

CHAPTER 1 DIMENSIONS AND PILLARS OF HUMAN FLOURISHING

Angela Ricker was born in 2004 in the living room of her parents' home, surrounded by her immediate family. No sooner had she arrived in the world than it was apparent that all was not well. Her uncle remembers receiving a distressed phone call from her grandfather, "There's something wrong with the baby." Babies with Down syndrome have an extra copy of their twenty first chromosome – a condition called trisomy 21. Angela had three copies of her thirteenth chromosome – this is called trisomy 13 or Patau syndrome. Angela's trisomy 13 affected almost every part of her body, from curled-in toes to unfused plates in her skull. It was this that immediately alerted the midwife to the need for urgent medical attention.

Angela never learned to see or hear normally, to walk or talk, or to feed or wash herself. Her family would never know what she understood or appreciated about her mother and father, her brothers and sisters, or her wider family. Although early on she responded to voice and touch, as she grew she seemed to recede further into an already distant and unknowable world. Was Angela flourishing?

Her uncle reckoned that you could not answer that question in isolation. If a test of a human community is how it cares for the most vulnerable like Angela, then the question is not whether Angela was flourishing *on her own* (she could not), but whether her presence led to the family and others flourishing *together*. That in turn suggests other questions, such as 'Who is helping Angela to flourish?' and 'Who is flourishing because of Angela?' Maybe even, 'How can those around her become the kind of people among whom Angela flourishes and who flourish with Angela in their midst?'

When Angela was ten years old, her grandparents celebrated their fiftieth wedding anniversary. Angela's siblings and cousins played music and games around her. Without belittling the huge emotional and financial costs of caring for Angela, her family found that her inescapable vulnerability in an astonishing way concentrated their attention and their love. Her uncle described it thus, "In a centrifugal world where everything and everyone flees the demands of love, Angela was a centre of gravity, drawing us back to one another and to true life – the life that really is life, the life that money cannot buy, the life of making flourishing possible, at great cost and with great tears."¹

For Angela and those around her to flourish required the best of scientific insight – the medical science that enabled her condition to be diagnosed and underpinned all the equipment and treatment needed to keep her alive – and the best of spiritual wisdom – the wisdom that affirms that Angela is of value and inspires those around her to keep on loving her even when there is no evident response. Those resources needed to be applied in three connected dimensions: the material, her bodily needs; the relational, the caring by her parents and others; and what we shall call the transcendent, to describe what enabled her family to attribute dignity and value to Angela.

Angela died a year later. While she was still alive, her uncle posed two further questions about flourishing: '*What are we meant to be?*', and '*Why are we so far from what we're meant to be?*'.² Answering such questions requires rich resources of scientific insight and of spiritual wisdom.

What do we mean by ‘human flourishing’?

The notion of ‘flourishing’ may appear rather antiquated to some. In the Western tradition the term is most closely associated with Aristotle, who lived in the fourth century before the Common Era. But interest in human flourishing has been growing in recent years in academic, policy and popular circles. In part, this is a reaction against measures such as ‘average human lifespan’ or ‘per capita Gross Domestic Product (GDP)’. While such measures clearly tell us something about a nation’s or a community’s state of affairs, we all know that a long life is not necessarily a good life and the same is true of a life that is rich if measured only in monetary terms. What then is it that makes a human life a flourishing life? We start from the premise that each person is of equal dignity – a premise shared by many religious and non-religious traditions. As this book is about to go to press, the refrain ‘Black Lives Matter’ has revived an awareness of the inherent dignity and worth of every human, regardless of what they look like.

Possibly since humans were first capable of asking the question, certainly since the dawn of history, humans have asked why we are here and what a good life entails. At different times, different answers have held sway. Nowadays, there are perhaps more answers proposed than ever. Much of humanity still finds the ultimate answers to meaning and purpose in religion. But in countries across the globe, secular views are widely held. In any event, whether religious or secular, individuals, communities and governments still have to make decisions about what people want and need from life.

The notion of human flourishing is a useful concept within which to consider such questions – few would maintain that we want people not to flourish. The concept is sufficiently flexible that it can contain common-sense answers as well as ones that date back to the births of the world’s major religions and the origins of philosophy, whether in the East or the West. In this book we therefore explore what is meant by human flourishing and see what it has to offer for those seeking after truth, meaning and purpose. We hope that this book will enable readers to clarify what they want for their lives, for themselves, for their families, and more widely. In our more optimistic moments, we hope that what we write will help some to lead more flourishing lives. We are not so naïve as to imagine that our writing will help those who, for example, are clinically depressed – and we are not attempting to write a self-help guide. But we do believe that at a time when most of us are bombarded with messages about what we should or should not do to live healthily, attain a work-life balance, and find meaning, a careful consideration of the contributions of both scientific insights and spiritual wisdom to human flourishing can provide a new angle that many will find helpful.

We realise that not everyone is convinced that science (both the natural sciences and the social sciences) has much of value when considering questions of human flourishing, such as purpose and meaning. Equally, many hold that, important as such questions are, religions have nothing of value to contribute to them. We disagree with both these views. In different places within the book the extent to which we rely on scientific insights – including such social sciences as psychology and sociology within the scope of science – and spiritual

wisdom varies. In some chapters one takes precedence, in other chapters the other. Across the book as a whole, both make major contributions and our hope is that someone sceptical of the utility of one or the other will, if not converted to our position, at least appreciate why we have included both and understand the contribution that each makes to our argument.

To anticipate the argument that we will develop, we maintain that the concept of human flourishing provides a valuable framework within which to consider the importance of satisfying people's yearnings for material goods, successful relationships and the hope that we can achieve and experience things that give us a sense of something greater than ourselves – the transcendent. We maintain that the transcendent is not discerned only within religions; for many, the arts, nature, wilderness and a consideration of our place in the universe are all instances of routes towards an appreciation of something beyond. At the same time, transcendence plays a particular role within religions and we will discuss aspects of transcendence that are opened up by a religious or spiritual outlook on life.

The material dimension of human flourishing

Words matter. The word 'material' can be understood in a number of ways. In philosophy the term 'materialism' refers to the view that nothing matters except for matter and such physical concepts as energy and waves. One of us is based in the Oxford Department of Materials. A scientist who works in physics is a physicist, but to describe a scientist who works in materials as a materialist might be seriously misleading! By the 'material dimension to human flourishing', we mean those aspects of human flourishing that are to do with such things as having enough to eat, access to clean water, enough sleep, reasonably good health, somewhere that one considers to be one's home and in which one feels safe, and enough money not be endlessly worried by financial matters.

It might immediately be objected that we are beginning rather to stretch the everyday understanding of 'material' – for example in our inclusion of 'somewhere that one considers to be one's home and in which one feels safe'. Our reason for having a broad conception of the material dimension to human flourishing is that we don't want simply to erect a 'straw man' definition of the term which allows it almost effortlessly to be knocked down, leading to the conclusion that the material dimension on its own is insufficient. We do think that even our rather broad understanding of the material dimension to human flourishing provides an inadequate conceptualisation of human flourishing. One of the rather sad, in our view, features of much of modern life, including too many education systems, is that one can arrive at adulthood thinking that the material is all there is to life.

However, this is to get ahead of ourselves. Before we critique the notion that the material dimension is enough for human flourishing, we need to acknowledge that for many people the way we have characterised it – such things as having enough to eat, access to clean water, enough sleep, reasonably good health, somewhere that one considers to be one's home and in which one feels safe, and enough money not be endless worried by financial matters – sounds like a utopian dream. Even in peace time there are many hundreds of

millions of people across the globe who do not enjoy such basic comforts. And when we add in the effects of wars and other conflicts, we are talking of many more.

So, the material dimension does matter. Indeed, if we just think of having enough sleep and enjoying reasonably good health, things may be getting worse in many countries. Modern life for many of us, as we live in an increasingly 24/7 wired world, means that it's all too easy to deprive oneself of sleep, striving to keep connected to our social networks for just another half hour. And then, while almost all countries have seen startling improvements over the last century in life expectancy, this does not seamlessly translate into greater human flourishing for all. People may be living some 30 years longer on average than they did a century ago but around ten of those additional years are often ones of poor health. The average person nowadays spends longer, especially towards the end of life, in poor health than their ancestors did.

The relational dimension of human flourishing

Most of us enjoy the company of others, even if there are times when we may prefer to be on our own. We value family and friendship, even though we all know that family relations can be painful and we may fall out with our friends. But even these apparent objections to the value of relationships show how significant they are – they can go wrong and damage us as well as go well and help us to flourish.

For all of us, our initial closest relationship is with the woman in whose womb we begin our post-conception life. Throughout our lives we carry genetic material from two individuals (setting aside biotechnological interventions such as treating mitochondrial disease using gene therapy) but for some nine months or so we rely on the biological environment that one of them provides. This first relationship is an important one. If all goes well the baby emerges at birth having developed from a single fertilised cell into a new-born, typically weighing several kilograms, able to breathe on its own and begin its post-partum development through to adulthood.

Sometimes, though, matters don't go as well pre-birth as they should, and not only for genetic reasons. For example, if a pregnant woman's diet is low in folate (vitamin B9) in the first few months of pregnancy, the new-born may have neural tube defects, which can have adverse life-time consequences. Moving from shortage to excess, a pregnant woman with too high an intake of alcohol or who smokes cigarettes (or pretty much anything else) can result in damage to her developing child. Fetal alcohol syndrome can result in permanent brain damage, with consequent harms to educational attainment and general intelligence as well as other problems including motor coordination. While mental impairment should not be equated with a life that is less worth living, no parent wants a child to have fetal alcohol syndrome.

The relationship a mother had with her unborn child illustrates how the distinction between the material and relational dimensions of human flourishing may not always be clear. In one sense, all the adverse consequences in the preceding paragraph could be said to provide evidence for the material dimension – too little folate, too much alcohol or cigarette smoke.

It is because the unborn child sits within his or her mother that we can also consider the effects as illustrating the relational dimension.

After the baby is born, the primary benefit of feeding, whether breast or bottle, comes from the nutritional, which is clearly material. But feeding for any of us – especially for a mother (or father, though perhaps typically to a lesser extent) with her new-born child – is also about relationships. This is a lesson from the great 1987 Danish film *Babettes gæstebud* (*Babette's Feast*), based on a story by Isak Dinesen (aka Karen Blixen). Spoiler alert: Babette is a refugee who uses lottery winnings and her extraordinary culinary expertise to create a meal that heals a damaged community.

For a mother and baby, feeding plays an important part in their relationship. New mothers are bombarded with feeding advice from all corners. The consensus nowadays seems to be that while breastfeeding can have various health benefits over bottle feeding (it is still not really possible to replicate in formula milk all the constituents of breastmilk, which also plays a role in the development of the immune system and lowers the likelihood of Sudden Infant Death Syndrome (cot death)), a mother can establish a good relationship with her baby whether she breastfeeds or not.³ We would like to think that this observation can be extrapolated to bottle-feeding by fathers. It is because of the importance of this bonding that some nursing parents choose to put away their phones while feeding.

The psychoanalyst, Wilfred Bion, introduced the term 'reverie' (from the French for 'dream') to describe what can happen between mother and baby when feeding is going well – which, of course, it doesn't always, for a range of reasons, sometimes to do with the baby, sometimes to do with the mother and often to do with their relationship, even if only their relationship at a particular point in time. When feeding goes well, the baby, with its immature mental structures, somehow senses that its mother can contain any anxieties it has. The baby can therefore relax and concentrate on feeding and on its relationship with its mother. At the same time, the mother too may enter a state of reverie. This experience, for all that it is a natural and not uncommon experience, may suggest to the mother an aspect of the transcendent. There can be a depth to the experience that is beyond the everyday, much as some poets talk of the capacity of nature to take us out of ourselves. We have more to say about transcendence in the next section.

Beyond the mother-baby relationship, most of us would affirm the importance of good relationships between people. This applies to dyadic relationships – as in a marriage or between a parent and a particular child or between two friends of any age – and also to relationships within a community, whether one is thinking of the relationships within a family, a team, a congregation, a neighbourhood or any other group that is not so large as to be anonymous.

Just how important relationships between people are for human flourishing we will examine in Chapter 3. For some people, relationships with non-human animals can play a major role in helping maintain their quality of life. Distinctions can be made between pets, companion animals and service animals. Pets are usually domesticated animals (cats, dogs, horses, certain bird species, etc.) that by virtue of their domestication are easy to keep and generally get on well with most people. Individuals with some sort of disability may have a

companion animal, which has no particular training for its role, or a service animal, which does. A companion animal, like a pet, can provide company, enjoyment and psychological support (Figure 1.1). A service animal, such as a guide dog for someone who is blind or visually impaired, does more than this – and is usually trained to pay as little attention as possible to members of the general public, so that it can focus on its job.

The transcendent dimension of human flourishing

For most of us, there are times when aspects of life seem to go beyond, to transcend, the quotidian or the mundane. Nature, music, poetry and the other arts can transport us beyond ourselves. Many creative people, whatever their discipline, may feel as if at least part of what they are creating comes from outside themselves, is given to them. An awareness of the transcendent can happen when we are alone or in group situations, whether in singing, in dancing, in certain sporting activities, or in worship.

But what do such highfalutin statements mean? Feelings like these, which in groups can be at least partly triggered by endorphin release, may serve some evolutionary function, perhaps in terms of binding people together; there is a growing scientific literature on this. Is that the whole story? Or does the way we react to great works of music, stunning scenes in nature or the birth of our own children require a deeper explanation?

We do not want to advocate some sort of cheap argument here from such experiences to belief in a transcendent being. Neither of us thinks that that sort of argument works. At the same time, while we fully recognise that there can be rich secular interpretations of such phenomena, we are also entirely comfortable with the suggestion that some experiences can be more than this, that they can link us to an awareness of the divine.

At this point it seems sensible to say a bit more about each of us. We were both educated in the natural sciences and one of us, Andrew Briggs, has remained in them to this day while the other of us, Michael Reiss, soon migrated to the social sciences. Each of us has a Christian faith that is important to us and shapes how we try to live our lives. For us, therefore, the transcendent dimension to human flourishing is not restricted to the material and the relational. For most of our professional lives each of us has sought to elucidate how our occupation fits within our religious convictions.

Since Christianity is the tradition which we know best, when we consider religion we focus on Christianity. At the same time, we have tried not to be too parochial, indicating when our observations apply to religions in general and, in places, drawing on religious traditions other than Christianity. We hope that readers will be able to apply the principles which we set out to wherever they are coming from.

The Methodist theologian Frances Young has spent most of her adult life struggling with the practical and theological issues arising from the birth, in 1967, of her son Arthur. Arthur has severe physical and mental disabilities, is unable to speak and has always required a great deal of care. In her book about Arthur⁴, she concludes with a chapter titled 'Arthur's

vocation' which provides insights about both the relational and transcendent dimensions of human flourishing.

Arthur, and others like Arthur, including Angela Ricker with whom we started this chapter, enable a shift from individualism and competitiveness to community and mutuality. As Young puts it:

What really makes us human is the capacity to ask for help, and that challenges modern claims to autonomy, as well as our individualism and success-values. The spirituality of the L'Arche communities has much to teach us about the presence of God in the everyday experience of living with persons who have learning disabilities. It's important to highlight the mutuality of this relationship. It's not a matter of doing good, or patronizing charity, but of receiving as well as giving, according dignity to the other person by receiving from them. The fruits of the Spirit, according to St Paul, are love, joy, peace, patience, kindness, generosity, faithfulness, gentleness and self-control (Gal. 5.22). It is in community with persons who are limited in their competence and capacity, at least compared with most of us, that we often best discover these deeper values.⁵

Young concludes her book with the thought that her son functions as a religious minister, who reveals to us something about who we are and reminds us that in worship believers enter the wordless praise along with all of creation.⁶

Different people are likely to react to the suggestion that there is a transcendental dimension to human flourishing in different ways. We hope that many readers find the notion intriguing, possibly attractive, even if it is not one to which they may have previously given a great deal of thought. The transcendent dimension of human flourishing, like the relational and material dimensions, is not without support. We identify three robust pillars: truth, purpose, and meaning.

The pillar of truth

We take it as axiomatic that a flourishing life will be built on truth. Pilate asked 'What is truth?' and, whatever he meant by this⁷, the question remains an important one. In the context of a post-positivist hangover⁸, it is easy to assume that the only truth that matters is empirical truth of the sort that can be used to establish whether a statement such as 'Gold is a metal that does not tarnish' is true or not. An assertion like this about the physical world falls within the domain of the natural sciences. How would a scientist go about establishing whether it is true or false? First, it would be necessary to be precise about the various terms. 'Gold' causes no problems – the word clearly refers to the chemical element with an atomic number of 79 – and 'metal' is reasonably clear-cut (though non-scientists may be surprised to be told that mercury is a metal as there is no requirement for a metal to be solid at room temperature) but 'tarnish' is a bit more problematic. It is an everyday word and everyday words often lack the precision that scientists attach to words – for example, to a physicist, the words 'energy', 'work' and 'force' each have precise and distinct meanings, which they lack in day-to-day conversation. In the case of 'tarnish', the word

principally refers to the product of a chemical reaction between a metal and either oxygen or sulphur dioxide. Then, having clarified precisely what is meant by 'Gold is a metal that does not tarnish' it would be necessary, either through experimentation or some other objective method, to establish whether or not gold does indeed tarnish, or whether this is only the case for a substance that contains gold in a mixture (as gold in jewellery almost always is – even 22 carat gold has 8.3% non-gold, metals like silver, zinc and nickel), rather than when it is pure?

But there are other ways of establishing truth, in addition to those used in the natural sciences. Mathematicians establish truth by ensuring that assertions that fall within the domain of mathematics are consistent. Many of us may remember from our school days, the three-fold classification of mathematics into arithmetic, geometry and algebra, but there is more to mathematics than this. Mathematicians are fascinated by patterns and while there is no universally agreed definition of the subject, mathematics is widely agreed to include such things as the theory of knots and game theory. Mathematicians arrive at their conclusions through the use of proofs – all it takes for a purported proof to be invalidated is for it to be shown to have one inconsistency or a missing step that cannot be filled in. Something of what it is like to be a world-class mathematician is captured in Simon Singh's account of how Andrew Wiles solved Fermat's Last Theorem, a mathematical problem that had baffled mathematicians for over 350 years.⁹

Truth can be found in other domains of knowledge – in history, in aesthetics and in moral philosophy, for instance. There is a joke that goes 'If Henry VIII had six wives, how many wives did Henry IV have?' The humour relies on the appreciation that anyone (perhaps a young child) who seriously answers 'three' has failed to understand how both mathematics and history work.

But there are deeper questions about truth that the sciences, mathematics, history, aesthetics and moral philosophy cannot answer. In *The Republic*, Plato presents his allegory of the cave. Plato has Socrates describe the lives of people (perhaps us!) who live their lives in a cave where their perceived reality consists only of shadows projected onto a wall from a fire behind them. From within a system it can be difficult to imagine what the system looks like from the outside. It's a bit like the story of two embryos debating whether there is life after birth. One asserts that there is, the other maintains that there isn't and that stories of life after birth – of embryos entering through a tunnel into the light of a new world – are wish fulfilments. After all, what embryo has every come back from birth to convince other embryos of this second life?

The pillar of purpose

When Charles Darwin was considering whether or not to propose to his cousin Emma, he listed the advantages of *not marrying*, including:

Freedom to go where one liked— choice of Society & *little of it*. — Conversation of clever men at clubs— Not forced to visit relatives, & to bend in every trifle.— to have the expense & anxiety of children— perhaps quarelling— **Loss of time**. — cannot

read in the Evenings— fatness & idleness— Anxiety & responsibility— less money for books &c ...¹⁰

and also the advantages of *marrying*:

Children—(if it Please God) — Constant companion, (& friend in old age) who will feel interested in one,— object to be beloved & played with.— —better than a dog anyhow.— Home, & someone to take care of house— Charms of music & female chit-chat.— These things good for one's health.— *but terrible loss of time.* —

My God, it is intolerable to think of spending ones whole life, like a neuter bee, working, working, & nothing after all.— No, no won't do.— Imagine living all one's day solitarily in smoky dirty London House.— Only picture to yourself a nice soft wife on a sofa with good fire, & books & music perhaps— Compare this vision with the dingy reality of Grt. Marlbro' St.

Marry—Mary [sic] —Marry Q.E.D.¹¹

More generally, we can say that the purposes of a marriage include companionship for the couple, a stable basis within which to bring up children and a socially sanctioned mechanism by which two people can begin a new life together. As an Anglican statement of purpose of marriage expresses it: "Marriage is given, that husband and wife may comfort and help each other, living faithfully together in need and in plenty, in sorrow and in joy. It is given, that with delight and tenderness they may know each other in love, and, through the joy of their bodily union, may strengthen the union of their hearts and lives. It is given as the foundation of family life in which children may be born and nurtured in accordance with God's will, to his praise and glory."¹²

To a reductionist evolutionist, the purpose of life is to produce more life, life that is as closely related as possible. The last forty years have seen an enormous growth in the disciplines of behavioural ecology and evolutionary biology, with a particular focus on cases where organisms appear to engage in behaviours that contract this simple dictum. A classic case is altruism – cases where organisms help one another in ways that go beyond what might be regarded as unproblematic instances of parents assisting offspring. Darwin himself wondered about the evolution of sterility in the social insects. In many species of ants, bees, termites and wasps, many individuals – indeed, typically the large majority of them – never attempt to reproduce, instead serving the colony as a whole. Darwin realised that what such individuals are, in a sense, doing is to reproduce vicariously via others in their colony.

Nowadays we realise that the story is a bit more complicated – there are evolutionary battles within a colony as the various individuals do not all share identical interests – but the fundamental insight of Darwin holds good. This type of activity is nowadays named 'kin selection' as individuals are, effectively, reproducing via their kin (e.g. their siblings) rather than directly. Another mechanism by which altruism can evolve is through reciprocal altruism when one individual helps another individual (who may not even be in the same species) with the expectation (though this is not to imply any conscious awareness) that the time will come when such behaviour will be reciprocated and the altruist thus paid back.

When most of us wonder at a deeper level what we should do with our lives, consideration of how best to advance our interests through natural selection of random mutations of genes is not generally uppermost in our minds. Part of being human is that we are able to go beyond the forces of evolution in a way that may be unique to our species. It is hard for people to flourish if they feel that their lives, indeed the universe more generally, lack purpose. A key issue here is what is involved in finding a purpose. At one pole is the view that the universe has no ultimate purpose for us; each of us needs, if we give any thought to the matter at all, to invent a purpose for our life. At the other pole is the belief that the universe has a defined purpose for us, which each of us needs to find. This latter perspective is found in most of the world's religions, though they differ greatly as to the origin and nature of this purpose. In any event, whether invented or found, whether in family, in friends, in art, in politics, in patriotism, in religion or elsewhere, the discernment of purpose can contribute greatly to human flourishing.

The pillar of meaning

To a certain extent we can find meaning in the goods we acquire and the other components of the material dimension of human flourishing but we are more likely to find meaning in the skills we develop and in the things we create. When we learn to read, to ride a bicycle, to swim or to get around using a foreign language, the learning itself can be meaningful as well as what is learnt. Indeed, one of the healthy things about learning any new skill as an adult is that this can remind us how poor we initially are at something with which we are unfamiliar, how hard learning can be and, if all goes well, how satisfying it can be to see ourselves progressing – the first time, for example, we don't have to look at the keyboard when typing or when we suddenly realise that we are able to understand some of what is on a foreign menu.

Creating something can be a deep source of meaning. This is not only the case for the few of us who paint well or write poetry that someone else wants to read. It also applies when we cook meals or tender gardens – so long as such activities are not drudgery, which they can become if we are tired, in pain or if no one appreciates our efforts.

The clause 'if no one appreciates our efforts' indicates the importance of relationships to our location of meaning. Appreciation from a human being for almost any activity, however large or small, can imbue it with additional worth. We can even value appreciation from non-humans – a dog wagging its tail at the prospect of a walk or a cat purring when stroked – and the relational dimension to meaning, while aided by appreciation (which makes the relationship a two-way one) does not require it (think of a parent going to check that their child is asleep).

Meaning is especially likely to be found in our deepest relationships. These can be friendships though marriage (or its cultural equivalents) is for many people more likely to be key, along with other deep family relationships, including the ones that parents have with their children.

We may have to dig deeper for meaning in circumstances where our material and relational needs are not satisfied. Those with a deep religious faith are likely to find meaning in their faith, always remembering that in religions where immanence is taken seriously, part of our relationship with God manifests itself in our relationships with those around us and in the significance of the physical environment. In awful situations – whether ones that almost all of us face at some time, such as the death of a loved one, or ones that, thankfully, few of us experience, such as starvation or torture, some people are able still to locate meaning, even if only in how they exercise the few choices that they are still able to make.

Limits to predictability

It is sometimes supposed that the natural sciences, and in their wake the social sciences, are all about making precise predictions – that the more information we have, the more exactly we know what will happen. This view came into prominence after the towering achievements of Sir Isaac Newton, who realised that the same laws of motion that describe how objects fall to the ground also describe how the planets in our solar system revolve around our Sun, and the Moon around the Earth. A clockwork-like model of the universe came to predominate in which it seemed that a precise knowledge of the present state of affairs would enable one to predict events far into the future.

There are areas where this is indeed the case. When we are dealing with situations involving massive objects, like the movement of the Sun and the planets, where gravity is the determining force, we can often predict events far into the future (Figure 1.2). We can confidently predict that there will be (or, by the time you read this, will have been) a total solar eclipse on 4 December 2021 and another on 8 April 2024. Astronomers can predict the date of such events hundreds of years ahead and, to a precision of a second, when they will start and end.

But even in physics there is much that is uncertain. Take something as well-known as radioactive decay. We cannot predict when a radioactive atom will decay; we can predict the probability of it decaying over a certain time period – but that is as far as it goes. Furthermore, the advent of chaos theory has enabled us to realise that, contrary to early aspirations, there are many features of the natural world that we will never be able to predict with useful accuracy – the weather on a given day a year from now being an example.

None of this of course, means that the world doesn't obey the laws of physics – just that the laws of physics are somewhat more complicated and much more surprising than was once thought to be the case. Nor does it mean that the world is irrational – rationality and irrationality are features of human minds.

At one point, many social scientists thought that there were laws that, once we discovered them, would enable us to predict the behaviour of humans with perhaps the same reliability as we can predict the behaviour of inanimate objects, thanks to the laws of physics and chemistry. This presumption has faded somewhat, though it keeps on reappearing, often as a new science or technology develops. So, genetics is not infrequently equated with

determinism and the advent of neuroimaging has led some to presume that we will soon be able to predict how humans behave.

There is a growing push back to such presumptions. The term *Homo economicus* was introduced in the nineteenth century to characterise humans as beings who are consistently rational and act in their own interests. At one time loved by economists – these sorts of assumptions make mathematical modelling much more feasible – the problem with such a characterisation is that it fails on empirical grounds.¹³ Almost no one is consistently rational and, thankfully, almost no one invariably acts in their own interests. We may be rational and self-interested much of the time but our actions are often better predicted by our values, which, while they need not be irrational, often vastly exceed what is simply rational and selfish. Many of us at times show compassion and generosity, even with no realistic chance of these benefitting us now or in the future.

One of the important implications of the world in general and humans in particular being less predictable than has often been supposed is that the future is more open-ended. The lives we lead and the choices we make a difference. We can promote flourishing, both for ourselves and for others, or we can make it less likely.

Patterns of religious commitment

These major shifts in how we understand the predictability of the natural world and the rationality of human action have come about at a time of tremendous changes in religious observance. While worldwide, some 90% of people profess a faith in God, religious observance, as measured by stated beliefs or documented practices, is falling in many countries, albeit remaining stable in most and rising in a few. In some countries that score highly on such measures of human flourishing as per capita GDP or average human happiness, religious observance is low and falling.

We do not find it particularly surprising, given our multi-dimensional approach to human flourishing, that countries with high per capita GDPs or measures of human happiness, such as the Nordic countries, have low levels of religious observance. We might expect that if material or relational measures of flourishing were high, religion might be less important – it is a widespread notion, and one for which there is some supporting evidence, that people are more likely to manifest religious practices such as prayer or attendance at worship when times are tough.

The decline of religious observance in much of the West has given rise to what Grace Davie has characterised as ‘believing without belonging’, i.e. those who have some degree of belief without being a regular part of any worshipping community.¹⁴ To this we can add the notion of ‘belonging without believing’, of whom no doubt there have often been many but whose numbers may be decreasing where there are fewer social pressures favouring regular attendance at worship.

The place that religion plays in human flourishing is profound and complex. For the atheist, religion fails the ‘but is it true?’ test which we examine in Chapter 5. The many reported and

positive correlations of religiosity with measures of self-reported happiness are then seen as evidence of self-deception. For those with a religious faith the correlations are not unexpected. Furthermore, the religious believer is not surprised that religiosity also correlates positively with more objective measures such as physical health and longevity, though the relationship between religiosity and mental health is less clear.

There are deeper questions about religion and flourishing than whether people with a religious faith live longer or report that they are happier. In Chapter 4 we examine whether a spiritual framework for one's life provides access to a transcendental dimension that a secular appreciation of beauty in, for example, nature, art and music cannot. In Chapter 7 we examine the implications of changing patterns of religious observance.

Human flourishing in an age of technology

Human technology predates the origins of *Homo sapiens*. Our ancestors were making stone tools millions of years before our species had evolved. The relationship between humans and technology is bidirectional. It is not only that our ancestors changed stones through chipping away at them so that they could be used for arrowheads, for chopping or as querns. Such stones, and tools in general, change us. They favour individuals who can make them and use them well. They contributed to important changes in our anatomy and behaviour and enabled us to increase in numbers and to spread to new geographical areas.

Despite concerns that robots might take away people's jobs, their expense and initial inflexibility meant that the movement to robots from humans, in things like car assembly lines, was quite slow, giving time for humans in the industry to move to other jobs. However, robots are becoming more affordable and more versatile with the advent of machine learning. Calculations suggest that a number of jobs in which large numbers of people are currently employed will soon no longer exist. For example, if autonomous lorries really do become a reality, many of the 3.5 million professional truck drivers in the USA will need new jobs. Not all of them will want to join the service industries. Besides, the use of robots in the service industries is likely also to increase substantially. Whether we really will have robots taking our orders in restaurants is unclear – though the prevalence of systems where one simply types one's choice into a tablet rather than engaging with a human being is increasing. However, robots are likely to become more important in social care (Figure 1.3). There is therefore a risk that elderly people in care homes might enjoy less human contact. On the other hand, a robot may be quicker to help one go to the toilet in the middle of the night – and some people may prefer to be helped in this by a robot than by another human being.

Machine learning is one of the fastest growing fields in computer science. The ability of machines to outperform humans is being demonstrated in a growing range of applications, from board games to medical diagnosis. We can expect to see increasing benefits. And who, even before the 2020 pandemic, would want to be without the power of social connectivity and online shopping? But there lies the danger. Some of the best minds in the world are being paid some of the highest salaries in the world to target influence at each user, starting with all the devices at their disposal to maximise the time that vulnerable young people

spend looking at their phone screens, and thence having their preferences manipulated both as consumers and as citizens. Flourishing is more than ever being controlled by large commercial interests, which are not necessarily aligned with an individual's conscious values.

Enhancement in humans exists in many forms. We can start with the uncontroversial – the education of a child by its family and in school. Education is all about enhancement; we talk about a learner 'fulfilling their potential' though it is often unclear whether there really are such limits and, if there are, what they are. Preventative approaches in medicine, such as inoculations, are all about enhancing the defence mechanisms of individuals so that they are resistant to polio, chickenpox, whooping cough, measles, mumps, rubella, and we hope by the time you read this coronavirus. More recently, somatic gene therapy is still barely out of the laboratory and into the clinic. Here, alterations are made to the DNA in the cells in the body that do not give rise to eggs or sperm. The intention is to correct those diseases or conditions that result from mutations in our DNA, such as sickle-cell anaemia and β -thalassaemia.¹⁵ In all these cases, if safety concerns are met and people consent to procedures, the contribution to human flourishing is pretty clear-cut. More problematic are cases – hypothetical at present but perhaps not for long – where we are not talking about restoring gene function to normality or enhancing the body's capacity to deal with infectious diseases but things like using somatic gene therapy or pharmacological agents to enhance a person's ability to learn more quickly. Would this be a good thing, or would it give such individuals an unfair advantage? Who will decide whether and how to use such capabilities should they become available? Will they diminish or enhance human flourishing?

We live in uncertain times. When we started to write this book, we little thought that we would finish it in a world disrupted beyond any comparable experience by the COVID-19 pandemic. When you read it, other changes may be uppermost in your mind. By taking these case studies of changes in uncertainty and predictability, in patterns of religious commitment, and in technologies, we seek to illustrate how the foundations of human flourishing can be applied to the dimensions of human flourishing. We hope that these worked examples will bring to life what might otherwise seem ethereally abstract. Human flourishing is all about how humans actually flourish, now and in the future, however uncertain the future may be.

Organisation of the book

The rest of the book is divided into three parts, each consisting of three chapters. Before each part we have an introduction to that part. Our first part is about the three dimensions of flourishing that we have identified: material, relational and transcendent.

¹ Crouch, A. (2016) *Strong and Weak: Embracing a life of love, risk, and true flourishing*. Downers Grove, IL: InterVarsity Press, p. 185.

² Crouch, A. (2016) *Strong and Weak: Embracing a life of love, risk, and true flourishing*. Downers Grove, IL: InterVarsity Press, p. 9.

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- ³ Hairston, I. S., Handelzalts, J. E., Lehman-Inbar, T. & Kovo, M. (2019) Mother-infant bonding is not associated with feeding type: A community study sample. *BMC Pregnancy Childbirth* 19, 125. DOI: 10.1186/s12884-019-2264-0.
- ⁴ Young, F. (2014) *Arthur's Call: A journey of faith in the face of sever learning disability*. London: SPCK.
- ⁵ Young, F. (2014) *Arthur's Call: A journey of faith in the face of sever learning disability*. London: SPCK, p. 143.
- ⁶ *Psalms* 148.
- ⁷ Wright, N. T. (2019) *History and Eschatology: Jesus and the promise of natural theology*. London: SPCK, p. 239.
- ⁸ O'Neill, O. (2013) Science, reasons and normativity. *European Review*, 21, S94-S99.
- ⁹ Singh, S. (1997) *Fermat's Last Theorem: The story of a riddle that confounded the world's greatest minds for 358 years*, Fourth Estate, London.
- ¹⁰ Cambridge University Library, DAR 210.8:2. Available at <https://www.darwinproject.ac.uk/tags/about-darwin/family-life/darwin-marriage>.
- ¹¹ Cambridge University Library, DAR 210.8:2. Available at <https://www.darwinproject.ac.uk/tags/about-darwin/family-life/darwin-marriage>.
- ¹² Church of England (n.d.) *Marriage Service*. Available at <https://www.churchofengland.org/prayer-and-worship/worship-texts-and-resources/common-worship/marriage#mm100>.
- ¹³ Sen, A. K. (1977) Rational fools: A critique of the behavioral foundations of economic theory. *Philosophy & Public Affairs*, 6, 317-344.
- ¹⁴ Davie, G. (1990) Believing without belonging: Is this the future of religion in Britain? *Social Compass*, 37(4), 455-469.
- ¹⁵ Ledford, H. (2020) Quest to Use CRISPR against disease gains ground. *Nature*, 577(7789), 156.