

Homo *crēdulus*:
bio-philosophical reflections
on evolution and religious belief

by

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Submitted in fulfilment of the
requirements for the Degree of
Master of Arts

University of Tasmania

November 2010

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November 2010

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Abstract

This thesis is a personal, folk philosophical reflection on the biological and believing nature of the human animal. It seeks to defend our right to believe, and argues that on occasion it *is right* to believe, even in the absence of good evidence. In particular I argue that such *credulous belief* may be justified when it forms part of a *Life Centering Belief* [LCB]. The prime example of an LCB is *religious belief*.

I argue that human beings are ‘naturally’ drawn to belief. We are ‘credulous animals,’ with limited access to certain knowledge of a personally relevant kind. So beliefs that solve problems for us are very attractive; in the right circumstances, they are all but irresistible. We must act to survive and almost always on less than complete information – thus the *need* to believe, even in the absence of evidence.

I argue then that religious believing is an evolved capacity. It came about out of the environment of evolutionary adaptedness for a number of practical reasons. Broadly, those reasons are: the need for security, the need for some explanation of many puzzling phenomena, and the need to bring together, to give us reason to cooperate. I review a number of hypotheses on the evolutionary origins of religious belief, and I am most attracted to a theory based on sexual selection.

Until relatively recently, it was thought and believed by almost all religious traditions that human beings are special. I argue against that view – we are a species, not a ‘chosen’ species. We are not special in any absolute sense. But, like all species, we have our own phenotypical peculiarities, our traits and behavioural predispositions – including the predisposition to believe in ‘strange’ things.

Some contemporary atheists have become ‘anti-theists.’ They rail against any non-scientific claim, and insist that religious belief is ‘poisonous.’ I take issue with their ‘rebuttal by ridicule,’ and affirm the value of socio-diversity. I argue that religion is properly based on different criteria than science: there need be no conflict.

Religious belief is good because we cannot live without ‘hope,’ and many of us need a faith to provide this hope. Even now that we know many religious beliefs are ill founded, we still need something to ground and center our lives. My thesis is devoted to trying to resolve this apparent paradox: the need to believe without something *out there* to believe in.

Acknowledgements

I have had substantial support and coaching throughout my period of research and study. First to greet me in the School of Philosophy at the University of Tasmania was Dr Jeff Malpas whose welcome was immediate, and nothing was too much trouble in getting me enrolled as he personally took me about and introduced me to people. Next, my first supervisor, in addition to Jeff, was Dr Anna Alomes whose personable nature, warmth and gentle way of getting me started were exactly what I needed as a very mature age student with 40 years between me and academic study. However, soon after my arrival, a change of topic and interest sent me to the good offices of Dr Richard Corry and Dr David Coady, who remained my supervisors, as a part-time student, for over four years. Richard and David have shared in the onerous task of ‘catching me up’ after my long hiatus in formal study. They have been brilliant, both in their academic guidance and in their personal support. But they have had a very difficult candidate. To put it bluntly, they had put up with an incredibly stubborn and sometimes grumpy old man. My hat is off to them in so many ways. However, as my father used to say, “You can lead a horse to water, but you can’t make him drink.” My stubbornness verges on the pig-headed, and, while Richard and David have helped me enormously, much of their wise and astute advice fell on a dumbo who wants to fly and thinks he only needs some magic feather. They are in no way to be held responsible for deficits in the end result, about which I know they have many reservations. On the other hand, whatever sound and solid philosophy there is in my thesis is very much to their credit.

Just toward the end of my candidature, I was lucky enough to link up with Dr Leila Tovieinen, an empathetic applied philosopher, whose encouragement was and is much appreciated. Finally, among my Utas Philosophy School supporters, I wish to extend a very special thank you to Dr Bruce Wilson, without whose friendship and support, I probably would have bombed out in the first year. Bruce was ever ready to sit down and philosophise in a way that made me feel both ‘This was where I belonged,’ and ‘This is what it is all about.’

I want also to thank Dr Peter Wilde. Peter is a personal friend who volunteered to discuss, read and comment for me, and he delivered way above and beyond what we should expect of friends.

I am indebted to Susan Headley, whose eagle-eye, and attention to details of written language and consistency of presentation, is truly staggering. From her I have some idea of what it means to be a caring professional. Thanks Sue.

And thence to the family who must ‘put up’ with a ‘present-absent’ loved one. My wife of many years has supported me in every way humanly possible throughout my wonderful ‘born again’ studenthood. I really don’t know why or how she put up with my monomania, but she did. That I was so immersed in writing a thesis on evolutionism and belief, and that this was a great celebratory year for Charles Darwin is more hoopla than any wife should ever have to bear. I am a very lucky man. My adult children, too, have all at various times given me helpful advice and been very patient with an absentee father. It must have seemed an interminable process to them. This thesis is really dedicated to my wife, Jenny Seaton, and to Orion, Elliam and Jasper Hedges for encouraging me, for helping me, for *believing in me*.

Finally, I wish to offer a very special *thank you* to Michael Leunig, one of Australia’s greatest philosophers. As well as being a constant inspiration, he has kindly given me permission to reprint one of his brilliant cartoons – one which depicts warmly and beautifully a central theme of my thesis.

Preface

Perhaps a word or two on my personal perspective would be in order so the reader will know ‘where I am coming from,’ and why I am writing this particular thesis. My approach to life and to philosophy is much influenced by the notion of philosophy as a “Way of Life.” (Pierre Hadot) Hadot writes movingly of the humane and humanistic concerns and focus of Hellenistic thought. A compassionate approach dedicated to practical wisdom has not always been dominant in the history of Western philosophy, but it has always been there, and it still is. In more recent times there have been others who have taken up the focus on practical wisdom. These words of Thoreau express eloquently this view:

To be a philosopher is not merely to have subtle thoughts, nor even to found a school, but so to love wisdom as to live according to its dictates, a life of simplicity, independence, magnanimity, and trust. It is to solve some of the problems of life not only theoretically, but practically. (Thoreau 1854/1960, p 15)

Thoreau was echoing the much earlier views of the Epicureans and especially the stoics. Pierre Hadot says:

The Stoics, declared explicitly that philosophy, for them was an ‘exercise.’ In their view, philosophy did not consist in teaching abstract theory – much less in the exegesis of texts – but rather in the art of living. (1995, p 82)

Seneca, as quoted by Hadot, is blunter, “Philosophy teaches us how to act, not how to talk.” (p 110) Philosophy at its best leads and motivates us to act and live thoughtfully. The point of view of the Hellenistic period was very much to emphasise some kind of utility, even what we would now call ‘therapy’ as the purpose for engaging with philosophy. This is also my view and conviction.

I have returned to formal philosophical study at this time because of a specific inspiration. I heard an interview with a philosopher (Lou Marinoff) on radio. He was discussing a new movement to encourage the use of philosophy as a *counselling modality*. Since I have worked in different kinds of social work through much of my life, I have an abiding interest in counselling and mediation. It has always been a large part of my basic outlook that living well demands an interest in and sensitivity to

human relationships – including a responsibility to try to help if I can. When I became aware of an opportunity to join my ‘first love,’ philosophy, with much of my life’s work so far, I was excited and wanted to pursue this. The prospect of employing philosophy as an agent of change in the personal lives of self and others was very much what the Epicureans and Stoics were about. I hope, if I am successful in my Masters study, to go on and qualify as a philosophical counsellor.

I have always been moved by the *Meditations* of Marcus Aurelius. So many of his thoughts, from nearly 2000 years ago, are still relevant and helpful to me and to many in our time. I wanted to choose one for this preface to express something of my own vision. It is hard to choose. But, for its relevance not only to me personally and what I believe, but to my thesis, here is a reflection from this wise and gentle Roman emperor. Considering ‘the gods’ and what it might mean to live without them, he says:

And if they make no decisions, about anything – and it’s blasphemous even to think so (because if so, then let’s stop sacrificing, praying, swearing oaths, and doing all the other things we do, believing the whole time that the gods are right here with us) – if they decide nothing about our lives...well, *I* can still make decisions. Can still consider what it’s to my benefit to do. And what benefits anyone is to do what his own nature requires.

(121189AD/2004, book 6, verse 44, p 89)

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CHAPTER ONE

INTRODUCTION

Man is a credulous animal, and must believe in something; in the absence of good grounds for belief, he will be satisfied with bad ones.

Bertrand Russell 1950/2009, p 96

Objective evidence and certitude are doubtless very fine ideals to play with, but where in this moonlit and dream visited planet are they found?

William James 1896/1962, p 97

The Credulous Animal

The credulous animal is the dominant species on this planet. We have imagined that we are rational animals: I *believe* we are the one and only irrational, or non-rational, animal where rationality is taken loosely to mean ‘conformity with nature.’ We are, apparently, the only species capable of deliberately contravening our biological mandates on a regular, non-freakish basis. Not only do we use contraception, abstain from sex, and suicide, but, in our social behaviour, we are sometimes extraordinarily nice to total strangers! Darwinian process might predict that such behaviour would have resulted in the species going extinct long ago – indeed, that it would not have got started in the first place! Needless to say, this raises a few questions about how we have evolved, and possibly about evolution itself. Are we different from other animals? Are we special? I will attempt to answer these questions in Chapter Two.

Unlike any of our animal kin, as far as we know, we seem to have an extraordinary requirement for purposefulness and hope. Without them we suffer, we pine, we atrophy, we shrivel and we ‘die’ – prematurely – even in life! The difference between those who survived the Nazi death camps and those who did not, according to Viktor

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Frankl, was encapsulated by Nietzsche who said, “He who has a *why* to live for can bear almost any *how*.” (Frankl 1959/2006 p 104) Why are we so ‘why-driven?’ Richard Dawkins says, “*Homo sapiens* is a deeply purpose-ridden species.” (1995, p 104) This may seem to suggest that we are ourselves the end of some purposeful process. However, Keith Ward corrects us in this: “To say that purposive beings exist does not entail that they were brought about purposively...” (1968, p 76) If we were not brought about purposively, why has human kind been so obsessed with, so prepared to believe in, almost anything that vests purpose in us?

Perhaps it is part of our ‘egocentric predicament’ – that we project our own nature onto the cosmos? We see intentionality and purpose everywhere because we, and the eyes with which we see, are calibrated and directed by this purposive, goal-directed mind of ours. Susan Blackmore says, “The way we experience the world is not the way it really is but the way that has proved useful to natural selection for us to perceive it.” (1999, p 112) Where would we be without goals, foresight and the capacity to plan? These are traits which natural selection has brought about in us as surely as it has our bipedal stance and our binocular vision?

Many have thought that the evolutionary process has a teleological or directional underbelly, and was either meant to or was bound to result in *us*, or at least something very like us. It is hard to see how that could be so without ‘outside help.’ The perception of an arrow of progress in evolution that was aimed at a bullseye, the human being, has contributed to and is arguably derived from our longstanding, embedded notion of species superiority. In Chapter 2, I will review these ideas and argue against them.

As a result of the seemingly exponential difference in *degree* (not ‘kind’ according to Charles Darwin) between humans and other animals, we have been seduced into thinking we are somehow *extra special*. I will argue our religious belief systems, our predispositions to faith, have co-evolved as part of our highly complex bio-sociocultural behaviour. Traditional religious faiths have almost invariably portrayed our species as transcendent and superior. We, *Homo sapiens sapiens*, are *extra-ordinary*, the ‘knowers’ twice over. All other organisms are lowly and stupid – sustained by mechanical instinct. Such ideas no longer have credibility; I will argue they have done us and our kin in the life-world, the DNA brotherhood, much harm.

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In this thesis I will contend that we are first of all *biological beings*. But, like all other organisms, we have our own unique set of traits and capacities. I will argue that believing in strange and mythical things stems ultimately from our biology. I suggest we can much better understand *and manage* ourselves if we abandon our inflated near angel status, and species-centrism as the exclusive ‘*sapiens*’ of the planet, and recognize our truer nature is Homo *crēdulus*: *believers*. I will argue that natural selection, in the environment of evolutionary adaptedness (EEA), has shaped credulity – a willingness to believe certain kinds of difficult-to-verify propositions without regard for ‘evidence,’ and that in fact evidence is irrelevant to the function of those beliefs, whose real purpose is in the first instance to aid in survival, but later becomes part of our core identity – ‘centering,’ and supporting us, and thus giving us the strength to endure hardships and face the demands of existence.

Further, I will argue that beliefs entail a *willingness*, indeed an *ability*, to act and that these beliefs do not require ‘validation’ in any modern, philosophical or scientific sense. As Stephen Stich says, “natural selection does not care about truth ...” (1990, p 62) I submit that when it comes to survival, *neither do we*. We must act to live and we can only act, and act effectively, if we have some faith or hope that our actions will achieve our ends. There may be dangers and risks, and we can be misled because they turn out ‘wrong’ in some way, but we couldn’t and *can’t live without this vital predisposition to belief*. It is, and has been, a crucial source of what and *who* we are. The capacity to believe is a strategy for survival, which became romanticised in myth, and became the backbone of our sense of worth. It lifts us up, and strengthens us in the face of the inevitable adversities of life. It is the vehicle of hope – without which we shrivel and could not survive. One of the central points I argue in this thesis is illustrated and beautifully embodied in the wise and wondrous Greek myth of ‘Pandora.’ It contains one of the great truths about human *nature*.

Pandora

Pandora, the ‘all-gifted,’ was given a beautiful golden box by Hermes, but told by him never, ever to open it. Nevertheless, she was given the key! Then she was given *curiosity* by Hera. This was all part of a plot by Zeus to take revenge on man for

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having accepted the gift of fire from Prometheus, which Zeus had forbade him to do. And so Hera's cunning gift worked on Pandora with many a clever rationalisation – that Hermes must have been 'teasing', and really he might be waiting for her to open it! Finally, one night she could resist its call no longer:

...the moonlight blazed into the room. She could not sleep. The light pressed her eyes open. She sat up in bed and looked around. All the room was swimming in moonlight. Everything was different. There were deep shadows and swathes of silver, all mixed, and all moving. She arose and quietly tiptoed from the room.

She dug it up from the garden where she had buried it in a heavy oaken chest. When she took it in her hands:

...it was cold, cold; coldness burned her hand to the bone. She trembled. What was inside that box seemed to know the very secret of life, which she must look upon or die...(she) opened the lid. There was a swarming, a hot throbbing, a wild meaty rustling, and a foul smell. Out of the box, as she held it up in the moonlight, swarmed small scaly lizardlike creatures with bat wings and burning red eyes.

They flew off hissing and screaming and cackling until Pandora came out of her spell and realised something was terribly wrong. She just managed to catch the last little monster and forced it shrieking and spitting and clawing at her back into the box. She locked it in and then fell away in a faint. What were those dreadful deathly creatures?

They were the ills that beset mankind...the spites, disease in its thousand shapes, old age, famine, insanity and all their foul kin ... spreading pain and sorrow and death ... into every home ...

But at that, things could have been much worse, for the last devil that Pandora managed to shut back into the box was the most dangerous of all.

It was foreboding, the final spite. If it had flown free, everyone in the world would have been told exactly what misfortune was to happen every day of his life. No hope would have been possible. And so there would have been an "end to man." For, though he can bear endless trouble, "he cannot live with no hope at all."

(quotes and the outline of the tale from Evslyn 1966, p 61-4)

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Hope and faith are two sides of the proverbial coin. We cannot live without them for good reasons including good evolutionary reasons. This is what I hope to show in this thesis.

Asides

I need to explain briefly a stylistic device I will use in this thesis. I think of these as *asides*, and I will set them off as if they are an indented, extended quote. In a sense, I am quoting – another part of me. I will ‘sign’ them off as “(DH)” and shade and box them. Here then is a sample:

The Tree of Philosophy? Or is it a Flower?

Some seek to grow great gnarly trees of philosophy. I will be content to raise a few flowers.

This is a “Confession of a Dilettante.” Why or how does one gain mastery? There is so much to know, ever growing. No sooner do we feel reasonably knowledgeable than knowledge or skill, or technology moves on, adds on. Knowledge adds, sometimes subtracts, you’re lucky if it multiplies, and unfortunately differences creep in which can divide (why is division bad?). What has been learnt, even if superseded, is usually still of some value or relevance. Individual trees form forests and stand strongly in good stead. Some fall while others grow taller and the conditions may change and a new species may expand within the forest. Few things are ever completely lost. This is surely true in science. Einstein improved on Newton, but didn’t throw Newton out.

But are philosophers ‘under-labourers’, as Locke suggested? Is it their duty to serve science! How philosophers hate to think that! But what is the value of reason on its own – without evidence or data or experiment. What can it truly prove about the world?

Philosopher is such a big word. I prefer to abbreviate it thus: I am a ‘philer’ (of gaps) and a grower in cracks. Philosopher is too long a title for a desultory dabbler. Still, I like the flowers. They add colour. I like humming too, and whistling. Little joys add up and are well worth cultivating. (DH)

Asides will crop up from time to time. It will make my presentation more enjoyable for me, and I hope it adds something to the reader’s understanding. I would like to think it will enrich the thesis.

Religious Belief

This essay is primarily aimed at a biologically informed understanding of the religious kind of belief. The questions I will attempt to answer are: Where belief comes from?

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What is belief? What is belief *for*? What does it do for us? Do we need it? Why? How do we arrive at (or ‘choose’) it? These many aspects of belief will be viewed from an evolutionary perspective. This means, as expressed by eminent contemporary evolutionist David Sloan Wilson:

I use the principles of evolution to understand the world around me. I would be an evolutionary biologist if I restricted myself to the topics typically associated with biology, but I include all things human along with the rest of life. That makes me an evolutionist without any qualifiers. I and my fellow evolutionists study the length and breadth of creation, from the origin of life to religion. (2007, p 1)

My thesis is not an episode in the science versus religion ‘wars.’ It is within that broad area of concern, but it’s not another round in the ‘debate’ between fundamentalism and atheism. However, it is partly about, or motivated by, a desire to ameliorate or mediate that ideological conflict. But mainly my thesis is about the ‘bio-philosophical’ role that religious kinds of belief play in our lives.

By ‘bio-philosophical’ I mean a biologically informed reflective process that tries to build philosophical understanding of who and what we are on the basis of an evolutionary understanding of life.

Religious belief and belief generally are big philosophical topics and I won’t be dealing with more than a small portion of those topics. I will not be taking up any of the historical issues, except in passing. I will not be entering into any of the considerable philosophy of mind issues that surround general belief. I am also not very concerned with the specific *content* of beliefs, beyond certain ethical constraints which I will specify in due course. My main interest in this thesis will be to look at where religious kinds of belief come from, how such beliefs *function* in human lives and how we ‘arrive’ at what we believe.

In the final stages of my thesis I will defend beliefs that are *not* based on evidence *but which do not necessarily conflict with evidence either*. Finally, I will put my case for belief arrived at *by decision*. This position is controversial. I will defend it.

Life Centering Belief

It is my thesis that there is an enduring and ubiquitous *need* to orient our lives around a *belief system* – an internal structure that underpins all of our basic understandings of who and what we are and how we relate to the world. I will refer to this concept as a *Life Centering Belief* (or, to save ink, an LCB). What I mean by an LCB has historically been associated or identified with religion. An LCB, as I intend the term is not limited to a formal religious belief. But, historically, religions are among the most important LCBs. In this thesis I will be concerned mainly with religion and religiousness, and not other ideologies and orientations (e.g. political, ethnic, nationalistic) that might function as LCBs. Just about anything that is idea based and someone can feel zealous about, and devote large amounts of time and energy to, can be an LCB. In a way, religion is the ‘template’ for life centering belief, but an LCB doesn’t necessarily have the creeds or trappings of religion. LCBs of the future will, I believe, be less and less limited to religion. Nevertheless, my thesis will mainly be concerned with religious belief, traditionally the ‘main source’ of life centering belief.

Religion involves metaphysical ideas, epistemological claims, a value system, and various observances and practices. It tends to give stability to communities, and a coherent sense of identity and belonging to individuals. It is the latter ‘functional’ aspects which I have in mind as the characteristics that make a religion ‘life centering.’ LCB is a *functional concept*. The ubiquity of religion tends to suggest to the evolutionist that religion answers some deep, biologically connected need. It is this ‘need’ aspect that the LCB concept is designed to highlight. Traditional religion originates in answer to that need. I hope to show it is not the only way of meeting that need, but the need itself is, I will suggest, still very much a part of human experience.

In today’s pluralistic world, at least in Western countries, a wide range of personal belief systems may (and do) address this need. As I see it, the most crucial defining characteristic of an LCB is *a sense of belonging or involvement with something greater than the self, and toward which one feels a sense of devotion and responsibility*. Some might think of it as our ‘source of meaning.’ I have no great objection to expressing it thus, but I will not use the ‘meaning of life’ way of framing the inquiry. There is a strong connection between what we believe and our personal ‘meanings,’ but I will put that way of talking about it to one side, because of some

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difficulties I have with the ‘meaning of meaning.’ So, this inquiry does not directly address the ‘meaning of life,’ but it is completely concerned with the *quality of human life at the lived and experiential level*.

For many people, religion constitutes an automatic part of their cultural lives and is often accepted without question. From a philosophical perspective, while recognised as very much a part of culture, religious beliefs are examined and questioned. But they are, in the language of William James, regarded as “live options,” by which he meant we have a choice and that what we choose will make an important difference in our lives. Whether such religious beliefs are “forced” and “momentous” as James described them in his famous essay, *The Will to Believe* (1896/1964, p 89), are issues worth reviving and viewing from my evolutionary, need-based perspective.

In the century since James argued his justification of Christian, theistic faith, much has changed. While Christianity is still alive and well in many quarters, I think it is fair to say it is much less dominant and taken for granted than it once was in most Western countries (with the possible exception of the USA, which I will discuss as a ‘case study’ in Chapter Four). Western minds today are more aware and better informed about the non-Christian world, especially Judaism, Islam and Buddhism among the ‘major’ faiths. But other ‘minor’ religions (e.g. Baha’i), and a variety of new age belief systems, are also on the cultural map to a much greater extent than in James’ day. In addition, the Christian variants are ever changing. Some, one could say, are attempting to ‘update,’ in an effort to ‘stay relevant.’ Meanwhile others tout a ‘back to basics’ (or fundamentals) approach. Christianity in all its forms is certainly a ‘living option’ as James might say, but still much less dominant than it once was.

The range of options and greater awareness of alternatives to traditional religious LCBs have increased religious and philosophical differences and ‘opened up’ a dialectic about who believes what and why. The proliferation of ideas vying for our attention is in itself a source of some confusion, including the distinct possibility of living *without* any formal or codified LCB. Indifference and apathy are options, though perhaps not satisfying ones. An LCB must fulfil its role of centering us and thus creating balance and satisfaction in life. There may be a tendency to drift into some kind of ‘default LCB’ which, instead of coming from any inner conviction, is thoughtlessly absorbed from our milieu. I agree with Bertrand Russell’s sentiments in

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my epigraph, if beliefs are not chosen on reasonable grounds, then into the vacuum, so to speak, ‘bad grounds’ will suffice. ‘Bad’ here suggests to me not so much epistemically weak, but personally unsatisfying or socially destructive or both.

The growth of a scientific mentality as a consequence of the pervasiveness of technology in our lives has tended, in my opinion, to result in a decline or a marginalisation of standard religious beliefs. In the West, the growth of the scientific paradigm in our world views has led many people not only to abandon religious involvement, but also to castigate the very idea of religious belief. Still others feel the force of the science, but are not comfortable or satisfied with science as an LCB. Within global culture and within Western culture, the heat of religious controversy is on, and there is no denying that tensions are increasing in some quarters and sometimes breaking out into vilification, ridicule, and even, violence. My point here is that the way we relate to belief systems, or LCBs, is changing – and therefore our strategies for integrating religious belief into our lives are under pressure. What’s more, these pressures are a source of considerable ‘dis-ease’ in the lives of many.

Within Western culture, the increasing influence of science on daily life, on our minds, and on the whole cultural fabric, is undoubtedly a primary source of the decline of the religious mentality – but I suggest that it is also an opportunity for the development of new and fulfilling LCBs. Scientists may well object to their predominantly ‘naturalistic’ view being characterised as a life centering *belief*. They are, as they see it, engaged in the pursuit of empirically based objective *knowledge* – not ‘beliefs.’ Let us then distinguish between the execution or methodology of science, versus science as an ideology – sometimes called scientism. Scientism is the notion that all knowledge comes from, and only from, science. A simple chiasmus helps to vivify this distinction: Is civilisation a ‘product of evolution’ as Robert Ardrey in *Cain’s Children* asserted (1976, p 450), or is evolution a ‘product of civilisation?’ Michael Ruse, a much published and respected philosopher of biology, weighs into this debate of whether science itself is a socially constructed ‘belief system’ with a recent book, *Mystery of Mysteries* (1999). He says scientism “is the ideology that science stands beyond ideology.” (p 12). I agree that science should not be an ideology, much less a religion. But in its quest for knowledge of the natural world, it may well serve some people as an LCB – something to base and to ‘center’ their lives on. Again, though there are elements of ‘belief’ similar to *religiousness* in

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an LCB, it should now be clear that not all LCBs are religions, nor even ideologies. I will attempt to make these distinctions clearer in subsequent chapters.

A Note on Bio-Philosophical Method: Biography and Biology

My overriding theme of belief will receive its fullest treatment in Chapters Three and Four. There are two supporting and connecting streams: Biography – the personal context of my study; and Biology – the evolutionary context. These two contributing perspectives account for the ‘bio’ in my ‘bio-philosophical’ approach.

Biography: I believe the pursuit of philosophy is best understood in a biographical context – as part of a person’s whole life. I resonate strongly with Martha Nussbaum’s characterisation of the Epicureans and the Stoics. She states that they believed that “philosophical argument must be searchingly personal.” (1994, p 7) Because it is an objective of mine to qualify as a philosophical counsellor, the kind of philosophy I most strongly ‘believe in’¹ is one which integrates life history, personal commitment and emotional engagement, as well as intellectual interest. We hear it said of religion, but I believe it is certainly true of philosophy as well, that it is, at its best, not so much a theory as a practice. As I mentioned in the Preface, with Pierre Hadot, I regard philosophy “as a way of life.” Throughout my thesis I will offer personal points of view – in the asides and in the footnotes, as well as in the main text. This is important context as I see it. I have sometimes thought that biography *is* philosophy! But that more extreme view is for another day.

Biology: My title, ‘Homo *crēdulus*,’ signals that I take for my fundamental starting point a biological understanding of where we come from, that we are animals *and that we are ‘believing animals.’* Religions, and other forms of non-evidential belief, are ubiquitous, and it is widely held that pan-cultural phenomena are likely to be biological or evolutionary in origin. (See Shermer 2004, pp 60-4; Pinker 2002, p 55). Being an animals does not mean we are ‘*only*’ animals, but, as I will discuss later, it does mean that it is difficult to foresee any credible future *theory of man*, including our religious and believing behaviour, that denies, ignores or glosses over our physical, organic and evolutionary origins.

¹ I say ‘believe in’ because philosophy is itself an LCB for me.

It is a well accepted principle that the origins of a belief must not be confused with a justification. I will argue strongly that this so called “genetic fallacy” is a cautionary principle, not a logical error. I will argue that origins *are* important, and that we must be on guard for the converse of the genetic fallacy; namely *to dismiss origin*, or say it has no relevance to understanding a later state of affairs. This is to commit what is sometimes called the ‘*modal fallacy*.’ These issues will be unpacked in my discussion of evolution, origins and animality in Chapter Two.

A Philosophy for the Future

Daniel Dennett has nominated Darwin’s theory of ‘natural selection’ as the best idea anyone has ever had! (1995, p 21) Natural selection *is* a philosophical idea. It’s a theory, perhaps even a ‘grand unifying theory’ in the life sciences. In my view it has vast philosophical implications.² Some thinkers insist that evolution is first and foremost a *metaphysical idea*! (see, e.g., Dupré 2003, p 16) There is no shortage of philosophers who have also thought evolution very important and highly relevant to philosophy generally.³ Others have questioned this – Ludwig Wittgenstein said, “The Darwinian theory has no more to do with philosophy than any other hypothesis of natural science.” (quoted in Flew 1984, p 32) Of course the way Wittgenstein has stated this leaves open the possibility he thought it relevant, but *no more so* than other scientific theories. Jean-Paul Sartre rejected a “biologically based human nature,” according to Jesse M. Bering. (in *Evolution of Religion* 2008, p 363) Bering thinks this an unfortunate move and so do I. Openness to ideas from the life sciences is crucial in my mind to the future of philosophy.

I advocate both a *deeply* historical, and a future-oriented philosophical outlook and emphasis. In our admiration of *written* history and philosophy, we sometimes do not accord natural history and the natural sciences the future forming importance it has. Do we ‘forget the future?’ Maybe what the world needs is a new ‘space age’

² Of course, natural selection and many of the ideas within evolutionary theory *are* part of the philosophy of biology, but my point is to do with its being taken on board more widely.

³ John Dewey, as has been mentioned, and William James and more recently Peter Munz (1993, *Philosophical Darwinism*) plus many others – perhaps all those inclined to empiricism.

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philosophy – one that will cook us a new casserole and not just stir the old cauldron. Fortunately, the basis for such a philosophy is at our fingertips and provides a unifying theme for many fields of learning. But it has been largely ignored, or even dismissed, by many philosophers, including, apparently, Wittgenstein. But a few have seen the importance of evolutionary thinking for a philosophy *for* the future.

Theodosius Dobzhansky had a winning formula. He has famously said, “Nothing in biology makes sense except in the light of evolution.” (quoted in Ehrlich 2000, p x) I submit that he did not go far enough and that *nothing in life* makes sense except in the light of biology! When Dobzhansky wrote *The Biology of Ultimate Concern* (1969), he was looking in the right direction, and with scientifically and biologically informed eyes. He was a philosopher of the future. His book was a brave effort to combine the growing knowledge in evolutionary biology with questions of belief, value and meaning. We will have further occasion to refer to his thoughts in later sections.

The Distilled Argument about Belief

These are the main points of my argument:

1. Religious belief has evolved for practical survival reasons.
2. The naturalised approach I will adopt sees religion as having an *adaptive role*.
3. Religious beliefs (can) still play a useful function in society.
4. But there is conflict between science and religion.
5. We should judge religious belief on how well it fulfils its social functions, not on ‘truth.’
6. Since religious belief is to be judged on different criteria than scientific claims, there need be no conflict between the two.
7. When judged on the appropriate criteria, religious belief is acceptable, necessary (for some), reasonable and even desirable.
8. Essentially one is free and justified to *decide what one believes* as long as it does not encroach on the ability and rights of others to do the same – this includes the ability and right to have no (religious) belief at all.

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And so, let us move on to Chapter Two in which I will outline the basics of evolutionary theory and consider other aspects of the bio-philosophical perspective in preparation for my main arguments concerning belief in Chapters Three and Four.

CHAPTER TWO

THE ‘CHOSEN’ SPECIES

Man in his arrogance thinks himself a great work, worthy of the interposition of a deity. More humble and I believe true, to consider him created from animals.

Charles Darwin 1838 in Rachels 1990, p 1

The shock waves of the ‘dethroning’ of man have not yet abated.

Ernst Mayr 1982, in Rachels 1990, p 173

Contrary to popular belief, the science of evolution does not belittle us.

Simon Conway Morris 2003, p xv

Nature and human nature – are we part of nature or distinct from it? Who has dominion over what and whom? Are we the saviours of this planet or are we the ‘plague species.’ (title of Reg Morrison’s 2003 book) This chapter is about our place in nature – both descriptively and prescriptively – are we simply another species or are we somehow special, a ‘chosen’ species?

How We Got Here: The Evolutionary Story Begins

At the risk of supporting another ‘ism,’⁴ the point of view I bring to this enquiry into evolution and belief can be broadly described as *evolutionism*. It means more than subscribing to the ‘theory of evolution by means of natural selection.’ The theory, as co-discovered with A.R. Wallace, but exhaustively developed and documented by

⁴ And thus falling prey to ‘ismism.’

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Charles Darwin, was a paradigm shift of major proportions in our understanding of the history of life. In importance, it was the biological analogue of heliocentrism. Both were profound and confronting conceptual and perceptual shifts in our thinking. One displaced us from the center of the universe; the other displaced us as the centerpiece of the ‘bioverse.’ Man *became Homo sapiens*, a species. And at last, we had a way of seeing how we and all other species could arise in a naturalistic way, without non-evidential, supernaturalistic explanations.

It is my primary purpose in this thesis to show that this transition in our way of understanding ourselves, our *nature*, was itself an evolutionary move ‘forward.’⁵ The impulse of this new wave of understanding can still be felt. Now the reader (all three of you I’m sure) will have noticed that I used the term ‘evolutionary’ to refer not to some genetic differentiation of species, but to a change in our way of thinking. Therein lies a teasing out of terminology that will be important to a fuller understanding of evolutionism. To ‘evolve’ in its first meaning is to change gradually. This already touches on one of the more contested issues in current evolutionary theory – how gradual is *gradual*? But putting the question of how gradual to the side, the conceptual shift I wish to impute to evolution is the affirmation of change in response to ever-changing circumstances, as opposed to:

The conceptions that had reigned in the philosophy of nature and knowledge for two thousand years, the conceptions that had become the familiar furniture of the mind, rested on the assumption of the superiority of the fixed and final; they rested upon treating change and origin as signs of defect and unreality.
(Dewey 1909/51, p 1)

American philosopher John Dewey was one who appreciated just how radical Darwin’s influence was – not just on biology but on the whole of philosophy. He wrote a whole book on the subject entitled *The Influence of Darwin on Philosophy*, published in 1910. Another philosopher with a deep connection to Darwinian ideas was William James. In his paper on ‘The Darwinian Center to the Vision of William James,’ Eric Bredo says, “James’ affinity for Darwinism can be seen as having deep roots in his own reaction to dogmatic and deterministic thinking.” (Bredo 1998, p 6) It seems that early 20th century American pragmatism was, on the whole, deeply

⁵ In the ordinary temporal, non-progressive sense – directional terminology can be very problematic in evolutionary theory, which is fundamentally ‘directionless.’

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influenced by Darwin. Bredo contends that pragmatism can be seen as the generalisation of Darwinian philosophy to human social and moral affairs. (p 1) Some 70–80 years later, another thinker from Harvard, E.O. Wilson (1978/2004) proposed even more explicitly the application of biology to human affairs. This is the notion which underpins my vision, ‘bio-philosophy.’

As for having some grasp of the *biological* theory of evolution – it is partially understood and rather indifferently accepted by a great many people. The depth and extent of its implications are poorly and often incorrectly understood, and not just by uninformed or uneducated people. D.S. Wilson notes that in America, ‘reluctance to accept the theory of evolution,’ according to the most recent Harris Poll (2007, p 2), amounts to 54% – more than half of the population! And further, the percentage who ‘do not believe’ that humans descended from earlier species, has actually gone up from 1994 when it was 46%. (2007, p 2)

The cross-disciplinary flow in academia between biology and other disciplines devoted to understanding human beings is all but invisible. Wilson says, “With respect to evolution, most scientists and intellectuals would say that they accept Darwin’s theory, but many would deny its relevance to human affairs, or would blandly acknowledge its relevance without using it themselves in their professional or daily lives.”(p 2) I myself have heard a professor with a PhD refer to the ‘theory’ of evolution as “that idea that men come from monkeys.” On another front, as a staunch evolutionist I have also been admonished by fellow postgraduates in philosophy for advocating ‘genetic determinism,’ as if evolution and genetic determinism amounted to the same thing. As Daniel Dennett argues in his 2003/2004 book *Freedom Evolves*, freedom is a ‘good trick’ as he calls it – a ‘strategy’ which increases our adaptability and thus survival and replication potential.⁶ Freedom itself is *selected*. Determinism, genetic or otherwise, is not an implication of Darwinism.

It is to this notion of ‘selection’ that I now turn. This was Darwin’s great insight – the one that Daniel Dennett would give awards to. (Dennett 1995, p 21) *Natural selection*, which Darwin’s great friend and colleague T.H. Huxley broadened to the

⁶ Having thus arrived, Dennett observes that it is ironically our greatest strength.....and our biggest problem! P 218.

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‘cosmic process,’ is the key to understanding life as a naturally explicable phenomenon.

A Minute to Learn and a Lifetime to Master

I have always been intrigued by the old saying, “A minute to learn and a lifetime to master.” This would apply to my efforts to find out about the theory of evolution. To begin with, it’s almost a ‘no brainer.’ T. H. Huxley, one of Darwin’s closest friends and supporters, and his ‘PR’ man, apparently said something like, “How stupid of me not to have thought of that.” (Rachels 1990, p 35) It is the sparest of ideas – it won’t even take a minute. How it works can be rendered in three words: 1) variation, 2) selection, and 3) heritability⁷. It has been seven or eight lifetimes since Darwin delivered his lesson, and we have yet to fully master its implications.

Mastery may be elusive, but progress has been made. Darwin and Wallace had, at the time of their discoveries, no inkling of the genetic mechanism of heredity. They nevertheless astutely observed that in each brood of offspring, some would survive and prosper where others would not. Darwin was a keen observer of domestic animal breeding. The breeders understood the practical principle without need for a theory of inheritance. However it worked, it *did* work and the traits they ‘selected for’ would tend to be passed down. But of course their ‘selection’ was motivated by whatever characteristics the human was seeking. It was Darwin and Wallace’s great insight that, in the state of nature, which organisms survived and reproduced, and which didn’t (the selection and significantly the *de-selection*) would tend to depend on some feature, trait or behaviour that conferred an advantage disadvantage, however slight on the survivors. It was recognised that this was a probabilistic process. What happens in one generation hardly matters, but, given evolutionary time, it became apparent that species could slowly change so that they eventually became something else altogether – a *new species*, and thus Darwin called his work, *Origin of Species*.

⁷ I have heard Richard Dawkins attempt to reduce it still further to one word – ‘inheritance’ – which obviously leaves a bit to be desired. I think he was trying, in his capacity as a communicator and populariser to render the basics memorable. As a former woodworker, I have found that VARN(I)SH keeps the elements accessible to me: VAR(iation), N(atural) S(election) and H(eritability). Obviously, ‘I’ am not a part of it!

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The discoveries and insights of Darwin (and Wallace) took the world by storm. Not everyone immediately accepted natural selection entirely, but so powerful was Darwin's evidence and 'one long argument' in *On the Origin of Species* that it eventually prevailed and to this day it remains the foundation of our understanding of how evolution works. Darwin was wrong in some details, but still he was amazingly prescient and correct in his overall understanding, and many of his explanations have not been improved upon to this day.

It seems that it is going to take many lifetimes to refine and 'master' their ideas. Since the publication of *On the Origin of Species*, Darwin's seminal work (which was 150 years old in 2009⁸), the idea of evolution has grown, been expanded, refined, and gaps filled in;⁹ it is still gaining momentum as it continues to explain the biological world better than anything or any idea previously (or since).¹⁰ It is the core idea, but the details and implications will occupy the life sciences for generations to come, and the influence on the social sciences and philosophy is only beginning.

Evolution is the quintessential 'self-referential idea' – for evolution itself continues to evolve. But wait a minute – this idea of a naturalistic explanation is all very fine – but what about us *Homo sapiens*? If we do not come from the divine place that religions for centuries and millennia have told us we did – ...are...we...not...special? Let us now focus on what evolution means for us and our place in the scheme of things.

Radical Ideas

Some years ago, an acquaintance of mine presented me with a radical idea. He was a young physicist and worked with electron microscopes. When he talked about science,

⁸ There were world wide celebrations. It was also exactly 200 years since Darwin's birth on Feb 12, 2009 – the same day that across the Atlantic, Abraham Lincoln was born!

⁹ Especially the synthesis with Mendelian genetics. In one of the great ironies in the history of science, Mendel did his work at almost the same time as Darwin, but Darwin never knew of him. Mendel's work was not recognised by anyone in his lifetime and he was forgotten for many decades.

¹⁰ As mentioned, Daniel Dennett famously gives it the 'numero uno' award for "the single best idea that anyone has ever had...ahead of Newton and Einstein and everyone else.....the idea of evolution by natural selection unifies the realm of life meaning and purpose with the realm of space and time, cause and effect, mechanism and physical law. (1995, p 21)

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I listened. He had a pleasant, soft-spoken manner. When I'd ask a question, he would say, "I've always wondered about that too..."

One day he said, "I don't actually believe in gravity – never have – and I've always wondered why things *appear* to fall. When I was little, I thought that when you let go of something, it *should* just stay there." Then he told me about his emerging adult theory that stemmed from this childhood perception. Paraphrasing and condensing his explanation, he said maybe the whole of the universe, *every single thing and atom*, expands at a rate that is proportional to their size the previous moment. Big things, like the earth, were expanding much faster than little things like a tennis ball. What we describe as 'falling' is really the expansion of the earth and whatever is 'dropped' until they come together!

The plausibility or merit of this idea doesn't matter for my present purposes. What struck me, and does matter, is two things: 1) that he had the gumption to question something that was so taken for granted, and 2) that he started from the point of doubt about something that most of us would take to be about as bedrock as you can get, and tried to come up with an alternative explanation. How could he say he didn't *believe* in gravity...? How can one *not* believe in something so basic, so... 'incontrovertible'?

I also confronted a childhood puzzle when I caught my first fish – at the age of six or seven. As I saw the fish flopping about on the wooden pier – I said, "I'm sorry fishy," more than a little alarmed by the death throes of the poor creature. I had a sense that I'd done something *not nice* and needed to apologise. Of course this is just childish sentimentality and doesn't mean anything important. Or does it?

Do I have the gumption, the presumption, to join with a growing cohort in striving for a newly emerging vision of universal species equality? Even though I do not want to breach the so called fact/value divide (the 'naturalistic fallacy'), I do think there is something in our emerging understanding of the continuity and essential unity of life that leads us to moral questions regarding how we relate to other species and indeed the whole biosphere. If I am right, moral precepts would need to be extended well beyond the human domain. How far and why? What would justice for and across all species look like?

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This is a big and interesting question, but well beyond the scope of the present inquiry. It is a question related to the topics of human nature and belief that I am pursuing. I refer to it to show how evolutionary thinking can insinuate itself into areas beyond biology proper. It is widely agreed, since David Hume drew attention to the is/ought distinction, that we cannot say that facts imply values. (quoted in Rachels 1990, p 61) Nevertheless, I agree with James Rachels that there is fruitful philosophical ground in the concept of ‘morally relevant facts.’ (1990, p 62ff) In this way, I think evolution and ethics may be related – but this too is a topic for another time.

I think that Charles Darwin was an exemplar of the ‘courage to question.’ He delayed 20 years before going public with his radical idea. He was afraid – not least of all, of alarming his dear wife, a devout Christian. Paul Tillich, an eminent theologian, spoke of and wrote about the *Courage to Be*. (1952/1968) Maybe even more than the courage to be, we need the courage to question. This is what Darwin and, in a smaller way, my physicist friend did.

A major paradigm shift has begun. But, as Ernst Mayr notes, we still have a way to go. And what will become of our sometimes sanctified special ‘selves?’¹¹ This is a step along the way on the journey of understanding that was launched by Charles Darwin. Darwin was arguably one of the most special human beings ever to walk this planet. This is somewhat ironic in that he believed he was no more special than one of his beloved barnacles, or orchids or earthworms! He actually thought that earthworms displayed some intelligence! What a radical idea that was – in an age that had barely gone beyond Descartes’ cruel and repugnant notion that animals were machines and incapable of feeling pain. (Rachels 1990, p 130)

Meanwhile, Darwin *observed*. He could *see* the earthworm respond to its environment. Of course, people thought he was crazy. Now many researchers, including Pamela Lyons in Australia, are amassing persuasive evidence that – not earthworms, not just single-celled ‘animacules’ (vanLeeuwenhook), but even prokaryotic *bacteria*¹²

¹¹ Or should we say, ‘*soulves*?’

¹² Still and ever the most dominant life form – most of the living material on earth is microbial! As James Shapiro says, “They can do without us but we cannot do without them.” (‘All in the Mind,’ 7/11/09). I myself put about 25,000,000,000 of the little altruists, *Acidophilus* and *Bifidobacterium*, into me yesterday to go after those nasty *salmonella* or *E. coli* which invaded me with some leftover chicken. And yet the Bible never mentions them directly ...?

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without a nucleus, much less a nervous system, demonstrate many advanced behaviours which arguably are indicative of some kind of cognitivity. (*All in the Mind*, 7/11/09). *Perhaps* it is true, as Professor J. Arthur Thomson said in his little book, *The Gospel of Evolution*, back in 1926:

We must assume that there was something corresponding to mind in the first living creatures, just as it is true of the first stages in the making of the individual man....whatever evolution means it is a process involving mind from first to last – if we dare speak of last – and through and through. It was part of the philosophical teachings of Aristotle that there is nothing in the end which was not also in kind in the beginning. Therefore, as we are sure there is mind in the end, we may also, as evolutionists, say: In the beginning was MIND. (1926, pp 35-6)

The courage to question and to formulate new ideas – these are the fruits of a creative mind. I don't think Darwin would concur with Thomson, nor would I. But I'll bet Darwin would be fascinated by Pamela Lyons' findings of putative 'intelligence' in bacterial behaviour. My guess is – he would not be very surprised at all.

Ideas are born

An idea is born naked. It may be stillborn or, in infant innocence, it may remain undressed, undeveloped, stunted and shunted out of awareness. But if and as it grows, gets glands and hair, it must cover up and dress appropriately in order to enter the world of big, burly, bully ideas that strut and *rule*. Brute orthodox memes rule the mind world with iron-like assurance, and are on the lookout for upstarts and invaders who would displace them. If necessary they will command their 'rational slaves', *RatS*, to seek and destroy, with mind-numbing rhetoric and piratical *arghhuments*, the heresies and the little hubrisees with long necks and big 'I's. (DH)

Cutting Down Darwin's Tree –

To Save the 'Third Chimpanzee' (J. Diamond 1991/2002)

It wasn't planetary gravity that Darwin questioned, even though the principle he discovered may, like gravity, be most appropriately described as 'natural law.' I believe Richard Dawkins sees natural selection as *fully law-like* – just as gravity is. Many would agree. The question Darwin raised (How do species arise?) and the answer he proposed (natural selection), cut to the core of who human beings thought they were. Although he studiously avoided saying anything about humans in *Origin of Species*, it was transparently obvious that his theory applied to us as well. About

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ten years later, he ‘came out with it’ in *The Descent of Man*. It forced us (men, and women!) to question our belief so long embedded in the identity of human kind – that we were somehow special, very special, *created in the image of God*. Our ‘half-way-to-the-angels’ place in the scheme of things, our centrality in creation, our vain presumption that *We* are *what it is all about* was now in graver danger than any previous threat from philosophical arguments posed – for Darwin’s case was based on the new paradigm of ‘evidence above all’ – he had lots of it, and an argument too.

In this section, and for the remainder of this chapter, I will engage with and challenge the traditional (largely religious) conception of our *specialness*. I will be using this term in two senses – the one descriptive and the other normative. In the first sense, I will be arguing we are not special because we are not essentially different from other forms of life – we have all evolved over the same time – and according to the same rule – *adaptive fit to our environment*. As Darwin said, which will echo through the ages, our difference is *in degree, not kind*. The second, normative sense of specialness is more complex. It is about whether we are special in the sense of ‘important.’ I will largely argue against this too, except that I will acknowledge two ways in which this is partially true. One is that, due to our social and relational nature, we are certainly important to one another. Indeed, our evolved cognitive capacities make this a rich source of meaning for us. The other sense in which we have some special importance is in our capacity to take responsibility for ourselves and our impact on the world – this is well beyond what other animals are capable of.

Unfortunately, some of the language and metaphors used by Darwin, as well as later evolutionists, have contributed to and reinforced notions of human superiority. Language reflects and shapes our thinking. We have what may be regarded as a *grammar and vocabulary of specialness*. “I” is capitalized. If we are an animal, we are “*higher*” than the others. Only we have a ‘mind’ not to mention a *soul*.

Darwin was of course a man of his times and culture, and try though he did to be objective and scientific, it is a well recognised problem in the philosophy of science that much of science is driven by our language. The result is that theory inevitably carries with it a great deal of cultural influence. (Shermer 2000/2003, p 149) The well regarded philosopher of science, Michael Ruse, who has written extensively on Darwin and evolutionary theory, has in a recent book raised the question: ‘Is

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evolution a social construction?’ (subtitle of his 1999 book *Mystery of Mysteries*). Ruse raises many interesting questions about how cultural values encroach upon an evolutionary biologist’s thinking. He notes how in Darwin’s time, “...he (Darwin) could not stop or delay the rush to make evolution a modern secular substitute for the older religions. “In some ways,” Ruse continues, “one senses that, toward the end of his life, he sank into acquiescence.” (1999, p 80) It is beyond my scope here to delve into these questions. However, as I have intimated before, we must stay alert to the ways that culture, context and environment influence our thinking, and can possibly mislead us. Language and metaphor have that potential. Of all the language traps, few were as seductive, or as misleading as ‘higher’ and ‘lower.’ Even Darwin’s famous ‘tree of life’ has its problems in this respect.

The ‘tree of life, which Darwin called a ‘diagram,’ is the only illustration in *On the Origin of Species*. (see Figure 1) As an analogue of a tree, it is a vertical image. As a representation of the ‘branching’ structure of evolution, it successfully visually reinforces the divergence of phyla, order, family, genera and species – showing how species are related. However, the vertical orientation is misleading. I think it would be more accurate (though of course less tree like) if it were envisioned on its side. Being an up and down image, it unfortunately lends itself to the notions of lower and higher, suggesting advanced and ‘primitive.’ The time dimension runs from the

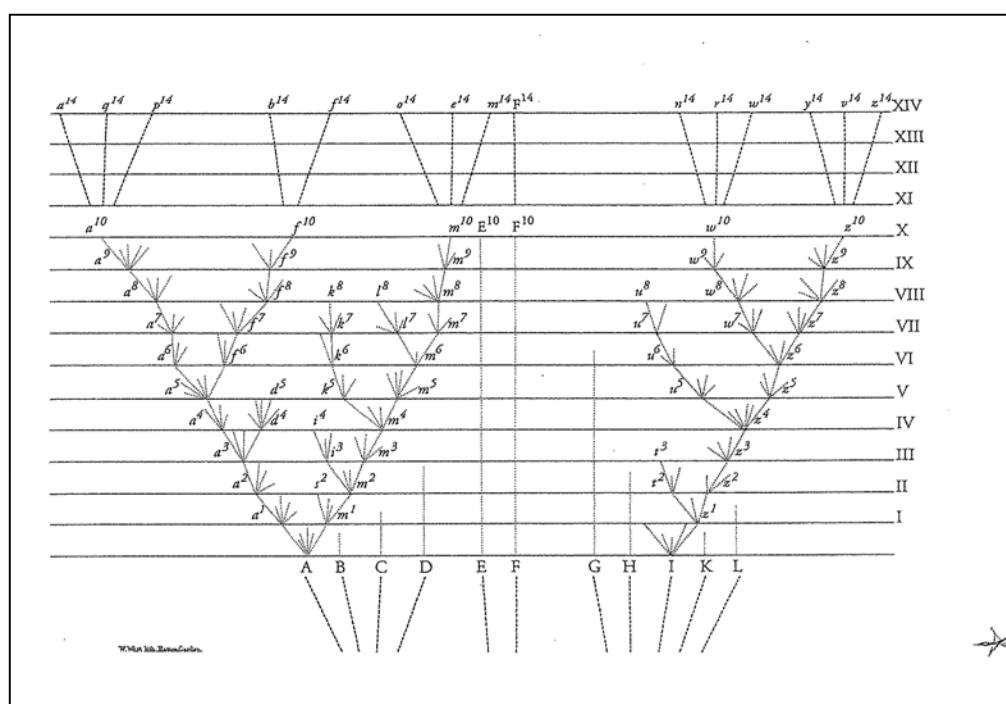


Figure 1: Darwin’s Evolutionary ‘Tree’ (Darwin 1859)

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‘bottom’ to the *top*. Darwin did not intend this interpretation, of course, and in fact his ‘diagram’ is quite technical and takes him several pages to explain, as it covers many of the possibilities of how natural selection can work out – and shows how the variety and diversity of life unfolds. It is more the popularisation of ‘the tree of life (as you can see Darwin’s ‘tree’ isn’t very tree like) that has been so abused and over used to suggest human superiority. In fact Darwin’s picture has a flat top which in no way suggests a ‘top rung’ for *Homo sapiens* which characterises the later ‘ladder metaphor.’ In spite of all this, I still feel my basic point stands – the graphic could better be envisioned on its side. It might help to avoid the misinterpretation of higher as better, more complex, more advanced or evolved – all of which is without foundation in Darwinian theory. All organisms alive today have evolved for precisely the same time – around 3.7 billion years. No organism is ‘more’ or ‘less’ evolved. Of course, the other suggestion that came out of the verticality of the tree, and even more from the common *ladder* metaphor, is the ascent toward *increasing complexity* – *progress* – of course, with us at the top! John Gray, has a way of knocking us off the top rung, and cutting the ‘third chimpanzee’ down to size, “For Gaia, human life has no more meaning than the life of slime mould.”¹³ (2002/2007, p 33)

The vertical conception of higher and lower contributed to the perception of evolution as progressing toward ever greater, ever more intelligent, ever more advanced species. There are, of course creditable intuitive, common sense reasons for this perception (e.g. we build cities; bacteria and slime mould don’t), but in the end each species does what it can with its own profile of capacities. Obviously some are more useful to us, but what does slime mould care about a city. Termites might have a good case for incredible architecture, with far fewer resources, and that doesn’t exhaust the planet. The issue of evolutionary ‘progress’ is especially fraught. S.J. Gould totally condemns (1996/2005, pp 167-75) the notion of human superiority as nothing but ‘big brain chauvinism.’ He is most eager and strident in his attempts to disabuse us of our notions of advancement or specialness – that evolution is in any way progressive:

We are possessors of one extraordinary evolutionary invention called consciousness – the factor that permits us, rather than any other species, to ruminate about such matters (or rather, cows ruminate – we cogitate). But how can this invention be viewed as the distillation of life’s primary thrust or

¹³ Read it again, for the hard truth hurts less when it slaps you in the face the second time.

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direction when 80% of multicellularity (the phylum Arthropods) enjoys such evolutionary success and displays no trend to neurological complexity through time – and when our own neural elaboration may just as well end up destroying us as sparking a move to any other state that we would choose to designate as “higher”.
(1995/2005, p 15)

While taking to task many of Gould’s ideas,¹⁴ Richard Dawkins agrees with him wholeheartedly in objecting to underlying and ubiquitous themes of human chauvinism. On these general matters of the saturation of human culture with speciesism, Dawkins says that much comparative psychology literature is “awash”:

...with snobbish and downright silly phrases like ‘subhuman primates,’ ‘subprimate mammals’ and ‘submammalian vertebrates,’ implying an unquestioned ladder of life defined so as to perch us smugly on the top rung.
(2003/2004, p 208)

My view is in line with Gould and Dawkins. But I propose we see the received notion of our specialness as an artefact which *at one time* served a useful purpose, and must now be retired... gently. For the sake of social harmony I propose being relatively hard (that is “questioning”) on the proposition, while being gentle on the persons who subscribe to views of human superiority.

I believe ‘socio-diversity’ in human culture is a form of bio-diversity. This is part of the ‘right to believe’ theme I will develop in Chapter Four. It is one of *my* beliefs that our difference from other species is one of degree and not kind, as Charles Darwin has said. (1871/2006, p 837) Compared to other species, we have more of some things and less of others. We have our own ‘recipe.’ We are unique – just as every species is. Lest “unique” sounds suspiciously *special*, Fernández-Armesto cautions us, “Humans are unique, but not with any unique sort of uniqueness.” (2005, p 36) Perhaps what we should emphasize is not that we are not special, but rather that *every* species *is* special! Every species alive today has made it to the ‘top’ of Darwin’s tree. We are all survivors – at least to this point. Unfortunately, some twigs are being

¹⁴ Dawkins gives a more nuanced ‘adaptationist’ definition of progress that he supports: “A tendency of lineages to improve cumulatively their adaptive fit to their particular way of life, by increasing the numbers of features which combine together in adaptive complexes.” (2003/2004, p 208)

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snipped at an alarming rate. Extinction is part of the program, and no species is immune from that threat – none are special in that respect, *including us*.

Part of our hominid ‘recipe’ includes a certain kind of relational specialness that we are capable of because of the kind of emotional social animals we are. Our relationships make us *special to one another*. But this then captures the more normative sense of specialness, as I have mentioned – one within our species, between its individuals. The individuals within every other species are undoubtedly special to each other too, even without being aware of it in the way we are.

‘Specialness’ is not only an assessment of what we are or what we think we are, but also connected with what we need. In that vein, a case may well be made that *Homo sapiens* are special in that they have some ‘special needs.’ On account of the cognitive architecture that is arguably our most distinguishing characteristic, plus the closely allied social nature of our species, we should not overlook our needs any more than we should ignore the needs of other species.

Let us now turn to some history. The notion of an ‘unassisted’ natural origin is far from new. The evolutionary view, though its Darwinian form is fairly recent, is actually quite an old idea. And so is the idea that human beings are special.

Some Historical Background that Enriches the Evolutionary Story

It is interesting that the words ‘special’ and ‘species’ have the same derivation. Both designate some measure of distinction – being of a particular character. Then there is specification, and speculation, and spectrum. All these related words convey something of a history of meaning. Languages and words evolve too. I wonder – what was the ‘common ancestor’ of all the ‘spec’ words?

Interestingly, my old *Webster’s Collegiate Dictionary* gives the first meaning of species as, “a mental image or sensuous presentation; an object of thought considered as the similitude of an object in nature.” (1951, p 812) Shades of the Platonic forms? Fixed, eternal unchanging? Now *that* would be special!

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Species assuredly *are* special – but not in that Platonic sense. Indeed that brings us to the shift in our thinking which others foreshadowed and Darwin ushered in. John Dewey wrote beautifully and wisely on the ‘species mode of thinking’ and how Darwin changed all that:

The conception that had reigned in the philosophy of nature and knowledge for two thousand years, the conceptions that had become the familiar furniture of mind, rested on the assumption of the fixed and final; they rested upon treating change and origin as signs of defect and unreality. In laying hands upon the sacred ark of permanency, in treating the forms that had been regarded as types of fixity and perfection as originating and passing away, the “Origin of the Species” introduced a mode of thinking that in the end was bound to transform the logic of knowledge, and hence the treatment of morals, politics and religion. (1909/1951, pp 1-2)

Of course, Darwin was not the first to consider that life evolved. As with many supposedly new or modern ideas, the ancient Greeks got there first – not in this case in terms of having any scientific explanation of how things might actually happen – but rather in seeing that a naturalistic explanation was needed, and theories could be proposed.

Of the pre-Socratic ‘scientific’ philosophers, Anaximander was one of the most ingenious. He was the first to make a sundial, a map of the known world and a celestial globe that showed the patterns of the constellations. About biology, he presciently noted that human infants were too helpless at birth to have survived unless they somehow arose from other animals that were more self reliant at birth! He also proposed that life spontaneously arose in mud. (Sagan 1980, pp 143-44)

Empedocles conceived of a ‘cosmic evolution’ driven by ‘love’ and ‘strife’ in which parts of animals combined and recombined in weird mixtures like an ox-man. The multiform chimeras of Greek mythology – the sphinx, minotaur, centaur, mantichore, griffin and many others – may well be related to Empedocles’ ideas. He doesn’t seem to have had any notion of how one form might have prevailed or been better adapted, but certainly there was a concept of dynamism in nature which could lead to biological transformation.

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Democritus also made some prescient suggestions – for example that there were other worlds that might or might not be inhabited! He also thought that, “the simplest forms of life arose from a kind of primeval ooze.” (Sagan 1980, p 146)

Not at all biological, but perhaps the most startling observation came from Hippocrates who wrote in his *On Ancient Medicine*, “Men think epilepsy divine, merely because they do not understand it. But if they called everything divine which they do not understand, why, there would be no end of divine things.” (Sagan 1980, p 145)

One of the greatest biologists of all times was Aristotle. He was a serious student of living things, and many of his observations, particularly of marine life, are current to this day. In his work, he was a scientist in the modern sense, carefully and accurately describing the parts and functions of parts of such creatures as cuttlefish, octopus, crab and lobster. It was a systematic inquiry – D’Arcy Thompson writes:

...in all this there is far more than a mass of fragmentary information gleaned from fishermen. It is a plain orderly treatise, on the ways and habits, the varieties, and the anatomical structure of an entire group. Till Cuvier wrote [in the 19th century!] there were none so good, and Cuvier lacked knowledge that Aristotle possessed. (1913, p 19)

Thompson speculates that as well as contributing knowledge still current, there may be “many allusions to things of which we are perhaps still ignorant.” (1913, p 20). Biology became a science in Aristotle’s hands and this almost certainly had a great influence on his philosophical work. The comparison of the state, the ‘body politic,’ with an organism was a metaphor first employed by Aristotle.

As well as being a keen, careful and thorough field naturalist, Aristotle dealt with the theoretical side too – formulating ideas on generation, respiration, vital heat, not to mention still weightier themes of variation and heredity. He covered or touched on almost all of the central problems of biology. Anticipating Darwin, he dealt with the questions of teleology, adaptation and design. (Thompson 1913, p 17) However, Aristotle’s focus on ‘final causes’ was a red herring from the scientific point of view. According to Bertrand Russell, “...all known scientific laws have to do only with efficient causes. In this respect Aristotle led the world astray, and it did not recover fully until the time of Galileo.” Russell further reflects, “There may, for aught we

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know, be purpose in natural phenomena, but if so it has remained completely undiscovered.” (1950/2009, p 127) This will be worth recalling in our discussions of religious belief.

Nor did Aristotle neglect animal behaviour, psychology (of such things as fear, anger, and courage) and rudimentary intelligence¹⁵. (Thompson 1913, pp 26-7) He was truly centuries ahead of his time. A final comment from Thompson is well worth including. It points to the same issue as Russell’s comments above. Even with acceptance of Darwinism, debates, ultimately traceable to Aristotle, still leave the question of purpose open. Purpose may not be necessary to a scientific explanation but it is difficult to totally rule it absolutely out. Bio-philosophy in the future may, we hope settle this one.

In our recent science the Aristotelian doctrine is not dead. For but little changed, though dressed in new garments, this Aristotelian *entelechy*, which so fascinated Leibnitz, enters into the vitalism of Hans Driesch; and those who believe with him, *that far as physical laws may carry us, they do not take us to the end*: that the limitations of induction forbid us to pass into thought and argument from chemistry to consciousness, or (as Spencer well knew) from matter to mind... (Thompson 1913, p 29) [my italics]

Between Aristotle and the modern era, not much of great significance to biology occurred until Carolus Linnaeus in 1758.¹⁶ It is worth noting that Galen (130–220AD) observed the similarities between Barbary macaques (the only apes then known to Europeans) and human beings. He dissected them, and observed:

If an animal has a round skull, its brain must be round; if elongated, so must be the brain. If the jaws are small and the face is oval, the muscles must correspond... Arteries, veins, and nerves likewise conform to the bones. Choose those monkeys that are most similar to humans, with short jaws and small canines. You will find that other parts also resemble the human condition, for they can walk and run on two feet. (Groves 2009, slide 2)

According to Colin Groves, an Evolutionary Anthropologist from the Australian National University, at least one Christian in the medieval period took some interest in

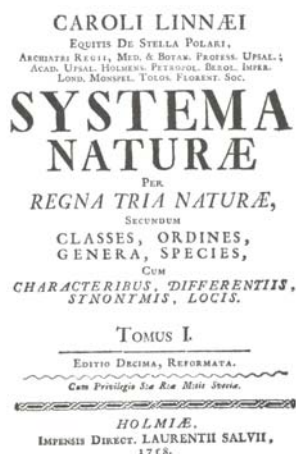
¹⁵ Aristotle might not be at all surprised about current research into bacterial cognition that I have mentioned.

¹⁶ Although Thomas Hobbes (1588–1679) was, by Daniel Dennett’s reckoning, the world’s first ‘sociobiologist.’ (1995, p 453)

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animals. St Isidore who lived from 510–636 possibly called apes ‘Simians’ from the Latin ‘simiae,’ “because we can see a great *similarity* with human faculties.” But perhaps more likely, simian came from ‘simia’ meaning ‘flat nosed.’ (2009, slide 3)

Then we come to Linnaeus who truly represented a *breakthrough*:



1758:
Carl
Linnaeus
classifies
humans as
animals...
as
mammals...
as part of
the Order
Primates

Breakthrough!

- 18 MAMMALIA.
GENERUM Characteres compendiosi.
- I. PRIMATES.
1. Homo nosce te ipsum.
 2. Simia Dentes laniarii, hinc remoti.
 3. Lemur Dentes primores inferiores 6.
 4. Vespertilio Manus palmatae volatiles.
- II. BRUTA.
5. Elephas Dentes laniarii & molares; Nasus proboscide elongatus.
 6. Trichechus Dentes laniarii superiores; molares ex offe rugoso. Pedes postici coadunati.
 7. Bradypus Dentes laniarii & molares. Nasus obtusus.
 8. Myrmecophaga Dentes nulli. Corpus pilosum.
 9. Manis Dentes nulli. Corpus squamatum.
- III. FERÆ.
10. Phoca Dentes primores inferiores 4. Auriculae nullae.
 11. Canis Dentes primores superiores intermedii lobati.
 12. Felis Lingua aculeata. Ungues retractiles.
 13. Viverra Lingua aculeata. Ungues exserti.
 14. Mustela Dentes primores inferiores conferti: duobus alternis interioribus.
 15. Ursus Dentes primores superiores excavati. Penis offe flexuoso.
- IV. BESTIÆ.
16. Sus Dentes primores superiores 4, inferiores 8.
 17. Dasybus Corpus testa zonis interfascia.
 18. Erinaceus Dentes primores superiores 2, inferiores 2.
 19. Talpa Dentes primores superiores 6, inferiores 8.
 20. Sorex Dentes primores superiores 2, inferiores 4.
 21. Didelphis Dentes primores superiores 10, inferiores 8.

Figure 2: Linnaeus Classifies Humans (Groves 2009, slide 6)

Linnaeus’ ‘breakthrough’ was devising for the first time a comprehensive and systematic method of classification of species. He classified *Homo*, man, under the ‘primates.’ This was truly a brave and radical departure – a bold placement of ‘man’ within the animal kingdom. Controversy ensued and Linnaeus’ move was ‘undone’ in 1795 by one J.F. Blumenthal, who could not stand for humans to be placed in the same group as apes and monkeys – so he created a new one just for us, ‘Bimana.’ Other primates went into another new grouping, “Quadrumana.” (Groves, slide 8) Blumenthal seemed to think our bipedalism was especially significant. Little did he know that hominids were bipedal millions of years before their brains got much bigger

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than an apricot! Not to mention that bipedalism is far from rare in nature. The dinosaurs were doing it millions of years ago. But, significantly, in spite of wanting to place man in a separate category away from the ‘disgusting’ apes, it seems Blumenthal was still willing to consider the idea of man being classified within the animal kingdom! In terms of the descriptive notion of our specialness, this strikes me as a pivotal point in history – the first broad acceptance that man is an animal – just so long as he isn’t put in with the primates!

Finally, T.H. Huxley who “brooks no nonsense” sorts out the controversy in 1863 saying:

... there can be no justification for placing [man] in a distinct order... a century of anatomical research brings us back to [Linnaeus’] conclusion, that man is a member of the same order (for which the Linnaean term PRIMATES ought to be retained) as the apes and lemurs.
(1863, quoted in Groves 2009, slide 9)

Coming up to the more modern era, there were several thinkers who engaged with the possibility of a naturalistic origin, including Erasmus Darwin, Charles Darwin’s grandfather, who already had one important part of the puzzle when he said:

...all warm-blooded animals have arisen from one living filament...with the power of acquiring new parts in response to stimuli, with each round of ‘improvements’ being inherited by successive generations.
(Erasmus Darwin 1794–1796)

Toward the end of the 18th century, then, the concept and term *evolution* was beginning to be discussed. Jean Baptiste Lamarck was the first to attempt to devise a serious theory which he based around the inheritance of acquired characteristics. This had great influence – even on Charles Darwin, but was superseded by natural selection. Grandfather Erasmus was a staunch evolutionist in theory, but had no grasp of the facts of the organic world. This his grandson Charles was going to supply in abundance. By the mid-19th century, evolution was being widely talked about and even accepted to some degree by an adventurous intellectual elite. However, no-one had come up with a convincing and comprehensive theory that fitted the facts and spelled out exactly *how* it was meant to work.

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It was the means or mechanism by which organisms evolved which Darwin discovered and eventually called *natural selection* (though he initially preferred ‘descent with modification’). He was not alone when he finally came forward with it. He first noted the idea in 1838, but *Origin of the Species* was not published until 1859. Why at that particular time did he decide finally to ‘go public?’ He received a letter from another naturalist, Alfred Russell Wallace, who was working in the Malay peninsula collecting exotic species, and with whom Darwin had corresponded. In a striking example of intellectual convergence, Wallace had come up with the almost identical idea – indeed, Darwin said Wallace’s letter could have been an ‘abstract’ for the *Origin*. Darwin was seized with ethical qualms that it would be wrong for him to claim priority now that Wallace had written to him. But Darwin’s friends, Lyell, Hooker and T.H. Huxley prevailed upon him to do so and quickly. He had, after all, been sitting on his theory for 20 years, and already written it up in some detail many years before.. In one of the most dramatic episodes in the annals of science, and it is a tribute to Victorian gentlemanly behaviour, a Solomon-like solution was arrived at – the two papers would be presented simultaneously! For years Darwin referred to natural selection as his *and Wallace’s* idea. But Darwin’s amassing of evidence, his undeniable priority¹⁷ and his position in Victorian society all conspired to assign the credit mainly to him. Even Wallace, in a letter to Darwin in 1864, said, “As to the theory of natural selection itself, I shall always maintain it to be yours and yours only.” (in Rachels 1990, p 34) It was clearly an idea whose time had come.

Passing through

Since Darwin, a ‘species’ can only be understood as a still frame in the moving picture of life. Species are here and gone quicker than a flicker in evolutionary time. Some last longer than others – are here for a moment or two, or a few. Much of the ancient notion of human ‘specialness’ is based on seeing ourselves as the destination, the culmination, the ‘*chosen*’ species. Everyone else was a mere tenant, but the permanent resident that the world had been waiting for arrived! But, as a species, we too are passing through. There is no compelling reason why we should be more permanent, or more special, than any other sojourner. Some have a longer lease than others – crocodiles and mosquitoes have done well – but none of us tenants owns the property. Nor, as far as I can see, do we have any special rights or privileges while we’re in residence. (DH)

¹⁷ Established in many letters and notebooks.

Origins: the Genetic Fallacy and the *Modal Fallacy*

This is a timely point to pause for a moment to deflect a potential misunderstanding or criticism of the position I am taking. As I have said in the above aside, we are no more special than any other creature or life form. An evolutionary theory of man is neither a demotion nor a promotion – it is a ‘leveler.’ Being animals neither constrains nor endorses us in any particular course. Origins do not limit or define us – this is the basis of what is known as the ‘genetic fallacy.’

It is not that human beings are *just* animals or are *only* animals. I am not intending at this point to conclude anything (beyond the minimal claim we are animals) about *what we are*. Mainly I am building a case for *what we are not*. What we are is a more vexed question. Even hard-core, naturalistic ‘biologists’ (as opposed to ‘theologians’) such as E.O. Wilson concede that human nature is malleable. He says, “Human nature exists, and it was self-assembled.” (2006, p 1482) The question/point I wish to raise here is: just how relevant to our interest in the nature of belief is the origin of human nature? And, furthermore, and to the point of this section, can we conclude *anything* about our nature *from* our origins?

The genetic fallacy refers to the claim that facts about origins tell us something concrete and inescapable about present nature. (Baggini 2003, p 90)¹⁸ However, I would argue that one can go too far in the other direction and claim that origins have *nothing whatever* to do with present state or purpose. This is to commit another and opposite fallacy – the *modal fallacy*. (Fuller 2003, p 184) Origin or original function doesn’t tell us what something is or is not, nor how it must function, nor, least of all, how it *ought* to function. A screwdriver can, after all, be used to pry lids off! But I submit that origin, or original purpose, may still be relevant to our *understanding*.

This is an ongoing pitfall in evolutionary psychology in discussions of human behaviour. It can easily be taken that an attempt to explain ultimate evolutionary causation amounts to an explanation and a *justification* of a present idea, attitude or behaviour. For example speculation about the requisites of sexual behaviour in the environment of evolutionary adaptedness has lead some to incautiously suggest that

¹⁸ Also discussed by Daniel Dennett (1995, p 470) who said that both Darwin and Nietzsche issued warnings about just this sort of inference.

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this is why men today are promiscuous and women are cautious and ‘choosey.’ This is especially worrisome when this claim is advanced to justify the behaviour. This is clearly not correct. But still, the inferential slide from ‘is to ought’ is a somewhat tempting danger zone, and many of us fall prey to it at times.

In terms of my argument that we are not special – I am *not* saying we are not special *because* we are animals. There are two differences between what I am saying and that position. First: There is no entailment intended. We are not special AND we are animals. I clearly think there is a *relevance* relationship, but it is not an entailment. It is entirely possible that someone could accept that we are animals and still think we are special.¹⁹ Second: My emphasis is certainly not that animals in general are ‘ordinary.’ Mine is an *equalising* or balancing argument. It is not intended as a rebuttal of any form of non-naturalism or ‘mysterianism.’²⁰ Its purpose is to affirm a *family-like view of the community of life*. In this community, every being is special *in its own way*, but no one species is more special (in the normative sense) because it has more of some trait or feature (e.g. intelligence) or less of something else (e.g. hair).²¹

I would say that we are ‘first of all’ animals. I am not claiming that biology is ‘destiny.’ But I do believe that, it is of great interest and *potential* relevance. We would be wise to pay close attention to and have great respect for our ‘animalness.’ I think that it is an important way of understanding ourselves, and a perspective which offers many potential insights. In Daniel Dennett’s great work on evolution, *Darwin’s Dangerous Idea* (1995), the subtitle is “evolution and the meanings of life.” Is there any reason why evolution and our origins should not be a source for thinking about meaning and value? Studying ourselves just as non-human animals are studied must be part of the picture of understanding human nature in all its fullness. It isn’t the whole story, but it is surely an illuminating part of it.

¹⁹ In fact, this is almost precisely the position of the Catholic Church’s encyclical ‘*Humani generis*’ (1950) which held that primeval man descended from the ape family, but that he acquired an immortal soul by ‘*divine afflatus*’ in the early Pleistocene period – about 800,000 years ago. (Hass 1972, pp 18-19)

²⁰ Based on Daniel Dennett’s somewhat pejorative use of the term, “mysterian” (1995, p 471) I mean it descriptively – of those who relish and revel in the notion that we don’t know everything, and who seem to think that science can never tell us much about what’s important to know. They therefore prefer explanations in which ‘mystery’ is an important component.

²¹ I’m reminded of the lampoon of communist ideology in George Orwell’s *Animal Farm* – something like, ‘all animals are equal but some are more equal than others.’ Is it possible to be ‘more special?’

In your skin

It's where we start, like a baby – in our biological body, which is also not *just* a body.

I would also say we have a biological *self* in our brains. Brains are a part of body. Whatever else a brain is or does, or contains, or gives rise to, it is still unmistakably part of body. And as far as reliable evidence seems able to support, we stay and reside in this physical brain/body. When anyone wishes to allow that we are like other animals, it is usually the physical and perceived body they refer to. I see no point, no advantage in denying *that evidence* of our senses and experience. Take off your clothes and have a good look in the mirror. Don't look at your 'eye-self', look at your 'body-self' as a whole. In spite of the obvious physical similarities with 'the brutes', some supporters of Darwin's thesis, like American botanist Asa Grey, still wished to retain a notion of 'soul' – a soul that itself may evolve, and through which we are 'immeasurably exalted.' (Rachels 1990, p 85) In general, however, it is our physical, bodily being which is the least controversial sense in which we are not special. (DH)

Origin is not destiny, but it is relevant to our practical understanding.

Specialness of the 'Mental Faculties' Compared with Non-Human Animals

Specialness of human faculties is ascribed to a number of cognitive, psycho-spiritual traits. Darwin said in *The Descent of Man* that many authors insist that "man is separated through his mental faculties by an impassable barrier from all the lower (sic) animals." (1871/2006 p 806) He collected a 'score' of such alleged differences, but then distilled them into this condensed list:

...man alone is capable of progressive improvement...he alone makes use of tools and fire, domesticates other animals, possesses property, or employs language; that no other animal is self conscious, comprehends itself, has the power of abstraction, or possesses general ideas; that man alone has a sense of beauty, is liable to caprice, has the feeling of gratitude, mystery, etc.; believes in God, or is endowed with a conscience. (1871/2006, p 806)

Some of these may be more or less true (fire and language) and some are false, but quite a few involve conjecture about what goes on in animal heads which we would have a very hard time knowing about for sure. It is not uncommon to hear or read bold pronouncements on what non-human animals can and can't think about, and the quality of their internal and cognitive experiences. Christine Korsgaard in response to

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Frans de Waals work with primates says, “Even if apes are courteous, responsible, and brave, it is not because they think they should be.” (in de Waal 2006, p 117)

Daniel Dennett has written an article entitled, ‘Do Animals Have Beliefs’ in which he argues that at least some animals – dogs and raccoons are his samples – behave in such a way that ‘belief,’ if permissively understood, can be deduced from their obvious desires and intelligent behaviour in relation to those desires. (1995, pp 1–5) D’Arcy Thompson’s reading of Aristotle’s biology states that Aristotle allowed for ‘gradation in psychology’ in which some animals possess “...something which we may call sagacity, which stands not far from reason.” (1913, pp 26–27)

Some people are willing to consider animal cognition, but most dismiss much beyond basic states, such as hunger and food, and therefore the ‘desire’ for food or water. It seems to me that in our arrogance, we take the attitude that when we want food, it is a ‘*desire*’ but when a non-human animal wants food, it is a physiological instinct, a mindless craving. In noting what is said and written about animal minds, I am reminded again and again of my work with non-verbal developmentally delayed children. Few people suppose these children (or similar adults) are bereft of cognitive states because they cannot use expressive language. But animals, we must remember, thanks to Descartes, don’t even feel pain! I wonder if Descartes was capable of feeling *shame*!

What about self-consciousness? How can we be at all sure animals don’t have it? With some of our close relatives in the mammalian order, I might well suppose completely the opposite – some animals, especially primates, almost certainly *do* have self-consciousness. Experimental work with chimpanzees has demonstrated what is cautiously called, “mirror self recognition.” (MSR) Is this not self-awareness? Dolphins too have been shown to possess MSR. (de Waal 2006, p 36) The possession of self-awareness is an empirical question. Rationalists need not apply their consciousnesses to it. In general, of course, there are large differences in degrees of ability, and quite possibly in degrees of self-awareness too.

The biggest differences that we can observe seem to be in tool use and language. But even with language, our specialness is beginning to crumble:

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There was a time when we thought humans were special in many ways. Now we know better. We are not the only species that feels emotions, empathises with others or abides by a moral code. Neither are we the only ones with personalities, cultures and the ability to design and use tools. Yet we have steadfastly clung to the notion that one attribute, at least, makes us unique: we alone have the capacity for language...Alas, it turns out we are not so special in this respect either. (Kenneally 2008, p 29)

When it comes right down to it, about the only thing I feel sure we possess that other animals don't is the use of fire. According to Kenneally (2008, p 34) all terrestrial animals are afraid of it, but somehow *Homo erectus* managed to overcome that fear – around 450,000 years ago according to some (Young 1971/1974, p 482) – and the rest, as they say, is history.

Fire and the development of articulate language²² are the areas which most likely account for why and how we have so greatly increased in our 'powers,' collectively considered.²³ And even then, it must be remembered that until a few thousand years ago, *Homo sapiens* were hunter gatherers, without any oil-powered, high-rise pretensions that make us seem so dramatically different now. In my opinion, it is not articulate speech so much as *written* language, and all it involves, that has enabled us to gain compound interest on our knowledge gains, and leave our animal cousins so apparently far behind. It is the exponential increase in knowledge and in social organisation – both very much facilitated by the recent invention of written language – that has enabled us to streak ahead of our DNA brethren. For the vast majority of our species' history, we were rooting around in the mud, and ran, ran, ran for every bite we could get, right beside the rest of the animal kingdom – not that there is anything in the least wrong with mud and running – some of us still love both!

The recent dramatic changes have played their part in tempting us to a view of ourselves that we are not just special, but *supernal*. Have we become gods? Are we

²² We had to have something to do, besides cooking, as we sat around the fire! We must recall that language as we now know it may not have come to us earlier than about 40–50,000 years ago (very controversial speculation on my part – no-one knows) – we must remember that hominid lifestyle did not change markedly for perhaps 2 million years; and it is only in the last 5–10,000 that anything like so-called civilization got going. Perhaps sounder speculation about language would be that it *gradually* evolved. When one should call it language instead of 'signalling' is arguable.

²³ Cooperation deserves a mention in this regard too, but again, this is far from unique to Homo (or even highly developed compared with the eusocial insects).

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completely *beyond the earthly limitations* of all other species? Asa Grey, and others, as mentioned, have considered whether mind and especially *soul* might evolve. There is a tension of competing ideas about human nature which begs for resolution. Are we special or are we not? Let's consider a few of the items on Darwin's list in more detail.

[Special note: Much of the foregoing and following factual information is, I believe, correct. It is gleaned from sources too numerous and vaguely remembered to mention. I consider much of this to be general knowledge, at least for anyone who takes an interest in such matters. Where I am unsure of something, I use an appropriate qualifier, or state that I am 'supposing' something.]

Tool use is often cited as the *sine qua non* of humanness. The very first hominid to be regarded as the start of our lineage, *Homo*, lived between 2.3 and 1.6 million years ago. 'He' was called *Homo habilis*, the 'handy man.' They were so called because "many stone tools have been found near *habilis* fossils, suggesting they were skillful in using them." (Zimmer 2005, p 82) And yet, now that we are alert to it, it is easy to see that many other animals use external objects in some way useful to them. Many species fashion, build, ornament and manipulate the environment in deliberate and skillful ways, even if not actually employing implements. But some do use implements, like stones and sticks and leaves too. The tool users are not only primates. Other mammals, and some birds, especially corvids, have been known to use objects to achieve their ends. Fashioning of tools as opposed to simply making use of what is lying around is much less common, but it does occur. And arguably the *selection* of objects from the environment, as nut-cracking chimpanzees demonstrate in their choice of stones to do the job, is a significant half-way step. They don't just pick up whatever comes to hand, but make deliberate *choices*.

My guess is that *communication* is more developed among non-human animals than tool use. Many organisms use a high level of behaviour and body, as well as auditory and visual, communicative strategies. Birds, of course, are very active visual as well as auditory communicators. Some cetaceans, especially whales and dolphins, are quite advanced in their use of sound – probably because water is such a good conductor of sound. Their vocalisations and 'songs' are extremely complex, and even have a syntax according to some recent research. (Conway Morris in *Intelligent Faith*, p 84)

Homo crēdulus

There seems little doubt that their sounds are meaningful to a greater degree than we have formerly thought. Some simpler forms of life, even the single celled, or the bacteria I have referred to, communicate *chemically*. Some more complex organisms than microbes retain chemical marking and signalling – right up to some primates, including humans! This may not be ‘communication,’ in the narrow human language sense, but let us not underestimate it until we know. It certainly shows how widespread, and varied, *and evolutionarily useful*, communication is. So why should we so credit our kind? Does the swift or the eagle say to the wren, or the swamp hen “You can’t fly, because look at me!” Every degree of communicative ability, like every degree of flying ability or of vision, can bestow some evolutionary advantage. It is clear that there is a continuum of communicative capacity. Darwin seems vindicated yet again – it is all a matter of degree, not kind.

Other attributions put forward as uniquely or quintessentially human seem even more questionable or erroneous to me – like that we alone “domesticate other animals” – there are many examples of symbiotic relationships that resemble domestication, notably among some of the eusocial insects. Some will object that mutualism and symbiosis in the non-human animals does not amount to ‘domestication.’ I would argue that there is no clear line between domestication and symbiosis. When it comes to the ‘milking of aphids’ by ants, we may well guess that they are both acting without what we call ‘intentions’ – but really, how do we know? Descartes said animals didn’t feel pain and so dogs were nailed down through their paws and cut open; and we say that ants or bacteria don’t have intentions – in both cases, the claim *to know* is not certain, or even very well founded in my estimation.

We alone ‘own’ property? Territoriality, arguably the origin of what we call ‘ownership’, is almost definitional for most of the animal kingdom. And then there are the all important ‘mind matters’ – we alone are self-conscious, have abstract thoughts, appreciate beauty, and have ‘feelings.’ I ask you – how can we be sure of what is actually going on in another human being’s mind, much less the mind of a crow or a chimpanzee? Anyone who suggests that animals (especially mammals) don’t have feelings is just absurdly, risibly wrong, as Descartes was. (See Balcombe 2006, *Pleasurable Kingdom*; also Lewis et al. *A General Theory of Love*, regarding the limbic system, the ‘emotion center’ common to all mammalian brains.)

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And finally, there remain our ‘glories’ – the spiritual qualities like having a soul, believing in God, having some kind of ‘transcendental awareness,’ and having a moral awareness or conscience. Some animals definitely have behavioural codes – up to and including behaviour suggestive of morality, which even Darwin thought was exclusively human. Recent research by Frans deWaal has demonstrated that other primates have the ‘building blocks’ of morality. (2006, p xiv)

Regarding the more narrowly ‘spiritual’ matters, it is very hard to say. Jane Goodall has interpreted some chimpanzee behaviour, e.g. sitting and staring at a waterfall, as revealing some sense of wonder or awe. Various researchers have reported on special behaviour in the presence of death – among cetaceans and elephants for example. I myself have observed dog behaviour in the presence of death which was most unusual.²⁴ Many of us have witnessed or heard similar stories, which are suggestive of one of the aspects of our experience that we tend to think of as ‘spiritual. Or maybe they reflect our tendency to interpret the world, including the behaviour of other animals, in terms of our experience of intentionality and spirituality? I would say that until we have an adequate philosophy and psychology of animal minds, it’s very hard to say what animals experience, and just what their capacities are. We can make guesses, but are we justified in doing so? I don’t know. It is a problem for the ethologists. Many people believe animals are conscious in some way. Buddhism and some forms of Hindu philosophy are based on a notion of *universal sentience*. At a minimum, and until further research shows a way forward, I accept Darwin’s proposition: ‘degree, not kind.’ It is the most plausible and open view to take. I believe we should be ever vigilant to the underestimation of other animals. If they seem less capable than us in some respects, so we are less capable than them in other respects. There is no sound basis for a claim to overall normative or moral superiority.

²⁴ The older of two dogs had died in the night. In the morning, I took the body out some distance from our house to where we were going to bury it later, when all my family came home in a few hours. The younger dog came with me. I covered the body with a blanket and headed back for the house. I called the young dog, who was sitting quietly next to her ‘fallen’ friend. She sat tight. I proceeded on and called her several times. She wouldn’t come. She sat there, hardly moving, for *over 8 hours* until we buried the body. And this was a Corgi who never went far from the kitchen for too long. She didn’t display any behavior I could describe as grief, but she was not going to leave her friend’s body unattended until it was buried. It has been suggested to me (R Corry, pers. comm.) that maybe she was just following the lead of the ‘head dog.’ I leave it to you...

Homo *crēdulus*

We have an ever-growing body of ethological research which documents, on the basis of behavioural studies, that many animals, and especially mammals and primates, are capable of much more than the traditional view has given them credit for. As a final string to my bow – it is said by some that in the absence of ‘true’ language there are good reasons to believe that ‘*behaviour is communication.*’ This is a professional principle for therapists who work with human beings who, for whatever reason (e.g. moderate to severe autism), are incapable of articulate speech. On that basis, even without communicative intent, much animal behaviour bespeaks an interactive awareness and organisation that we usually only give ourselves credit for. Darwin thought that even earthworms displayed some level of intelligence.²⁵ This was based on careful observation, which was one of Darwin’s acknowledged strengths. If I was a betting man, I would go with Darwin.

Kin: Differences and Similarities and What They May Mean

In spite of arguments against it, I suspect that many if not most people will continue to believe that the human capacity for language, learning and culture so exceeds that of any other animal, that it is even *obvious* that we are special, at least in the descriptive sense. Even such a courageous defender of Darwin as Thomas Huxley played down the similarity between us and ‘the brutes’ saying, “...no one is more convinced than I am of the gulf between civilized man and the brutes.” (in Singer 1994/97, p 172)

No matter to what extent we share an almost identical genome with chimpanzees (closer than a horse and a donkey, and consider that they can cross breed!), the difference between their life and minds, and ours, *appears* vast. Yet there is research which shows them, at least with receptive language and sometimes with expressive language, demonstrating a very high degree of sophistication in understanding and/or communicating. I have heard that with sign language they have shown the ability to use it creatively by constructing from words they knew, some new concept or idea – for example by putting together the signs for water and bird – “waterbird” on an

²⁵ A former editor of *New Scientist* magazine believes (though concedes he can’t prove it) that even cockroaches and bees are conscious! (Alun Anderson in *What We Believe but Cannot Prove* 2006, pp 128-29) Who knows?

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occasion when a duck came into view. I believe that if they had the larynx, if they *could* speak, they would, and I bet we could understand them too.²⁶ There is so much that unites the myriad organisms of the earth. I believe we have enough in common to interpret the language of others no matter how different it may be from our own. Our senses and our needs are so similar; how could our consciousness be so different?

Darwin's minimal principle, at least when thinking of our close mammalian relatives, is entirely convincing. The human brain has many similarities to brains of other mammals. Especially noteworthy, we mammals all have the 'limbic system,' which is the seat of emotions. (Lewis et al. p 40ff) All mammals almost certainly have *feelings*, even if they don't have 'elevated' or conceptual thoughts. The capacity to *feel* is a principle reason that we are not special in any normative sense – the capacity to suffer and to feel satisfaction trumps special status or privileges of any one species.

Darwin's principle of 'degree-not-kind' does not rule out large differences, but when it comes to our primate cousins, and especially our simian 'brothers,' I support views espoused by Peter Singer (e.g. in 1994/97, pp 159-63) that thinking of them as *persons* is not at all far fetched. I do not mean to imply that 'personhood' bestows any special rights, privileges or status on any of us – rather my suggestion is that we are *family* – *kin*. If anyone has had eye contact with an ape, they will not doubt how close we are.²⁷ If any one ape is special, all apes are!

It was a huge challenge to the traditional religious view that we are somehow related to apes. In the "Great Debate" that took place at a meeting of the British Association for the Advancement of Science in 1860, shortly after Darwin's *Origin of the Species* was published, a notable cleric by the name of Bishop Samuel Wilberforce took Darwin's champion, T.H. Huxley, to task.²⁸ After an eloquent but scathing attack on the perniciousness of the whole evolutionary idea, the Bishop turned to Huxley:

He enquired of Mr Huxley if he was descended from monkeys on his father's side, his mother's side, or both!? Hearing this, Huxley whispered to a companion: "The lord hath delivered him into mine hands." To

²⁶ Unlike Wittgenstein's famous lion.

²⁷ I have had prolonged eye contact with an orang-utan in the Melbourne Zoo, and I can tell you, without any doubt or hesitation whatever, there *was a person there*.

²⁸ Darwin himself was not there as he had little taste for the public defence of his theory.

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Wilberforce, he shot back, “I would rather be the offspring of two apes than to be a man and afraid to face the truth.” (in Rachels 1990, p 48)

It is odd how totally resistant to the close relationship with primates and especially *apes* the traditional Christian view was and is. That view seems more shocked by the primate connection than if you’d said we were related to frogs! Perhaps this is because of the unmistakable and thus uneasy *similarity*. And, after all, apes are often perceived as ‘ugly.’ (Frogs meanwhile, are ‘exotic’) Plus, of course, it was lack of first hand knowledge or direct contact. Like much prejudice, it was largely based on ignorance. Bishop Wilberforce failed to distinguish monkeys from apes, almost willing himself to ignore the presence or absence of a *tail*, which obviously makes an ape so much more conspicuously like human beings. If a creature has a tail, it is obviously not like us.²⁹ Primatologists can provide a long list of our similarities with apes. Jared Diamond in his 1991/2002 book, *The Third Chimpanzee* argues that the two types of chimpanzee should be included in our genus, *Homo*. Or perhaps we should be included in theirs, *Pan*! Genetically there is a strong argument for this.³⁰

However, no matter how much apes are like us, and despite a 95–98% identity of our DNA with chimpanzees, we are still, arguably, very different. But then chihuahuas and great danes are extremely different, and they are even the same species! Nevertheless, some would argue, the difference between us and (other) apes is much more than appearances. Is it? And does this lead to a justified belief that human beings are completely separate and apart from our ape cousins?

As I see it, there are two main issues in understanding the *apparent* gulf between us and our closest biological kin. One is historical and the other I will call bio-philosophical. I will deal first with the historical issue, which is a very straightforward one. Then I will employ evolutionary reasoning, bio-philosophical reasoning, to explore and explain one possible ‘scenario’ for one difference with our close cousins.

²⁹ ... ignoring our ‘tailbone’ – a vestigial leftover.

³⁰ Apparently the two species of gibbons, as well as some bird species we would be hard pressed to tell apart, are more genetically distant and diverged longer ago than humans and chimps. Diamond says, “On this basis, then, humans do not constitute a distinct family, nor even a distinct genus, but belong in the same genus as common and pygmy chimps.” (1991/2002, p 21)

The Historical Issue

All of our really close hominid relatives are gone – *extinct!*³¹ Our common ancestor with the Pan genus (which consists of two species – common chimps (*troglydytes*) and bonobos (*paniscus*))³² lived about 6 million years ago, giving rise to the pongid and hominid families, as currently classified. At one point between two to three million years ago, there may have been as many as six hominid species co-existing in Africa. From the ‘fray’ the genus ‘*Homo*’ emerged somewhere between 1.5 to 2.5 million years ago. *Homo habilis*, whom I’ve referred to, was the first hominid who is generally regarded as more human (*Homo*) than ape. *Habilis* used crude chopping tools. Later came *Homo erectus*, whom I’ve also mentioned. He/she is thought to be the first to use fire, and to hunt large animals, possibly cooperatively. *Erectus* is by far the longest-surviving hominid, having emerged in Africa as long as 1.5 million years ago, and survived up to 40,000 years ago.³³ In the latter stages of the long reign of *erectus*, they fashioned complex stone tools and wooden spears, and are thought to have buried their dead. Between *habilis* and the first *Homo sapiens* that we know of from around 200,000 years ago, there were up to six different *Homos*, some of whom, like *erectus* and *neanderthalensis*, co-existed with *sapiens*. Finally, fully modern ‘man,’ *Homo sapiens sapiens* to give us our full, self-appreciative appellation,³⁴ is thought to have emerged around 60,000 years ago. (dates and details from Young 1974, Bryson 2004, and Zimmer 2005) Unfortunately, all the ancestors or co-existent species of *sapiens* are dead and gone – except insofar as they are still with us in our DNA. It is likely that neaderthalensis, having disappeared only 20-30,000 years ago is very much with us in this respect.

³¹ This despite the fact that three other hominids were living ‘alongside’ us in the last 50,000 years – *erectus*, *neanderthalensis*, and *floresiensis*; the last diminutive hominid, only recently discovered, disappeared only 10 to 15,000 years ago – what a great pity! *Erectus* who disappeared about 40,000 years ago, walked the planet for over 1.5 million years. We *sapiens* have only been here about 200,000 so far. How much we might have learned from *erectus*! Of course all of these figures and facts are subject to constant revision.

³² Bonobos, *Pan paniscus*, are misleadingly referred to as ‘pygmy chimps’ – they are not much smaller than *Pan troglodytes*. Their common ancestor lived about two million years ago. (Dawkins 2004, p106)

³³ Arguably even more recently if it is true, as some think, that the recently discovered *Homo floresiensis* is a direct descendant of *erectus*.

³⁴ The hints of vanity and arrogance never stop, even by those who should know better. I like to think of us, ironically, as ‘the chosen species’ – we did the choosing! And of course, *Homo crēdulous*, my nominated ‘sub-species,’ is especially capable of self appreciation – because who else would think they are the best with the most without even thinking it’s odd that they should think that?

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It would seem very plausible speculation that if we could line these ancestors up, we could discern the gradations and branches of evolution. Gradualism is an important principle in how natural selection is thought to work – incremental changes that add up over time – so that when you get far enough ‘down the line,’ the successors may appear radically different from their early ancestors. If you go far enough back, we were all amoebas! Would you believe bacteria? Bacteria reigned on their own for over 1 billion years, though of course there are many species of bacteria too.

Many animals have much closer living relatives, than we do. In fact, before the relatively recent discovery of fossil remains of early humans and other hominids³⁵, I would say it was much more understandable that we were thought to be somehow genuinely ‘special.’ It makes the idea of our being of some lofty origin easier to grasp. Without those ‘in-betweens’ that we now know something about, it can appear that our debut on the planet was one hell of a jump – one of those unaccountable ‘saltations’ that would have us all looking for what Dennett called ‘skyhooks’ – an appropriation of folklore by which he means, with help or intervention from a non-natural agent – some ‘invisible hand.’ (1995, p 74) The lack of ‘betweeners’ may make former beliefs somewhat more understandable, but this is a bit like seeing a climber on top of a mountain, and because we did not observe the climb, we suppose he jumped up there! Mind you, the supposition of a divine origin can easily provide for miracles of this sort, and more, much more.

Now that we have certain facts in the fossil record (and increasingly in the DNA record) about our close relatives and ancestors, we know we are not special on account of the gap between us and our nearest *living* relatives, the chimpanzees. Archaeological information has helped us out of that misunderstanding. Facts are not everything but by god they’re good when you’ve got them³⁶ – not that ‘facts’ about fossils are absolute – new discoveries and ideas about all the linkages are ever changing. Still, it *is* an indisputable fact that our closest hominid kin *are extinct*.

³⁵ Bones of *neanderthalensis* were first excavated in 1857, but it was several years before they were recognised for what they are – another species. (Zimmer 2005, p 13) Note the date. Darwin’s *Origin* was *published* in 1859. Who says we don’t need a theory to see facts!? Then again, maybe it was just coincidence.

³⁶ Or conversely, maybe they are like money and sex – only really important when you *haven’t* got them! Regarding facts, the philosophical mentor of my youth used to say, “First of all get the facts.” (D.H. Newhall, pers. comm.)

The Bio-Philosophical Issue: Debunking Specialness with Evolutionary Logic, a Hypothesis about the Rapid Development of the Human Brain

But what of the other and more complex ‘bio-philosophical’ issue – another reason that contributes to our *appearing* special? We can be seen and said to have taken an extraordinary ‘giant leap’ – I won’t say ‘forward,’ because *that remains to be seen*. This has to do with language and culture, as already briefly discussed, but it also has to do with our *brains*. There is an evolutionary puzzle with the human brain – it has *tripled* in size in less than two million years! For biological evolution, that is a *fast* development.

For this exercise in evolutionary reasoning, it will help if we briefly revisit some of the basic of evolutionary theory – forgive me if this seems a bit repetitive. There is a great deal of on-going debate amongst evolutionary theorists about the precise way evolution works, and we need to be as clear as possible about the ‘received view.

As mentioned much earlier, something like an evolutionary, or a naturalistic explanation of biological origins and development has been around since before Socrates. Darwin and most modern evolutionists argue that natural selection is the *major* driver of evolution. Natural selection works on the basis of variations, including especially *random mutations*, some of which, the beneficial ones, confer some slight advantage. Disadvantageous mutations, in terms of evolutionary fitness, render an organism likely to die or fail to reproduce, and thus they, or their ‘line,’ will not go any further. By far the greatest number of genetic mutations are *not* beneficial. And changing environmental conditions, where adaptative variation is not forthcoming, or the change is too sudden, may lead to ‘de-selection’ of individuals, a much diminished population or even the extinction of species. It is actually more helpful and accurate to think of this in *populational* terms since that is where it eventually counts – for a population the possibilities are extinction, increase or stasis. However, a population is seldom completely static since environmental conditions keep changing, but clearly there can be *periods* of stasis. Factors other than natural selection also impact on evolutionary change, including major environmental/geological/astronomical events or catastrophes.

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Further insights on how evolution works were added by Dobzhansky, Haldane, Fisher, Hamilton, Williams, Trivers, Lewontin, E.O.Wilson, D.S.Wilson and Richard Dawkins, among many others. One of the most recent and prominent theorists, (and popularisers) was Steven Jay Gould. Gould believed that stasis may prevail for considerable periods until a significant mutation occurs – a process he described as ‘punctuated equilibrium.’ His ideas and those of other theorists have been hotly debated.³⁷ There is general agreement that natural selection is the major driver, but Gould and some allies argued that other factors also have a significant influence, and we must beware of ‘pan-adaptationism,’ which is basically giving all the weight to natural selection. Natural selection is perhaps best known from Herbert Spencer’s popular rendering (later adopted by Darwin), ‘survival of the fittest.’ The Gouldian view adds a large measure of contingency and could be characterised as ‘survival of the luckiest.’ Chance happenings, or contingency, according to Gould, must be considered a *major* factor in the unfolding of evolution.

Gould point is plain to see, and we should consider what it may have meant in our case. It is correct to say that evolution may proceed in different ways and at different rates according to circumstances. No-one, not Darwin, not Dawkins, proposed that evolution was a steady regular process that popped out a new species at regular intervals. Evolution has no clock, and change, is utterly unpredictable because environmental circumstances are so variable.

If one is to truly understand evolution, one must first of all understand *geology*, which is exactly what Charles Darwin did. In his early work and during the voyage of HMAS *Beagle*, he thought of himself first of all as a *geologist*.³⁸ Even without major extinctions (that have happened several times, and some of them catastrophic) there have been many, shall we say, ‘ordinary fluctuations,’ little speed ups or slow downs of evolutionary change, over a few million or a few tens of millions of years. You could say these have constantly (but *not regularly*) happened due to many events like changes in climate, earthquakes, meteoric impacts, solar winds and other chance

³⁷ Particularly between Gould and Dawkins – Kim Sterelney, an important Australian philosopher of science and biology (ANU), has written a whole book on their differences entitled *Dawkins vs. Gould: Survival of the Fittest!!* (2007)

³⁸ During his brief stay here in Hobart Tasmania where I live, Darwin exclusively worked on geology and made some pertinent observations too – but, alas, not about biology, except some moth or other. Come to think of it – we do have some extraordinary and beautiful moths here!

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global events. Add to the external factors the chancy rate and variability of internal organismic change due to mutation, and you have a recipe for almost any rate of change. The speed ups, especially, would cause species to adapt or perish.

Among these pulses and permutations of environmental change in the course of life's history, no doubt many have lead to populations perishing – literally 'dead ends.' But even so, *at least some* must have been beneficial too – for some species or groups. What I want to suggest is that there could be a confluence of circumstances, a convergence of conditions which will bring about what I will call a 'serendipity effect.' I use the word 'serendipity' advisedly – it is only beneficial for the particular species involved. I'm being inadvertently anthropocentric again – it's so hard to avoid.³⁹ But if I am correct about this confluence of circumstances, it may permit a much more rapid and even exponential change than one would expect. Dramatic and sudden environmental changes have occurred, and, as mentioned, there have been a number of mass extinctions according to the geological record. Also, an adaptation that confers a minor advantage at one time may turn out to facilitate a radical development later. It is thought that birds' feathers evolved from reptilian scales – initially as thermo regulators – flight anyone?⁴⁰ The right combination of environmental factors and variation may precipitate this serendipitous effect.

Let us imagine, as a totally hypothetical 'just so story',⁴¹ – a creature living on the fringes of the arctic circle which happens to gain, through mutation, a much thicker coat of fur than is usual for its kind. As a result, it has no reason to move away from the cold. Meanwhile, an ice age descends. It is known that ice ages can happen very rapidly. This has a much more deleterious effect on others of his kind, and predators or competitors in the area, and it distinctly favours its likely-to-be-furry progeny. It thus may confer a coincidental benefit, or what I will call a 'serendipity effect.' A mutation that might have been neutral, or even deleterious, becomes an unexpected advantage. Provided the extra furriness is a dominant and heritable characteristic, this

³⁹ Our species going forward at such a rate may have been very bad for the other co-existing hominids, mightn't it? Somewhat more assuredly, *we* are bringing on unparalleled extinctions for many species right now! Perhaps our advent should be called the *cursed event*.

⁴⁰ not that feathers are absolutely necessary for flight, but they do seem to have favoured it.

⁴¹ i.e., an unproven hypothesis. The 'just so story' (a reference to the fanciful tales of Rudyard Kipling) is a pejorative that has come down from Gould (and before him anthropologist E. E. Evans-Pritchard. (D.S. Wilson 2002/2003, p 70)

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creature's genes will increase and spread more rapidly than those of any of its conspecifics – as long as its food source is not too adversely affected by the cold change, i.e. all things being equal. Perhaps he is a fish eater, and, as long as he can find or create holes in the ice over water, he is very happy to live where many others, including his less furry ancestors, might starve or freeze to death. And so the population and the progression of this lineage could increase in an exponential way, depending always on the competition, the availability of food, and on its extra furriness not bringing with it some horrendous disadvantage, as genes sometimes do, like an increased susceptibility to parasites.⁴²

Another possible contributor to rapid change could be something akin to a 'critical mass' phenomenon. Once small, slowly emergent changes that develop from mutations accumulate – that ultimately enable an organism to reach that little bit higher or run a little bit faster, these may result in some true advantage that turns out to 'pay off in spades.' What I am suggesting is something like 'the straw that broke the camel's back' in reverse – a hardly significant phenotypic change, which combined with other conditions, leads to a real survival advantage. Bear in mind that such 'break-away' developments may in evolutionary time still take thousands or even millions of years. However, I am inviting consideration of the possibility of shorter time frames in relation to the scale of changes considered.

I would suggest that hominid brain development, once underway, could have progressed under a relatively sudden combination of unusually favourable conditions and opportunities – leading to exponential development. It is known that there have been several dramatic changes of climate that our forebears had to cope with. One speculation for why early hominids 'came down from the trees' puts it down to a relatively sudden change in climate such that forests gave way to savannah. It was not so much that they left the trees, "but that the forests left them." (John Gribbin, quoted in Bryson 2004, p 537) Operating in woodlands and open savannah may well have

⁴² While I am not necessarily intending to refer to the polar bear in this scenario, one might well wonder why no other organism remotely like it, like wolves or cats, have managed to carve out a very big niche in such a hostile environment (on and in the snow and ice). I am not suggesting here a grand saltation – just a serendipitous mutation. I don't think that the prevalence and spread of polar bears, as far as I know about them, lends any support to my thesis about the 'serendipity effect.'

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favoured bipedalism. According to the received view, it was advantageous to see over tall grass and to keep an eye out for prey and predators. Meanwhile, one of the ‘side effects’ of the upright posture was freeing the front limbs from full-time locomotion. Already primates, and we can presume our common ancestor with the chimps, did not have paws so much as grasping appendages for their arboreal lifestyle. Fingers and something like a thumb were already in place in primates, but in



Figure 3: Penfield Sensory Homunculus (Dawkins 2004, plate 13)

the *Homo genus*, the ‘thumb’ shifted down and out to oppose the forefingers. And while walking on the hind extremities became more common, they became more like feet. But here is the telling point – the front extremities had much less to do in a bipedal creature – and thus the opportunity for them to become ever more adept at manipulation near eye level; so the development of true *hands* was facilitated.

It is one of the plausible theories of the development of our inflated brain that the freeing of the hands gave *sapiens* the opportunity to develop “precision controlled manual dexterity.” (Dawkins 2004, p 88) The odd looking image in Figure 3 is a ‘Penfield Homunculus.’ This is a sculptural model of a person, but with bodily parts proportioned to the amount of brain dedicated to that part. The mouth and tongue are huge as you might expect, but the most extraordinary parts, as you can see, are the hands – they are enormous. Could brain development have raced ahead to keep pace with the highly adaptive and unbelievably advantageous use of hands? Yes, possibly, but there are other plausible explanations too.

This, my foray into evolutionary theory-making, what I am calling the ‘serendipity effect,’ is a pure speculation, a mere possibility. One of the other more intriguing, and perhaps more plausible explanations of the rapid increase of the human brain has to do with sexual selection. Did our braininess develop to attract mates? Evolutionary

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psychologist Geoffrey Miller thinks so, and his book on the topic, *The Mating Mind*, “offers most convincing – and radical – explanations for how and why the human mind evolved.” (2000, back cover) I don’t know about that assessment, but it is an intriguing hypothesis and he just might be right! Insofar as braininess or intelligence is correlated with capacity to succeed in the world, it is not too hard to imagine that mate selection could be influenced by cranial capacity.

It is beyond our scope to delve more deeply into this particular puzzle, the “hypertrophy of the hominid brain.” (Dawkins 1998, 287) It is widely recognized as one of, if not *the* “fastest advance (sic) recorded of a complex organ in the entire history of life.” (p 287) But even so, it is well to recognize that we are still talking about *evolutionary time*. Evolutionary time is much slower than we can normally appreciate because change have to come about through hundreds and thousands of individuals dying while rival individuals reproduce successfully. Over the 5 to 7 million years of hominid development, brain size doubled about every 1.5 million years between the australopithecines who were bipedal but had a chimp size brain, and anatomically modern *Homo sapiens*. So it was *relatively* ‘gradual’ – no super saltations, no skyhooks. So does the hypertrophy of the brain make us in any way special? It is somewhat unusual, but it still seems like an evolutionary explanation is possible and plausible, and more parsimonious.

Let the Evolutionary Logic Continue: Three More Ideas

Let’s look at a couple of ideas yet, not so much to debunk specialness, but to continue the exercise of evolutionary logic, which really, now that Darwin has bequeathed it to us, *is* quite special, and natural selection has brought us the brain to work it!

Once the adaptive potential of auditory communication was broached – possibly by some of the first land animals (think of the well developed and varied calling of frogs), sound became a widespread method of communication in much of the terrestrial animal world. Reptiles are not noted for being voluble, but virtually all warm-blooded animals use sound extensively. In any case, the progression from simple signalling through basic communication, to language seems easily imaginable.

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The argument would be the same as that for other evolved organs, such as the eye. The eye is an outstanding example of complexity, which many ‘intelligent design’ people seize upon because they could not *see* beyond the apparently intuitive, either you need a fully functioning eye or it is no use. But when you stop and think about it, every incremental step, every gain in visual acuity, (or in communication), however small, would be likely to confer survival advantages. There are continuums for both of these evolved capacities, with evolutionary advantage at each step of the way.

Yet another angle that is a real factor in evolutionary development: there are good reasons to believe that *positive feedback* mechanisms can contribute to relatively rapid and accelerating change. The very *exercise* of intelligence, like the use of many capacities, strengthens and promotes its further development. There is neuro-scientific evidence that the brain changes structurally in response to its use. This is, of course, not heritable since it is an acquired characteristic.⁴³ But over generations it may factor into a positive feedback process whereby the more we use and benefit from our intelligence, the more selection pressure there is for high intelligence, which leads to higher intelligence, which leads to more opportunity to depend on intelligence, and so on in an accelerating spiral. Dawkins gives this sort of explanation some credibility. He calls it “self feeding co-evolution.” (1998, p 289) – or “the more you have the more you get.” His idea involves an arms race like relationship with competitors relating in ways that encourage certain developments in the other. In the case of the human brain development, the competitors may well have been other hominids. What happened to *erectus* and *neanderthalensis*? They were all exploiting this relatively new survival strategy called ‘intelligence.’ Were some more sapiens than others...?

Taking it just one more surprising, but plausible, step further, once language is *written*, and the intelligences of individuals are thus joined, new and ever more rapid development of organisational and cultural complexity is made possible. It’s not hard to imagine that the evolutionary success of a species that reached these ‘mindmarks’ would accelerate dramatically – which is just what we have seen in *Homo sapiens*.

⁴³ Refer to the ‘Baldwin Effect’ for a theory on how acquired characteristics and learning can affect evolution. (see Dennett 1995, pp 77–80)

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I may not be right in many of the half-worked-out particulars I have here entertained, but unless I am drastically wrong, it appears almost certain, and much more plausible than a non-natural explanation, that *natural processes have made us what we are*.

As mentioned, the foregoing hypothetical reconstruction of the past is sometimes called a ‘just-so story.’ I suggest these attempts at explanation are better thought of as ‘thought experiments.’ They are based on some evidence, and follow a course consistent with evolutionary logic, employing ‘cranes,’ not ‘skyhooks.’ (Dennett 1995) In the ‘experiments’ I have constructed, I feel they help to imagine why we *appear* so much more ‘advanced’ than our living relatives. In the end, if I am *even close* to right, *it gives us many reasons to doubt that we are special* in any significant way. The aim has not been to give *the correct* account of how we got to be more advanced than our living relatives, but rather, to show that it is *possible* to give a naturalistic explanation grounded in evolutionary thinking. While such explanations may occasionally seem wild and extraordinary (think of Miller’s hypothesis that basically the brain is like a peacock’s tail!), they have a kind of coherence and relevance that makes them very interesting indeed, and arguably helpful to a full understanding of *Homo crēdulus*. Let’s give Daniel Dennett and humility the last word in this section:

There is simply no denying the breathtaking brilliance of the designs to be found in nature. Time and again, biologists baffled by some apparently futile or maladroit bit of bad design in nature have eventually come to see that they have underestimated the ingenuity, the sheer brilliance, the depth of insight to be discovered in one of Mother Nature’s creations. Francis Crick has mischievously baptized this trend in the name of his colleague Leslie Orgel, speaking of what he calls, “Orgel’s Second Rule: Evolution is cleverer than you are.” (1995, p 74)

Special to One Another: But Look Out for the ‘Chosen’ Species

There is little doubt that we, as members of the same species, are of great interest and importance to one another as unique individuals. In proportion to our particular relationship, we are undoubtedly *special to each other*. We can observe, even within our species, however, that as the perceived connectedness thins out, our sense of being

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special to one another gradually dims to near complete obscurity.⁴⁴ This kind of relational connection is far from unique to our species. But as the intensely social animals we are, there is no doubt that it is highly developed in us. You and I are very special – if not to each other, to someone!⁴⁵

The point for me in arguing against the traditional view of species superiority is to move away from our pre-eminence, our dominance and dominion, none of which contributes to human flourishing as far as I can see. The notion of our specialness hints at another doctrine from another realm of human endeavour which is, in my view, dubious in the extreme. What I have in mind is not just that we are special but that we are somehow *chosen*, something final, something exalted – the ‘reason for it all.’ I believe this is what Charles Darwin correctly called our ‘arrogance.’

Nevertheless I believe our inflated idea of ourselves was *an evolved conception* (a meme par excellence) and originated, or at least has persisted so strongly, because it was in some way advantageous and adaptive. But herein lies an example of the important evolutionary principle I have mentioned – yesterday’s adaptation may no longer be adaptive today! However, let us suspend judgement on this matter for the moment, for it goes to the heart of discussions of belief yet to come.

Parting Words

I would like now in this final section of Chapter Two to foreshadow some discussion to come in remaining chapters regarding the paradigm shift from a purposeful universe to one of contingency and necessity. Even though it was not Darwin’s first intention or desire to inflame this longstanding debate, it was implicit in the new biological understanding – and it continues to this day. It has in fact become more heated in recent times, with world events fanning the flames. The ‘ultra-Darwinists’ are

⁴⁴ I suspect that if there were two strangers in great difficulty, but one of them *looked* a bit familiar, if a choice had to be made, efforts to help them would go to the familiar-looking one first. But maybe I am wrong – either totally or it could be a highly individual matter with all kinds of reasons why you might help one rather than the other.

⁴⁵ But I assure you, if you have bothered to read my thesis, I would die for you. I already almost did!

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adamant that there is no room, no place, no evidence, no need whatsoever for the notion of conscious design in the universe. Let us recall one of the baldest statements of their atheistic position:

The universe we observe has precisely the properties we should expect if there is at bottom, no design, no purpose, no evil and no good, nothing but blind, pitiless indifference.

(attributed to R. Dawkins by R. Alexander in *Intelligent Faith*, 2009, p 11)

Steven J. Gould wrinkles it somewhat differently – he is prepared to leave the religionists to their own domain, but he wants us to face a fact which seems to lift us up and slap us down at the same time. He says we are exceedingly fortunate, you might even say ‘bloody lucky’ to be here. This is his message of ‘radical contingency.’ Evolution may have unfolded in many different ways that wouldn’t even come close to a naked ape. Gould says in *Wonderful Life*:

Wind back the tape of life to the Burgess Shale; let it play again from an identical starting point, and the chance becomes vanishingly small that anything like human intelligence would grace the replay. (1990/2000, p.14)

Had that great K-T meteorite not struck the earth 65,000,000 years ago, knocking out something like 75% of all species, the dinosaurs might still be the dominant life form. We couldn’t be very special in that case because our nearest relatives of the time had to scurry around, never going very far from their holes, for fear of the ‘terrible lizards’ that thundered over the earth. Actually they didn’t all ‘thunder’ – some were quite small. I don’t recall ever hearing about dinosaurs that lived in trees, but somehow I don’t think an arboreal primate would have stood much of a chance in dino times. Thank god for meteors, right! God?

Due to our unique capacities, we have enormous power and responsibility – this is one of the ways that I conceded *we are* special. This is because... *in spite* of our humble position on this humble little speck in this humble split second of cosmic time – *in spite* of the fact that we did not intend to become the commandants of Earth...we are the only ones, as far as I can see, who are in a position to do the work that needs doing in these problem rich times – and *it’s the only home we’ve got!*

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Can a philosophy of the future actually help us in the future? With a tip of the hat to Pandora, I hope so. We are the only species who know what's at stake and can do anything about 'it.' As E. O. Wilson says, in *The Diversity of Life*, "One planet, one experiment." (1992/1994, p 182) So we had better get it right! Ethics needs to evolve beyond our narrow species' interests and expand to a new all-inclusive standard where frog ponds and even rocks are more important than golf buggies and nappies for parrots. I wonder if we are intelligent *enough*, or again if intelligence is a very good *long-term* evolutionary strategy? We are going to find out, sooner or later.

Fallen upward

This narrative is intended as a philosophical palliative for the 'shockwaves,' the post-traumatic stress of our 'demotion.' Our arrogance, our pride, our conviction that we are hugely special is collapsing/has collapsed. If we have 'fallen' from grace, from our angel perches, I would argue that we are '*fallen upward*' toward the truth. What truth? The truth that T.H. Huxley spoke of to Bishop Wilberforce. For me this way of understanding is more fabulous, more engaging, more glorious, *more hopeful* (thank you again, Pandora) than any past attempts at explanation that relied on 'mysteries.' But my position too is ultimately based on a belief, a faith even – I hope (that word again) it is a truly intelligent faith. (IF). Some scientifically oriented people deny their position involves faith, but I don't see any way around it. (DH)

What Copernicus did for the planet, Darwin and Wallace did for man, and I suggest there is another 'shift' of major proportions on the way – the next one will be for the Earth, our one and only home.

We are no longer in the centre on any stage (except perhaps at the "Cartesian Theatre"). On the stage of life, we have drawn the spotlight to ourselves, through all of history. Let's turn it into a floodlight illuminating the whole pageant of life, of which we are, without doubt, an important part – indeed, all may depend on us in the short term.

Standing naked before the mirror, with our cousins beside us and all our DNA brethren arrayed around, in front, and behind us – a family photo, one for the kids!

If only apes had tails

If only those cousins had had a tail! Then we could kick back in our comfy armchairs (which wouldn't be so comfortable if we did have a tail) and smile smugly – “a ‘mere’ monkey – how dare they call the star of the show...er, whoops, someone is tapping on my shoulder...it's ‘the director!’

And so the ‘director’ calls us to attention – it's time for the ‘Grand Parade’:

“OK, folks, get in line for the parade of life, and would the hairless, sweaty, *talkative*, big-headed biped over there please not hog the front. Pigs are better equipped for that. There are already too many vying for first position because they are the fastest, or the biggest, or the toughest, the most artistic (very nice displays I must say, you bowerbirds) or the most cooperative! Yeah, the bees and ants claim the cooperation prize, which was also contested by a number of others – including birds, mammals and fish. Yes, I have heard about your brain, dear biped, and your wars... I'm not convinced your much vaunted intelligence is all it's cracked up to be – instead it's cracking up and you could take nearly everyone out with you! You've overpopulated the planet with your kind and brought it to the brink of annihilation. The jury is still out on who the ultimate survivors will be. I'm putting a little money on several species including the cockroaches and the rats – talk about *replicators*! Most of the insects are doing fine – small things it seems are managing quite well. Apparently size does matter and you, dear featherless biped, are just too big all around – especially in the ego department!”
(DH)

The upside is: we are just as important as every other species, and if we handle our abilities and our consequent responsibilities well, we may even earn some extra points. (since we seem to crave status so much) I feel sure the ‘former’ CEO might even admit us into his special place in the sky for that. We *can* (only) hope!

Do you believe me? Why does anyone believe anything? Where does belief come from? Must we believe something, anything? Come with me and we shall see in Chapter Three...and even more in Chapter Four.⁴⁶

⁴⁶ I have it on good authority that one reason why this thesis is not better is because I was having ‘too much fun’ in the early part of my candidature – Alas! I must confess...I'm caught out!

CHAPTER THREE

THE EVOLUTION OF RELIGIOUS BELIEF

I can't prove it but I'm pretty sure that people gain a selective advantage from believing things they can't prove.

Randolph Nesse 2006, p 42

A faith that stands in flagrant contradiction with well authenticated scientific findings cannot be right, but one in accord with such findings may nevertheless be wrong. Science discovers what exists; man has a longing to discover what ought to exist.

Theodosius Dobzhansky 1969, p 109

Religion ensues from the ordinary workings of the human mind as it deals with emotionally compelling problems of human existence such as birth, aging, death, unforeseen calamities and love.

Scott Atran 2002, p viii

In Chapter Two I laid the groundwork for understanding belief from an evolutionary perspective. In it I argued that we are not special in any absolute sense. Instead we are a species among others. But like all species we have our own abilities and peculiarities, our evolved traits and behavioural predispositions. In this Chapter Three, I show that a predisposition to belief in strange things is one of our evolved traits.

Before applying my evolutionary perspective to religious belief, it may help to review in point form what I feel I have so far claimed or argued for. These 'points of understanding' are:

- Human beings are 'naturally' drawn to belief – we are 'credulous animals.'

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- We cannot live without hope. We need hope.
- Belief and Hope are realised in a psychological system which I have called a ‘life centering belief’ (LCB) – which makes life whole and worthwhile.
- Historically, LCBs have mainly been religions, and religious belief is still a major source of ‘life centering belief’ for many people worldwide.
- Newer scientific and especially biological understandings provide new options for LCBs, but without necessarily displacing religious forms.
- Philosophy can help ‘sort out,’ for individuals and society, the criteria for acceptable LCBs.
- My approach to philosophy is personal – therefore I write in an informal style that I hope will be readily accessible and have broad appeal relevance.
- I think philosophy should be *helpful*. It should help us find our way. It can be applied *therapeutically*.
- A philosophy of the future will be biologically informed.
- An understanding of Darwinian theory is desirable, even necessary for a philosopher of the future (and really for everyone).
- The implications of an evolutionary understanding are that we are a species among many and not ‘special’ in any absolute way.

At the end of Chapter One, I previewed the eight main points of my argument – what I am calling my ‘distilled argument.’ In Chapter Three I will begin to develop these points, give my reasons for holding them, and show how they fit together. I will refer back to these points as they come up in my discussion. They will not necessarily arise in exactly the order listed. If my presentation is not perfectly ordered, I trust I will still get there in the end! Perhaps my style can be likened to jazz – all over the place, but in a certain key and if I end on the right note, it will work out as a harmonious whole. As I’ve said, we cannot live without hope! So, for future reference, and staying on track, here are those points of the ‘distilled argument’ again:

1. Religious belief has evolved for practical survival reasons.
2. The naturalised approach I will adopt sees religion as having an *adaptive role*.
3. Religious beliefs (can) still play a useful function in society.
4. But there is conflict between science and religion.
5. We should judge religious belief on how well it fulfils its social functions, not on ‘truth.’

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6. Since religious belief is to be judged on different criteria than scientific claims, there need be no conflict between the two.
7. When judged on the appropriate criteria, religious belief is acceptable, necessary (for some), reasonable and even desirable.
8. Essentially one is free and justified to *decide what one believes* as long as it does not encroach on the ability and rights of others to do the same – this includes the ability and right to have no (religious) belief at all.

Belief is an enormous topic of great interest in many quarters, across many disciplines and from many points of view. As mentioned, I will concentrate on the kind of belief and belief system I regard as having direct impact on our overall orientation in the world – those which ‘center’ us (i.e. make life worthwhile) and contribute to wellbeing and social integration. These, LCBs, do not necessarily have to be restricted to religious beliefs nor specific ‘creeds’ that are associated with religions. As I have said elsewhere, other kinds of ideologies, ‘causes’ if you like, may well work as an LCB for an individual. Nevertheless, for this thesis, unless I state otherwise, it will be the religious and even theistic type of belief I have foremost in mind. With that caveat, let me begin by hazarding a working definition of belief. Then I will discuss some initial considerations, and my evolutionary understanding of where belief comes from and what practical functions it serves.

What is Belief: Initial Considerations and Boundaries

I propose as a working definition of belief: a psychological mental state which inclines the believer to *accept something as true*, to the extent that he/she *is willing to act upon it*. The two key phrases are self-explanatory and non-controversial (at least among non-philosophers), but I will highlight a point or two about them.

To ‘accept something *as true*’ indicates a *lack of certainty* about whether it is true in fact. So, if this definition is reasonable, it cedes a kind of legitimacy for holding on to a mental state in spite of what might be construed as an epistemic ‘weakness’ (lack of certainty). But then, you might well be thinking, that is obvious – that is what belief means! Yes, indeed – that is the nature of ‘doxa’ (from which we get the adjective ‘doxastic’) – the Greek term for “belief, opinion, conjecture and estimation” – all

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mental states involving some degree of intuition and some degree of uncertainty. Aristotle used the term, and for him it meant, “ ‘things that are said’ by the many or the wise regarding some problem or issue which any adequate philosophical assessment must take into account justly and properly.” (*Oxford Comp to Philosophy* 2005, p 220). Aristotle took *doxa* seriously. What is said, what is believed, counts as much, or perhaps sometimes even more, than secure knowledge. I have already put this William James’ quote before you, but here it is again – because it ‘shines’ so true:

Objective evidence and certitude are doubtless very fine ideals to play with,
but where in this moonlit and dream visited planet are they found?
(1896/1962, p 97)

Clearly there is a continuum from totally uncertain to totally certain. Degrees of certainty *may* be important with some kinds of belief – like, that this airplane will get where it is going! But on the whole in religious matters, certainty is basically *irrelevant* to the function of belief in the mind of the believer. Some thinkers (e.g. Kierkegaard) have even suggested the more absurd (or uncertain) the belief, the better to demonstrate *faith*! I’m not sure about that. I think it might be stretching the point to say it is not only OK, but also *desirable* to believe something that you can almost *know not to be true*. That seems strange to me. My interest is mainly with beliefs that impact on action, and my criteria for justifying them (point 5 of my distilled argument). These criteria are the ethical consequences, the results, the personal and social functions beliefs fulfil. As I see it, the value of religious belief does not rely on the objective certainty or ‘truth’⁴⁷ of any of its tenets. Holding something *as true* has practical utility and value that does not depend on it *being* true in an absolute, certain, scientific sense. It has created conflict when religion has claimed factual truth, or contradicted factual truth, but the core of religious experience and practical utility does not depend on such factual claims or certainty. Its appeal and value is much more *subjective*, as Kierkegaard and many others have understood. The certainty continuum is important, but leaves much of human experience ‘high and dry.’

⁴⁷ ‘Truth,’ the ‘capital T variety’ seems like a ‘philosopher’s god’ to me. I am just as sceptical about this god as any other. But I’d better not ‘go there’ – I’m sure some logician or other ‘Truth’ lover would tie me in rational knots in no time – proving that I am wrong, wrong, wrong, and probably inconsistent to boot.

The Certainty of Uncertainty

One of the few certainties we have is that universally accepted certainties are a rarity. Indeed, is there one? And yet, in spite of pervasive bedrock doubts about what we know, we have a situation where 1) many claim to know and 2) we need to live and proceed *as if we know*. Utter doubt equals utter disability – almost immobility. Something must be taken on board as a kind of working hypothesis. Every belief system is a working hypothesis and we need a place to stand, a place to start. As often as I’ve found maps to be wrong, I wouldn’t want to proceed into new territory without one – but by a similar token, being sceptical is essential.

Whatever we choose to believe does not determine or excuse behaviour towards others – that is a separate issue. Working out the relationship of belief to behaviour is of the essence. It is a minimal condition of the acceptability of any belief system that it does not legitimate or covertly encourage harm to others.

About the contents of almost any proposition, religious or otherwise, we can be almost absolutely certain that certainty is not absolute. (DH)

When I say, “...to *accept something as true*, to the extent that he/she *is willing to act upon it...*” the second criterion qualifies the first – ‘...to the extent that...’ – thus denoting *degrees* of belief according to which one is *willing to act upon it*. It is the willingness to act in a proportional way that gives such importance and personal power (motivational content) to beliefs. *Depth* of action reveals *depth* of belief.

To try this definition out, let’s take an uncomplicated example about a factual matter: on a bushwalk, if one encounters a rickety wooden bridge over a deep ravine, inspects it and comes to believe that it will take one’s weight without collapsing, this then becomes the basis for getting on with things, but not yet a belief in my terms. We have met the first criteria – accepted something as true. But until one ventures to cross, I would argue, it is more properly called a hypothesis – an idea or possibility entertained. But when one is willing to cross, and indeed *does* cross – *that* is belief. On this point I have been advised as follows:

You have a non-standard account of belief here. In the literature I have read, there is nothing incoherent about holding a belief that you would be unwilling to act on in the kind of way you mention. Once you allow the possibility of belief without certainty, there will be cases where it would be irrational to act on some beliefs. Decision theory counsels that one would weigh the certainty of the belief against the costs of being wrong (and the benefits of being right) before acting (e.g. I believe that Plato was more recent than Xerxes, but I wouldn’t bet my life on it). It may come down to a

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technical difficulty about what it is to act on a belief. I might be willing to state that the bridge is safe, but unwilling to cross it – is that enough to count as acting on the belief?

(R. Corry, pers.comm., 24/02/10)

This advice from Dr Corry is helpful. It alerts us to the undoubted fact that in some arenas there are *degrees of belief*. And the point is well taken that with a physical world example like I have posed, a kind of cost – benefit analysis is relevant. One may well have less than whole hearted (100%) belief in something and therefore be unwilling to take certain kinds of actions with respect to it; or conversely, one may be willing to ‘take a chance’ on something one only partially or half-heartedly believes – if the rewards are high enough and the costs low enough. This was the basis of ‘Pascal’s Wager’ with which I have a certain sympathy. But on the whole, I would argue that religious beliefs tend to be ‘all-or-nothing’ propositions. With the exception of Pascal’s notion, they are not taken on board on the basis of costs and benefits. In the end I will be suggesting that it *is* the potential benefits of a belief which justify it, but I nevertheless incline to an all or nothing conception when it comes to believing in anything ‘non-natural’ – either you believe it or you don’t. This, I think, is the kind of position one needs to take for it to serve the ‘life centering’ function I am interested in. As will be discussed later, I believe in the power and the moral right of decision in matters of belief. One may change one’s mind, of course (and I have), but in the meantime, it is hard to say what it would mean to ‘half’ believe in a god, or the soul. On the other hand, reserving the right to change one’s mind implies some capacity for doubt even about something which one wholeheartedly believes.

According to my tendered definition, a belief involves a willingness to ‘put your money where your mouth is,’ or, in less economic terms, to ‘stand up for,’ or act on what you believe (possibly with some limitations as per the discussion above). Note though that this willingness to act or to stand up for does *not* entail proselytising or attempting to draw others in. This is an important criterion of valid religious beliefs,⁴⁸ The kind of belief which deserves to be valued must be free of overt or covert persuasion. Modelling is inescapable. Example is the only legitimate ‘persuader.’

⁴⁸ I am not sure that employing reason to try to compel someone else to a conclusion is not a form of proselytizing – the ‘religion’ of the intelligentsia?

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Pascal Boyer, in his philosophical anthropological investigation of the evolutionary origins of religious thought, writes, “The idea of a universal religion that anyone could adopt – or that everyone should adopt – is not a universal idea.” (2001, p 9) He points out that in many places religion is just built into the wider culture and is not perceived as ‘a’ religion (among others) nor even ‘as’ religion (no special word for ‘religion’) because it is just *built in* and not distinguishable from the culture generally. One of the most remarkable points Boyer makes is that ‘faith’ too is a more or less Western concept that doesn’t apply where people have no concept of ‘believing *in* something.’ They just accept entities like ghosts and witches and gods as being around, like rivers and mountains and animals and telephones! (2001, p 9)

Clearly then, the idea that if I believe in something, you should too, is by no means the way religious belief automatically functions. I will later argue that ‘missionary zeal,’ which can easily run to fanaticism, is *contrary* to the integrity and legitimacy of a religious belief. The point I wish to make here is that proselytising is one of the behaviours associated with some religious beliefs that is contrary to my view (point 3 above) that religious beliefs (can) have a useful role.

Note another important aspect of my definition, that the *acceptance* ‘of something as true’ – of whatever proposition is involved, suggests a *voluntary* action – a choice. If you can ‘accept,’ you can also ‘reject.’ This kind of choice may be lacking in the cultural conditions that Boyer is talking about above, but it is a feature in most Western cultures. This is one of my central points; *choosing*, as I see it, is an essential ingredient of what I think *constitutes* an LCB. An LCB requires deliberate agency to qualify for the legitimacy and centrality I am claiming for it. An individual raised in a certain belief system would need *to make an autonomous choice at an appropriate age* – to opt in, not just ‘go along’ with the religion of his/her/ parents or community. For it to be inconceivable to break with tradition is perhaps more common in cultures other than those of the West, so I don’t really speak to that situation that Boyer identifies where religious belief is so embedded in the culture generally.

There are many areas in which beliefs are held – everyday beliefs, factual beliefs, moral and ideological beliefs, and, of course, religious beliefs. Some of what I have to say may be relevant to other areas, but it is the religious kind of belief that is at the forefront of my concern and discussion.

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I will not deal with many of the conceptual aspects. I am primarily interested in the origin and the functional role of what might be called ‘deep’ belief in people’s lives – both for the individual and for society. As has been mentioned, I am concerned with how we, as individuals, arrive at and justify our beliefs. I will in the next section give an account of where beliefs come from – the functional evolutionary, perspective.

What is Religion *for*?

I am not concerned here with a particular religion. And I am not qualified to speak about all religions in any detailed way, nor is that relevant to my approach. Religion is an extremely complex and varied phenomenon, and yet there are common features that are virtually universal. So, although making generalisations about it is asking for trouble, that is a necessary risk. This is first of all because it will be necessary to begin with some sort of working definition of religion, just as we have for belief. For religion, I will attempt to characterise it in terms of what it is intended to do, more than what it *is*. Or to put it another way, let’s have a look at what religion is *for* – what its purposes are.

As Daniel Dennett lays it out, and this is a simplified but fairly agreed upon synopsis of the literature (“thousands of books and articles” according to Dennett), and including the expert anthropologists Atran and Boyer, the three most commonly advanced evolutionary advantages of religion are: 1)to explain, 2)to comfort, and 3) to encourage cooperation (and cohesion). (Dennett 2006, p 103) Pascal Boyer teases these out somewhat, and I summarise below:

Solace and Security – making mortality more bearable, to allay existential anxieties, to provide for a ‘rosier’ future if one finds the world hard to bear.

Explanation – of puzzling natural phenomena, or experiences (e.g. dreaming), explaining the origins of things, explaining why there is evil, suffering, etc.

Co-operation and Cohesion – providing a common social bond, perpetuating a social order, supporting morality or a behavioural code. (Boyer 2001, pp 5-6)

Boyer also adds a fourth role to these standard “origin scenarios,” as he calls them, and this is that human beings are illusion prone, they are superstitious, “*they will believe anything*” (p 5) – in other words suggesting the same conclusion that Bertrand Russell came to – “man is a credulous animal.” (1950/2009 p 96) It may well be true

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but further questions follow immediately: why is man so ‘illusion prone?’ *why* are people ‘superstitious?’ Why will they ‘believe anything?’ And, importantly, the evolutionary question – how does being illusion prone contribute to survival? I hope to shed some light on the question of credulity in my discussion of the evolution of religious belief to come. All of these points are assuredly part of the naturalistic framework of religious belief. People who hold religious beliefs may well object to this functional analysis because of its lack of attention to specific doctrines, and because such an analysis overlooks *qualities of experience* they hold dear and claim to be ‘what it’s all about.’ Theirs is a different conversation altogether.

I have wondered: in order to fully understand religion, does one need to study it like anthropologists study culture, i.e. *from the inside*? I think a *full* understanding would have to include that perspective. Therein lies something of a paradox. Although I believe it is possible to *decide* to believe, I can’t see how one can just ‘*try belief out*’ in order to understand it. But perhaps this is a limitation of my imagination. According to Pascal, one needs to *practice belief*, to ‘rehearse,’ as it were, beliefs before they become fully realised. I will have more to say later on Pascal’s position – what John Mackie calls, the “cultivation of belief.” (1982, p 202)

The view I choose to take is from the ‘outside.’ An outside view has sometimes been difficult due to the defensiveness of adherents. But, for our purposes, we do not have to get so close or to criticise specific doctrines.. To be sure, an ‘inside’ view might involve claims which are often seen by the faithful as highly relevant to the question of what to believe; but I am putting such claims to one side, or rather saying that I will leave those issues and arguments to others. I am focused on two practical issues: 1) how religions function, and 2) the *outcomes* of religious believing – real world results that *can* be viewed from the outside, somewhat objectively and perhaps even measured.

Nowadays a more objective (possibly) and, dare I say, ‘scientific’ or naturalised approach to understanding religion is becoming established within the social sciences. Even some ‘insiders’ accept that the objective study of religion may well have some

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value.⁴⁹ Whether it threatens the ‘insiders’ view is a moot point. R.W. Emerson counters a perceived threat, “The religion that is afraid of science dishonours God and commits suicide.” (in Dennett 2006, p 366) Scott Atran, explains his anthropological study of religion diplomatically:

Religious explanations of religion may or may not accept this account of proximate causes, but no faith-based account considers it to be the whole story. I do not intend to refute such non-scientific explanations of religion, nor do I pretend they are morally worthless or intellectually unjustified.
(Atran 2002, p ix)

Atran’s position is similar to the one popularised by Steven J. Gould – namely that religion and science are ‘non-overlapping magisteria’ (NOMA) which deal with totally separate realms. Gould is an important evolutionist and he advocated this ‘compatibilist’ view of science with religion. He had this to say about NOMA and science:

Religion is too important to too many people for any dismissal or denigration of the comfort still sought by many folks from theology. I may, for example, privately suspect that papal insistence on divine infusion of the soul represents a sop to our fears, a device for maintaining a belief in human superiority within an evolutionary world offering no privileged position to any creature. But I also know that souls represent a subject outside the magisterium of science. My world cannot prove or disprove such a notion, and the concept of souls cannot threaten or impact my domain. Moreover, while I cannot personally accept the Catholic view of souls, I surely honor the metaphorical value of such a concept both for grounding moral discussion and for expressing what we most value about human potentiality: our decency, care, and all the ethical and intellectual struggles that the evolution of consciousness imposed upon us.
(NOMA Wikipedia, accessed 27/01/10)

Both Atran and Gould are attempting to ‘make a space’ for religious sentiment and expression despite their personal rejection of faith. This is a view that Richard Dawkins and other of the ‘new atheists’ are unwilling to take – this will be one of the central questions of the next chapter. As mentioned, I argue for a compatibilist view, different from, but in the spirit of, Atran and Gould. Gould has said that, “NOMA

⁴⁹ This is what such organisations as the Templeton Foundation are all about. They welcome the scientific study of religion in order, apparently, to deepen and enrich belief. Others, like the Collins Family Foundation, with an ecological charter, although not explicitly religious, are supportive of the scholarly study of religion because of its role in promoting cooperation. (Collins 2008, *The Evolution of Religion*, pp 11-12)

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represents a principled position on moral and intellectual grounds, not a mere diplomatic stance.” (Wikipedia, 27/01/10). My own position will emphasise the diplomatic, ethical and also existential reasons for being accepting (and even encouraging) of religious belief. Point 6 of my ‘distilled argument’ states that religious belief should be judged on different criteria to those relevant to science – there need be no conflict. But, of course, we can see that there is *potential* for conflict in the second ‘function’ of religion above. As a source of *explanation*, religion and science may well conflict. I will engage with these issues directly in Chapter Four.

Returning to the ‘insider/outsider’ question: I acknowledge that I am a part of a culture heavily influenced by a Christian ethos. In spite of my effort to be objective, pluralist and universalist in my view, I inevitably reflect some of my own cultural biases. For example, the *centrality* of a godhead is by no means universal in the religions of the world.⁵⁰ Dennett says that a “...religion without God or gods is like a vertebrate without a backbone.” (2006, p 9) Like him, I feel somewhat trapped in this thinking.⁵¹ There is no use or value in denying our inclination to this Western orientation. As long as it is declared, the limitations of the inquiry will be clear.

Dennett quotes a sly comment of D’Arcy Thompson, “Everything is what it is because it got that way.” (2006, p 97) Historically, we might say that ‘everything *was* as it *was* because it got that way.’ Whether we are speaking of biological matters (as Thompson was) or ‘cultural evolution,’ neither has hindsight nor foresight. There seems little point in judging the ways and solutions of the past harshly. The religious ideas and visions of the past *were* solutions. Some of them served humanity and the world well, and arguably some continue to do so. But some or all of them may *now* be doing harm in some places and ways – and it is here that our closest scrutiny is needed. To justify religious belief we must ‘maximize’ the benefits (if any) of religion and minimize or hopefully eliminate the kind of damage it sometimes causes.

⁵⁰ Belief in unseen forces and supernatural agency *is* common to most religious belief throughout the world, but the centrality of *a* God, while common, is by no means universal.

⁵¹ Sshamefully ignoring millions of Buddhists out there. However, I know from personal experience that many *practicing*, as opposed to *philosophical* Buddhists, do have theist, and even animist ideas. Buddhism seems to be a broader or more flexible belief system than mainstream Christianity. This may account for its growing popularity as an LCB in the west.

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It has become common for critics of religion to lump the monotheistic, ‘Abrahamic’ religions together. They are all monotheistic and have common historical roots, as well as great differences. They have many features in common, though I hasten to re-emphasise that such an observation reveals that I am viewing them *from the outside*. From the inside, the differences are possibly seen as huge by many adherents. Meanwhile ecumenical movements (such as the World Council of Churches) are diligently trying to increase the common ground. One of my objectives too, is the recognition and expansion of common ground - between religions, and also between religion and no religion. This is, of course, nothing new. Building bridges is the ‘name of the game’ within those organisations and communities devoted to world peace, where religion has often been a divisive force. Meanwhile, the absence of religious belief, atheism, is currently making a strong play for the minds of man and woman in the West. This will also be a major focus of Chapter Four – not only to understand *belief*, but also to understand and gain some perspective on *unbelief*, and the ‘apparent’ conflict (point 4 of the distilled argument) between them.

One useful distinction of interest, and importance, to my inquiry is that between religion and *religiousness*. John Dewey wrote eloquently of this in his book, *A Common Faith*, (1934/1968). He argues that the quality of experience of religiousness is worth preserving while the supernaturalism that is (almost always) a doctrine of religions needs to ‘give way.’ He would dispense with *religions* for the sake of saving *religiousness*. (p 1-28) An insightful point, but I think it a totally impractical proposition to *eliminate* religion. But I would say that he is at least trying to critique religious belief or orientation without totally attacking the whole phenomenon. There is a redeeming side – something to save, values and experiences worth preserving.

In my investigations of religious belief, I have developed, as it were, some *faith* that progress can be made in *de-heating* the fractiousness that one could say, has truly ‘exploded’ onto the world stage in recent times. I will argue, with Dewey, that there is a baby in the bathwater – that religiousness in particular can be ethically legitimate and worth preserving – that it is a clue to LCBs that are not explicitly *religions*. However, the high profile atheists like Dawkins, Dennett, Harris and Hitchens argue that virtually everything religious is evil and “poisons everything.” (Hitchens’ phrase) I disagree. I understand where they are coming from – there stridency has come out since the disastrous destruction of life and property in New York in 2001. But I do not

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think that religion, or *religiousness*, can be blamed for 9/11 any more than science or being scientific can be blamed for the dropping of atomic bombs on Hiroshima and Nagasaki in 1945. I will explore related questions further in Chapter Four.

Claims of compatibility and continuing value in religious beliefs constitute important aspects of my argument and will be fleshed out in greater depth as we proceed. For now, the salient point is that religiousness has been with us for a long time, and I am *not* convinced that it should be summarily off-loaded (even if it could be) as obsolete, irrational and ‘poisonous’ superstition. In spite of the deepest wishes of the ‘new atheists,’ such an outcome is about as likely as the ‘second coming!’ (Of Socrates I hasten to add!) The demise of religion has been predicted ever since the beginning of the Enlightenment, and especially since 1859. It is part of the intrigue of religious belief that it is just *so* tenacious. Attempts to suppress religion, as was official policy in the former Soviet Union, were about as successful as ‘Prohibition’ in the USA during the 1930s. The outward expressions of religion were kept down and out of sight, but as soon as the regime relaxed, religion sprouted like flowers in the desert after a rain. As Dennett observes, “The rebound of religion in post-USSR Russia suggests that religion has roles to play and resources undreamt of...” (2006, p 86) Indeed! Such apparent futility in countering religion ‘head on’ is part of my rationale for a compatibilist view. As someone once wisely counselled, ‘Don’t enter fights you can’t win!’ But Dawkins would probably answer that cliché with another one – ‘Never give up.’ I would say it is not fighting nor winning that we want or need.⁵² Competition has its place, but not in matters people are all too willing to die for.

E.O. Wilson has said, “The predisposition to religious belief is the most complex and powerful force in the human mind and in all probability an ineradicable part of human nature.” (1978/2004, p 169) I don’t wish to suggest that we must ‘endure’ religion because of Russellian credulity, nor because of its incredible tenacity. Rather, it is Wilson’s claim that it is part of human nature that most interests me. Also of great interest and relevance is the common sense Darwinian proposition that what doesn’t serve some useful purpose, or even more, what is detrimental, is likely to be ‘weeded

⁵² My own coinage in this competition is, “War is not the answer.” We get “war” whether of weapons or ideas as an answer because we are asking the wrong questions. What are the right questions? I don’t know but we need to keep looking.

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out.’. Religion not only hangs on. It *grows* – as has been the case in the USA and some other Western countries recently. In some niches of our Western world it is contracting. But overall I would surmise that worldwide, and in much of the West, religion is still going fairly strong. I believe and will argue that people everywhere are ‘drawn’ to belief in unseen entities and forces.⁵³ I argue for the moral right of the individual to choose what they will believe – *within certain limits*. I will delineate the limits of legitimate belief, as I see them, in due course, but let us now and for the rest of this chapter put religion and religiousness under the evolutionary ‘*understandascope*’ (concept of cartoonist, Michael Leunig). Point 1 of my ‘distilled argument’ is our first item to look at in greater detail – that religious belief has *evolved for perfectly understandable and practical survival reasons*.

Religious Belief from the Evolutionary Perspective

In the previous section I have tried briefly to locate religious belief in its broad cultural and contemporary context. What about the ‘temporal’ context – its history? As interesting as the recorded history of religious belief may be, it is beyond my scope here. Though it may well be relevant to some of the contemporary phenomena I do want to discuss, still it is the *natural history and origins* of belief that are germane to my project. What can evolutionary history contribute to our understanding of religiousness? Where does religion come from? In this section and the next, I will present my account of an evolutionary understanding that would have favoured ‘believing behaviour.’ And then, I will attempt to show how this very practical believing behaviour could have evolved culturally from the already mentioned ‘seeds’ - the needs for security, solace, explanation, and cooperation and cohesion in society (arranged, if you can bear it, for another memorable acronym: *SSECCS*).⁵⁴

My personal focus in life is mainly on the present, but, as I age, I become ever more interested in the *future*. It is *lineage* that ‘counts’ for an animal with foresight. It is very well to replicate, but unless one’s genes are going to carry on down through the

⁵³ I won’t go so far as to say that there is ‘something to be salvaged in salvation.’

⁵⁴ Don’t knock it – the ‘memory challenged’ like me need this sort of thing. I remember the three main ingredients of natural selection as ‘VARNISH’ – VARIation, Natural-Selection, and Heritability. No ‘I’ (or soul) required for it to shine!

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generations, you may well wonder why all the fuss. It doesn't matter to natural selection – as Sterelney and Griffiths say, “Evolution by natural selection cannot look forward because it cannot incur costs in anticipation of later benefits: do not ask for credit, as extinction often offends!” (1999, p 219) Evolution cannot anticipate nor can it see. Peter Singer says, “The blind forces of evolution have thrown up creatures with eyes!” (1981, p 169) Similarly, evolution, without any foresight, has thrown up a creature with *distant* foresight.⁵⁵ Foreseeing descendants might well be our only form of assured ‘immortality.’ Not having descendants? You would have to at least say it is a pity.⁵⁶ It is my interest in the future that draws me to the idea that understanding our distant past will enhance our understanding of ourselves in the present, and give us the best shot at a long line of great, great, great, great^x – grandchildren!

Historically, in all parts of the world, religious beliefs have been prominent. And while diverse, there have been common elements. I suggest this is because religion has immediate practical utility. The environments of former times were demanding. Life was rarely easy for the majority of people. Acquiring the necessities for survival required astuteness, concentration and near constant activity – just to stay alive and be able to raise one's offspring. Whether in hunting, agriculture or domestic work, it seems a safe guess that, in general, human beings were (and probably are, but possibly less so now) extremely practical in their orientation. Whether we are speaking of historical or pre-historical times, I submit that before Homo was *credulous*, he/she was mainly concerned with praxis – getting the necessary tasks done – mainly, of course, getting something, hopefully enough, to eat. So, I submit, for the less obviously useful ideas like gods and ‘hidden agents,’ to get a toehold in human minds, these too had to be of some *immediate practical utility*. (Remember – “do not ask for credit.”) I am not saying there was no room for non-essential activity. Sooner or later, at least some of the time, one's belly is full, one is warm and safe. Then can imagination and dreaminess be allowed to occupy our minds. I have often wondered if belief in ‘the unseen’ might have originated in early human curiosity about night dreams – another reality, or so it may seem to the lucid dreamer. But first, I submit, must come *food*.

⁵⁵ Many animals have *some* foresight – tigers will stalk prey for days. I've heard that some birds in arid central Australia will start building a nest at the appearance of clouds on the horizon. Call it instinct if you like, but *you don't know*.

⁵⁶ Mindful of the fact that many couples choose, in contravention of their biological mandate, not to have children, I nevertheless think there is only one thing worse than having children – and that is *not* having them. But is that ME talking or is it my genes?

‘Science’ predates religion

Long before science, as an identified and self-conscious activity, was called ‘science,’ people were very scientific. They had to be. For all the ‘goods’ which imagination, myth or religion may supply, food on the table is not one of them. Food is ‘matter’ and requires a materialistic approach. A trial and error approach to food-getting might work for some hyperactive organisms in a food-rich environment, but as soon as on-board equipment for foresight and planning developed, it was an instant success in the food-getting and the selection stakes. Man might dance for rain, for fun and ‘just in case,’ but once cloud seeding became possible, most people with access to this modern method adopted it with its more reliable, predictable results. Some people may still continue with traditional faith-based approaches at the same time – and why not – there is still the fun to consider – not to mention, ‘*just in case.*’ (DH)

Not all ‘practical’ activity deals with something as basic as food-getting of course. Historical man had other practical problems, including how to face a multitude of anxiety-producing conditions, both internal and external. Recall Scott Atran’s comments, “Religion ensues from the ordinary workings of the human mind as it deals with emotionally compelling problems of human existence such as birth, aging, death, unforeseen calamities and love.” (2002, p viii) These life events are real practical problems too. For example, anything that would help get over losing a child could have enormous influence and leverage with a grieving family. If someone had an idea that eased a parent’s pain, the grieving mother and father would be (wouldn’t you?) very predisposed *to believe* that which brought some comfort. The solace that religious belief can bring in one’s ‘hour of need’ would always have been powerful.

David Sloan Wilson observes, “Even massively fictitious beliefs can be adaptive, as long as they motivate behaviours that are adaptive in the real world.” (2002/2003, p 41) Wilson further observes and makes a strong point of the relative *strength of practical realism over factual realism*.⁵⁷ To underscore this distinction, he says, “If there is a trade-off between the two forms of realism, such that our beliefs can become more adaptive only by becoming less factually true, then factual realism will be the loser every time.” (p 228) Wilson is an ardent evolutionist and adaptationist. He defends religious belief on its adaptive credentials – and criticises the ultra-rationalists

⁵⁷ A distinction which I have brought forward in the early stages of Chapter 2, a most enlightening and helpful distinction which will arise further down our track.

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saying, “Rationality is not the gold standard against which all other forms of thought are to be judged. *Adaptation* is the gold standard against which rationality must be judged, along with all other forms of thought.” (p 228) Stirring words and a striking idea. It rings true to me. Ghosts and witches, not to mention gods, might provide lots of SSECCS and so solve many problems, and make a coherent whole out of the chaos of daily experience.

Is Religious Belief an *Adaptation*? An ‘Emotive’ Theory

Beyond the explanations of the origins of religion already given, i.e. the ‘seeds’ as I’ve called them: security/solace, explanation, and cohesion/cooperation – there are other issues to tackle in answering the question whether religion is an adaptation. No doubt many finer grained definitions of adaptation can be given, but for simplicity’s sake, I will go with J.Z. Young, “Adaptation is a process of change to meet a particular existing condition in the environment.” (1971/1974, p 472) I have one quibble with this definition – I think it would be more apt to say ‘...to *fit better*...’ rather than “to meet.” Natural selection can be thought of as producing a resultant trait or behaviour which, for whatever reason and however slightly, enables an organism (or a population of organisms) to survive and have more offspring where others perish or have fewer offspring. I think it is ‘better’ to call this a ‘better fit.’

Better

Of the three stages of adjectives – ‘good,’ ‘better,’ ‘best’ – better is the one I like better, and is the most readily recognised or identified. What is good? Who knows. What is best? Who knows. But what is better? Almost anyone can at least hazard a reasonable guess, no matter what the contents or circumstances are. And this is essentially what natural selection selects. It doesn’t have to be ‘good.’ It almost certainly is not ‘best.’ To be *selected*, a mutation, a deviation, some kind of variation only needs to be functionally and statistically *better*. Dennett says, “Natural selection occurs because a sum of events, of all sorts and sizes has a particular statistically describable outcome.” (1995, p 326) What is natural selection’s favourite song? “Anything you can do I can do better!” Evolution is mainly about *incremental* change, although ‘hopeful monsters’ as they are called – where some giant or bizarre mutation occurs, although unlikely, cannot be ruled out. If they are *better* (i.e. *fitter* in this context), they could be expected to survive and prosper.

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We need just one further technical distinction before we tackle the big question about the adaptiveness of religious belief that heads this section. When a chance variation becomes fixed (spread throughout the population), and becomes a more or less permanent feature of the population through time, then this is what is meant by *an adaptation*. However, a key point to bear in mind, as discussed earlier in Chapter Two, is, that due to environmental changes, what was an adaptation may later prove not to be *adaptive*! This explains why organisms sometimes carry on with functionally useless traits or behaviours – features that *once were*, but *no longer are*, adaptive. As long as such traits (or behaviours) aren't very costly and don't get too much in the way (like male nipples, or the appendix), they may remain with a species indefinitely.⁵⁸

All researchers I have read who take the 'outsider' or naturalistic view agree that the pervasiveness and costliness of religion demands a thorough-going naturalistic and evolutionary explanation. Full-blown religion takes precious time and energy. The counter-intuitiveness⁵⁹ of some of the ideas about hidden entities and agencies associated with it present a challenge to understanding unless it really *does something for us*. And, if we are not going to accept (i.e. 'on faith') its own account of its origins, a miraculous or supernatural account, then *it had to come from somewhere*, and it has to do a lot of work for us.

Ever since religion has been looked at scientifically there has been no shortage of attempts to provide this kind of explanation.⁶⁰ So here are my thoughts on the subject: We must first of all note that *emotion*, for its own good evolutionary reasons (which I won't go into, but see Lewis et al. 2001, pp 37-66), has been around in the limbic

⁵⁸ Note how readily we can imagine differing outcomes in the two examples I give: the male nipples might well go on forever, but the appendix, without the advantages of modern medicine, might well have been 'de-selected' out of the species due to frequency of its becoming infected. How likely mutants born without an appendix would be is another question, but perhaps even smaller and smaller ones would be favoured because they might be less likely to become infected, or less dangerous if they do.

⁵⁹ As some wit has said, "faith is the magic ingredient that enables us to make 'that wonderful leap from grim reality into the totally bloody ridiculous.'" (Morrison 1999/2003, p 254) On a more serious note, it is Scott Atran who emphasises that the counterintuitive and counterfactual belief in a factually impossible world of supernatural agents is a universal core aspect of religion, if not religiousness. (2002, p 5) This could be disputed, but it is beyond my scope here to do so explicitly. (However, see later discussion of byproduct/brain theory.)

⁶⁰ As Richard Dawkins says, "Everybody has their own pet theory of where religion comes from and why all human cultures have it." (2006, p 163)

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system of mammalian brains for a long time. ‘E-motion,’ suggests it is something about getting us moving – *in motion*. Lewis says, “In all cases, emotions are humanity’s motivator and its omnipresent guide.” (Lewis et al. 2001, p 36)

I think religion began with an emotional response to the world in which this probing animal, *Homo*, found itself – a world that was dangerous, puzzling, and so full of mysterious *others*. What emotions would these conditions be likely to evoke? I suggest – the emotions of *fear, curiosity/wonder/puzzlement, and love/hate*. If this is a reasonable supposition, it corresponds to the three ‘seeds’ – security/solace, explanation, and coherence/cooperation. (SSECCS) “Fear,” John Dewey said, “created the gods.” (1934/68, p 24) Clearly fear would spur us to ‘motion’ toward safety and security (the first seed). The emotions of curiosity and wonder lead us to an *inner* ‘motion’ – puzzling, to look for some anxiety-relieving, some cognitive dissonance-resolving, *explanation*. And love/hate would lead us to ‘motion’ toward, and protection of, the beloved, and away from the possibly dangerous ‘other.’

Religiousness is a collection of powerful feelings – perhaps also a faculty or sensibility that some people have more of than others. I believe there is a differential *need* for whatever benefits are seen to accrue from religious feelings. I suspect another ‘layer’ of emotional response developed from the basic physical and social ones (SSECCS) already identified. These feelings include awe, reverence, and, arguably, an aesthetic sense. I speak here of a closely allied affective experience, being *moved* (e-motion), that can lend special warmth, depth, connection and a sense of being overwhelmed – i.e. ‘spiritual’ feelings. Just a reminder, I am not talking about the whole construct of institutional religion(s) here, but *of the feelings which I suggest gave rise eventually to them*. I am building on Dewey’s distinction, which I introduced previously, and suggesting that *religiousness precedes religion*.

I believe the emotional experiences of mystery, wonder, awe and beauty were the next stage in the evolution of religion. Perhaps, to continue the botanical metaphor, we could call them the ‘roots’ (as opposed to the ‘seeds’) of religion. However, this does not go to the ‘root’ of the Darwinian question. As Richard Dawkins says, “...we should ask what pressure or pressures exerted by natural selection favoured the impulse to religion.” (2006, p 163) We might well wonder how those religious feelings would lead to some kind of functional belief(s) that had *survival value* – for

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this is the key and the basis of all evolutionary analysis. I don't think anyone knows or ever will know for sure – such aspects of evolutionary development do not even leave bones, teeth or footprints. But with some judicious extrapolation from what we can see, and do know something about,⁶¹ we can attempt to put up plausible explanations. That is what I have tried to do in this section. Now let us look at some of the current theories in the literature.

Cognitive Theories

There are a number of cognitive theories that try to account for our apparent disposition to believe in non-natural phenomena. I will give a very brief account of some of these. None of these accords perfectly with the thoughts on the emotion/evolutionary connection I have presented above. Cognitive theories are more sophisticated, more intellectual, and more focused ultimately on explaining the higher levels of development of religion, but they would be compatible with my speculations about emotive seeds and roots.

The first is called by Daniel Dennett (the following discussion is largely based on Dennett 2006, pp74-93) the 'sweet tooth' theory and is based around the notion that we have genetic 'receptors' or a 'god center' in our brains that responds to supernatural explanation. This is a general class for the hard-to-credit idea that religiousness is somehow 'hard wired'⁶² in our brains – straightforwardly genetic. But, as Richard Dawkins aptly puts it:

If neuroscientists find a 'god center' in the brain, Darwinian scientists like me want to know why the god center evolved. Why did our ancestors who had a genetic tendency to grow a god center survive better than rivals who did not.

(quoted in Dennett 2006, p 83)

⁶¹ For example, we can do some 'social reverse engineering' based on the lifestyles and folkways of contemporary hunter-gatherers whose ways and conditions of life, anthropologists have thought, are closer than urban hominids to those of the 'environment of evolutionary adaptedness' – the often acronymned 'EEA.' Also, by way of example, the supposition I made earlier that prehistoric mammals had emotions, is based on all existing mammals having a limbic system, the seat of emotions. (Lewis et al. 2001)

⁶² However, there is a part of this that I am tempted by – see below under the discussion of 'byproduct' theories.

The second type of cognitive theory is called a ‘symbiont’ theory. Symbiosis is a biological relationship between different organisms where they somehow ‘share’ life together – they may be mutually beneficial to each other, but can also neutral or parasitic. Symbiont theories (there are several variations) are based around Richard Dawkins’ idea of ‘memes.’⁶³ Basically the notion is that a cultural idea can have a life of its own as a ‘meme,’ which, like a living entity, is subject to a process akin to natural selection. (Dawkins 1976/89, p 189ff) A meme once started, passes horizontally from person to person, or brain to brain, and the ‘better’ memes or ideas, in this case religious ideas, will endure because they somehow ‘stick’ – like a catchy tune. The memes may, but do not have to benefit you. Instead they are replicators in their own right, moving on the ‘back’ of language from brain to brain. Dawkins has suggested that religion *is like* a ‘mind virus’ – a ‘parasite’ that is well evolved to “counter our defences and enhance their own propagation.” (Dennett 2006, p 84)

This idea has some persuasive force but is very hard to verify (or falsify). Sterelney and Griffiths are “very sceptical about this way of applying evolutionary theory to the task of explaining features of human societies.” (see 1999, p 333ff) I share their scepticism for the additional reason that Dawkins is ever at pains to portray religion in the most negative light. Without doubt, religious ideas, like ideas and information generally, do pass from mind to mind (duh), but the parasite and virus idea are part of the Dawkins’ program of ‘rebuttal by ridicule.’ That doesn’t mean the parasite/virus idea is necessarily incorrect of course, but it makes the idea suspect in my book. Dawkins is very insistent that the onus is and ought to be on ‘believers’ to show that their beliefs are grounded in reality. I submit that the onus is on him to show that memes are ‘real.’ Of course, they are an explanatory construct and do not need to exist in any material way – but could we not say something similar about gods? But I digress...

⁶³ First introduced in *The Selfish Gene*, (1976, pp 192ff). Much could be said but it is beyond our scope here. It has become an intellectual industry, taken up by many, including Daniel Dennett. (see 1995, PP 335-369) Susan Blackmore has written a book on the concept, *The Meme Machine*, 1999, in which she develops the notion of transmission by *imitation*. It seems the ‘meme’ meme is replicating quite successfully. We now have meme pool, memeplex and even the memeosphere! I myself have written a song called, ‘Please Love Meme.’ Will it ever end? Not if memes have anything to say about it! They do because our brains are full of them.

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Next in our parade of theories are those based on *sexual selection* – simply that religion is something akin to a peacock’s tail or a bowerbird’s bower. I am inclined to this idea, not because females are necessarily drawn to religious ideation, as in the classic (peacock’s tail) sexual selection hypothesis, but because religious ideas can be *comforting*, and even alluring or mesmerising when they come from the right source with the right tone of voice! In fact, this notion lends support to my contention, mentioned earlier, that aesthetic inclinations blend in some way with the spiritual. I believe there is some commonality between artists/musicians and priests/purveyors of religious or quasi-religious (mysterious) ideas. I call this the ‘poet/priest complex’ and I think it is sexual selection at work. The following longish quote is from the pen⁶⁴ of evolutionary psychologist Geoffrey Miller, whose revival of Darwin’s ‘other’ theory, sexual selection, as previously mentioned in Chapter Two, is very interesting – and he might even be right! Most of his work is devoted to arguing that the relatively rapid increase in hominid brain size (nearly tripling in about two million years) is due to sexual selection. However, he pauses to share this scenario with us, which resonates with my thinking on the poet/priest complex:

Imagine some young hominids huddling around a Pleistocene campfire, enjoying their newly evolved language ability. Two males get into an argument about the nature of the world, and start holding forth, displaying their ideologies.

The hominid named Carl proposes: “We are fallible primates who survive on this fickle savannah only because we cluster in these jealousy-ridden groups. Everywhere we have ever travelled is just a tiny, random corner of a vast continent on an unimaginably huge sphere spinning in a vacuum. The sphere has travelled billions and billions of times around a flaming ball of gas, which will eventually blow up to incinerate our empty, fossilized skulls. I have discovered several compelling lines of evidence in support of these hypotheses...”

The hominid named Candide interrupts: “No, I believe, we are the immortal spirits gifted with these beautiful bodies because the great god Wug chose us as his favourite creatures. Wug blessed us with this fertile paradise that provides just enough challenges to keep things interesting. Behind the moon, mystic nightingales sing our praises, some of us more than others. Above the azure dome of the sky, the smiling sun warms our hearts. After we grow old and enjoy the babbling of our grandchildren, Wug will lift us from these bodies to join our friends to eat roasted gazelle and dance eternally. I know these things because Wug picked me to receive this special wisdom in a dream last night.” (Miller 2000, p 421)

⁶⁴ Or should I say ‘computer,’ but doesn’t pen sound more poetic, even sexier?

Now I ask you, according to current stereotyping at least, which of these characters would any red-blooded romantic female be more drawn to? Despite the tongue-in-cheek delivery, there is an important and possible truth here – both about how beliefs may have got started and quite plausibly about how religious stories are sustained (meme-like). My contention is that the poet/priest phenomenon, so ably illustrated in Miller’s vignette, supports the idea that, at a certain point in hominid evolution, when language was sufficiently advanced, quite possibly around a flickering fire, which would lend atmosphere, clever and creative males sought to impress and win the affections of ‘choosy’ females with rich and mysterious tales – not to mention *songs*.

Could anyone doubt that music is the richest of all veins in the ‘mines’ of sexual selection? Why do people sing? For the same reason that birds do. (Attenborough, Radio National 30/01/10). As Daniel Dennett jokes, “The idea that musical talent is the royal road to the embrace of a woman is certainly familiar; it probably sells a million guitars a year.” (2006, p 88) With mystical, mythical murmurings and enchanting lyrical songs, the border between fact and fiction is increasingly blurred – and becomes unimportant, second to emotional rapture. Dreaming is and always was a great mystery, and, as I’ve claimed, could readily be invoked as evidence of ‘another world.’ Whatever the reality status of a tale once told, if it was repeated down the generations (meme-like), as was often the case in oral cultures, a fanciful story could easily be transmuted, as suited the teller, into as much ‘reality’ as required to get the ‘job’ of maintaining mystique and enhancing sexual attractiveness done.

Nonadaptive Theories

All of the theories so far presented propose that religion is an adaptation – that it directly benefits the individual’s survival, or the survival of genes or memes. There is also a *group* selection theory advanced by David Sloan Wilson. I will not discuss this in detail because it is a controversial theory which, I confess, I do not understand very well. However, implicit in one of the ‘seeds’ of religion – cooperation and cohesiveness – we have the social dimension fully before us. If that ‘seed’ is correct, then it is evident that the formation of a group is part of the core business of religion. Implicit too is the notion of *belonging*. Religion, as opposed to religiousness, clearly

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has a function that involves the bonding (cohesion) of the group – sometimes for the purposes of solidarity *against* the other or “out-group.” Without getting too technical about it, it seems obvious to me that one of the major contributing factors to the evolutionary/historical development of religious belief is the formation and strengthening of a social group and a social order. I think this has more to do with culture than biology and so will leave it at that.

There are two additional theories that propose that religion is ‘nonadaptive.’ (D.S. Wilson 2002/2003, p 45) One is the notion, based on our earlier distinction, that religion *was* an adaptation to *past environments* but is not *adaptive* in modern environments. This idea is a very interesting one. It is also a ‘generalisable principle’ that utility may not be constant through time. It is ever worth bearing this in mind in many contexts, but I will leave it at that for my purpose at present.

The other ‘nonadaptive’ idea is a very significant and widely supported (e.g. by Robert Hinde, Pascal Boyer and Scott Atran) theory that holds that religion “is a by-product of genetic or cultural evolution.” (Wilson 2002/2003, p 45) Dennett calls these ideas ‘pearl theories’ because, like pearls, the product is not the real reason for the production – rather it is a by-product of the oyster’s effort to deal with a local irritation. (Dennett 2006, p 91) Gould and Lewontin called such things ‘spandrels’ after an architectural feature which is ‘incidental.’ (Dennett 2006, p 271)

My favourite example of the by-product theory harks back to David Attenborough’s question of a few paragraphs ago, “Why do humans sing?” It is widely accepted that the ‘Broca’s area in our brain’ (our neurological, language processing center), and the larynx in our throats, have slowly evolved and added capacity as more precise signalling was naturally selected. It could be seen as one of the ‘best tricks’ (phrase coined by Dennett) evolution has ever come up with. The enormous functional advantage of articulate communication hardly needs to be stated. Being able to make such a variety of sounds, with such control over pitch, volume, and every other conceivable aspect of speech, is arguably the ‘best trick’ ever. In addition, singing and music generally certainly have functionality too – as discussed. But singing is almost certainly, in the first instance, a by-product. What is the sound-producing capacity of *Homo sapiens* for? It is *for* communication. That is, almost certainly, its

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primary purpose.⁶⁵ That some other animals (especially birds of course) sing to attract mates does not, in my view, detract from my point. The human range of complex, sustained, melodic, pure sounds is surely a by-product of the development and utility of endlessly varied speech. This is conjecture, but, I submit, a good one!

Both Daniel Dennett and Richard Dawkins seem to give some credence to by-product theories. Dawkins provides an illuminating example concerning children. He argues that child brains may very well have a default or ‘rule of thumb’ innate urge which inclines the child to, “...believe without question, whatever your grown-ups tell you. Obey your parents.” (2006, p 174) This can quite readily be seen as a basic safety (survival) principle for any sensible child under a certain age. And it also can readily be envisioned as ‘misfiring’ when it comes to a child’s being receptive to all kinds of imaginary, fictional ideas, when delivered by adults. Another take on this basic idea is provided by Bruce Hood – he says,

The idea is simply that we’re born with brains which have evolved to make sense of a complex world by seeking patterns. And in doing so, and this operates early, it’s an intuitive, untutored process; in so doing children come up with misconceptions, or assumptions which can be seen to be the basis of later adult supernatural beliefs. So the idea is that one source of beliefs is from *within* the child, not necessarily through story telling or indoctrination.

(Radio National, 30/01/10)

The final truth (if there is such a thing) may very well be a combination of some or all of these ideas which are, after all, educated guesses. However inventive or far fetched any of these may appear, *they demonstrate that naturalistic explanations can be offered* (point 2 of my argument) for what was once seen as the province of ‘revealed truth.’ And this is one of the major points I wish to make. A specific idea or ‘just so’ story, if you like, may not be the truth, the whole truth and nothing but the truth, but it does demonstrate the *possibility of a naturalistic explanation*.

That ‘believers,’ those on the ‘inside,’ may find such attempted explanations somehow threatening is unfortunate. I have mentioned Emerson’s view, and it is mine also; and Dennett echoes similar sentiments – no faith worth having ought to be undermined by

⁶⁵ I actually heard someone at an evolution conference (name forgotten, I’m sorry) suggest the opposite – that singing came first! As a sometimes musician, I like that idea. In that case, perhaps speech is the by-product? Perhaps we should consider if they co-evolved?

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a naturalistic understanding. But still tension and conflict on this point are likely to continue. I hope to give further and convincing reasons why this conflict is not necessary (my argument points 4 & 5) in Chapter Four.

In spite of my giving plenty of space to these naturalistic theories, my preferred kind of explanation, I cannot and do not conclude that an ‘inside’ understanding of religious beliefs is invalid, unworthy or should be dismissed. On the contrary, I am inclined to think that the insider’s perspective should be listened to very carefully. As will become apparent in Chapter Four, I will argue for the rationality and right to believe *on the basis not only of an appeal to reason, but of the fruits of the particular belief, or belief system*. I have heard it said that Camus did not think he should be thought of as a philosopher – because he didn’t believe in ‘reason’ all that much. I too wonder about the *extent and limits of reason*:

The superiority of reason?

One of the most dastardly products of reason is its own adulation. So convinced are the ‘reasoners’ that their Truth has the capital ‘T,’ that it thus becomes a self-congratulatory, and self-righteous way of thinking, not terribly unlike dogmatic religious beliefs. Such is the power of confidence in correctness it instils in the reasoner. There are many who would be Lord. Their gods are embattled in some cosmic arm’s race – “Mine is bigger, better, *truer* than yours, and especially superior to *theirs*. You are misguided; they are foolish blind believers; but I am a rational reasoner, king of our cerebral species!

(DH)

So *is* Religious Belief a ‘Product’ of Natural Selection?

Those ‘of faith’ who are afraid that a naturalistic understanding may undermine their beliefs, shrink from the question. A closed question like I am posing asks for, but cannot satisfactorily be answered with, a ‘yes’ or ‘no.’ It is not a ‘leading question’ but a ‘mis-leading one.’ The word, ‘product,’ points to a fixed and mindless form that results from a mechanical process. We are not products. No “paper cutter” made us. (Sartre 1957, p 14) I believe it truer that we make ourselves. Our evolutionary inheritance includes cultural ideas and forms – religiousness is almost certainly part of that legacy, and thus one of the themes of antiquity. It is ours to embrace or discard.

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Biology sets the stage, but *we are the actors*, and interactors, within an environment. Biology gives rise to us, but it is up to us to nurture and define ourselves, and reflect on what is given, what is not given, and what we need. We must make choices because that is the kind of animal we are. As Dennett says, "...the ability to transcend our genetic imperatives...is itself a biological fact." (2006, p 4) One only needs to reflect on which of these two following scenarios will most likely lead to biological success: one where an organism always responds in the same old way to a stimulus, and sometimes lucks out, and other times loses; OR, scenario two – one which says, "hey the last time I did that, it didn't work out so well, I think *I'll try something new*." The capacity to learn and to use what we learn has given us a huge leg up in the evolutionary stakes. Our freedom is part of our biological nature – it is what we are in an even deeper sense than Sartre had in mind in his expostulations about human freedom. "...man is free. Man *is* freedom." (1946/1975, p 353) I agree with Sartre – but adding to his philosophical reasons for saying so, I would say we are also biologically free *and responsible* and we must *choose even what we believe, or don't believe*. This will be my point of departure and overriding theme in Chapter Four.

IF and "Nothingbutness"

While *Homo sapiens* is not special in the sense of being a 'chosen species,' by divine appointment, neither are we simply 'products' of nature or nurture, or a combination of the two, or *any production* process. We are not products, but ACTORS. While science is a wonderful tool for self understanding, it must not and cannot be our master. We are the toolmaker and it is the tool. We have no obligation to reason. While we would be fools not to consult this superbly evolved cognitive capacity, we would be greater fools still, to think that reason and science are the only way, the *one true way*. That would be as bad; indeed, *it is* another version of *blind faith*. We must consider what to put our faith in – *considered faith* combines the light of reason with the light of the human heart – it leaves us open, neither masters nor mastered, once removed, actors and observers of the action. Let us not place boxes around ourselves, nor limitations of any kind. We are not defined by our limitations, but by our possibilities. This is, I hope, an 'intelligent faith' (IF).

As Viktor Frankl has said, it would be dangerous to accept man's 'nothingbutness' – the theory that we are 'nothing but' the result of bio, psycho or socio conditions. (1959/2006 p 130) We must uphold our ultimate freedom, this above all is our ultimate concern, never to forego our autonomy – our right to believe in ourselves, in whatever we deem necessary for our survival *and flourishing*. Even if our beliefs are false or wrong, *we have the right to be wrong*, as long as it harms no one else. If it harms us, that is the price we pay for being foolish. Being foolish is not morally (or epistemologically) disallowed – it is just being foolish, being human. (DH)

CHAPTER FOUR

TO BELIEVE OR NOT TO BELIEVE

I find it fascinating that brilliant scientists and philosophers have no clue about how to deal with the basic irrationality of human life and society other than to insist, against all reason and evidence, that things ought to be rational and evidence based. Makes me embarrassed to be an atheist.

Scott Atran 2007, p 170

If believing something for its desired consequences is a crime, then let those who are without guilt cast the first stone.

David Sloan Wilson 2002/2003, p 229

The true atheist is not the man who denies god, the subject; it is the man for whom the attributes of divinity such as love, wisdom and justice are nothing.

Feuerbach mid-19th C in Robinson 1963, p 50

Nothing is more difficult, and therefore more precious, than to be able to decide.

Napoleon Bonaparte in Dennett 2006, p 132

Broadly speaking, this thesis, and this chapter in particular, are within the contemporary reason (and science) versus religion (and faith) debate. In this chapter I will specifically argue against the polarisation of religion and science. I support a compatibilist position on socio-ethical grounds.

Mine is a ‘big picture’ discussion of the religious kind of belief, which I believe one is justified to hold *without any epistemic certainty*. I am only concerned with those kinds of internalised, deeply felt beliefs that have some considerable impact on our

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actions and our lives. I will pass over many of the more technical philosophical issues – leaving them to others to explore. I hope that my observations and arguments may have some broader relevance to questions of what it is legitimate to believe. But I will once again leave it to others to adduce whatever value for other aspects of the whole range of doxastic issues may reside in my more limited concern with religious belief.

Let us for a moment recall the myth of ‘Pandorra’s Box.’ Hope, as I have said, is part of my perception of what philosophy can illuminate in the modern world. I will strive in this chapter to present *hope* for a harmonious future as a reasonable position, and one of the important reasons that belief is still needed, reasonable and justified. I will do that by arguing that in affirming and committing to a ‘life centering belief’ (LCB), individuals need not make a truth claim about the content of their belief. Rather, they are expressing a feeling, and a commitment to a locus of values, based on grounds which have personal meaning for them and are respectful of others. With Bertrand Russell’s notion of the ‘credulous animal,’ I have argued that we cannot escape belief – that I have claimed is a part of *our evolved nature*. It is not required of us, but we are predisposed to religious faith. It becomes a question of *choosing our grounds*.

What’s at stake in whether we believe in ‘something we can’t prove’ or not? Is it, as Randolph Nesse suggests, justified because of conferring some ‘selective advantage?’ In this chapter, we continue looking at religious belief from the evolutionary perspective – which is, as I have argued, an illuminating account of our origins, and has much to offer in a practical philosophical world view.

However, in this chapter, our focus will fall also on the question and possibility of ‘unbelief’ – is atheism justified, and what are the challenges that contemporary atheists pose to the case for belief that I am making. Is it correct and complete to assert that religious ideas *are* truth claims that are totally without a credible, evidential basis? Are they right that religious worldviews are irresponsible and dangerous to mankind? Feuerbach, in the epigraph above, questioned what an atheist is, and so shall I. To believe or not to believe – *is that the question?*

Thus we will consider issues to do with certainty and evidence. I believe that William James (1842–1910) had a wise perspective on religious belief and its related questions a century ago. I intend to bring forward and support his position, or my reading of it.

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His famous essay, ‘The Will to Believe’ (1896/1962), was “a defence of our right to adopt a believing attitude in religious matters,” (1896/1962, p 88) and that is precisely my overall aim as well.

On the other hand, Theodosius Dobzhansky asserts that our temptation to believe in “what ought to exist” can run afoul of reason and thus disqualify itself from being “right.” (1969, p 169) He was an eminent scientist, but also a great humanist and a religious believer. We should take note of his view since he modelled a compatibilist position – good science with religious sensitivity. Scott Atran (2007, p 170), on the third hand, has his finger on the pulse of reason. I shall argue that this pulse is strengthened by a code not of rigid rationality, but of a broader based code of *reasonableness*. I will argue that reason, in the end, must give way to itself and foreswear righteousness and dogmatism.

And so we come to my big and burning questions, the ones I have been leading up to through the previous chapters. Given who I am, given who *we* are and our evolutionary origins, given what we need to feel our lives are worthwhile, *what are we entitled to believe?* To believe in something we perhaps take ‘on faith,’ is for many people a ‘living’ and ‘momentous’ question (James’ criteria). Even if the question is not ‘*forced*,’ as James seemed to think, still to believe or not to believe confronts us in many ways and places – even, in some cities, on the streets and at *the bus stop!*⁶⁶ In this chapter I will apply my bio-philosophical perspective to religious belief, to religious unbelief, and to the ethical considerations of the positions on offer. D.S. Wilson, in the epigram above, speaks to me – should belief not be assessed on the social functions and consequences that surround it? And finally, I will address the question that if beliefs are not to be assessed on their truth or falsity, how does this impact on how we arrive at what we believe. My view is, concisely: we believe we actually make decisions; so let us first of all *decide what we believe*.

There are many things I believe I know, but in the end, all I know is what I believe. (DH)

⁶⁶ The ‘new atheists’ are taking a page out of evangelicalism and starting to ‘market’ their message, even on the sides of city buses.

Points of Departure: Belief and Unbelief

In Chapter Three, I argued that the inclination to believe, even if we are unsure as to the precise mechanism, must in some sense have been favoured by a selective process. I want to add a brief further point to that argument in order to be clear that the whole of our phenotype, including our behaviour, indeed all that an organism is and does, is included. It is part of our “extended phenotype” (Dawkins’ concept). Conrad Lorenz in the 1930s ‘discovered’ that “a behaviour pattern could be treated like an anatomical organ.” (in Dawkins 1982/99, p 2) It now seems obvious, but it was not always so. Some historical ‘hold outs’ – people who were reluctant to concede the full extent of *what exactly has evolved* – wanted to limit the Darwinian process to morphology, or physical form, only.

The biological mandate to survive and reproduce is currently understood by evolutionary biology, psychology and related disciplines to include everything an organism *is and does* to achieve those ends. Richard Dawkins has developed that idea to include all of the behavioural pattern(s) that slowly and painstakingly evolve to adapt an organism to its environment. Classic examples of Dawkins’ conception of the extended phenotype are the spider’s web, the termite’s mound, the beaver’s dam, the bird’s nest – all can readily be seen as crucial to the being and survival of their respective species. But they are all physical, material ‘extensions.’

What about mental, purely cognitive ‘behaviours?’ Can believing, and especially believing ‘strange things,’ be seen as part of the extended phenotype? If religious belief is an outcome of naturalistic processes, is it not short-sighted and misguided (unscientific even) of the ‘new atheists’ to stridently attack and want to dismantle the *evolved* edifice of religious belief holus bolus? Do they know what they are doing?

Religion is ubiquitous and enormously important to a majority of people on the planet. It is beyond important – it is part of who and what we are – its ubiquity and persistence suggest that it is embedded in the cognitive architecture of our brains as well as the social architecture of our cultures. However, religious belief is not sanctioned or justified by its inbuilt, embedded nature and evolutionary rationales. (See discussions of the ‘genetic fallacy’) Is it justified to believe totally false things?

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My answer to that, as will unfold, is a conditional “yes” – it *depends on what you do with it*. Recall that belief, as I’ve defined it in Chapter Three, is bound up with action. I will argue in this chapter that it is on the ethical consequences of that action that the justification of religious belief succeeds or fails.

I have three further points to make in these previews and points of departure. First, I want it to be utterly clear that when I argue that a belief in a god may be justified, I don’t mean to limit my discussion to any god or a specific god of a specific religion – and especially not to a big severe-looking white haired geezer in the sky who created everything in six days – that’s the *straw god* that is, in my opinion, all too easy (and tedious) to tear down.⁶⁷ The question of any scientific, factually real ‘god-out-there’ is not what religion is essentially about. Each person’s god(s) belong(s) to him or her. With Kierkegaard and Sartre, I believe that “human subjectivity must be the starting point.” (Sartre 1957, p13) My ‘god’ (simply characterized as *the most important thing in my life*) is the one I envision *within me*. Even Daniel Dennett concedes that atheists can have ‘sacred values.’ (2006, p 23) ‘Sanctity’ may be life enhancing, and the centrepiece of an LCB. For many people, ‘sanctity’ includes a *godhead*.

Second, I believe we are all ‘religious’ in some sense. Or anyway we all *believe in*⁶⁸ something or *some things* (values), which, as Dennett says “are not up for re-evaluation at all.” (2006, p 23) It seems to me that we either believe *in* something or we don’t; and even *not* believing in something is itself a species of belief.

The third and last point for this opening section is that, as far as I can see, there is only one thing we can *know* in these matters – and that is: when it comes to some sort of ultimate explanation or ‘purpose of it all,’ *we don’t know*. What’s more, *we know that we don’t know*.

⁶⁷ I don’t want to get into all the various conceptions of ‘god’ either – I don’t think it necessary to my consideration of belief, and it has certainly been done to death (of god?) However, I find it a particular weakness of the new atheists’ position that they lock on to the simplest, most naïve conception of god possible. Fundamentalism is an issue of course, but I would say of the ‘fundies’ that their noise outweighs their numbers – at least in most places.

⁶⁸ ‘Believing *in*’ is the religious and social expression of faith and trust – as opposed to believing *that* which is usually about factual, practical matters, e.g., that it will rain; that so and so will come to the party. This is an important distinction in general studies of belief.

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So what are we to do? This was precisely the problem that William James confronted in the *Will to Believe* – what to believe when evidence is ‘insufficient.’ (1896/1962) James was mainly concerned with the Christian God. I want to broaden out our range of possible things to believe in, but to be of a religious (or LCB) nature, they all need to have a certain ‘ultimate’ quality – something we adhere to and do not give up easily, and which means a great deal to us. It is most important *how* we believe and less important *what* and *why* we believe what we do. Especially *why* may or may not have a rationale in the believer’s mind – it is hard to discern, and we don’t really want to say, or put ourselves in a position of having to defend it – we believe in it just because we do!⁶⁹ In this respect, religious faith is similar to being ‘in love’ – it may *have its reasons*, but it is not *based* on reason.

To believe or not to believe – that is the big question of this chapter of my thesis on evolution and religious belief. Quickly let me list the points of my ‘distilled argument’ again, so that if I digress, or get temporarily lost in my reflections, at least you, the reader, will know what I am basically on about! Here are the points:

1. Religious belief has evolved for practical survival reasons.
2. The naturalised approach I will adopt sees religion as having an *adaptive role*.
3. Religious beliefs (can) still play a useful function in society.
4. But there is conflict between science and religion.
5. We should judge religious belief on how well it fulfils its social functions, not on ‘truth.’
6. Since religious belief is to be judged on different criteria than scientific claims, there need be no conflict between the two.
7. When judged on the appropriate criteria, religious belief is acceptable, necessary (for some), reasonable and even desirable.
8. Essentially one is free and justified to *decide what one believes* as long as it does not encroach on the ability and rights of others to do the same – this includes the ability and right to have no (religious) belief at all.

⁶⁹ I have always loved the Benjamin Disraeli quote, “All men have the same religion; as to what it is, all wise men will never say.” I would say there *could* be ‘one true religion’ – we just don’t know what it is yet!

Terminology and Positions: Are Science and Religion Compatible?

Daniel Dennett in the first chapter of *Breaking the Spell: Religion as a Natural Phenomenon* tries very hard to reassure believers that the only things they need to let go of are not worth hanging on to anyway. (2006, pp3-28) He quotes a wonderful passage from William James' *Varieties of Religious Experience*:

A story which revivalist preachers often tell is that of a man who found himself at night slipping down the side of a precipice. At last he caught a branch which stopped his fall, and remained clinging to it in misery for many hours. But finally his fingers had to loose their hold, and with a despairing farewell to life, he let himself drop. He fell just six inches. If he had given up his struggle earlier, his agony would have been spared.

(James 1902, p 111, in Dennett 2006, p 20)

I suspect that truly 'true believers' would be little comforted. Nor would they be likely to appreciate Dennett's suggestion that religious fervor should not be viewed as something one cannot live without, like "daily newspapers, a free press or ...cigarettes." (Dennett 2006, p 14) Yikes! With due respect to both James and Dennett, both philosophical heroes of mine, is it any surprise that deeply 'religious folk' might justifiably feel *underestimated*?

In this section I will attempt to more precisely define terms and describe positions that I refer to that are parts of the science and religion debate. I want at this point to clarify my understanding of the 'poles' in this so-called 'debate.' Part of my project is to delineate a more complex relationship between these positions, which sometimes sound like they are complete opposites – I don't think they are. Science and religion are not like hot and cold – they are not diametrically opposed, though their methods are very unlike each other. The polarisation of them is misleading at best and dangerous at worst. Science is based on an empirical methodology guided by reason, whereas religion is based on *faith*, which is belief without proof. They are different, but they are not contradictory. They have common ground – they are both about interpreting the world and human experience. At a simplistic level, they may appear to be at odds and in conflict. I will argue they can complement, or at least be compatible with each other – basically as long as neither tries to rule or trump the other.

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Reason constitutes the rules for logical thinking – intended, when employed by science, to pursue a very precise, usually measurable, kind of understanding. Religion, at its best, is also a way of understanding, but it is a broad cultural phenomenon, usually with a body of beliefs, but also with an emotional, social and practical side to it – including a value system. They are different in scale and scope. Science is like a ‘laser,’ whereas religion is more like a ‘floodlight.’ Pitting the two as opposites is like saying the musical score is at one end, and the sound of the orchestra is at the other – it doesn’t describe true opposites. Perhaps a better analogy would be that reason is a tool, a big and important one, but a tool nevertheless,⁷⁰ which aids science in describing and making predictions about the material world. It is about *receiving* information about the world around us. But religions, I would say, are more akin to *the hopes, dreams and aspirations* of the tool user. They are about *expressing* our subtle senses of wonder, relatedness and connection to the world. They help us to discern what we need to do in order to feel whole and complete.

Religion is more closely related to art, music, and literature than it is to science and reason. Like artistic activities, religion is a layer, an ‘infusion,’ an expression of culture. *Religion* (the institution) is a different order phenomenon from *religiousness*. Religiousness is primarily emotional and internal to the believer, whereas religion is a complex cultural structure. Beliefs are part, but not necessarily the most important part of either the institution or the feelings. The *practice* of religion can be much more important and meaningful for everyday adherents (though perhaps not for theologians) than its *theory*. This observation is based on my functional understanding of religion. To be sure there are theologians and other religionists for whom their beliefs and creeds are important to them. But, unfortunately, wars have been fought over doctrinal differences. For this reason, I think a *wise* religion does not put creed above all. I am interested in a modern, somewhat generic, and perhaps an ‘idealized’ religiousness *of the future*, just as I am more focussed on a philosophy of the future. Religiousness as a kind of aesthetic activity can be seen in this light.

I have foreshadowed earlier that the main reason that religious belief does not conform in all ways to the standards of ‘reason’ is that it is only tangentially a system of

⁷⁰ I’m reminded of the contemporary witticism that if your only tool is a hammer, then everything looks like a nail. This may be quite appropriate to the ultra-rationalist mentality.

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thought. It is ‘non-rational.’ This is not to say it can’t make sense or doesn’t have meaning in some way – *in some way*, yes.⁷¹ But is it the kind of sense that maths and logic are aimed at? Or is it the sense of a painting or a piece of music? I will explore this question further in a later section.

In today’s Western world where the secular/scientific modality, at least in terms of the penetration of technology into daily life, is on the ascent, there is an increasing emphasis on the *theological* aspects of religion rather than its practice and social function. But I would suggest that historically in the West, in many non-Western cultures, and even among ‘ordinary church-goers’ in the West today, the ideological and doctrinal aspects of religion are relatively less important than the experiences, practices and social aspects of religious life. The ‘world’ of religion includes a cast of thousands crossing themselves, lighting candles, facing east, and/or praying a required number of times each day. That the theory may not be all that important to many of the faithful is not, of course, an argument that religious ideas are justified in being totally incoherent. Though new atheists might say so, I don’t think religion today can ‘get away with’ being utterly and totally unreasonable, though perhaps it *sometimes* is. Many, perhaps of a more cynical view than I, have said *it even needs to be*.⁷² I, however, am partial to the view that religiousness (at least in the Deweyan sense) needs to be an enrichment, an aesthetic and axiological activity where ideas (sometimes quite fanciful ideas) are part of the palette. I argue that religiousness, at its best, is concerned with understandings, sensitivities and values that integrate or *center us* (LCB) in the world. Great works of fiction in literature, and great works of art generally, are as capable of serving our needs to come to broad understandings as are reason, or the sciences, or philosophy for that matter. All have their role to play and their contribution to make – including religious faith.

⁷¹ Perhaps it is fair to say that, in its totality, it needs to be *reasonable*. Although in the past, animal and even human sacrifice has been part of religion, such extremes would be dimly regarded and not very successful in attracting adherents today. It needs to be reasonable, I would say, but it isn’t, and doesn’t need to be, *reasoned*.

⁷² It depends on what you mean by ‘unreasonable.’ Eric Hoffer says, “If a doctrine is not unintelligible, it has to be vague; and if neither unintelligible or vague, it has to be unverifiable.” (1951/2002, p 81) Pascal Boyer backs this up from an anthropological perspective saying that consistency and refutability are “routinely flouted” by most religious traditions. (2001, p 300) This also harks back to the Kierkegaardian notion that faith is best that embraces absurdities.

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The common lexicon of the reason/science ‘side’ of the contemporary debate is in terms like ‘scientific materialism,’ ‘naturalism,’ ‘unbelief,’ ‘atheism,’ ‘rationalism,’ hard or ‘ultra rationalism’ – these all come up time and again. I’m sure everyone will recognise that all of these terms refer to a quite similar grouping of views. It is also true historically, and on the contemporary, there is overlap with the most common heading for this group – the ‘scientific position,’ or ‘scientists’ or just *science*.

There are two further issues I would like to discuss to do with the opposing of *science versus religion*. First, most religious positions are, as I have discussed, fundamentally *non-rational* (as noted, importantly distinguished from *irrational*). And therefore, (a)theism and rationalism ARE ‘opposed’, though not so much diametrically as, perhaps, orthogonally. Only agnosticism is the purely rational position. A totally *irrational* position would be one, perhaps like the contention that the earth is flat, that can be unequivocally disproved. As I am using the term, non-rational means things that cannot be finally proved or demonstrated one way or the other. Therefore a belief that there is a god and a belief that there is not a god are both non-rational.⁷³ I believe, therefore, that science and any rational way of thinking are not necessarily opposed to religious and faith-based belief because religiousness is *non-rational*.

The second and totally different kind of reason I think it inappropriate or misleading simply to oppose ‘science’ with ‘religion’ is that the two supposedly incompatible positions apparently coexist in many individuals – not least in scientists themselves! Bearing in mind Benjamin Disraeli’s observation on three kinds of lies: lies, damned lies and statistics, we need to approach with caution the available figures on ‘scientists who believe in God.’ But, according to one source, there are around 39.6% of scientists who say that they believe in some sort of personal God “to whom one may pray in expectation of receiving an answer.” And if this is broadened out to be “spiritual to some degree,” the percentage rises to “more than half of scientists in all disciplines.” (Giberson and Artigas 2007, p 10)⁷⁴

⁷³ There may still be (good or bad) reasons both for believing and for not believing – indeed that is one of the key issues of my thesis, part of the apparent paradox that there *are* good and bad reasons for both. Fortunately, I think evolution gives us a way to go between (or is it over?) the horns of this dilemma.

⁷⁴ Some expressly Christian websites, contrary to what one might expect, put these figures lower! Giberson and Artigas are both scientists and they are at pains to uphold scientific values while steadfastly maintaining that science is not necessarily incompatible with, nor hostile to religion. They are ‘apologists’ and their book had Templeton Foundation support.

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A second source quotes very similar figures and comes from a social scientist (and non-believer). Hinde cites similar surveys done in 1916 and 1996 which showed that “the proportion who believed in a personal god who heard prayers and could grant immortality remained steady at about 40%.” (1999, p 3) If this is at all accurate, it is surprising in two ways – both the lack of change over the last hundred years, and that scientists, in greater than generally appreciated numbers, are actually religious believers.

A search of internet sites, googling “scientists who believe in God,” found quite similar figures. Some surveys break it down much more – including between different kinds of scientists, in different countries, and at different ages and educational levels. One internet site distinguished between selected “eminent scientists” and those randomly chosen from amongst science educators – the percentage who were believers was much lower in the former group. By contrast, another site put the number of scientists who believe in Biblical creationism at below 1%.

There is often difficulty in interpreting statistics, but if these figures are even close to right, it seems reasonable, given the several different sources, to conclude that there is a *significant minority* of scientists who hold or retain some non-naturalistic beliefs.⁷⁵

On a more anecdotal but I would say significant level, one book I have read was, *Finding Darwin’s God*, by Kenneth R. Miller. (1999/2007) He is a devout Christian, but also a diligent and dedicated evolutionist – good enough in that area to win an accolade – a citation from none other than Richard Dawkins in *The God Delusion*. (2006, p 131) Also, and this is part of what Dawkins likes in Miller, he is not only *not* a creationist, he is not a ‘theistic evolutionist’ either. Theistic evolutionism is the position that God directs or facilitates creation *through* evolution, which is the position of many ‘intelligent design’ advocates. Dawkins says of Miller, “...he is for my money the most persuasive nemesis of ‘intelligent design.’” (p 131)

⁷⁵ A little ‘derring-do’ in offering these figures. Questions arise. But even if we discount the un-cited internet figures, I think the near agreement between Giberson/Artigas and Hinde (a noted scholar), strong enough to credit. Of course scientists are a big population – I doubt that the numbers of believers are higher than average among (evolutionary) biologists.

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To conclude my section on terminology and positions, it seems clear that rationalism is logically opposed to anything *irrational*, but not necessarily (logically) opposed to positions that are *non-rational*. Therefore, science, a rational activity, is not necessarily opposed to religious belief, which is non-rational. Further, from a sociological perspective, scientists whom we may reasonably assume to be rationalists in the main, as the figures above suggest, do sometimes (dare I say, rather more *often* than you might expect) hold non-rational beliefs. On both approaches these considerations lead me to conclude that religion and science ought not to be seen as in direct and complete opposition.

Belief by Evidence versus Belief by Decision

Science and reason are often lumped together, as are religion and faith. Are there relevant differences between science and reason for our purposes? Science does indeed *employ* reason. And it does so to a much greater extent than religion, if indeed religion does at all. Religion does not rely on reason for its authority, whereas science is almost wholly ‘authorised’ by reason in combination with empirical evidence. None of the aesthetic endeavours to which I have been comparing religion relies on reason in any obvious and prominent way. The claim that, “The music is beautiful,” is not one to which we can readily apply objective standards determining truth or falsity. Once again, the comparison and opposition of such dissimilar fields seems to me to be missing something. If one compares, “concrete is hard,” with, “life is hard,” it is readily apparent that the first one can be *tested* once an appropriate criteria or standard for hardness is determined. Whether it is hard or not can be determined by the evidence. On the other hand, while relevant evidence may be offered, the statement ‘life is hard,’ is largely a subjective one. It has to do with intangibles – feelings and decisions on the part of the speaker. Religious beliefs may be influenced by some kinds of evidence, but they are not *determined by evidence* in the way that scientific conclusions are. Religious belief is located (and decided) *in a mind*, whereas scientific ‘belief’ is, at least ‘in theory,’ determined solely by evidence supported by reason. Simply put, and without getting too philosophically pedantic about it, religion is subjective and science is objective.

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Kenneth Miller says, “The world has many religions but just one science.” (1999/2007, p 221) There are variations, disputes and differences in how science works or should work, but as a big broad generalisation, I think Miller’s point is valid. Scientists the world over would have a great deal more in common than, for example, Baha’i’s do with Buddhists – at least at many levels.⁷⁶ As mentioned in a footnote earlier, we cannot rule out the possibility of one religion in the future. It may seem a vain hope, but in the distant future humanity may rally around a universal belief system. Hans Küng, an eminent theologian, is devoted to the concept of a ‘Global Ethic.’ Perhaps this is a step in the direction of the unification of belief.

It is not necessary for my purposes to go into any detail on the many interesting issues in the philosophy of science, but there is one I would mention, for it bears directly on the conclusion that I am heading toward. It is the question of whether we believe by evidence or by decision. As I said in my preview of this matter, these are not mutually exclusive procedures. We often decide to believe something *in accordance* with evidence; but as I conceive them, evidence and decision are different in emphasis and intent, so let us have a deeper look at the history and nature of this distinction.

The ‘*evidentialism*’ of W. K. Clifford (1845–79) is captured in the famous quote, “...it is wrong always, everywhere, and for anyone, to believe anything upon insufficient evidence.” (1879/2001, p 18) William James is in part replying to Clifford, “...that delicious enfant terrible,” (1896/1962, p 92) in *The Will to Believe*. He says, “There are two ways of looking at our duty in the matter of opinion... *We must know the truth*; and *we must avoid error*.” (pp 99-100) James claims that Clifford’s position is not tenable – that it places all emphasis on the avoidance of error, and not enough on reaching for the truth. James says:

Believe nothing, he tells us, keep your mind in suspense forever, rather than by closing it upon insufficient evidence incur the awful risk of believing lies....You, on the other hand may think that the risk of being in error is a very small matter when compared with the blessings of real knowledge, and be ready to be duped many times in your investigation rather than postpone indefinitely the chance of guessing true. (p 100)

⁷⁶ Although I am not for a moment suggesting that *all* religious belief does not have considerable common ground. That is one possible helpful conclusion of an evolutionary analysis: common ground due to common origin and function. Furthermore, as will be seen, that is a part of my hope for a harmonious, radically inclusive future.

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The terms of this debate were taken up later, in the 20th century, by the philosophers of science Kuhn and Popper. The view that evidence *compels* belief goes back to St Augustine (roughly Clifford's position) and this orientation was adopted by Thomas Kuhn. (Fuller 2003, pp 112-13) Popper, on the other hand, took the more Jamesian view that:

We do not stumble upon our experiences, nor do they flow over us like a stream. Rather we have to be active: we have to 'make' our experiences. It is we who always formulate the questions to be put to nature; it is we who try again and again to put these questions so as to elicit a clear-cut 'yes or 'no' (for nature does not give an answer unless pressed for it). And in the end, it is again we who give the answer; it is we, ourselves who, after severe scrutiny, decide upon the answer.

Karl Popper (quoted in Fuller 2003, p 111)

Interestingly, Fuller notes that contemporary theories of knowledge rarely acknowledge their 'religious roots.' He says, "...these roots are indelibly marked in the philosophical tendency to think that beliefs are *compelled by evidence* rather than *made by decision*." (Fuller 2003 p 112). It may seem odd to us to think of religious doctrine as 'compelled by evidence' but the key to understanding this is contained in the concept of heresy. 'Heresy,' the word, derives from the Greek where it means 'decision', i.e. "contrary to what one knows to be the case through acquaintance with church doctrine."⁷⁷ (p 112-13) The religious 'roots' of his position would probably horrify Richard Dawkins!

Dawkins says that he finds the idea of deciding what you believe to be "ludicrous." He is wholly convinced that one only 'believes something' because you genuinely think it 'maps on,' one to one, with material reality (Dawkins, 2006, p104). He does concede that "at least it (deciding to believe) is not something I can do as an act of will," which leaves somewhat open the possibility that *someone else* might be able to do it. But in his condemnation of the role of decision, he seems oddly out of step with

⁷⁷ In other words, "the authoritative objective Truth out there *IS* church doctrine. This is so topsy turvy to our contemporary view that it is confusing; but such is the power of what Kuhn would call the *paradigm* – it literally "structures observation and defines reality." (Ruse 1999, p 22) You want the evidence? Go read your Bible – *that is* the evidence!

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Popper (though they are speaking of decision in different ways)⁷⁸, and oddly in step with a great nemesis, St Augustine, who, among other things, was the originator of the concept of ‘original sin’ which Dawkins abhors!⁷⁹

I will return to issues to do with evidence, and the right and propriety of decision, in the last section of this chapter. I hope then to make my own position and argument clear – where the *consequences of belief* become a *decisive* factor.

Conflict within Religion: A Meeting

Recalling my discussion in Chapter One about the relevance of the personal to the philosophical, I want to relate a personal biographical experience that for me ‘brought home’ some of the conflict and confusion that differences in belief can have for us. In this case, the challenge had some parallels with the science vs religion debate we have been discussing, but it was not between believers and unbelievers. It was *within* a religious organisation – both sides were believers ‘of a kind.’

During a recent ‘service’ of a religious organisation when protocol allowed anyone present to speak, one of the assembled worshipers ventured that heaven and hell were of *this* world, and not some ‘after-death’ place. At that, a relative newcomer to meetings of this religious organisation, an older woman who looked like she would brook no nonsense, stood up and vented vigorous exception to the previous speaker’s sentiments. Holding her worn looking Bible aloft, she inveighed that if what the previous speaker had said were actually true, she would have to RIP pages out of her sacred text!

Needless to say, this confrontation sent waves of unease through the meeting, which was normally a fairly quiet and civil affair. But after a shocked moment or two, order

⁷⁸ Dawkins would undoubtedly insist *with* Popper in the realist conviction that there is a mind independent reality out there! Regarding decision, Dawkins’ objection is specifically to deciding on religious beliefs and I don’t think he would disagree with the above Popper quote on ‘making’ our experience and decision, though I’m not sure. I think where their positions are clearly at odds is over being *compelled* by evidence – Popper against and Dawkins for.

⁷⁹ I agree with Dawkins on this one. I have always thought that the Christian emphasis was much too ‘sin heavy.’ What about: ‘*the virtues of the fathers are visited upon the sons!*’

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resumed – with some uncertain sighing here and there. Later, after the official service ended, efforts were made at emendation; but, there was a residue of uneasiness.

Some weeks later, the ‘objector,’ and her partner, were called upon by the ‘elders’ of this religious organisation. The appropriateness of the objector and her partner’s *general forcefulness* in advancing a strict biblical line on this and previous occasions, was questioned. In effect, they were ‘called on the carpet.’ They took this as ejection. In their eyes, they were being asked to *dilute* what, for them, was indisputably *The Truth*. They were being chided by a religious society with Christian roots for being, in some sense, *too Christian*. They savoured the unseemly irony, and decided that this was probably not the church for them – indeed, was it a church at all?

This was a personal experience of a conflict within a religious group, and as I see it, an example of conflict between faith based on authority and faith based on conscience. In this case the issue was more about ‘reasonableness’ within a faith framework rather than the sort of rationality which the ‘new atheists’ champion in their criticisms of ‘irrational’ religious views. No one on this occasion was being totally unreasonable or irrational. Nevertheless, the basic difference was between a more literal, conservative, arguably fideist version of faith (of a moderate sort), as opposed to the organisation’s more liberal, somewhat ‘mainstream’ and modern blend of faith, which for the most part downplays reliance on Biblical *revelation*.

Being a witness to the above incident caused me to review my own perceptions of, and participation in this organisation – and to reflect on *what I believed*. What exactly did I believe? And how was this important, if at all, to me, or anyone else? What should I do about this conflict within a religious group I had supported and been a member of for more than ten years? Did my own beliefs affect what I should do? What are the limits of tolerance we can or ought to expect – from ‘believers,’ or for that matter from ‘unbelievers? What is the role and function of the many religious varieties of belief? Can we, **SHOULD** we, accept that people have a right to believe? Or that they *are* right (justified) to believe? I speak not of *legal* rights, but of epistemic and, a fortiori, *moral rights*.⁸⁰

⁸⁰ Technically most Western countries, and I believe others outside the West, undertake to guarantee ‘freedom of religion.’ It is also enshrined within the Universal Declaration of Human Rights.

But what about epistemic rightness – the Truth! When it comes to unverifiable, non-evidential, faith-based beliefs, the moral right to believe may appear (especially to ‘hard core’ rationalists like Richard Dawkins), as the ‘right to be wrong.’ Surely, that is outrageous – absurd – or at least paradoxical? Who on earth would want, or expect, that anyone should accept *the right to be wrong*. This is surely *not* what belief is about – rather belief is, or ought to be, concerned with *Truth*. “Belief aims at truth” claims Bernard Williams in his well-regarded discussion of ‘Deciding to Believe.’ Truth is seen as one of belief’s central features. “If a man recognises that what he has been believing is false, he thereby abandons the belief he had.” (1973, pp 136-37) So says Williams, although he explicitly states he is not talking about religious sorts of belief. He allows that what he says about belief generally *might* apply to religious beliefs too. But wait a minute, don’t many of us hold beliefs that we can’t *know* to be true – or know them to be false for that matter? It stretches credulity to suggest that someone might hold to a belief when they *know* it to be false.⁸¹ But with religious belief, are we not faced with *uncertainty* in the final analysis? So an instance of something that is *both fully believed and fully known to be false* seems like a pointless hypothetical – so rare it may reasonably be discounted.

Truth: another figment?

Philosophy and theology and humanism and nearly all the philosophical traditions of humankind cling to the quaint notion of ‘Truth.’ Is Truth another god, a philosopher’s god, another figment, another useless deception, another instance of wishful thinking? Man, the wishful thinker. For most of our species’ history, we did not see ourselves as different from other animals. And then arts, and sciences, and tools beyond club and stone were invented. Then also, Truth was invented – *all the better to control those who didn’t have it(?)* There look at you in your nakedness; aren’t you ashamed? Get a fig leaf for your body and a figment for your mind. (DH)

⁸¹ I can, however, imagine, and I don’t think it uncommon, that someone may continue to believe something even when evidence points the other way – or instances of some cognitive dissonance where the truth is somehow too horrible to face and thus belief is used as a *shield* – for example, “I believe my wife is faithful although there have been odd occurrences that might point the other way.”

The Ethics of Unbelief

Most contemporary critics of religious belief are evidentialists who would agree with W.K. Clifford. As James observes, their primary concern is to *avoid error*. The onus is on someone who makes a ‘truth’ claim – to show evidence in a publicly verifiable way. This is part of the generally accepted epistemological standards of science. The scientific ‘ethics of unbelief’ is, you ought *not* to believe anything that cannot be publicly verified; additionally Karl Popper’s criteria for scientific hypotheses, that they be *falsifiable*, is widely accepted. These are epistemic principles – without regard to other values like human welfare, or flourishing, or any intellectual value in pluralism. Evidentialists would not be likely to agree with Gillian Beer who said:

And I think we should never overlook how far theories or ideologies that are different from our own can stimulate. It’s not what’s like what we are thinking but what’s different from what we are thinking that is going to drive thought forward.

(Beer 25/1/09)

Richard Dawkins and most of his ‘new atheist’ cohort, including Daniel Dennett, Sam Harris, and Christopher Hitchens, are adamant that beliefs which depart from the evidentialist standard, which suggest any relativism in how truth is to be judged, are not only wrong in themselves, a violation of intellectual standards, but they are *dangerous* and *do* enormous harm – they do ‘break legs’ and they certainly ‘pick pockets!’ The new atheists point to moral imposts that are much heavier than a broken leg or a lost wallet – they contend that religion brainwashes, and thus destroys children’s minds, and that it incites sectarian enmity and causes wars. Hitchens, who is particularly hard hitting in his attacks on the evils committed in the name of religion, says:

Car bombs have been planted outside nightclubs, in the hope of maiming and dismembering young women who have the nerve to be immodest in public. Blood-curdling yells, thirsty for the murder of Jews, Indians, and other riff-raff, issue from the mosques and from tapes and films sold in their precincts. In one of the most secular and multi-cultural capitals (London) in human history, the lives of everyone are being poisoned by hatred and violence.

(2007, p xiv)

There is no denying the suffering that religion has brought about historically (e.g. the Crusades, the Inquisition) and contemporaneously (the Holocaust, 9/11). But whether religious beliefs were the root cause of these human disasters is another question. I do

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not wish to argue against religion *sharing* in the responsibility for evils committed in its name. But other ideologies, and bent science too, have been used and abused to justify all manner of evils (including, for example, the deplorable doctrine of ‘Social Darwinism’). The new atheists seem to think that religion itself is directly to blame for excesses, evils, ‘sins’ even, committed in its name. Perhaps so, but this is a complex question and I must say it sometimes seems to me to be bringing down an elephant for an infected toe. What I am even less sure of is that the elimination of religion and the installation of a totally scientific materialist culture would rid the world of suffering. I very much doubt it, but that would be a very fruitful and useful path for further research.

Also not clear is how one measures the harm versus the benefits that arguably flow from religious activity. There is a need to weigh up the whole ‘balance sheet’ of good and bad outcomes – and then to ask how much religious belief contributed as distinct from other influences and factors, like economic deprivation, disempowerment or simply ignorance.

These historical and sociopolitical considerations are important in an overall assessment of the net effect of religious belief in the world today. For my purposes here, I am equally concerned with the needs and the rights, and the consequences, of religious beliefs for *the individual*. The consequences of religious beliefs are relevant for societies and for individuals. At both levels we ought to bear in mind the costs, including the litany of ‘new atheist accusations’ placed at the doors of belief, and at the feet of believers. But is there not also a need, out of fairness, to ask questions about benefits of religious belief?

Perhaps, as intimated above, an important question to pose to the unbelievers is: would we want to live in a world where there were *no religious beliefs* (remember John Lennon’s song, *Imagine*, “And no religion too”). If that were the case, believers might become an ‘endangered species’ – where the dominant ethos was like the Middle Ages on its head – atheism totally embedded in the culture. Entertaining a belief in anything not verifiable (or ‘falsifiable’) might become not only disresponsible, but despised, with believers marginalised and discriminated against. Would this be a utopia or a dystopia? B.F. Skinner envisioned a scientific utopia, in *Walden II*, but it sounded distinctly dystopian to me. Although we are far, far from a

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world like that, many secularists today, including those I have already mentioned, are scathing and virulent in their attacks on religious belief. Of the ‘Four Horsemen,’ as they are sometimes called – Dawkins, Dennett, Hitchens and Harris – only Hitchens is prepared to say he wouldn’t like a world without religion. Why would a rampant atheist want to retain his nemesis? Because, he says, he would ‘miss the opponents,’ the sparring partners, the thing that he loves to hate!⁸² (in Dawkins 2007)

At this time within Western societies and perhaps more so in some non-Western cultures and nations, few people are willing to abandon their beliefs because of what *someone else* thinks about the truth or falsity of their beliefs. And I have to say that although I myself am a non-theist, I do not respond well to anyone telling me what is OK or not for me to believe. I suspect most people feel as I do. Therefore, I would say the new atheists are on the wrong tack and track. It seems they may be taking a page out of some missionary’s book! It is not unusual to hear of them being accused of being as fundamentalist as their quarry.

In spite of a sustained campaign by the ‘new atheists’ (see www.RichardDawkins.net), including now even bus advertising in some places, I would be surprised if many believers were changing their stripes. The strategy of shaming, ridicule and insulting language⁸³ is very likely to be counterproductive. In my view, the art of influence, as opposed to the rhetoric of ridicule, would greatly benefit the cause of the unbelievers. This war of ideas, is the spawning ground for frightening and disastrous disharmony, and more, not less, conflict across cultures in the contemporary world. The mindset and methods of the new atheists are very questionable ethically. Their righteousness is a good match for that of their ‘enemy.’ It is an important part of my project to highlight what might be called the ‘ethics of *unbelief*.’ If you want to change people’s minds, to disabuse them of beliefs they hold, how *ought* one to go about it? I am not sure how to answer that – but I have prior questions: Is it really necessary? Do we need to change people’s beliefs, or rather how they express their beliefs? And finally, what values may be compromised or lost while we are busy insisting on a scientific materialist standard of truth? These questions all have to do with what we value.

⁸² One cannot help but feel, sometimes, that this is a dogma eat dogma world!

⁸³ “morally obnoxious” (p 251) and “demented parrots” (p 308) are both phrases describing religious behaviour found in *The God Delusion* (Dawkins 2006); and I have heard him on video recordings slam religionists for being “stupid.”

Faith, fundamentalism and fanaticism

Of these three, it is the last that is the most dangerous and destructive. Faith is sometimes meritorious. Faith that your chicks will fly, or in your friend's abilities – these are good faiths to have. Fundamentalism can be hard to credit, but may have redeeming features in social terms. But fanaticism seems to me to have no redemptive features. No doubt it is positive to be *passionate* about some things and to stand up for what we believe in, but the fanatic goes too far. (DH)

Values

Questions about the role of belief in the world interest and concern me because of the values I, and many others, hold regarding the desirability of peace of mind for the individual and social harmony within our countries, and indeed in the world. But am I suggesting by my compatibilist sentiments some kind of capitulation or collaboration with the 'fickle forces of unreason?' In this section I want to look at values, and the relationship of value to belief. I believe it is principally values which are the source of conflict between the scientific and the religious mentalities. But are these thought systems so different in the values they uphold or how they uphold them? And, science doesn't really have values...does it?

Many people the world over will voice vigorous support for the value of 'tolerance.' At least in theory, most of us support socio-diversity and believe it a source of social enrichment. But, of course, there are limits that all people and groups everywhere place or would wish to place on what can be tolerated. For example, most citizens of most countries say 'yes' to freedom of speech, but, equally, 'no' to slander, libel and defamation. We all have our limits and some of them are enforced by legal sanction, the original and still powerful arbiter of public morality.

What does 'freedom of speech' mean? And, more to the point, what does 'freedom of religion' mean? Is the principle called freedom of speech for the protection of individual people or could it also mean *for the protection of ideas*? Apparently, there is a movement within the Islamic world to have some of the protections against defamation of individuals, which are promulgated in the Declaration of Human

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Rights, extended to *ideas*. Thus it seems to be proposed to restrict or prohibit criticism of religious ideas. Laws against ‘blasphemy’ were once widespread.

These ethical/legal questions go beyond my scope here, but my point in this section is to draw attention to value differences which create conflict. There is conflict between science and religion at many levels, and I want to raise some of the issues, as I see them, to show that it is the values clash, the ethical differences, that count and should concern us, and not epistemological or ideological differences. Or, put more plainly, it’s what people *do* that matters most – more than what they *say* or *believe*. And, furthermore, I want to show that science is not ‘*above value*,’ nor even *above belief*. I am arguing that science and religion have different values, but that they are equal in having values, and that the set of values of one is not inherently or morally superior to the values of the other. To some extent the rest of my thesis will revolve around these value issues.

Although religion is seen as saturated with value, and in some instances almost *identical* with a value system, science is ‘supposed’ to be spare in its values – free inquiry, rules of evidence, peer review, etc., but above the vicissitudes of culture, time and place.⁸⁴ But is science really so objective and relatively value free?

I remember once a friend saying to me that she didn’t ‘believe in psychology.’ As a would-be psychologist, I was perplexed and even a little offended. It hadn’t occurred to me that psychology was the sort of thing that someone would ‘believe in’ or not – after all it was a *science* – something unassailable, a quest for knowledge, *superior*! This experience shook me. I came to realise that just because something calls itself a science doesn’t make it so in everyone’s mind. Obviously, Dawkins would agree enthusiastically with this point in the case of ‘creation science.’

And it seems that even within the more or less accepted scientific disciplines, all is not equal. The social sciences are deemed ‘special.’⁸⁵ Even biology has had to struggle

⁸⁴ Remember K. Miller’s comment, quoted earlier, “many religions, but only one science” – no wonder Dawkins likes him!

⁸⁵ Do they get ‘special treatment’ as once the Aborigines of Australia were meant to get?

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for full respectability and recognition, and has not yet attained the status of physics, chemistry and the physical sciences. What makes one science somehow more creditable than another? It seems there may be more scope for value differences within science than Miller and Dawkins, at least, would have us believe.

Dawkins calls it a “tired old red herring” that philosophically unsophisticated people will suggest that “a scientist’s belief in evidence is itself a matter of fundamentalist faith.” (2006, p 82) Personally, I wouldn’t compare it with fundamentalism, and I can understand his annoyance, but more philosophically sophisticated people, philosophers of science, do raise interesting, and probing questions about the degree of objectivity in scientific inquiry. Even such a prominent scientist as Gould has said:

Science, since people must do it, is a socially embedded activity. It progresses by hunch, vision and intuition. Much of its change through time does not record a closer approach to absolute truth, but the alternative of cultural contexts that influence it so strongly. Facts are not pure and unsullied bits of information; culture also influences what we see and how we see it.
(Gould in Ruse 1999, p 30)

Gould and Dawkins were partial adversaries, and clashed on many points of ‘scientific correctness’ (i.e. *values*), especially with regard to their speciality, evolutionary biology. Their “punch up,” as the Australian philosopher of science Kim Sterelny calls it, was a “public and polemical exchange.” (2007, p 3) Indeed, such was their status, and the vitriol of their differences, that Sterelny has written a whole book on it – wickedly entitled *Dawkins vs Gould: Survival of the Fittest*. In this book, Sterelny comments that Dawkins is an “old-fashioned science worshipper” and thus for him:

...science is not just one knowledge system among many. It is not a socially constructed reflection of the dominant ideology of our times. To the contrary: though occasionally fallible, the natural sciences are our one great engine for producing objective knowledge about the world. (2007, p. 158)

This controversial, sometimes acrimonious debate between two leading scientists seems to me to demonstrate that they too have their values contrary to the ‘received view’ – i.e. what we are taught in school, etc. Scientific theory clearly is affected by factors external to science. The ‘war of words’ between Dawkins and Gould, which at times was intemperate, even intolerant, led to a great deal of latter day confusion about Darwinism. It actually gave succour to their common intellectual ‘enemy,’ the

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Christian fundamentalists, who seized on this disagreement as evidence that evolution itself was somehow in dispute. It never came close to that, but it showed that science was not always a gentlemanly, disinterested pursuit of objective truth – instead, like religion, it could also lead to passionate disagreement.

Not all religions are as contentious as the new atheists might have us believe. Buddhism, although not totally without blemish, has not fought a war to defeat ‘infidels,’ nor has it, as a matter of some ‘divine right,’ sought to convert by coercion (Conze 1959, pp 25–26). Meanwhile science itself, apart from in-fighting, has often been employed to aid and abet morally disastrous enterprises. I think it fair to say that a good deal of science has been conducted with careless disregard for the uses to which its results may be put. I am reminded of the delightfully wicked verse from a Tom Lehrer song sending up ‘Werner Von Braun’ (1965):

Once the rockets are up,
Who cares where they come down
That’s not my department
Says Werner von Braun. (lyrics accessed, www, 3/11/09)

I wish to argue that the legitimacy, the justification, of belief, rather than resting on epistemic considerations, can and ought to rest on the *consequences* of holding a belief. Meanwhile, those who most object to ‘unfounded’ belief, the rationalist/scientists, are supporting a world view that has contributed to many less-than-desirable consequences. It might appear that my ‘consequentialist’ orientation, if there is anything to it, should thus hold science accountable, and maybe even call into question the moral legitimacy of science? But no, I am not saying that I think it is sound or clear-cut to hold science responsible because discoveries of scientists have led to the invention of, say, weapons of mass destruction. Two of the three items, *Guns, Germs and Steel*, (1999) that Jared Diamond identified as the (more or less destructive) shapers of civilisation, steel and guns, were made possible by science. What I am advocating is some consistency in our ethical assessments – that we ought not to hold religion responsible either (as the new atheists tend to) because of its misuse.

The complexities of this point go beyond the scope of my thesis, but in terms of the ethics of unbelief, I think it illuminating to note some parity in science and religion –

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both with regard to inbuilt values, and regarding the potential for doing harm. It may be that as well as researching the ethics of religion and belief, we could do well to investigate the ‘ethics of science and rationality.’ It seems to me that ‘epistemic correctness’ is not a guarantee of virtuous behaviour. I would say that righteousness, excess piety and ‘disagreeable behaviour’ are just as bad when they are from a scientist as when from a religionist.

One of the values that points the way forward is fairness. It is a major plank of my argument that religious belief should be judged on how well it fulfills social functions and not on truth (point 5), and in that respect it is quite different from science. But, when it comes to criticism across the line which tends to divide them, fairness should be required of both. I think the new atheist’s criticisms of the evils of religion is sometimes unfair and ‘over the top.’ It neglects due consideration of both benefits of religion, and ill consequences of science.

A Case Study of Conflict: ‘The Land of the Free’

Let us move on to an overview of one of the ‘hot spots’ of conflict, sometimes between different kinds of believers, but increasingly between those who do and those who don’t hold basic (predominantly *Christian*) beliefs. I have in my sights the strange case of *American fundamentalism*. I am sorry if this seems “culturally claustrophobic.” I realise as, Pascal Boyer says, “Theism is only one of the thousands of possible ways of building supernatural beliefs. It has no special privilege.” (www, ‘Is the spell broken?’ accessed 18/11/09) Well spoken by an anthropologist with a broad world view.⁸⁶ However, in view of my topic, there is an elephant in the room.

One doesn’t have to look further than the United States to see contemporary examples of powerful religious feelings. It may not often erupt into ‘sticks and stones,’ or

⁸⁶ Unfortunately, being US born, I am constantly confronted with the issues we have been discussing in one of their most puzzling manifestations – and one which, for better or worse, has enormous implications. So both personally and ‘genetically’ I am drawn back to that world power which is simultaneously one of the most scientifically advanced nations on earth, and one of the earth’s most religious societies – or at least, so the press has it. It gets far too much attention and I am only too aware that there is a world out here beyond its borders, because I have lived outside the USA for forty years. But, bias aside, in this case I think it justified to focus on American fundamentalism – it is potentially dangerous for the whole world.

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perhaps, being America, I should say ‘guns and knives.’ But it is still a hotbed of religious invective – the land of rights and righteousness where religious ideas have divided and redivided and are sold over the television like laundry detergent. The American cultural view on what is permissible and/or commendable to believe may elicit some insight into my belief questions, so let’s take a moment to look at it.

Curiously, in spite of dramatically opposing and strongly voiced views within the religious communities, there seems to be very little interfaith violence. I have heard it speculated that the strong, constitution-based principle of religious freedom, or respect for *faith*, contributes to the relative ‘de-radicalisation’ of the Muslim community in the USA (as compared with some European countries). I don’t know if this is true, but, if it is, a question that must be asked is: Does such institutionalised and codified ‘tolerance,’ even of what to some (especially non-believers) would be utterly irrational, crazy beliefs, help to make differences more manageable and less conflictual somehow? I am inclined to think that the juxtaposition of the constitutional guarantees with the ethnic diversity of America may lead to the elevation of tension but also discourage open intolerance.⁸⁷ In other words, people may go around with their jaws clenched, but they don’t tend to bite!

Many of the most bizarre cults have set up in the USA, with varying degrees of success and disaster. Some of the disasters have been tragic, but, on the whole, I believe that a case can be made that the ratio of adversity to diversity in the mixed-faith communities of the USA is smaller than one might expect from a country infamous for its violence. In the USA the most egregious belief conflict is arguably that between the various brands of creationism/intelligent design and the Christian mainstream. They are sometimes allies against increasingly strident atheists or ‘anti-theists,’⁸⁸ but nervously so because of serious doctrinal differences.

⁸⁷ My point in a different context – the scene: gridlock on an eight lane freeway in Los Angeles. Thousands of cars stock still, drivers sitting there, in eerie silence. Why wasn’t someone on the horn, tooting and beeping to get things moving? *They wouldn’t dare.*

⁸⁸ This is perhaps a better term for the ‘new atheists.’ Technically, atheist should mean just ‘without god’, but those I have been discussing are actively and vociferously against, or *anti* god. They are more like Thomas Nagel who said, “*It isn’t that I don’t believe in God and naturally hope there is no God! I don’t want there to be a God; I don’t want the universe to be like that.*” (quoted in Dennett 2006, p 264)

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The United States is a very religious but also a very secular country, where separation between church and state is enshrined in the constitution. It is both the most ‘God fearing’ and probably the most ‘techno-gear’d’ country on earth. The tendency to think of religion and science as in an antagonistic relationship is nowhere further from the truth. I gather there is evidence to suggest that the more conservative a person’s religious orientation, the more likely he or she is to work in information technology, embrace gadgetry and pursue high-tech lifestyles. In my own family, my brother, a very Bible-oriented Baptist, is an aerial-mapping pilot. The huge camera for taking accurate images of huge swaths of countryside is fixed to the floor of his airplane, and is worth hundreds of thousands of dollars. My brother flies the plane in strict grid-like patterns – holding his bearings so that the photos will all link up adjacently and provide a comprehensive record of the land. Meanwhile I have been mostly godless (I gave up religion when my brother told me my dog would not go to heaven) and my main occupation in life was as a woodworker – saws, chisels, sanding blocks, and a power tool or two, were about as technical as I got. Somewhat ironically, my woodworking philosophy was much influenced by a view that came from a religious source – the Shakers – who said, as I roughly recall from memory, “work as if you would live forever, *and* as if you would die tomorrow.” Which of us was the most religious? Or the most scientific for that matter? And did our different metaphysical orientations, our ‘beliefs’ really have much to do with our ways of life. I don’t know and possibly this is not very relevant, but recalling some of the views I expressed in Chapter One, a little biography may be of some interest. My family certainly exemplifies my lead point in this paragraph – the USA is both a religious and a secular place.

Very few things are a simple this or that. The personality theorist Alfred Adler ‘discovered’ that, beyond their biological gender, individual human beings are mixtures of ‘anima’ and ‘animus’ – the masculine and feminine principle – Yin and Yang. I would also suggest that religiousness, being such an aggregate, a basket of varied elements, is mixed in us all – and maybe irreligiousness is as well. Certainly a scientific bent is present in everyone to some degree. As I have argued elsewhere, a bit of factual realism is utterly necessary in order to get our physical needs met. We are all mixtures, and so are societies, especially ones as diverse as the USA.

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In spite of the polarisation and oversimplifications of the ‘religion vs science’ debate, these orientations of thought that have come down to us from many brilliant and well-meaning minds of the past, are *not directly opposing*. At deeper, motivational levels they have a complementary relationship – they are both quests for understanding, and ways of making sense of and finding some ‘center’ in our lives.

It is strange that the country that was first settled by people fleeing religious persecution, and whose first principles (largely formulated by deists and ‘free thinkers’) enshrine religious freedom, should end up being a hotbed of religious evangelism and fundamentalism.

The ‘fundies’⁸⁹ (lumping several stripes together for present purposes) are not noted for their spirit of tolerance. They are thus perceived, and some of them may even say (or think) that if you are not one of them, you will go to hell! The more gentle ones might put it more softly – ‘you’ll be walking in darkness.’ Even the fundies, at least those I have known or heard about, don’t put too much emphasis on hell these days. We have come a long way since ‘hellfire and brimstone.’ The flight from religious persecution is a slow but fairly sure race – even in America.⁹⁰

Here is another way of looking at the apparent intransigence of some fundies. These days, any religious view that incorporates some quasi-scientific notions on the nature of reality is under scrutiny if not pressure – if not from without, from within. As I noted above, some religionists are, in their practical lives, technical or scientific people, with a great fondness for modern/techno gear. It’s almost schizophrenic.⁹¹

The point I want to make is that scientific materialism, although not a religion, seeks, as much as any form of religious zealotry, some hegemony over the human mind. So,

⁸⁹ This is my coinage and betrays my long residence in Australia where every long word that needs to be repeated often, or has some sentimental connotation, gets the suffixes, ‘y’ or ‘ies’ – like veggies (vegetables), pollies (politicians), poolies (lifeguards) and even footy for football – so why not ‘fundies’ – it takes a bit of the sail out of their winds, and maybe even humanises them. They are not faceless enemies and they are not stupid either.

⁹⁰ Unsettling major disasters, either natural, or man caused like 9/11, will inevitably lead to temporary set-backs, or hesitations.

⁹¹ I’m reminded of an insightful saying by that lovable streetwise cartoon cat Garfield: “The material things in life are not important but I do like the stuff!”

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the fundies, in their resistance to evolutionary biology or to the notion that science has an exclusive on knowledge, are actually not responding all that differently from the ‘Pilgrim Fathers’ who were seeking freedom from being told what they could and couldn’t believe. The attitude I’m speaking of one might sum up as, “No, you will not tell me what to believe; or that I must join your ‘church of reason;’ or that ‘evolution is the way, the truth and the light’.” The fundies are still asserting religious freedom, “No, don’t tell me what to believe, thank you, no matter how rational you regard your views, or how irrational you regard mine.” Could we propose an 11th commandment? *Thou shalt not tell me what to believe.*⁹²

From what I have observed, conservative and traditional Christians who are fundamentalists or lean toward it, whether in the USA or elsewhere, are extremely resistant to changing their ideas, no matter how much they are subjected to sceptical, secular, scientific culture and views. According to K. Miller, “They still *know* that naturalism is false.” (1999/2007, p 172) And, just as stubbornly, the new atheism is for the most part equally adamant that science is the *only* source of reliable knowledge – the rest is fiction or superstition.

There is no denying an epistemic conflict here. But, as with the Chinese character for ‘conflict,’ I submit that this conflict may include both a ‘problem’ *and* an ‘opportunity.’ I want to explore a little more both the problem and the opportunity that I see in this apparent opposition, not just of ‘the two cultures,’ nor even of two worlds. When my fundy friend and I begin to ‘draw our swords’ (see poem below), we put them away again realising, as we do, that we live in different *universes*. It is a rapprochement that nary a Dawkinsonian could abide, but my fundy and I are still friends in spite of the inability on the part of each to fathom how the other can believe what he does. Beliefs of the religious kind are very individual, or so they should be. Perhaps this was not always so. In times past, I can well imagine that from the evolutionary perspective where issues of survival reign supreme, a unified belief system was the bond which kept communities solidly together for the benefit of all. But that situation is now reversed – survival now depends on acceptance of diversity.

⁹² Please take a good look at a master cartoon by a master cartoonist, Michael Leunig, the philosopher cartoonist of Australia, who kindly gave me permission to include one of his most insightful cartoons – one that appeared in the *Age* Newspaper in the 1990s (precise date unknown). I will include it at the end of this chapter. It is a concise summary of my thesis!

Action, Intolerance and Conflict

The ‘Meeting’ I wrote about earlier was about someone who was seen to have gone ‘too far’ in his or her beliefs. Was the problem just that, the supposed extremity of the beliefs, or was it *the behaviour* that those beliefs gave rise to? This is an important distinction. William James emphasises the proposition that, “belief is measured by action.” In fact he goes so far as to say, “The whole defence of religious faith hinges upon action.” (1896/1962, p 108) He regards belief, correctly in my view, as a great motivator. And thus to him belief is an *opportunity*, i.e. not to be missed if you have the will to enter into it. He says further:

If the action required or inspired by the religious hypothesis is in no way different from that dictated by the naturalistic hypothesis, then religious faith is pure superfluity, better pruned away...

(p 108)

He thinks that religious belief has a profound effect on our behaviour which is to be welcomed. I think he is revealing an overly optimistic expectation that belief will ‘change one’s life,’ and for the better. It *may* do so. But I don’t think James has fully considered the distinct possibility that belief, when acted upon according to what is seen by some ‘true believers’ as ‘required or inspired,’ may not be at all what would universally be seen as desirable. It may even be downright immoral or intolerant.

J.L. Mackie discusses the religious views of Wittgenstein, who, like Kierkegaard (but for different reasons), was totally opposed to the notion that religious belief needed to pass a test of rationality or reasonableness. And on this matter of belief and action, Mackie renders Wittgenstein’s thoughts as follows:

...the firmness of a belief is not like the intensity of a pain; it can be measured by the risks that the believer will take in reliance on it, or again by the extent the belief enters into the believer’s choices of action and into his interpretation of what happens to him.

(1982, p 218)

It is “measured by the risks?” That phrase sounds warning bells for me. If Mackie/Wittgenstein are right, it is easy to imagine that the believer, in taking great risks on the basis of his/her belief, will be moving along the ‘zealousness scale’ until...? The American working-class philosopher Eric Hoffer has written an analysis of the mind of the ‘*True Believer*’ (1951), which is devoted to the excesses of mass

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religious, political and nationalist movements or ‘faiths.’ He says that no matter how different these movements are in doctrine and aspiration, “...the fanaticism which animates them may be viewed and treated as one...the man of fanatical faith is ready to sacrifice his life for a holy cause...” (p xii) In the matter of ideological extremism, it seems any ideology will answer their ‘need’ for the deep and exciting involvement that ‘true belief’ brings. It is just this danger, and the undeniable occasions of the historical fulfilment of this dark side of belief, that strengthens the hands and arguments – and whets the scorn of the anti-theists.

Dawkins, however, is not at all willing to concede it is fanaticism, not faith that is the enemy. In *The God Delusion*, he devotes a large section to “How ‘Moderation’ in Faith Fosters Fanaticism.” (2006, p 301ff) He believes that the suspension of rationality in the embrace of faith, however moderate, sets up the possibility of its growing and further usurping the power of reason, either in the individual so possessed, or in the climate of opinion such zeal helps to foster. He argues that religion, even the milder forms, by discouraging scepticism and a questioning perspective, and often with promises of a glorious afterlife that counters the fear of death, is well placed to bring out totally irrational behaviour – like suicide bombings. He could be right of course – it is a question which would benefit from empirical research. It would be very interesting and useful to have some psychological research on how degrees of belief are related to willingness to act in a particular manner; and on what people are and aren’t willing to sacrifice, and under what conditions. Dawkins is unrelenting in his castigation of moderate faith. He says regarding the willingness to die of would-be martyrs:

These people *really believe* what they say they believe. The take-home message is that we should blame religion itself, not religious extremism – as though that were some kind of terrible perversion of real, decent religion.
(2006, pp 305-6)[my italics]

Sam Harris says, “It does not seem much of an exaggeration to say that the fate of civilization lies largely in the hands of ‘moderate’ Muslims.” (2004, p 152) The implication he is making seems to be that it is up to these ‘reasonable moderates,’ to reign in their extremist Islamist brethren. I’m not sure about his claim, or Dawkins’ either, both of which seem to be a version of the ‘slippery slope’ argument. I am not convinced that moderation necessarily leads to excess. We have seen the flaws of that

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way of thinking in other areas, e.g. that the use of soft drugs inevitably leads to the abuse of hard drugs. It seems at least possible to me that moderation actually sets a shining standard that could divert some people *away* from excess – it may make it possible for the ‘true believer’ to back off without having to give up their faith entirely. I don’t know. Be that as it may, it is certainly arguable that fundamentalist extremism, and fanaticism of all kinds, (including non-religious ideologies) are a serious threat to harmony in the world today. And these matters do impact on the argument I am making for an individual’s ‘right to believe.’ Radical individual freedom of belief will not work unless there is a simultaneous, steadfast and over-arching belief that others have the same rights. Respect must precede response.

Any philosophical formula for the defence of religious belief must deal with what might be called the ‘new problem of evil’ by which I mean the ill consequences generated *by zealous belief itself*. This is different from the ‘old’ problem of evil in that I am not making any ontological claims about an ‘omni everything’ God that is incompatible with ‘evil’ in the world. I am not defending the content of belief, but I am claiming that religious belief is “acceptable, necessary (for some), reasonable and even desirable for its benefits” (points 3 & 7 of my distilled argument). In defence of my project – I am *not* saying there are no costs. I concede that religious belief can become extreme,⁹³ and, that when it does, it is harmful. But when it does, and this is the key criterion of the acceptability of religious belief in my argument, it loses its legitimacy – it can no longer be justified.

Within the world community, issues of tolerance and forbearance are of great and urgent concern, and this is part of my motivation for writing on this topic. Religious differences, or differences between groups with different faiths, are the source of, or implicated in, much of the conflict and suffering within the world today. For example, both Muslims and Jews lay claim, on religious grounds, to Jerusalem. In Northern Ireland, while the conflict was complex and historical and very influenced by economic issues, still religion played its part in defining the sides. The division of

⁹³ Monotheism seems particularly disposed to it, I would say. As I’ve mentioned, it gets less and less clear to me how and why *monotheism* was ever regarded as a great leap forward in religious thinking. Perhaps one of the more defensible options in religious beliefs would be a return to some form of polytheism, or even animism! I myself have a big old ‘friend’ who is a tree – it’s always there for me!

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India which Gandhi tried so valiantly to forestall,⁹⁴ failed to deflect the bitter sectarian violence between Islamic and Hindu partisans.

Exclusivism and intolerance often characterise and exacerbate religious tensions. History is replete with examples of ‘desperate difference’ and out-group xenophobia. In-group loyalty and out-group antipathy are widely thought by evolutionary psychologists to be traceable to survival issues in the environment of evolutionary adaptedness (EEA). (Hauser 2006, p 417) If so, this bears out T.H. Huxley’s wisdom that...“the ethical progress of society depends, not on imitating the cosmic process, still less in running away from it, but in combating it.” (1893, quoted in Cronin 1991, p 369) Religious belief traditionally has been a reinforcer of in-group amity and out-group enmity. We have to consider that religious belief may not, at least in the modern context, be a builder of universal cooperation – not a global peacemaker or conciliator, but may be a fulminator of suspicion, bigotry and intolerance among local and loyal partisans of the ‘one true faith.’ If it once was adaptive, it is entirely possible that it no longer is – and in fact it could be ‘counter-adaptive,’ – an instrument of ‘de-selection.’ Such dark thoughts are not totally without foundation.

Of immediate and anxious concern in the sphere of religious belief and feeling are the events of 9/11, and the rising tide of tensions between the predominantly Christian west, and some parts of the Islamic world. This seems to me, a new ‘mushroom cloud’ that darkens our post-cold-war world. Religious beliefs, considered narrowly, may not be the primary cause or aggravation, but when religious systems, value systems, cultural practices and even individual identity or ‘self-system’ (Hinde 1999, pp 26-32) are considered as parts of the whole plethora of ways that religious ideas insinuate themselves into our lives, the impact of religious belief on the world is, at the moment, very worrying. Hinde says of the self ‘system’ that it is arguably a “concept that we construct to help make sense of our lives.” (p 30) Religion *has been* a concept and practice to help us *communally* make sense of our lives. In evolutionary terms, instead of facilitating security, explanation and cohesion in society, religion may be undermining all of those seeds that gave rise to it long, long ago.

⁹⁴ In part by his embrace of all religions. He is reputed to have said, “I am a Muslim, I am a Hindu, I am a Jew, I am a Christian...” (in Dawkins 2006, p 45)

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At all levels of religious belief, whether the beliefs are germane or incidental to the conflict, fractious differences can and are arising. It is thus not at all surprising when people divide and attempt to conquer under religious banners – even when the root causes may not be directly and straightforwardly due to religious differences.⁹⁵ Still religious differences are often used and abused to foment anger, inspire enmity and close ranks. So, is religion bad for us? Does it “poison everything”⁹⁶ (as Hitchens claims)? Everything? He is attention grabbing, but he has some strings to his bow. I accept that he and his fellow anti-theists are sincere in believing that religion is a dangerous and possibly evil force⁹⁷ in the world. Their rhetoric is sometimes excessive and neglects a balanced view, but their views deserve to be taken seriously. They may even be prophets of a kind. But insofar as their project is to eradicate religion, I think they are on the wrong track and need to review their strategy. After nearly 2 million years of hominid evolution, our bio-cultural ways cannot be so summarily swept aside by the haughty broom of righteous reason no matter how demented or damaging the dirt is.

Clearly this is no time to be learning the fiddle.⁹⁸ In the interests of containing my topic, I will not be going into the many vexing political aspects of religious belief. Ultimately though, politics may be an important key to resolving some of these problems – but we must beware of placing too much *faith* in politics! I am inclined to think that long-term strategies for the reform of religious ideas and forms have more to do with education. But do we have time? I would say yes – not for Pollyanna, but for Pandora, and because I think time is the only way – that which has taken enormous stretches of time to assemble, will not be undone or redone in a day.

Some things, many things, need to be *done*. Aristotle wisely remarked that we study ethics “not merely in order to know what excellence or virtue is, but in order to

⁹⁵ As, arguably, in Northern Ireland, and I would say economic factors are very common fomenters or behind the scenes causes of conflict, and ideological differences are just a cover, a banner to rally round.

⁹⁶ As Christopher Hitchens subtitled his 2008 book, *God is not Great: How Religion Poisons Everything*

⁹⁷ or ‘force for evil’ – evil is such an evil word, but then I realized that it is LIVE spelled backwards!?

⁹⁸ Reference is to Nero, of course, not to the many musicians who probably do as much or more than anyone for world peace! Talk about a universally loved phenomenon – *Homo sapiens* is one species!

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become good; for otherwise it would profit us nothing.” (Nicomachean Ethics, Book II, Section 2) Likewise, my major concern and focus is *praxis* – something that can enable practical and effectual understanding that helps to light the way to the great need to identify *common ground* – among religions and among the people of the planet. I am encouraged that the historically recent religion Baha’i incorporates many enlightened and helpful ideas, including the ideal of the world as ‘One Country.’ That is a visionary principle – beyond ‘in-group’ and ‘out-group’ to *one group*. Whether Baha’i has everything right or not, I take heart from their emphasis on religious unification, and consider it a shining example of religiousness *as a vehicle for change and hope*. And this is also where I believe that a kind of biological realism helps to unite us – we are, after all, *one species*. There are other unifying and ecumenical movements happening in the world, which are steps in the right direction.

There was recently a ‘Parliament of the World’s Religions’ held in Melbourne, Australia, with every major world faith represented. The noteworthy theologian Hans Küng was there and, as mentioned previously, is actively promoting the development of a concept he calls “The Global Ethic,” which is gathering support across the religious and political world. (Küng 07/02/10) It is very much a multi-faith effort to find and promote the *ethical common ground* – an encouraging initiative from the religious community.

Science is, in its methodological unity, a natural agent of hope and change. However, it would be a misplacement of faith to put too much on the shoulders of science. It can shine many lights, but it cannot point the way.

The most dangerous faith?

The most dangerous faith of our times is not faith in gods, but the faith that science “will forgive us our trespasses” – that it can ‘make everything alright.’

(DH)

Fortunately for some citizens, in some regions of the world, conflict is *relatively* non-violent (though I’m sure many would disagree with me on that), even while rhetoric is often heated. However, there is certainly no shortage of examples in Western history, some of it recent, where people’s disagreements over religious matters have brought about violence and mayhem. Sometimes the differences have been small and

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sometimes large. Small differences between closely related parties can be the most contentious – what I would call the ‘Cain and Abel phenomenon.’ It’s often relatives more than strangers who fight, and not infrequently over very small differences. Civil wars within countries or ethnic groups are often the most vicious. And civil war everywhere is notorious for pitting brother against brother. Within our communities it is often stated, and I believe the figures support the view, that the majority of violence is within the family! War has been much more common between countries close in geography and culture. It is often those we are close to, and who have similar but not identical views, who we are keenest to convert to our ways, or subdue, or bring over to ‘our side.’ For this reason, differences *within* a religious community can be the most acrimonious. The following charming little poem expresses well the bizarre internecine conflict between brothers of Christendom:

As Each Drew His Sword

Said Zwingli to Munzer
“I’ll have to be blunt, sir,
I don’t like your version
Of total immersion.
And since God’s on my side, and I’m on the dry side,
You’d better swing ovah
To me and Jehovah.”

Cried Munzer, “‘Tis schism
This infant baptism!
And since I’ve had a sign, sir,
Let all men agree
With Jehovah and me
Or go to hell singly,”
Said Munzer to Zwingli;
As each drew his sword
On the side of the Lord!

Phyllis McGinley, 1956
(www, accessed 03/07/09)

Deciding to Believe

The notion of *deciding what one believes* may seem odd. Few people doubt that *actions* are voluntary and can therefore be decided upon – we can raise our arms, go outside, smack our lips, any action, as we choose. Plans of action are also clearly a matter of decision. But when it comes to purely internal mental activity, we are much less certain how much voluntary control we have – over what we think, feel, believe, and so on. Most would agree that we may have *some* conscious control over whether we, at any given time, decide *to think, to feel, to believe*. We seem to have some voluntary ‘gate keeping’ functions. But how much control do we have of what comes in or goes out once the gates are open? As I am not here concerned with thinking or feeling, let us just consider *believing* in this way.

How is it possible to decide *what* we believe? It sometimes seems that beliefs arise in our minds like bubbles – floating up from some subconscious place. At other times we may feel *possessed* or seized by some belief(s) that we can’t account for – like some apprehensive belief that something bad will happen. So, we may sometimes have beliefs we don’t want to believe. In such a case, if we can decide what to believe, why don’t we just decide not to believe those things? But it’s not so easy, is it. On the other hand there might be innumerable other things we would actually *like to believe* – that some great good fortune will befall us perhaps. But again it is not so easy. It really does appear that the notion of deciding what to believe is strange, a mismatching of action and object, like drinking an apple.

There is little doubt that one can, and people often do, believe things without rational reasons for doing so. (see Mackie 1982, p 199ff) At one level that seems to be precisely what religious beliefs are about – beliefs without reason, and maybe even *in spite of reason*. But the notion of *deciding* as it were, arbitrarily, say by flipping a coin, seems positively crazy – completely *counter* to reason. So why do I propose such apparent ‘irrationality?’ I will attempt to answer this question and to outline several considerations to support a position that non-rational religious belief can still *reasonably* be entered into as a matter of wilful choice – *voluntarily*.

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The notion of *choosing* what we believe has a long history, going back at least to Descartes. I will not be reviewing all the arguments for and against this strange (to some) proposition, but simply present my argument in favour of it. Once again I will partly appeal to the personal and the biographical to support this. Quite simply and bluntly, I support the notion that one can decide what to believe because *I have done it*. However, I don't intend to rest my case there. I will give some reasons why I think this was and is a reasonable and justified course of action.

I acknowledge that this position flies in the face of the most usual understanding of 'belief,' which I take to be typically represented by Bernard Williams's view that beliefs 'aim at truth.' (previously cited) He is talking about belief in general. I, however, am only concerned with religious belief and I have disputed that the legitimacy of religious beliefs depends on their aiming at or approximating truth. I have already given my reasons why I believe that the justification of religious belief does not depend on content, and that its legitimacy depends instead on an assessment of the ethical consequences that follow from the belief. You may be wondering what this has to do with *the decision to believe*, but please bear with me. This final chapter is drawing to a close and so I want to bring some threads together. In order to do that and to make my case for deciding to believe, I wish to recapitulate my conclusions about the justification of belief. So it will be useful to briefly summarise. A religious belief is acceptable and justified if:

- It does no harm.
- It is practically helpful and beneficial – to self, others, the biosphere, the world.
- It 'centers' one's life – fosters a sense of wholeness and worth.
- It is never put to others in a forceful or coercive way.
- It incorporates basic reciprocity.

I would further contend, although it has not been my focus and I have not explicitly argued the point, that religious beliefs must not make or insist on the veracity of scientific claims they may advance about the nature of things, that contradict well established laws and principles – e.g. miracles. If an individual wants to believe in such things – fine – but they ought not to expect others to do so.

Those are my 'criteria' for judging religious beliefs ethically acceptable, and thus justified. Note that as well as satisfying and fulfilling a 'useful social function' (points

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3 & 5 of my ‘distilled argument’), they point to a ‘personal social function’ – what we might normally call in the vernacular, being prudent or ‘sensible.’ I have not emphasised that point in these chapters on belief, but it was implicit in my earlier discussions on the need for philosophy to be personal – the helping and therapeutic application of philosophy. So this is an important point in evaluating religious belief.

Now, let us return to the question of how belief is arrived at – the question of the legitimacy of *decision*. I will deal with the objections to voluntary belief I first pointed to in this section, but first – why have I raised the matter of the justification of belief in the midst of this section on voluntarism? It is because I see both as having a common ground which is that, as I view them, both the justifying principles and voluntarism (the right and capacity to decide) are matters of *practical and prudential reasoning*. For a very similar reason I argued that belief is justified by how well it fulfils social functions, including one’s own flourishing, so now I argue for ‘decision.’ This may at first seem excessively egocentric – everything is OK if it’s what you want. It may be egocentric but I do not think it is selfish, but to defend myself from this charge might take us too far from our main point – the culminating question of voluntarism regarding religious belief – so let us stick to that. Can we decide to believe more or less whatever we choose?

My flat answer is, “Yes and why not.” But let us return to those objections raised at the beginning. The first was that we seem to have little control over what we believe, whether of a religious sort or otherwise. My main answer here is that beliefs generally are of many kinds. The discrete mental state we call ‘belief’ plays out on a field of ‘doxa’ – clues, hints, hunches, suspicions, leadings, wishes, wants, opinions – there is a whole range of mental activity with as many causal stories and degrees of conscious control. An ‘impulse’ is almost by definition an undecided, uncontrolled urge; while an opinion approaches the ‘reasoning arena’ of mental functioning. Meanwhile, decision too is of many kinds – sometimes barely or grudgingly acquiescing, and other times totally deliberate and pressed. My main point here is that some of these ways and variations of belief may be consciously decided, others perhaps, less consciously. Still others may appear to be almost reflex like, but *failure to exercise veto is itself a choice*. There is a concept of an ‘irresistible impulse’ that psychopaths are said to labour under. But under normal, non-pathological circumstances, it seems to me, as a

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matter of faith if you like, that human free agency is rarely if ever totally blocked, hard though it may sometimes be to exercise it.

I ask anyone, who may consider my view unsubtle and egocentric – is there anything more paradoxical than saying to someone, “*You have no choice?*” To say that, as far as I can see, is really to say, “*Your choice is clear.*” I am in complete accord with Jean-Paul Sartre (“Man is Freedom” – cited previously, 1946) in these matters. I also think my *evolutionism* supports that we are animals evolved to possess the most exquisite degree of freedom, quite simply because it has enormous survival value. Yes, we have impulses, yes we have *apparently* involuntary mental phenomena of all kinds. We are *the actors* in this Sartrean theatre. Thoughts and flashes, fickle fibulations and firings of the synaptic machinery in that neural lab in our heads is one thing, but what we *do* as a result of our machinations is up to us. And we can’t do *anything* without first choosing (being willing) to do it.

John Mackie says that action *is decided upon*, but, for some reason, without any argument, he rules out voluntary belief. (1982, p 201) Is believing not an activity of the mind and one which leads to action? It may not be a physical action like walking, but it certainly *precipitates* action. Either it leads us to action (or at least, recalling my definition, a *willingness to act*) or it is just ‘wheel spinning’ – totally internal and irrelevant to others. In that case I say – believe whatever you will without restraint for it has no consequences for others. I fully agree with Thomas Jefferson who said, “But it does me no injury for my neighbour to say there are twenty gods or no god. It neither picks my pocket nor breaks my leg.” (www, accessed 17/08/09) You can’t put someone in jail for *wanting* to hurt you – indeed you can’t even charge them with a crime because crimes are and must be actions. Likewise, the only important thing about belief that should concern others in the least is what it leads the believer *to do*, or conversely, what it prevents them from doing – *material consequences*.

William James makes some pertinent comments in ‘The Will to Believe,’ (1896) which emphasise action and also raise again the question of benefit. Why bother with religious belief if it makes no (‘act-ual’) difference in our lives? James obviously thinks that the ‘religious hypothesis’ can make a positive difference. Once again we need to consider why religion has been so durable. Is it because it really does something for those who need it? James says:

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Since belief is measured by action, he who forbids us to believe religion to be true, necessarily also forbids us to act as we should if we did believe it to be true. The whole defence of religious faith hinges upon action. If the action required or inspired by the religious hypothesis is in no way different from that dictated by the naturalistic hypothesis, then religious faith is a pure superfluity, better pruned away, and controversy about its legitimacy is a piece of idle trifling, unworthy of serious minds. I myself believe, of course, that the religious hypothesis gives to the world an expression which specifically determines our reactions, and makes them in a large part unlike what they might be on a purely naturalistic scheme of belief.

(1896/1962, p 108)

Since action is so important, what about all the heinous acts alleged on the debit account of religion? Once again, in the matter of religious beliefs, I suggest that *on balance* it is not clear that the good done as a result of religious belief doesn't outweigh the bad, no matter all the posturing and damning allegations of the anti-theists. It is an empirical question of course. Who knows – perhaps they are right – but, personally, I'm still worried about the 'anomic bomb.'

The *anomic bomb*

I have recently read another version of the argument in favour of religion, which says that even when those beliefs are untrue or ill founded they may be justified by their beneficial effects. (Szathmáry, E. 2005, p 856) Would we rather a 'Big Brother?' he asks. He further suggests that '*virtual reality*' may possibly be more perilous than drugs for today's youth! The comparison is good rhetoric, but drugs create a 'virtual reality' in your mind too, and a dangerously real reality for your body. Death is not, cannot, be *virtual*. But whether a chemical or a mind drug, there is little doubt that both contribute to anomie. A scenario:

Each person sits silently before their screen. Many of them work in front of it as well. Even shopping I hear, can be done via 'The Screen.' Another public, social, market place activity that has gone to the steaming, screaming screen. Soon there will be little need to go out. Meanwhile, the need for vitamin D supplements will increase as do the aches and ill health of sunlessness and inactivity. Perhaps we will have to lie under 'sun lamps' for x minutes a day. Also fears and social phobia increase as lack of contact with others breeds social clumsiness, diffidence, and social phobia. For sex, there are an infinite variety of porn sites, and all manner of groovy and gooey sex aids. For companionship? There is 'Second Life' – for those who don't have a first life. Eventually the isolation grows into 'anomic terror.'

The *anomic bomb* (cont.)

If we destroy all the old gods, who or what will move in? Social nature too abhors a vacuum. Will it be the much vaunted rationality that ‘new atheism’ celebrates?

Is it foolish to encourage, or fail to criticise ‘crazy’ religious beliefs? How can a society, a civilisation, survive and thrive when built on ‘false beliefs?’ Is this not folly of the first order? So ask the new atheists, the ultra-rationalists. But, I ask: are they building the *anomic bomb*? Or are they stripping away our protection from it? By their vigorous denial, their ridicule, their attempt to obliterate the old, ‘false’ beliefs, are they fanning a wildfire of anomie and alienation? What then...? (DH)

Now the second point I wish to make in response to issues raised is to do with the question of whether belief can be taken on board by ‘flipping a switch?’ Some decisions are effected directly or indirectly with very little in the way of conscious consideration. My first point is that everybody makes decisions in their own way, and it’s not really for anyone else to say. God? Flip a coin and see what you think⁹⁹. In general, and here again some psychological research could help us out, but, I would think, pathological extremes aside, some kind of ‘proportionality’ would make sense and suit most of us – let the punishment fit the crime so to speak.¹⁰⁰ Or, in this case, let the discernment fit the decision. It seems very unlikely to me (and I would certainly not recommend it, Pascal notwithstanding), that religious beliefs would be taken on lightly.¹⁰¹ But the final point belongs to Pascal who anticipated this objection that beliefs cannot be engaged directly on a whim. He had an elegant solution. I will quote John Mackie on this - he puts it so beautifully:

Perhaps, for the reasons he [Pascal] has given, you would like to believe in God but find yourself initially unable to do so. Since it is not reason that is now an obstacle to belief – for, by hypothesis, intellectual considerations were unable to settle the question either way, and practical reason, in view of the wager argument, favours belief – the obstacle must lie in your passions...Although you cannot believe by simply deciding to do so, *you can come to believe by deciding to cultivate belief.*

(Mackie 1982, pp 201-2)[my italics]

⁹⁹ On the other hand, agonise over it for 40 years or more as I have done. It’s *your* choice.

¹⁰⁰ It usually does anyhow, especially when we are not caught.

¹⁰¹ That would spoil the fun!

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William James also thought that where the facts or reason cannot decide a matter, that “passion can lawfully decide.” (Mackie 1982, p 208) James is not suggesting an abandonment of the pursuit of truth, but affirming the role of earnest decision when ‘certitude’ is unavailable. He says:

But please observe now, that when as empiricists we give up the doctrine of objective certitude, we do not thereby give up the quest or hope of truth itself...Not where it comes from but where it leads to is *to decide*. It matters not to an empiricist from what quarter an hypothesis may come to him: he may have acquired it by fair means or foul; passion may have whispered or accident suggested it; but if the total drift of thinking continues to confirm it, that is what he means by its being true. (1896/1962, p 99) [my italics]

Pascal, James, and Kierkegaard too, have all supported the principle of ‘elected faith’ or belief by volition of one’s own free *will*. I am grateful to them for making explicit and arguing ‘by fair means or foul’ that – we are, above all, *choosing beings*; and when reason and fact do not suffice, it is up to each and every individual to decide, to choose his or her place to stand.

Addendum

I am guided in my thinking, through and through, by my favourite ghost – that of Blaise Pascal, one of my philosophical heroes. My admiration for his thought is partly because of his seemingly fanciful ‘Wager,’ argument. It was a huge departure from all previous attempts to advance theism, and I think it clever. It is sometimes called after the sacrificial move in Chess; I prefer to think of it as that, a *gambit*, rather than a ‘gamble.’ The terms of his reasoning may have many holes, but beyond his ‘argument,’ the beauty and brilliance of Pascal was that he put his proposition to us *as adults* – as if we have the wherewithal, the common sense, the power of mind, the *right to make our own decisions*. Oh, he wanted to convert us all to Christianity, *his* LCB; there is no doubt about that. But he was not trying to twist our mental arms with rationalistic presentations of convoluted proofs of God, nor with trumped-up question-begging evidence. He wasn’t trying to obfuscate or bowl us over with supposed profundity (a la Hegel), “...and so you see here... and therefore you are a fool if you don’t accept my exquisite reasoning.” He certainly wanted to *induce* us to believe, but he understood that belief and feelings were the *heart* of Homo *crēdulus*, not cold

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logic-chopping pedantry. Reason is fine, essential in its place, but, as Pascal sagely said, “the heart has reasons that reason knows not of.” He also said:

For we must make no mistake about ourselves: we are as much automaton as mind. As a result, demonstration is not the only instrument for convincing us...Proofs only convince the mind; habit provides the strongest proofs and those that are most believed...Who ever proved that it will dawn tomorrow, and that we shall die?

(1966/1995, p 247).

And he might well have added – whoever was able to *prove* that he/she loved someone? Love, like religious belief, is not explicable by reason alone. It ‘wells up,’ and *our heart decides*. I would give Pascal a Nobel prize for philosophical *heart*. His approach, as far as I can tell, was not based on ‘truth-trumping’ nor on vainglory, but on a real concern and respect for the ‘souls’ of others.

The main objection to voluntary belief is that one is kidding oneself – that it is an insincere ruse, an “epistemological ponzi scheme” as Sam Harris dismissively says. (2004, p 63) But what Pascal understood is that you first of all pitch in, you absorb it, you practice, you work at it, you *make* it real – the *cultivation* of belief. Very few things that involve human understanding are overnight wonders. I say one *can* decide to believe, by way of deciding to *cultivate* belief – that is a beginning, and then the ‘hard yards,’ the practice, the *action* that is at the core of most human success begins. If it is right for you (which is also up to you) the benefits will slowly accrue. The kind of belief we choose is also the kind of belief we need – and it builds, evolves, in our minds and hearts, and becomes our own, life-centering, *belief in*, and makes us whole.

Believing In

Material existence is not *so* important. It is not belief ‘*that x*’ or ‘*that y* exists’ that we need. Rather what we need is **belief in** – ourselves, gods, science, Taoism, our children, the swallows returning next year, whatever – *believing in* is real and makes real – it can ground and center our lives. And no-one has to be wrong for each of us to be right.

There is only one thing worse than *believing in* something...and that is...believing in *nothing*, nothing at all. Homo *crēdulus* must breathe, and must believe. (DH)

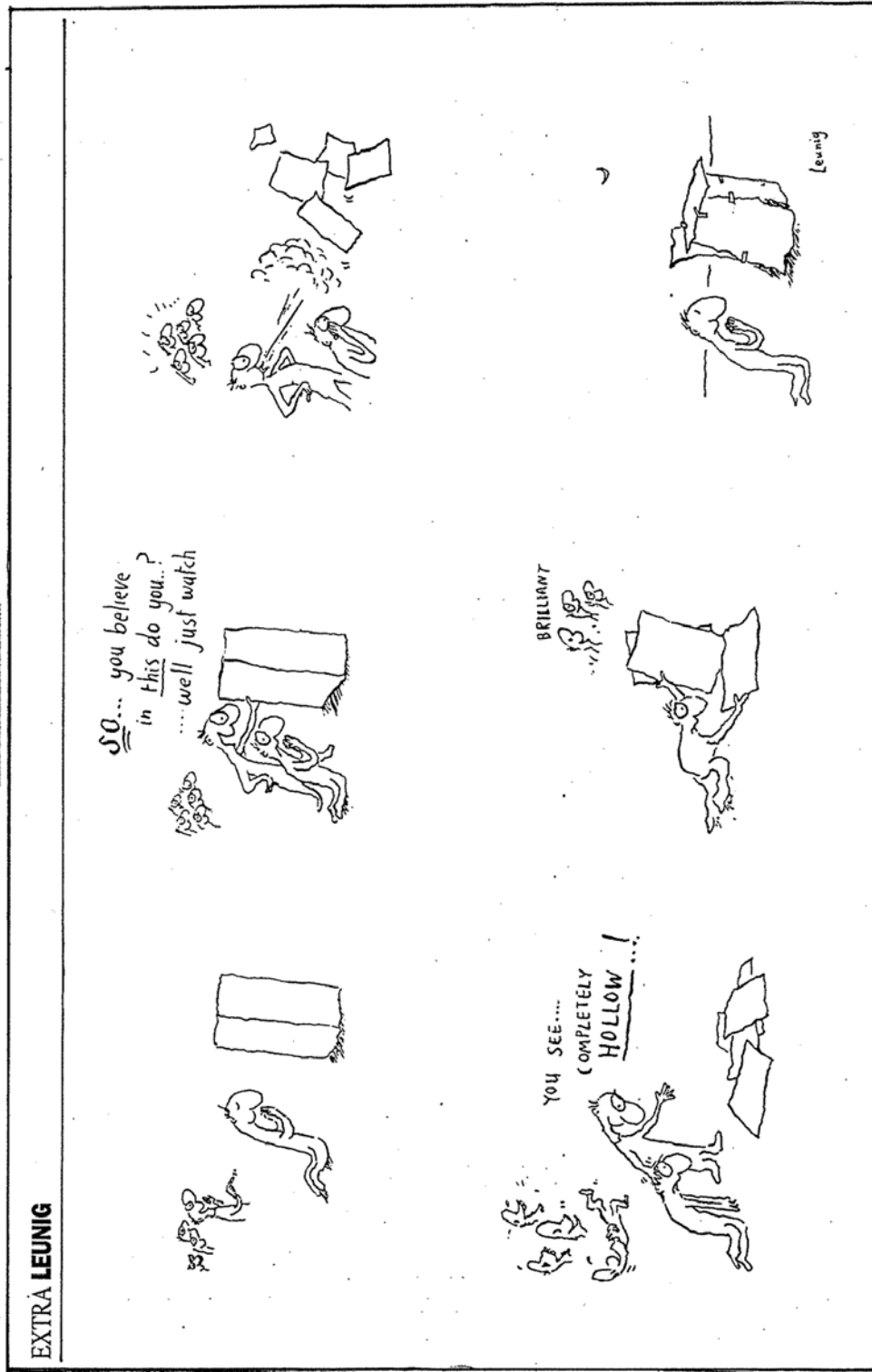


Figure 4: 'Homo crēdulus' (reprinted with permission of Michael Leunig)

CONCLUSION

Summary

In this thesis, I have presented a personal ‘folk philosophical’ reflection on the biological and believing nature of the human animal. The overall thrust of my argument was to show that religious belief is part of our evolved nature for sound, understandable and practical reasons. I have argued that human beings have an evolved predisposition to belief, and that ‘credulous belief’ is justified when it forms part of what I have called a ‘*Life Centering Belief*’ (LCB). The prime example of an LCB, historically, is a religious belief. In modern times other ideologies and associated activities have also come to serve this purpose.

In Chapter One I shared my conviction that philosophy is or ought to be a personal and biologically informed activity. I declared my interest in Hellenistic philosophy and in applied philosophy. I committed myself to a style of presentation that was informal and accessible, with some diversity in presentation. I argued that biographical content was justified and added context, interest and value. Perhaps most strongly, I argued that a biological and evolutionary perspective was needed and illuminating in philosophy, and in those fields pertaining to nature, human nature and human behaviour especially. I advocated a ‘*bio-philosophical*,’ perspective.

In Chapter Two, I presented my views on the birth and history of life. The basics of evolutionary theory were discussed and some of the history of naturalised thought. I argued strongly and at length that a human being is an animal among animals, and is not special or privileged in any absolute way. Nevertheless, one of our evolved traits is the tendency to believe (in) ‘things’ – we are *drawn* to belief – it is part of our evolutionary inheritance.

In Chapter Three, I began the application of my evolutionary perspective to religious belief, delving into different hypotheses about how and why religion evolved. Naturalised approaches to religion see it as having some kind of adaptive role. At the

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same time I began to build my case that religious belief still has a useful role to play in society – but that there are areas of conflict (first foreshadowed in Chapter One) both among religious beliefs and between religion and the newer ‘belief system’ of science.

In Chapter Four the major themes of my reflections and argument came together. I acknowledged and discussed aspects of the religion and science conflict in some detail. However, I presented my view that religion should not be judged on truth or falsity but on how well it fulfils its social functions, and lives up to certain personal and ethical requirements. Since religious belief is to be judged on different criteria from scientific claims, I argued that the objections raised by the so-called ‘new atheists’ are overblown, and counterproductive – and that these ‘anti-theists’ have overlooked or underestimated the benefits of belief.

Finally, at the end of Chapter Four, I laid my claim that not only are religious beliefs justified (when they meet the right criteria) but that belief can be approached and embraced by the expedient of *deciding* to do so. In the end I claim that evolution has shaped our minds and emotions to *choose what we will believe in*.

Postscript

Although it is an old battle, my main concern is with the new sword of new steel, the best that science and technology can devise – because it is mainly in *their* service that it is being wielded. After centuries and millennia of nearly automatic devotion to unseen non-natural forces, scientific materialism continues to sharpen its shiny new weapon – one used not to attack variations in belief, but to challenge the basis of the religious impulse.

The success of science and, therefore, the expansion of the scientific mentality are both eroding the authority and hegemony of traditional religious institutions. This process has accelerated in the last 150 years. Many churches and other religious bodies in the West are in decline. There are exceptions, of course, and it seems that in some places, it is the more extreme forms of religiosity that are surviving if not growing. As I write, I am listening to an ABC Radio National interview with a journalist/editor, Jeff Sharlet, whose book title tells all, *Jesus Killed Mohammed: The*

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Crusade for a Christian Military. Meanwhile, some of the ‘new atheists’ are busy engaging in a strident campaign against all things religious, and sometimes indulging in harsh invective and rather crude ridicule. Suddenly the intellectual room seems to be nothing but corners occupied by fearful, angry or spatting partisans.

We live in a time of challenging socio-philosophical transition. Since the Renaissance religion has been gradually losing much of its former authority since the Renaissance, but its decline has gathered momentum since the Enlightenment, and especially since 1859. However, contrary to many confident predictions that religion and/or God would die, their demise has been greatly exaggerated (to paraphrase Mark Twain on reports of his death). Nevertheless, the pressure has not eased and there is currently, in the English-speaking world at least, a renewed effort, especially since September 11, 2001, to discredit or marginalise religious belief by blaming it for many social and political problems.

I think it is generally agreed that the pressure and rate of change in many aspects of our culture, and our world, are increasing. Of course, the rate and direction of change are not uniform within or between cultures, and this situation exacerbates some of the tensions. Some societies are prosperous and others not – this is a recipe for tension and conflict. Add to that issues associated with religious beliefs, which can be especially vexing, and you have an uneasy, paranoid world, with renewed xenophobia – just when we thought we were travelling in the direction of human unity. It is with these considerations in mind that I felt a certain urgency about addressing this topic.

Ideological differences of all kinds are potent and divisive features of the modern world. Just when we need some kind of working unity most, it instead seems to have become more difficult for people of dissimilar views to speak to one another. I do not underestimate economic or historical factors, though they were beyond my scope here. Such big concerns are truly multi disciplinary and need all manner of expertise.

The ongoing and sometimes acrimonious debate between science and religion, with its associated moral issues, is a major contributor to discomfiture in the world today. The historical experience of philosophy with the issues and ideas within these domains suggests to me an opportunity for philosophy to play a mediating role, and that is the

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long range, hopeful application of this thesis. Every thoughtful effort at finding new ways forward that will bring conflicting parties into closer alignment are worthwhile.

I hasten to add that I have no illusions that my views offer any particular insight. Still, one rarely knows the full effects of one's efforts...and, thanks to Pandora, we all keep trying. Were it not for the active concern of countless involved individuals, each in their own way, cynicism would increase its despairing hold on our thoughts and imagination, and on our lives. I would consider such an outcome philosophically and personally unacceptable. With many others, I prefer to 'have a go' as they say in Australia. As a matter of 'faith,' (dare I say) I have offered my thoughts with due humility, but also with genuine concern, hope, and with a mixed sense of appreciation for everything and responsibility – for everything.

While the big picture is ever beguiling, still we must limit our inquiry to the size and depth that will hopefully allow for some penetration. I am also mindful of my capacity, my life experience, which is not insubstantial at 64 years, and also of my research which has focused on the application of the evolutionary perspective and biological thinking to our understanding of who and what we are, as well as where we are going. All of these factors offer some possibilities but also some constraints on what I as an individual can contribute. I have done it for itself – for the learning and the discovery. I have had a lifelong desire to learn about Darwinian evolution and now I have done it – in the 200th year since Darwin's birth.

Every journey of discovery has some unexpected turns. One of the surprising things I have discovered is that each and every member of every species is an *individual*. Blackbirds may all look the same to us, but they aren't – not at all. I'm sure neither you or I ever fell into the trap of thinking that people of a different race than our own all 'look the same.' Not only are looks deceptive, but we only see the differences that *make a difference to us*. Natural selection has shaped us to discern faces of other humans in the most unlikely places – clouds, rocks, even bakery buns! As Susan Blackmore said, "The way we experience the world is not the way it really is but the way that has proved useful to natural selection for us to perceive it." (1999, p 112) I believe she is not far wrong. Each of us depends on that kind of evolved perception – the reading and interpreting of small details in human faces. Being able to see the difference between blackbirds is of no use to us and so our observational powers are

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weak when it comes to their faces. Nevertheless, individuals have individual differences in all organisms – in appearance and equally important – in behaviour. People who study animal behaviour closely, ethologists, learn to distinguish individuals even in the most apparently uniform of species. How would you like to work with King Penguins? I think I would need name tags on them for awhile!

In Western countries in particular, we are said to value *the individual*. But we often miss the implication that we must thus appreciate and respect individual *differences*. In Western culture, we celebrate individualism at a sort of theoretical level. But for many of us contact and intelligent communication between really different individuals, the kind of sincere contact that might help to dispel confusions and anomalies due to religious or ideological differences, is not frequent enough to overcome our ‘dis-ease’ with the ‘otherness’ of those different from ourselves.

Add wild-west-like proselytisation from some quarters (it used to be in tents and is now on television!), where what amounts to the marketing and commodification of religion stirs up the uncertainties and insecurities of many – and the individual is further faced with a worrying conundrum: One is damned if he/she does not ‘believe’ or accept this or that doctrine, and you are also surely damned, at least by some, if you do! Meanwhile pressures to conform in general are as strong as ever. Fitting our cog to the wheel of industrialised, urbanised, bureaucratised, hyper-civilised, agenda-mad society is pressed on us by every institution in the land – including the university! Ah, the forces that would mould us – and we, the willing putty.

The Origin of the Sinners

We could have been blissful and ignorant, but we chose to affirm curiosity and gain knowledge of good and evil. Why do we create beautiful things – and bombs? Because we can? ‘Ought’ implies ‘can,’ but ‘can’ does not imply ‘ought.’ Why do we slowly but inexorably engineer our own demise? I wonder what the species ‘flatline’ will be like? Perhaps the replay of the evolutionary tape will result in intelligent creatures, instead of merely *curious and credulous ones*. Then again, maybe the experiment is over and nothing remotely like us will ever evolve again. I’m pretty sure the bacteria and the insects wouldn’t mind at all. Then again, primate-like intelligence has evolved more than once according to some (see S.C. Morris 2003), and convergence like this may indicate that if we fail this time around, intelligence may yet have another day. Ah, Pandora...

(DH)

I am flying

I am flying, or maybe air-sailing. I am above the world and the sounds of the world. I hear the whoosh of air. It's just me; it's just my body, laying out and looking down, superman like. No machine, no apparatus. The occasional grit or insect hitting me reminds me – I am soft.

I'm well above ground, but close enough to make out much of the panorama of the world below. Some of the taller trees seem to reach up for me as I whoosh past. I'm travelling fairly fast, so I have to keep a look out for what's up ahead, in case a hill looms up before me, or perhaps a tall building.

The built environment looks toy-townish. Cars move along roads like de-segmented millipedes. Green field, suburbs, parks and bushland – everything looks so neat, orderly and clean. There is none of the detritus of the 'ground world'. I think of ants. I feel superior, but LOOK OUT – a steep hill or bluff looms up before me.

My peaceful reverie is broken – I must take evasive action – increase my height quickly, but how? I don't know how. I don't know how I'm doing this. It's just me, my soft body, clothed but very vulnerable. The ground below and rapidly approaching looks so hard – the bluff or hillside is composed of formidable boulders that are getting bigger every second. It's concerning but I don't feel frightened...yet.

Somehow, by what I can only guess is some act of will, I manage to slow my pace, rise slowly and veer slightly to the right. This change of trajectory happens rather more slowly than I would like, as if I am a heavy ship manoeuvring. I miss colliding with the hill and almost certain death, but not by a very comfortable margin. I must work on that.

My heart is thumping and although defying gravity is exhilarating, I am shaken, and I begin to wonder, indeed to doubt. How am I doing this? This is impossible. It can't be real. I must be, yes, I am dreaming or 'imagining' – this must be a flight of fancy, a virtual world. But those cliffs I just missed looked VERY real and I am filled with palpitating apprehension. I try to calm myself as I still whiz along, though a little slower now. As my incomprehension and doubt grow, I feel myself lowering, coming down, but not slowing down enough to 'land' safely. At the rate I'm going, I will strike the ground hard. I might die or be broken up into body parts.

I MUST somehow find whatever it takes to stop this descent. Please, I think, almost praying, focusing...I am doing it, so it must be possible even if I can't understand how. My descent slows and I level off, though I am rather closer to the ground than I like. Yes, I can do it! It was and is wonderful and I rise up into the sky.

I begin to think again. My head, my intellect, and what I believe seem in conflict. Do I have the grounds or the right to believe I can fly – completely contrary to the laws of physics!? As I think that thought I come down a little. I come down a little more and I look at the nearing ground with renewed

I am flying (cont.)

alarm. The laws of physics, gravity, I come down still more and my breaths shorten. I begin to feel slightly sick, but I must not panic.

I have somehow managed to do this flying or air-sailing. Is it a dream? Yes, it must be, but it doesn't seem miraculous to me. I feel sure it does not depend on something outside me. If I am right, it only depends on me, something inside of me. This thought is itself almost as frightening as the prospect of hitting the ground at speed. It occurs to me that if I must go down, it will be better to go straight down, maybe over some soft-looking tree like an inelegant parachutist. I decide to stop. I decide to stop?

Some yellow-tailed black cockatoos, three of them fly by languidly. They look at me curiously. Eh! They seem to say, just some human helicopter. I watch them fly off, chatting to each other, no doubt about the crazy human who forgot his machine! Magnificent animals I thought – now THEY can fly. Thanks to evolution, their forelimbs are wings. Excellent equipment. They don't get scared. Or at least I don't think they do. But what do I, or any human, know about what goes on in an animal's mind. Hardly a day goes by without hearing some human animal pronounce on what some non-human animal thinks or feels, or can and cannot do. But, until telepathy is discovered or invented, we're all stuck in our own heads. We don't even know what the person next to us is thinking, much less what a cockatoo or komodo dragon has on its mind. Meanwhile...

I do seem utterly suspended not going up or down, left or right, backward or forward. Three dimensions certainly changes a flatlander's perspective. I'm still far from certain how I am doing this. I know, as I said, that it is something IN me. Then I realise that I am as still as a Ta-ta lizard in the Northern Territory. How did that happen? Then I remember...I decided to stop – that's it!? Could it be that all this fantastical experience is somehow a matter of believing and deciding?

Come now, I almost laugh out loud, giddy with the thought of it. Just imagine the POWER. Why if that's true, maybe I could go around the moon! Now we're getting silly. Time to wake up and think about this with the waking mind. I momentarily re-experience the fear – maybe I need to hit the ground to wake up? Scary. In that case I might just stay in the dream. But, to tell the truth, I'm getting hungry and a little cold. No stamina, I've never had stamina, even when I'm doing impossible things before breakfast. Suddenly a big puff of wind pummels and tumbles me. I don't like this out of control feeling. I decide to try...I *decide* to land gently...feet down...ah...

And here I am on good old terra firma. Eyes open – feeling a bit like someone from the 60s, LIKE WOW! I was a young man in those heady days when some people on substances jumped out of windows thinking they could fly. Shudder. I resolve never to take a substance when I go flying – even in my dreams. Anyhow, I'd better go and write down that flying dream before I get started. I'll put this flying report last so readers will know where I've gone.

(DH)

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