reinterpretation of the constitution of the hypostatic union in Christ is below is combined with the idea of the incarnation as *tzimtzum* above). When it is affirmed that the role of Christ is only in 'formal' causality, and not 'efficient' causality, then the two realities can exist in the same physical body. The 'space' that is created in the incarnation (which causes mutability and thus providing the basis for evolution) is not a physical space, the contraction of God in the incarnation is not a physical

contraction – because God is not physical – therefore the historical body of Christ can be the ‘ontological space’ of creation without any contradiction. (This also means that the problems with Teilhard’s Christology in terms of the neglect of the historical can also be corrected.)

Teilhard needed to posit a third nature of Christ because the second nature of Christ did not come at the end of evolution. The human Jesus does not represent the fullness of convergent evolution; Christ needs a body that is coextensive with the cosmos to do so. However, now that the possibility of ‘completion’ has been removed (i.e. the rejection of teleology), and, complementarily, there is no such thing as humanity as distinct from the rest of the cosmos, there is no need to postulate a ‘third’ nature.

For Teilhard, the historical Christ has a different ‘body’ from the cosmic Christ. The ‘mystical’ body of the cosmic Christ is the universe, which is differentiated from his historical body, as they perform different functions. The historical body almost takes on a teaching role, its function is to show humanity the way to bring about the end of evolution and to assist in that ‘bringing’ (hence his doctrine of original sin). However, his mystical body is that end of evolution, the only thing that is being created. However, now that ‘efficient’ causality has been removed, and there is no end to fasten, there is no need for this future nature.

Creation does exist in Christ, it is in Christ that creation moves and has its being (NRSV, 1995, Acts 17.28), but creation does not need to ‘inhabit’ Christ (cf. Torrance, 1978, pp.38-9), instead it participates in his form. Christ defines what it means to be created, i.e. formal causality (cf. Mostert, 2011, p.127). There is thus no inconsistency between the assumption of creation by Christ as an event ‘later’ than the first moment of time, because the kenotic/tzimtzumic incarnation is a proleptic

event. The incarnation is an eternal event; therefore its temporal manifestation does not need to be at the beginning of time because there is no identity between the Son's contraction of his divinity and the first moment of time. As de Lubac makes clear, 'Christ existing before all things cannot be separated from Christ born of the woman, who died and rose again' (de Lubac, 1947, p.174; cf. NRSV, 1995, Jn. 8.58).

This means that the incarnation is not coterminous with the Big Bang but, as already stated, the incarnation creates the ontological conditions that mean spontaneous self-creation by the universe is possible. The Big Bang is the beginning of time, the first moment of time, but the incarnation is the bridge between time and eternity. The fact that this bridge is temporally manifested at the 'middle-point' in time does not contradict the fact that it causes time itself; it is not an efficient cause of time but the formal cause.

The Constitution of the God-Man

This provokes a reworking of the constitution of the person of Christ. If neo-Darwinism provokes a reinterpretation, respectively, of humanity and God, then it is logical to claim that this leads to a reinterpretation of the hypostatic union of Christ. However, that new anthropology is not towards a more dynamic conception of humanity (as Lane contends (1990, p.131)) but is instead a relegation of humanity from their previous privileged position among the animal world. There is no longer any basis to claim that humanity deserve any special treatment from God. The accumulative, quantitative difference between humanity and the rest of creation further provided ammunition for this relegation. There is absolutely no way of distinguishing where humanity begins and the rest of creation ends; therefore, there is nothing that can objectively be termed 'human' nature. If this is so, then there can be

no 'human' nature for Christ to assume. If the act of creation is only achieved through assumption, then this provokes a new understanding of what it means for Christ to assume 'human' nature.

Likewise, if there is no 'traditional' understanding of original sin, no original historical event, there is nothing that makes humanity uniquely in need of the incarnation. The 'fact' of evolution, as it was acknowledged in the introduction, and as it was by Teilhard, suggests that humanity is not inherently sinful and has no unique need of Christ's grace. The 'mechanism' of neo-Darwinism further clarifies that God no longer uniquely favours humanity – he treats all creatures identically – as there isn't anything concrete that can be considered humanity anyway.

Teilhard did not consider the wider implications of this evolutionary constitution because he did not recognize the relegation of humanity. Christ was only relevant to the rest of creation in as much as he was the fulfilment of the process of which they constituted an earlier part (Dobson, 1984, p.208). Mooney evidences that for Teilhard

the humanity of Christ embraces not only the human race but also the cosmos in so far as this is united to man, that is to say, in so far as evolution produces man, and in so far as man freely fosters that personal unity in the noosphere which is the key to evolutionary progress (Mooney, 1966, p.146 (*italics mine*))

Evolution, for Teilhard, was a means to another end, and therefore, since other creatures represent a lower and more primitive part of that process, they are only indirectly addressed in the incarnation. Teilhard does not need, therefore, to 'spread'

the 'range' of the incarnation either 'backwards' or 'outwards' (to put the point rather crudely), to include all of the past and present life in the relevance of the incarnation.

To put the point differently, if 'that which is not assumed is not created', to paraphrase Gregory of Nazianzus, then Teilhard's Christ does not need to assume other 'natures' because they are represented by humanity who, by being a later, more united and converged manifestation of evolution, transcends them. However, if humanity no longer represents a 'better' nature, and indeed there is no such thing as 'human' nature anymore anyway, what exactly is it that Christ assumes in the incarnation? Lyons asks the same question in his book on Teilhard's Christology, writing

this language [of cosmic Christ] says that what God does for men he also does for the whole of creation; and it asks the question, if to be involved with humanity God becomes man, what does he become to be involved with the whole of creation? (Lyons, 1982, p.4)

a. *Christ's Assumption of Creation*

Christ is creation; creation participates in Christ, but ontologically, not physically. This relegation of 'efficient' causality means that creation does not need to physically 'inhabit' Christ, hence the rejection of the third nature. The cosmic nature, which is the ontological 'inhabitation' of Christ's person, can be coterminous with his historical body without any contradiction. This means that Christ must now be relevant, not just to humanity, but to all creation, and not just indirectly either, since there is nothing to suggest that humanity is representative of the rest of creation. If

creation happens because of an assumption of nature, then all of creation, every manifestation of evolution, must now be assumed by Christ in order for them to have Being.

Whilst for practical purposes the classification of life into variations and species is essential, philosophically it is not only an arbitrary process but also, in many respects, an impossible one. There is now no such thing as human nature proper since it not only emerged from, but is also therefore impossible to demarcate from, the rest of creation. What it means to be human is only one manifestation of what it means to be created. All life, and in many respects all matter as well, becomes connected and linked in a genealogical and familial way, and there is no clear way, as Darwin made clear (2009, p.378), of properly distinguishing where those ‘divides’ should be.

To put the point crudely, if humanity is saved through Christ’s assumption of human nature then so must its direct ancestors, so must the Neanderthals, and so must their ancestors, and so on until all of creation becomes implicated. If humanity, for example, shares 50% of its DNA with bananas (cf. Morris, 2010, p.159), and creation and deification extend ‘automatically’ because of Christ’s assumption of human nature, then at least 50% of all bananas are deified. Yet what about the slight DNA differences between humans? Are only humans who are exactly genetically identical to Christ deified? Since these questions do not make sense, it seems better to claim that all creation is now implicated in Christ’s incarnation, rather than limiting it to only genetically identical individuals. Precisely because evolution is the result of small accumulative changes, no ontological separation can be made and thus all of creation enjoys being at the centre of God’s work. Christ comes for the benefit of all

creation, not just humanity – ‘all living things are brothers and sisters because they have the same genetic code’ (Boff, 1997, p.211).

The implications of this theological approach to the traditional Chalcedonian constitution of Christ are great. Christ, according to the Nicaeo-Constantinopolitan Creed, was truly God and truly man, he was two natures in one person, he had one divine nature and one human nature. However, neo-Darwinism concludes that, due to the inherent biological unity of creation, there cannot be anything so concrete as a particular nature. Life is just a ‘smeary continuum’ of different manifestations of evolution. Instead of claiming that Christ assumed a human nature, it must be claimed that Christ assumed a created nature; Christ was not a human, he was a creature.⁵⁶

All nature is now included in the work of God, nothing is excluded. All creatures must find their ontological grounding in Christ, not just humanity. To put the point differently (with reference to Gregory of Nazianzus’ infamous formula), if Christ assumed male humanity, then only male humanity are deified through him, and therefore male humanity is the only thing that was created. If Christ assumed humanity, the fact of his maleness being irrelevant, then humanity is deified through him, and therefore humanity is the only thing that was created. If God assumed creation, the fact of his humanity being irrelevant, then creation is deified through him, and therefore the creation of everything finds its ontological ground.⁵⁷

⁵⁶ The use of the word ‘creature’, ‘created’, ‘creation’ etc, shall be used, not as an opposite of ‘uncreated’, but in the sense of using a neutral term that can apply to the whole of creation, to include every creature (which in turn means ‘something created’, and thus includes literally everything that exists from humanity to elementary particles); ‘when all is said and done, quantum fields are simply creatures’ (Polkinghorne, 2006, p.72).

⁵⁷ In Galatians Paul writes that ‘there is no longer Jew or Greek, there is no longer slave or free, there is no longer male and female; for all of you are one in Christ Jesus’ (NRSV, 1995, Gal 3.28). Prat writes on this verse that ‘for Christians, identified individually with Christ in the unity of his mystical body, the natural inequalities of race, condition, sex, no longer count for anything. A slave is as good as

This is precisely what one would expect from a neo-Darwinian Christology. Humanity is accidental; there is nothing to suggest that evolution worked towards the appearance of humanity, nor that the appearance of humanity was inevitable. If this is the case, then the same must be said of Christ's assumption of it; Christ's being human is only accidental, there is no reason for Christ to appear as a human. The incarnation is necessary as the means of creating, but if humanity is accidental, then Christ's humanity must also be accidental. Christ, it must be maintained, could have just as easily appeared as a tree, a mushroom, a cicada fly, or indeed an extra-terrestrial and the creation of the universe would be just as effective. The important point is that Christ became created, not that he became man. This doesn't deny the fact that Christ did appear as a 'human' in first century Palestine, nor that this was the moment of revelation of God to creation, but it wasn't necessary for it to happen this way.

b. The Constitution of Christ as Tzimtzum

This understanding of the constitution of the God-creature complements the idea of Christ's incarnation as tzimtzum. The quotation of Russell used above in support of the understanding that it is through Christ's assuming human nature, not his 'efficacious, vicarious death', that he defies and creates can now be nuanced to include all creatures. It must now be 'the unity of [creation]... means that the whole of [creation] is deified... when the [creature] which the logos assumed is deified him' (cf. Russell, 2004, p.172). All of creation is now unified, and it is this created nature, the

a free man' (Prat, 1945, p.276). It is possible to add no creature, no manifestation of life and matter at all, is separate from Christ. Christ is relevant to all, and in that way he assumed all life.

smearly continuum of created nature, that Christ assumes and creates through grounding it ontologically in his historical body.

Likewise, de Lubac's quotation, used above in support of the same interpretation, can be similarly nuanced. De Lubac notes that it is important to maintain that Christ, in assuming human nature, did not just become another human person; his humanity was different in the sense that he assumed human nature itself (de Lubac, 1947, pp.37-8). However, there is no longer a human nature that can be separated and held apart from created nature; Christ no longer assumes a human body but a created body. This created body must be identified with the ontological 'space' that remains after Christ 'retracts' his divine nature. The created nature of his historical body is the nature that Christ 'assumes' in emptying his divine nature; this created nature is what results when God 'subtracts'. Again, this neo-Darwinian interpretation of the incarnation performs the same function that Teilhard needed a third nature for: the unity of creation in Christ.

c. Constitution of Christ as Biological Unity

All creatures are united in Christ, and all creatures find their ontological grounding in Christ. This means that there is an ontological unity in creation that mirrors their biological unity. De Lubac writes that 'the unity of the mystical body of Christ, a supernatural unity, supposes a previous natural unity, the unity of the human race' (de Lubac, 1947, p.25). However, if that 'previous natural unity' is now extended to include all creatures, then this must mean that the 'supernatural' unity in the mystical body of Christ is likewise extended. This unity is found in the historical body of Jesus of Nazareth.

However, if deification and creation are now the same event, not two ends of the same process, then Christ's assumption of creation is no longer limited to deification but also includes creation. Again, there is a distinct understanding of the relationship between nature and grace here that is distinctive of Teilhardian Christology and comes to represent the mainstay of Roman Catholic theology after the Second Vatican Council. The natural unity of creation and the supernatural unity of creation are the same thing. To put it another way, the Christological unity, which was affirmed above as the result of imitation, is the same as the biological unity that neo-Darwinism claims. All creation is now made in the image of God, not just humanity. The genealogical and familial unity that exists in nature means that all of creation is made in the image of God, which again is the historical body of Christ; '[Christ] is the Logos, the image according to which not only man but all creation is fashioned' (Maloney, 1968, p.7).

Again, such a conflation of creation and deification, such is the outcome of a Teilhardian doctrine of nature and grace yet without the teleological, forward-looking dimension, concludes that there is no need to postulate a third nature of Christ. The 'second', creaturely, historical nature of Christ fulfils the role that Teilhard wanted it to. There is no need to postulate another, cosmic Christ, because the historical nature of Christ, by removing 'efficient' causality and a future completion, is cosmic in dimension and function.

Participation and Imitation: A Subjective Approach

With a new interpretation of the constitution of Christ, and his role in being the ground of creation, the subjective nature of imitation of Christ can be returned to. If all creatures are imitating Christ by virtue of finding their ontological grounding in

him, and that this imitation is an imitation, not of Christ directly, but of their ancestor, then just as neo-Darwinism becomes subjective, so does ontological imitation.

Castelli supported the idea of imitation by maintaining that there is a hierarchy that exists in terms of who imitates whom. Humanity does not imitate Christ directly but through the imitation of community leaders, theologians, biblical translators etc. and therefore is always susceptible to mistakes. Since the copy is always imperfect, this means that 'errors' are always going to be possible, not because theologians and biblical translators are consciously attempting to change (although this might sometimes be the case), but because they can only ever present a subjective account of the revelation of God in Christ; no theologian can work out of context (Wiles, 1986, p.10). What it means for humanity to imitate Christ in twenty first century Western society is entirely different from what it means for a first century Palestinian to imitate Christ. Yet, it could be argued that the difference between the two 'imitations' is nothing but a 'smeary continuum' of different imitations, caused by replication 'errors' of theologians' interpretations or biblical translations etc (cf. Cupitt, 1972, p.144).

This means that there is likewise a relationship with participation. All creation participates in Christ but that participation is not an 'indwelling', it is not an 'inhabiting'. Thus all the manifold and diverse creation participates in Christ through their ancestors, just as they imitate Christ through imitation of their ancestors. The hierarchy that it is argued is demanded by the use of participation and imitation is not a hierarchy in nature, there is an equality in nature that does not allow the postulation of higher and lower; the hierarchy is between Christ and creation. This means that there are various ways in which imitation and participation is manifested, but there is no judgment value; it is entirely subjective.

However, as outlined in relation to the constitution of Christ, Christ is not just relevant to humanity but to all creatures equally; his appearance as a human does not betray a uniqueness on the part of humanity. This means that one does not need to be a human to imitate Christ; in the same way that Christ's maleness is not important, so neither is his humanity. A tree, for example (cf. Delio, 2013, p.99, quoting Thomas Merton), imitates Christ by being a tree. Therefore, in the same way, it can be said that a hydrogen atom imitates Christ by being a hydrogen atom.

To suggest that inanimate matter and/or 'irrational' life's imitation of Christ is forced since they do not have a brain and therefore are not able to freely choose to do anything, as Rolston argues that 'trees do nothing voluntarily' (Rolston, 2001, p.62), is merely an anthropocentric assumption that such a distinction correlates to better or worse. There is nothing superior about consciousness, therefore, there is nothing superior about humanity's ability to freely choose an action (cf. Kenney, 1970, p.65), assuming of course that humanity are completely free, something that modern behaviourists have denied (Pannenburg, 1985, p.29). Precisely because consciousness is an evolved category it only represents one subjective manifestation of the ontological principle of imitation of Christ. Conscious and unconscious imitation merely represent two subjective 'attempts' to imitate Christ and do not form a progression.⁵⁸

Genes, it has been argued, act in precisely the same way. Genes imitate their ancestors, just as humans do, therefore they can be included in this subjective exposition of imitation. What a gene does is imitate Christ, the way it does this just

⁵⁸ This also applies to the magnetic fields that hold atoms together. Teilhard claimed that it was the love of God that held atoms together (Teilhard de Chardin, 1965, p.146), however, now it must be claimed that this 'attraction' is an imitation of the love of God by those elementary particles responsible for such forces.

happens to accidentally provide the basis upon which evolution occurs. The replication, and possible errors that occur in replication, are only the manifestation on the level of genes of the ontological principle that imitation of Christ is the basis of creation.

There is no ontological separation between anything in existence; all find their ontological grounding in the divine milieu that was brought into existence through Christ's incarnation. Such an ontology, it has been argued, can be described as one of imitation or 'half-fixity', therefore, the subjective approach that was claimed to be characteristic of neo-Darwinism can also be applied to the Christological doctrine that all creatures must imitate Christ – itself made necessary because of neo-Darwinist interpretation of the constitution of Christ's person.

Omega Point as Parousia: A Reinterpretation of Vision

As well as this subjective interpretation of imitation of Christ – i.e. what constitutes imitation for one is different from what constitutes imitation for another – the distinction between creation and deification is likewise subjective. Such a position is, of course, dependent upon Teilhard's particular understanding of the relationship between nature and grace, but it must be argued that Teilhard did not go far enough. He postulated a connection between nature and grace because the natural process of evolution has a supernatural term. However, now that there is no term, there is nothing, per se, to separate creation and deification, as Lossky argues, 'the notion of creation in Dionysius is so close to that of deification that it is hard to distinguish between the first state of creatures and their union with God, their final end' (Lossky, 1957, p.97). Creation and deification are precisely the same event, not two ends of the same process, thus Williams can write that 'the entire story of salvation from creation,

through the fall and our redemption, to consummation, is condensed into this one moment [the Transfiguration of Christ], and thus a single moment of history stands as a comprehensive statement of Christian theology, like a creed, a symbol of faith' (Williams, 1999, p.116). However, the transfiguration, like the cross and resurrection of Christ, are only important in that they point towards the incarnation, that this human was truly divine. The transfiguration is only important in that it confirms the incarnation took place.

If creation and deification are the same event – participation in the divine nature, or, now, participation in the Christic person – then the only distinction between the two is subjective. The ontological basis of creation is participation in Christ and, likewise, deification is participation in Christ. For Teilhard, there was a definite progress in terms of what it meant to participate in Christ, but now this progress has been removed so that it becomes nonsensical to talk about progression in participation in Christ. The difference becomes only one of interpretation, or, better, it is the person who has 'vision' who realizes that they are already deified in Christ; the two can be seen as a Gestalt picture, they are simply two ways of looking at the same picture (cf. Hefner, 1993, p.271). If imitation of Christ is subjective then the imitation of Christ that represents deification is likewise subjective.

The comparisons with Gregory of Nyssa's doctrine of *epektasis* are clear. If there is an infinite distance between creation and God through Christ, then there is always infinite possibility for greater imitation and participation in Christ. This infinite possibility of progress therefore means that there is no real progress at all; just like evolution, the only possible criteria for judging progress is entirely subjective and relative (cf. Dobzhansky, 1982, p.23; Huxley, 1942, p.119). There is nothing to

prevent the conclusion that a tree imitates and participates in God to a greater extent than humanity because such a judgment is only relative.

The example of the Transfiguration can serve to illustrate the point. Mooney writes of the Transfiguration that '[Christ's] divinity was not fully manifested in his humanity except on Mt. Tabor in the transfiguration. There was no change in Christ, yet a radical change took place in the belief of Peter, James, and John' (Maloney, 1968, p.246). Lossky also writes that 'the transfiguration is not a phenomenon circumscribed in time and space; no change took place in Christ at that moment, even in his human nature, but a change was produced in the consciousness of the apostles' (Lossky, 1975, p.61). The point is that the Apostles 'saw' Christ differently; there was no objective change. The same can be said of all creatures. Creation does not objectively change, it does not progress towards a future perfection when all will be deified; those who have 'eyes that can see' are able to notice that creation imitates Christ and participate in his divine person.

Henri de Lubac can also contribute to this position. He writes that 'for each one salvation consists in a personal ratification of his original "belonging" to Christ, so that he be not cast out, cut off from the whole' (de Lubac, 1947, p.39). In other words, the individual already belongs to Christ, it is the reason for their Being, and deification consists in the individual recognizing such a belonging and ordering their life accordingly. For the human, this recognizing is conscious, but for other, non-human life or matter, it must be a non-conscious 'recognizing'. What this might mean is difficult to say, but, as Thomas Nagel illustrates (cf. Nagel, 1979, p.165ff), it is important not to anthropomorphize this ratification.

a. Two Biblical Parables

Two biblical passages help to illustrate such a position: the parable of the labourers and the parable of the widow's mite. The first demonstrates the equal value of creation to God and the fact that, to God, any response [read: imitation] to his self-revelation in Christ is just as good. Likewise, the second parable confirms the subjective nature of the imitation of Christ, that what is deemed imitation for one is not necessarily that of another.

b. The Parable of the Labourers

The parable of the labourers, recorded only in the Gospel of Matthew, relates the parable of a landowner who hires workers throughout the day, yet at the end of the day, regardless of how long the labourers have worked, he pays them all the same wage;

when those hired about five o'clock came, each of them received the usual daily wage. Now when the first came, they thought they would receive more; but each of them also received the usual daily wage. And when they received it, they grumbled against the landowner, saying, "these last worked only one hour, and you have made them equal to us who have borne the burden of the day and the scorching heat" (NRSV, 1995, Mt 20.9-12)

In evolution (the day), some, such as humanity, seem to be afforded a closer relationship with God (working all day), due to an anthropocentric understanding of imitation and the apparent openness to the call to respond to God that the evolution of consciousness affords them. Yet, objectively, it affords them no greater wage (the

relevance of Christ in the single, eternal outpouring of grace) than the rest of creation. God treats all creation the same. Both the unity of nature and the eternal action of God show that he pays all of his creation the same wage – it is anthropomorphic to suggest otherwise. God calls us all to work in the vineyard (respond to the call to imitation of Christ), and some respond to that invitation ‘better’ than others, but, ultimately, God pays all of creation equally, and the response (imitation) to that wage (grace) is only ever a subjective response.

c. The Parable of the Widow’s Mite

The parable of the widow’s mite also provides a comparable example. Humanity in this example is the rich people. Other, non-human life (or even ‘inanimate’ matter) is the widow. Just because humanity has the ‘riches’ of consciousness and freedom to give more to God does not mean that God does not revere it better than the contribution of the rest of creation – humanity ‘[contribute] out of their abundance’ whereas non-human life, the rest of creation, ‘out of [their] poverty has but in all [they] had to live on’ (NRSV, 1995, Lk. 21.1-4). If imitation is interpreted as being the ‘gifts put into the treasury’, then what constitutes a ‘good gift’ is completely subjective and relative; what is considered imitation for one person may not be the same for another. Humanity’s complex moral and ethical principles are nothing but a ‘codification’ of the imitation of God (cf. Delio, 2013, p.73). Imitation and participation in Christ is only ever a relative category, it has no objective value.

The outpouring of grace (wages) by God is singular and broad, whereas it is the creaturely reception of it that is graded (gifts put into the treasury), not the gratuitousness of God; it is not a case of ‘how much’ grace one receives (grace is not

‘quantifiable’ so that creatures can receive it differently), but how open to that grace that influences the life of the individual. This leads Williams to affirm that

sanctifying grace cannot differ in degree [i.e. the single bestowal of grace in the incarnation] because its nature is to effect the union with God, but grace may differ in degree from the perspective of the subject, who may receive more or less of it and be more or less enlightened than another subject...[yet it is] not whether sanctification is God’s work or ours but whether our sanctification can be accomplished against our will or without or wills (Williams, 1999, p.86, p.130)

Thus, evolution, through the molding of life, ‘creates’ creatures that can, subjectively, imitate Christ differently. However, it would be too anthropocentric to suggest that this represents a better imitation of God, only a different imitation of God. God appreciates the small and insignificant gift of the elementary particles in just the same way that he does the grand riches of humanity.

Conclusion

Teilhard’s Christology may look significantly different at this point, but it is still a Teilhardian Christology. Christ is responsible for creation, but now that the tension between finished and unfinished has been removed this leads to a relegation of efficient causality and an affirmation of formal causality. This means that participation in Christ is likewise not a progressive category. All participate in Christ not in correlation with how close to the end of evolution they are but equally. Christ is

equally relevant to all creation because evolution is no longer a 'linear' process of progression.

This affirmation of the equal relevance of all creation, in conjunction with the fact that creation is the event of the incarnation, now means that the constitution of Christ must be reinterpreted. There is nothing that can concretely be termed human nature, therefore there is nothing concretely that Christ assumed in the incarnation. In the same way that humanity are an accidental, irrelevant manifestation of evolution, so Christ's humanity is irrelevant for his relationship with creation.

This reinterpretation of the hypostatic union also means that the event of the incarnation can now be reinterpreted as well. Christ assumed all creatures in his incarnation, but not 'physically' or 'efficiently' as Teilhard claimed his 'third nature' to be, but 'formally'. This means that, in conjunction with the doctrine of Tzimtzum, the incarnation is not the addition of another nature, but the contraction of his divine nature. The ontological 'space' that is left is therefore no longer God and as a result is now mutable, characterized by the tension of imitation that provides the formal explanation for evolution. In this space spontaneous creation happens. This ontological 'space', now no longer needing to be a 'physical' body, can be identified with Christ's historical body, denying the need for a 'third', cosmic nature; Christ's historical body is cosmic.

This means that all creation is included in the incarnation and all find their ontological grounding in Christ. All creation imitates Christ because it participates in his person. Likewise, if creation and deification are the same event, what constitutes deification is no longer an objective principle applied to few, but an affirmation that the 'original' ontological ground and basis of life is supernatural in character. One

cannot participate in Christ more, since that implies that grace is quantifiable, and that there is a finite distance between God and creation.

Christ, therefore, is still the creator, he is still the principle of unity in which all creation participates, and he is still that which, at least formally, causes evolution (if somewhat indirectly, and accidentally). However, now, that principle is a single event not a process. The incarnation becomes, quite literally, 'co-extensive with the duration of the universe' (Teilhard de Chardin, 1965, p.64), but again, not as a process, but as a single event.

Chapter 8

Further Problems and the Contextualization in Wider Roman Catholic Theology

The essential conclusions of this thesis were drawn at the end of the last chapter. This interpretation of Teilhard's Christology, however, is not without problems. In claiming to represent a neo-Darwinian Christology, using Teilhard de Chardin as a model, it has raised more questions that lie outside the scope of this thesis to consider. Therefore, it is important to point out the direction in which further research is needed, and the particular questions that need addressing.

However, in raising these questions and problems, it will be shown that such issues can also be found in the work of Karl Rahner. This does not mean that Rahner will be used as evidence for what has been claimed, but rather that he works with the same themes that both Teilhard and this thesis have. After all, Rahner reached his own conclusions for different reasons and using different methods than have been used here. Indeed, it must be remembered that Rahner was implicitly criticised in the introduction for adhering to an evolutionary paradigm that this thesis has explicitly argued against. Rahner's own evolutionary theology can be understood to follow from Teilhard's in that he views in humanity an emergent manifestation of life that is qualitatively separated from the rest of creation. In his *Foundations of the Christian Faith* (1978), he writes that 'man is thus the self-transcendence of living matter' (Rahner, 1978, p.187) and that 'the history of the cosmos is always and basically a history of the human spirit' (Rahner, 1978, p.191), both of which express clear agreement with Teilhard's general theory. At one point, Rahner even affirms a

positive correlation between being and consciousness that could be seen as similar to Teilhard's (Rahner, 1978, p.303). Albeit that Rahner uses Aquinas for support, and Teilhard did not deal with Thomism favourably, this could provide further evidence of the similarity of the use of evolution within a theological paradigm. Moreover, Rahner's treatment of the incarnation is also similar to that of Teilhard. When Rahner considers the incarnation explicitly from an evolutionary perspective, he notes that the Christ-event happens when it does, because it is at that moment that creation is able to respond to such an event (Rahner, 1978, p.181). This again is a theme that is paramount for Teilhard.

However, by making this claim he is fundamentally at odds with the neo-Darwinian synthesis and thus must be criticised and corrected in precisely the same way that Teilhard de Chardin has been. When Rahner writes that 'the notion that man is accidental and really unintended product of the history of nature, a caprice of nature, contradicts not only metaphysics and Christian faith but basically it also contradicts natural science itself' (Rahner, 1978, p.188) he is unfortunately incorrect in his claim. It is he who contradicts natural science (as outlined in this thesis) by claiming that man is not accidental and unintended, and, as this thesis has maintained, it is metaphysics and Christianity that must reinterpret their claims.

That being said, this does not detract from the fact that some of the solutions presented here can be found supported by Rahner. It must be emphasized again that Rahner is not being pointed to in support for what is being claimed in this thesis, but to show that the themes and questions raised are not isolated problems but represent central concerns in twentieth century Roman Catholic theology. This is thus used as a sort of 'rubber stamp' to claim that if the Christology presented here seems strained, or even alien, then the same must be said of Karl Rahner, one of the most influential

Roman Catholic theologians of the twentieth century (this is without acknowledging that other influential Catholic theologians, such as Henri de Lubac and Joseph Ratzinger, have, at various points, also been used to support the same Christology).

This being the case, two distinct elements of Rahner's theology will be pointed to in order to demonstrate that the Christology presented in this thesis is distinctively Catholic: Rahner's theology of the anonymous Christians and his relegation of the particularity of the Christ-event. Both of these themes, in one way or another, can be shown to anticipate what has been claimed here in terms of the broadening of the relevance of the incarnation and the subjective nature of its acceptance. Tying the two themes together, and thus of supreme importance for Rahner, as indeed it was for Teilhard de Chardin, and likewise this thesis, is a particular relationship between nature and grace.

Anonymous Christians

One of the salient elements of Rahner's theology is that the human being, by its very nature, knows God. It is for this reason that Rahner can write that 'man always and inevitably has to do with God in his intellectual and spiritual existence, whether he reflects upon it or not, and whether he freely accepts it or not' (Rahner, 1978, p.69), meaning that an orientation towards God is the very ontological make-up of humanity. Precisely because humanity depends on God for its very existence (Rahner, 1978, pp.77-8), so it cannot ever be in a position, whether accepted or not, whether acknowledged or not, in which its life is not directed towards God. In fact, at one point Rahner even points to the language of 'natural desire' for God in order to explain this relationship between humanity and God (Rahner, 1978, p.298). Humanity desires a relationship with God as a part of its very nature, even if the individual

person does not know the name of this God or is aware of his self-revelation in Christ, or does not explicitly acknowledge such a desire.

If Christ is the culmination of God's outpouring of grace, or even the single outpouring of grace in the world (Deane-Drummond, 2009, p.42), then this means that the person of Jesus Christ is supremely relevant and effective for all humans. This leads to Rahner's doctrine of the 'anonymous Christian', that,

anyone who, although far from any revelation explicitly formulated in words, accepts his existence in patient silence (or, better, in faith, hope and love), accepts it as the mystery which lies hidden in the mystery of eternal love and which bears life in the womb of death, is saying "yes" to Christ even if he does not know it (Rahner, 1978, p.228)

Acceptance of Christ for Rahner, therefore, is not judged on a conscious acceptance of the Gospel but on the acceptance of the eternal mystery that lies at the centre of all life, the eternal mystery that is the ground of one's being in God; embracing one's life is response to the Christ event. Put simply, the human who lives his life true to being a human, in terms of embracing the absolute freedom with which he is constituted, that person is a Christian, with or without the explicit self-revelation in Christ. That acceptance Rahner also sees in the love of the neighbour. Pointing to the passage in Matthew in which Jesus relates the love of neighbour to the love of God (NRSV, 1995, Mt 25.40), Rahner claims that the man who loves his neighbour also loves God, even if he is unaware of such a fact (Rahner, 1978, pp.295-6). In other words, for Rahner, love of the neighbour is an unmistakable expression of the natural

desire for God, and affirmation of the individual's grounding in God, and a response to that affirmation (Rahner, 1978, pp.309-11).

Elsewhere in the same work he writes that 'this global understanding of existence [is] already "Christian" because of antecedent grace' (Rahner, 1978, p.295). In other words, life is Christian, not because of a conscious submission to God through Christ, but because grace, which is out poured in the incarnation, is the ground and basis of life. For Rahner, precisely because human existence is from the very moment of its inception directed towards God, who is the ontological foundation of creation, the human responds to the Christ event positively simply by living a life that is true to itself, without having to have had the opportunity to explicitly respond to the Christ-event in an ecclesial environment. For Rahner, response to Christ is not explicitly an ecclesial action. In fact, he claims that Christology, as an apologetic exercise, only has any value because those to whom it is directed have already made an unconscious 'yes' to the subject of that Christology (Rahner, 1978, p.294).

a. "Anonymous Christians" as Ontological Position

Whilst the question of 'anonymous Christians' inevitably presents itself in relation to the post-life experience of those who, through no fault of their own, had no opportunity in life to hear the Gospel (i.e. do the unbaptized go to heaven?), any vision of the doctrine of anonymous Christians as solely to do with this question is to miss the scope of what is being claimed. The doctrine is not solely a response to an ecclesial (or evangelical) problem, but is actually an ontological one, and has far greater implication than for those who were not born, through no fault of their own, in the Western world (understood loosely, as Christianity is often defined as a 'Western religion' despite its universal following). The doctrine is more concerned with the

ontological condition of humanity, and the relationship with God on the level of being. The human cannot exist without the grace of God (hence the relationship of nature and grace). As a result of this, no human can truly be said to be without the presence of God in their lives. Thus, submission to this presence can be seen as response to the Christ event, even if they are unaware of either that presence or its revelation in Christ.

b. "Anonymous Christians" in A Neo-Darwinian Context

Such a position can be claimed to be representative of this thesis, yet on a narrower plane because there is no reference to the neo-Darwinian synthesis. The freedom with which humanity can respond to the self-revelation in Christ (a neo-Darwinian would argue) is an accidental occurrence and does not provide them with any objective advantage. This means that, just as for Rahner all of humanity can enter into relationship with God, whether consciously or not, so now it must be claimed that the whole of creation can enjoy such a privilege – humanity are no longer uniquely favoured by God. The freedom to respond is no longer a necessary requirement. Just as, for neo-Darwinism, consciousness does not represent an objective ascent of life, but simply one solution out of many for survival, so for theology 'emergent freedom' does not represent a pre-requisite for relationship with God, only one possible manifestation of relationship with God. God treats all creation precisely the same, and humanity does not enjoy a uniqueness in being able to freely respond to the Christ-event (if, indeed, humanity is 'free' to begin with (cf. Pannenberg, 1985, p.29)). There is nothing to separate humanity objectively, fundamentally or ontologically from the rest of the animal world (and possibly even matter in general), and so there is likewise nothing about humanity which gives them a unique ability to respond to the Christ-

event, only that their conscious, apparently free, response is different, neither better nor worse, than other responses.

Rahner's doctrine of anonymous Christians, therefore, can be seen to anticipate what has been claimed here. For Rahner it was specifically humanity who were called to respond, yet now, precisely because the neo-Darwinian synthesis has destroyed any claim that humanity transcend the rest of creation, and thus enjoy an ontological equality, that privilege must be extended. The hydrogen atom is as much an anonymous Christian as is the human who has died without hearing the gospel. Once response to the Christ event is removed from a narrow, conscious acceptance of the revelation in the historical person of Jesus of Nazareth to a broader ratification of the person's own being, then it is not a great step to broaden such a response further to include all of creation and not just intelligent life once the neo-Darwinian synthesis is taken seriously.

This does not mean, as it has already been claimed, that in Rahner there is support for the conclusion of this thesis, but it shows that the problem of the relationship of those outside of an ecclesial environment with God is not a problem that is exclusive to this thesis. In fact, not only is this problem not exclusive, it is one of the central problems of late twentieth century Roman Catholic theology. As the world becomes smaller, and the Catholic Church comes into closer contact with those who are not members, so the problem of how to engage with those outside its confines becomes more pressing. However, because this thesis approaches the problem from a neo-Darwinian perspective, the question is asked from a different angle and, as a result, a new dimension is focused upon, namely, the relationship of the non-human world to the Church. Rahner's engagement with the problem

anticipates what it expounded in this thesis, but, as has already been claimed, he does not go far enough precisely because he is not a neo-Darwinian.

The Relegation of the Particularity of Christ

The affirmation that humanity is directed towards God as the ground of its being, meaning that the response to the incarnation is found in the freedom of the individual, necessarily leads onto, and provides the foundation for, another important element of Rahner's theology, namely, the relegation of the particularity of Christ. In the chapter on Christology in his *Foundations of the Christian Faith*, Rahner claims that theology demands that an 'absolute saviour' is necessary (Rahner, 1978, pp.228-9). He then argues that there are very few criteria that need to be satisfied in order to be labelled 'saviour'. This means that the particular details of Jesus' life are relatively unimportant in order for him to be considered the 'absolute saviour' (Rahner, 1978, pp.245-6).

a. The Problem of The Particulariness of Christ as Historical Problem

If all that is required of humanity is to 'exercise this obedience [to God] by accepting his own existence without reservation' (Rahner, 1978, p.306), then the particular historical details of Christ's life are irrelevant: they do not impinge upon the individual accepting their own existence. This means that the incarnation could have happened in secret, without the preaching of the Word by Christ through first century Palestine, and nothing fundamentally different would be affirmed (indeed, the doctrine of 'anonymous Christians' affirms exactly that the incarnation has happened in secret!). If the individual can have a personal relationship with Christ without actually being aware of the object of that relationship (Rahner, 1978, p.305ff.) then

the 'particularliness' of Christ is inconsequential; all that is required is that the incarnation happened, at a real, concrete, historical time, at some point in the history of creation, at some location, the finer details making no important difference.

Of course this does not mean that Rahner denies, or even doubts, that the first century Palestinian rabbi Jesus of Nazareth was the incarnation of the second person of the Trinity. Far from it. However he affirms that Christ did not need to be Jesus; the particular details of Jesus' life are not essential for his being the Christ. The incarnation did not need to happen in first century Palestine, but this does not mean that it did not.

Neither does this deny that the incarnation did not need to happen at all. Relegating the historical particularity of the Christ event does not mean that it can be completely 'demythologized' away as being merely conceptual. The incarnation needed to happen. The argument is that the details, and indeed knowledge of these details, are not important. The second person of the Trinity needed to become incarnate in order for the universe to come into being; he did not need to be a first century human for this to happen, but he was.

Importantly, this does not mean that the historical Jesus is unimportant. One of the potential problems with the relegation of the particular details of Christ's human life is that Christology becomes docetic by default. To claim that it is not important for Christ to be Jesus is not the same thing as claiming that Jesus is unimportant (Jorge Maria Bergoglio did not need to become Pope, but, now that he is, his life becomes necessary to understanding his papacy). It is in this direction that O'Collins claimed that 'Christology requires both some historical credible information and some philosophical structure' (O'Collins, 1995, p.10). In the same way it can be said that

humanity is not a necessity, simply an accident of evolution; yet this does not mean that constructing a theological anthropology is not important. Christ did not need to be Jesus but he was. This makes the historical Jesus very important for theology but not necessary.

b. The Problem of the Particulariness of Christ in the Context of Neo-Darwinism

Again, as with the anonymous Christians, there is in Rahner an anticipation of the conclusion of this thesis, namely, the accidental nature of Christ's humanity and its revelation of the Godhead. One of the biggest problems with this thesis, it may be claimed, necessitated by a sober acceptance of the neo-Darwinian appraisal of the role of consciousness and the accidental genesis of humanity, is that the self-revelation of God in Christ, whilst remaining a necessity as the ground of existence, does not need to be manifested as a human, nor, further, does it need to be recognized by creatures. Just as the arrival of humanity in the universe is entirely accidental, and represents no qualitatively different or emergent property, so the self-revelation of God in human form is itself entirely accidental. The incarnation simply had to happen, as the coming together of divinity and creation. What particular individual manifestation of creation it occurred in is mostly irrelevant.

If it can be claimed, and upheld, that the conscious understanding of the self-revelation of God in Christ, and the free response to it, are not essential elements of the individual's relationship with God, then it follows that the explicit self-revelation of God in Christ is not essential either. The fact that Christ 'became' created, i.e. the incarnation, is, of course, essential. But the manifestation of it as a human and the conscious communication of God in him are not. Christ could have died as an infant, or born isolated from society, or, as this thesis has maintained, he could have been a

tree or a pebble or any other accidental manifestation of creation. It would have made no difference to the expectation on creation. Response to the Christ event, as Rahner makes clear (Rahner, 1978, p.228), does not require the conscious comprehension of it.

Therefore, just as Rahner was criticised above for not going far enough in broadening the relevance of Christ to all creation so his understanding of the particularness of Christ does not go far enough either. Rahner still maintained that the absolute saviour had to be human (Rahner, 1978, pp.245-6). Rahner was no neo-Darwinian. However, one of the main points of this thesis has been that humanity is accidental, and therefore Christ's humanity must also be accidental. This means that the 'absolute saviour' did not have to be human in order to do what he did. This follows from the Patristic notion that it is not what Christ did but who he was, i.e. the divine person, the creator.

Again, it must be stressed that Rahner is not called upon as support for this thesis. Rahner arrived at his 'reductionist' Christology, at least as it is presented in *Foundations of the Christian Faith*, for historical critical reasons, whereas this thesis arrived at its 'reductionist' Christology for neo-Darwinist reasons. However what Rahner does show, as does Teilhard to a certain extent, whose own doctrine of the third nature of Christ could be interpreted as being a relegation of the importance of the historical Christ, is that the themes and questions raised in this thesis, and the conclusions reached, are not isolated problems but real problems for contemporary Catholic theology. All this thesis has done is attempt to discuss them within the framework of a neo-Darwinian paradigm. Or, to put the same point differently, the problems and issues raised attempting to formulate a neo-Darwinian Christology are

the same issues that other twentieth century Roman Catholic theologians deemed important for different reasons.

The Christocentric Nature of Theology

One of the implications of the relegation of the particularness of Christ is that his relevance becomes widened as he becomes less and less 'tied' to the first century Palestinian rabbi who was his historical appearance. However this widening of the relevance of the incarnation also has the implication of narrowing the role of the Spirit.

In *Foundations of the Christian Faith*, Rahner writes that 'Christ is present and operative in non-Christian believers and hence in non-Christian religions in and through his Spirit' (Rahner, 1978, p.316), and that the Spirit 'can and must be called...the Spirit of Christ' (Rahner, 1978, p.316). Rahner also affirms that there is a connection between the presence of grace and the presence of the Spirit (Rahner, 1978, p.316). This means that the Holy Spirit is only ever considered within a Christological context; the Spirit only ever continues the work that was started by Christ, such that he can be called the Spirit of Christ.

This betrays an understanding of the Holy Trinity that is quintessentially Western; the Spirit proceeds from the Father and the Son. In this way, Rahner's Christocentrism is not a criticism that is limited to his theology, it is representative of the wider criticism of Western theology in general (Boff, 1997, p.166). Teilhard, too, was criticised for being Christocentric (cf. Grey, 2006, p.118). For both Rahner and Teilhard, the widening of the scope of the incarnation has impinged upon the work of the Spirit, so that the Spirit can only rightly be seen as doing the work of the Son.

a. Neo-Darwinism as Christocentric

Once again, therefore, Rahner has anticipated what has been concluded in this thesis. This thesis has likewise widened the scope of the incarnation to such an extent that there, at first glance, does not appear to be any room for the Spirit. The work of God is creation: this work is carried out specifically in the incarnation. If the Spirit is to be included, it could only ever be as an 'addition' to the incarnation, since that now becomes the main focus of the work of God.

There are further issues here. If God must become created in order to influence the world, then the Spirit must also be incarnate. This clearly impinges upon the uniqueness of the incarnation of the Son.

Further, the Holy Spirit is often used as a way of accounting for the continued presence and action of God in the universe (cf. Ramsey, 1973, p.1ff). However, if it is correct that neo-Darwinism argues for an 'incarnational deism' (the activity of God in the universe is singularly in the incarnation) then there is no need for a continued activity. This further weakens the role of the Spirit.

Likewise, a Christocentric account of creation also seems to ignore the role of the Holy Spirit in the incarnation itself. The Holy Spirit is seen, most notable in the Gospel of Luke (NRSV, 1995, Lk. 1.35), as being responsible for the conception of the Son in Mary. Even if the incarnation is emphasised to the detriment of other models of divine activity, there is still the problem of the relation of the Holy Spirit to the incarnation itself, especially in the light of the claim that God needs to become created in order to influence creation.

It is not clear how this problem can be solved, and it is not necessary to attempt it here. However, it is important to note that the Christocentric nature of any theology does not mean that this theology is a failure. It only serves to strengthen its contextualisation within Roman Catholic theology.

The Relationship between Nature and Grace

The reason that Rahner can maintain such a position as ‘anonymous Christianity’, and thus postulate an incarnation that does not demand our conscious knowledge of it as being essential, is precisely because of the relationship he postulates between nature and grace.

Rahner can claim what he does because he acknowledges that there is no such thing as ‘pure nature’ and that the human cannot exist without grace (Rahner, 1966, p.183; cf. Peter, 2012, p.89). This grace, as Deane-Drummond notes (2009, p.42), is singly bestowed in the incarnation. This means that the human, with or without their own knowledge of it, is already in a state of facing God and being drawn towards him as the natural condition of their lives. Whilst this position is dependent on the incarnation as its basis – as this thesis maintains as well – it is primarily an understanding of the relationship between nature and grace that underpins the whole position (Rahner, 1978, p.181).

The same can be said of Teilhard and his evolutionary theology. Whilst there are of course other elements that are essential to how Teilhard understands evolution to function in a theological perspective, it is ultimately a relationship between nature and grace that underpins his relationship between matter and spirit, and thus the overall function of evolution.

a. Nature and Grace in A Neo-Darwinian Context

This thesis has concluded that Teilhard is correct in his understanding of nature and grace. Christ can have the relationship he does with creation precisely because he is the bestower of grace (i.e. the only way that God can interact with this creation). The incarnation is the only, single, bestowal of grace (Deane-Drummond, 2009, p.42), therefore the incarnation is responsible for nature i.e. creation.

In the same way that Rahner claims that the human is already naturally inclined towards God, and Teilhard claims basically the same thing whilst invoking evolution as the means of such an inclination, so this thesis takes over the same basic principle: the whole of creation, from the very first elementary particles to humanity, find ultimate significance and relevance in Christ. Yet this ultimate significance and relevance is subjective. It is only 'he who has eyes that can see' who can perceive that the individual already participates in the divine person and is deified. This dictates a reinterpretation of 'vision'. Yet again, it is a doctrine of vision that is widened to include all of life. Deification is not just subjective for humanity but for all creatures.

b. The Relevance of Vatican II

What is important about making such an observation is that it puts all three theologies (alongside others, such as Henri de Lubac, who was also used in support of the Christology espoused in this thesis), to some degree at least, within the bounds of acceptable theology after the Second Vatican Council. As was noted already regarding Teilhard's evolutionary theory, he anticipated many of the themes of Vatican II and influenced many of its leading contributors (despite his reputation in Rome). Of course, it would be irresponsible to claim that a relationship between nature and grace is the sole outcome of the council (and in many respects it was the

influence behind Vatican II, rather than its conclusion), likewise that adherence to its precepts can be judged solely on the one issue. However, the point is to show that the issues raised in trying to construct a neo-Darwinian Christology, and the problems that it inevitably creates, are not only far from alien, but are actually anticipated in mainstream Catholic theology.

Once again this is not to claim thorough orthodoxy but to show that the problems wrestled with here do not separate it from contemporary Catholic theology but actually form part of that ongoing conversation. To put the point simply, if a neo-Darwinian theology suggests Christocentricity, a relegation of the particularity of Christ, and an affirmation of the possibility of grace outside of the institution of the Church (as opposed to Church as an abstract concept comparable to the communion of saints), made possible because of a particular understanding of the relationship between nature and grace, then this is not an alien conclusion. In fact, it is exactly what should be expected from a modern Roman Catholic theology.

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