

## Part 1

# Human Nature

### *Insights from the Frontiers of Neurophilosophy*

The last several decades of brain research have radically changed our understanding of what it means to be human. Are we inherently good or bad? Are we driven by reason or emotions? Do we have free will? Does power corrupt the mind? Are we capable of genuine altruism? Questions such as these have puzzled philosophers for millennia and have laid the groundwork for the development of political theories and ideologies that changed the course of history. Reflecting on these important matters has advanced our understanding of the human condition, of its extraordinary virtues and enduring limitations. Yet, most of the answers, and attempted answers, to questions about our human nature have remained, historically, speculative in nature. The absence of tools to access the human brain and understand its deeper neurochemical and neuroanatomical processes and responses has meant that, for the longest time, a critical seat of our emotions, reason and identity was left completely unexplored. In this book, I aim to bring neuroscience to the forefront of inquiries about human nature and, in so doing, reflect on what accounts for 'good governance' and what can help us secure a more peaceful future for humanity.

Neurophilosophy opens up fresh perspectives on such questions, which humanity has been pondering for centuries. Neurophilosophy, which emerged in the late 1980s, is a field of cross-disciplinary research, which pioneers insightful synergies between neuroscience and other

disciplines which have traditionally sought to elucidate the human mind, and it offers a key to unlocking some of the most persistent mysteries shrouding human nature.<sup>1</sup>

Chief among them is a puzzle long thought to be without answer: the human capacity for both good and evil. Instances of atrocities – such as genocide or enslavement – can be found in all cultures and societies, modern and ancient. We need only scratch the surface of history to find confirmation of our darker impulses. Yet, for all the man-made horrors, there are also many instances of other human characteristics: of goodness, of charity, of heroism on behalf of strangers. Recently, the European refugee crisis has highlighted how profoundly dualistic human nature is: alongside occasions of xenophobic violence, we witnessed enormous generosity and friendship shown towards refugees. Suffice it to say, the picture is mixed. As Louis Pojman has observed, ‘We seem to be part angel, part demon, part rational, and part animal, capable of great glory and great tragedy.’<sup>2</sup> How can we explain this paradox? Traditionally, at the heart of the debate on human nature has been the question of whether we are inherently good until corrupted by our environment or born bad but kept in check by society. Well before the advent of modern theories of human development, philosophical and religious traditions sought to answer this enigma. Thomas Hobbes (1588–1679), for example, argued that humankind is driven by passions and instincts linked to self-preservation, requiring law and rules to keep our basic instincts under control.<sup>3</sup> Jean-Jacques Rousseau (1712–78), by contrast, believed that human beings are naturally good and that their vices are attributable to the corrupting influence of society. Plato (427–347 BCE), occupying the middle ground, described humans as the product of their biological heritage but also recognised the crucial role of the environment in influencing their behaviour. In the Old Testament, humankind is portrayed as created in the image of God and, thus, as inherently good. Both Jews and Christians agree, however, that human beings fell from grace by eating from the tree of knowledge, which left them alienated from God and in need of salvation.<sup>4</sup>

The continuing nature–nurture controversy frequently lapses into debates over whether we are driven by emotions or by rational thought. Traditionally, those placing greater emphasis on passions and survival instincts regard our biological heritage as more important than the influence of our environment. By contrast, those stressing our capacity for reason tend to attribute greater significance to culture and education as factors in determining who we are. A related question is, thus, whether reason plays a role in our moral judgements. If so, do we engage in

conscious reasoning before forming a judgement or after the fact? The first modern philosopher to argue that we make moral judgements based on emotional responses to situations or scenarios was David Hume (1711–76). Immanuel Kant (1724–1804), on the other hand, held that we reach moral judgements through a process of conscious reasoning. In Kant's view, humanity has progressively evolved from being motivated by animal instincts to being driven by reason.<sup>5</sup> Aristotle (384–322 BCE), too, regarded human beings as capable of living a 'good' life by employing reason.<sup>6</sup> Plato depicted human beings as driven by both passion and reason. He famously compared balancing both faculties to steering two horses running in opposite directions.<sup>7</sup> Indeed, only recently have we begun to unveil the crucial role of emotions in rational decision-making. Advances in neuroscience and brain-imaging techniques have given us a glimpse of the complex interplay of emotion and reason in moral judgement. Consider, for example, the famous case of Antonio Damasio's patient, 'Elliot'. Surgery to remove a tumour impaired Elliot's emotional capacity. Whilst still exhibiting a high IQ, Elliot found himself incapable of making decisions, with disastrous consequences for his previously happy professional and family life.<sup>8</sup>

Another recurring set of questions in the study of human nature, and closely intertwined with the nature–nurture controversy, pertains to free will and determinism. Are we in control of our behaviour or is everything we do determined by genes, the environment or other forces beyond our volition? At one end of the spectrum are existentialists – such as Jean-Paul Sartre (1905–80), Søren Kierkegaard (1813–55) and Friedrich Nietzsche (1844–1900) – who argued that human beings have a radical free will. According to Sartre, 'Man is condemned to be free.'<sup>9</sup> At the other end of the spectrum is, for instance, Hobbes, who held that nature is the driving force behind human action.<sup>10</sup> Yet others believe that free will is merely a figment of our imagination. An example of this can be found in Sigmund Freud's (1856–1939) theory of pansexuality, which holds that, while we may think that we are making conscious choices, we are driven by subconscious motives.<sup>11</sup> Interestingly, in the twentieth century, modern physics' discovery of quantum mechanics sent determinism into retreat. At the same time, however, determinist thinking saw a rise in other disciplines – such as biology, psychology or the behavioural sciences – as a result of new insights into the impact of genetics and heredity on human nature and the influences of social and cultural conditioning on our behaviour.<sup>12</sup> Today, neuroimaging tools are enabling neuroscientists to further their exploration of our agential control. Moreover, advances in technology are increasingly allowing us

to alter our species' capabilities, prompting the questions: Shall we soon take biological evolution into our own hands? Will technology change what it means to be human? Indeed, recent technological developments – such as brain-computer interfaces – complicate the traditional nature-nurture debate by blurring the line between human and machine.

Across disciplines, inquiries into free will have probed the nature of moral judgements. Are we truly free to discern and pursue the good, rather than being driven by forces outside our control? Are we capable of moral behaviour, of altruism which does not serve our self-interest? The range of answers to such questions has inspired widely different perspectives on human nature. Hobbes, for example, portrayed human beings as egoists, incapable of acting altruistically. Kant regarded morality as the result of reason.<sup>13</sup> Some sociobiologists, such as Edward O. Wilson and Frans de Waal, consider morality to have developed from our social instincts.<sup>14</sup> Others, including evolutionary psychologists such as Marc Hauser, have gone so far as to argue that, over time, human beings have evolved so as to develop an innate moral instinct.<sup>15</sup> This suggests that some basic moral criteria must be universal across different cultures. Nonetheless, it also raises the question of whether human beings are deliberating moral agents.<sup>16</sup>

In short, the paradoxes of human nature have inspired heated controversies from various disciplinary vantage points for centuries. The writings shaping the debate on human nature, however, have long missed a key element: insight into the human brain. For millennia, the workings of the brain were considered relatively unimportant. In ancient Egypt, for example, mummies often had their brain discarded, whilst the heart was preserved as the assumed seat of both thoughts and the soul. Similarly, Aristotle located the mind in the heart, regarding the brain merely as a cooling mechanism for blood.<sup>17</sup> Until the early twentieth century, very little was known about the physical basis of the mind. Since then, a neuroscientific revolution has drastically improved our understanding of the mind as a product of complex, but real, processes occurring in the material brain.<sup>18</sup> More recently, twenty-first-century brain-imaging technology – such as functional magnetic resonance imaging (fMRI) or, more recently, magnetic encephalography (MEG) – has enabled us to delve into the inner workings of the living brain. Whilst modern neuroscience is still far from unlocking all of the mysteries surrounding human nature, it has drastically improved our understanding of how we feel and think, what motivates us and what we are capable of doing under certain circumstances. Today, novel techniques

from neuroscience allow us to explore the brain structures involved in moral judgement, for instance, or emotional experiences, overturning many long-held beliefs about the human species.<sup>19</sup>

This book seeks to move beyond deterministic and reductive accounts of human nature by taking stock of, and advancing, not only insights from philosophy, psychology, and social biology, but also cutting-edge findings from neuroscience. In so doing, the book pushes the field of neurophilosophy into uncharted territory, which incorporates neuroscientific discoveries into the analysis of international relations and global order. Indeed, recognising our neurobiological make-up and the social and political tendencies it underpins is key to understanding international security and to improving its practice. Only if we know who we most deeply are, and what we most genuinely want, can we devise policies which bring out the best in human nature. Tragically, at a time when conflicts are abundant, neuroscience's meaningful contributions are widely overlooked in policymaking and wider debates on human nature.

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## The Structure and Aims of the Book

As mentioned above, this book is driven by three central purposes. First, it advances our understanding of human nature by drawing on insights from various disciplines and especially from cutting-edge neuroscience research. Second, it offers a convenient entry point for researchers and practitioners to understand how a neurophilosophical perspective on human nature can improve our understanding of existence, international relations, prosperity, peace and security. It thereby addresses a gap in the existing literature which widely neglects the political implications of neuroscientific discoveries and their neurophilosophical implications. Third, the book makes pioneering neuroscience research – all too often presented in arcane technical jargon – accessible across disciplines, to both academics and policymakers. It, therefore, avoids overwhelming the reader with technical detail and jargon in its explanations of neuroscientific discoveries and their societal implications.

The book frames these insights from neuroscience within an overarching theory of *emotional amoral egoism*. To establish a context for understanding this theory, Part 2 provides an overview of noteworthy accounts of human nature which have emerged across disciplines over the past three thousand years. Given space constraints, this section of the book cannot endeavour to capture the whole range and variety of thinking on human nature. It focusses instead on what I see as the most influential ideas, including philosophical, religious/spiritual, psychological and evolutionary approaches. Part 2 more fully develops the main contours of the debate outlined in the introduction, including the nature–nurture controversy and the emotionality–rationality dichotomy. From this emerges a kaleidoscopic view of humankind riddled with paradoxes. Part 2 explores not only the main intellectual positions about who human beings are; it also considers where we are going in light of twenty-first-century advances in science and technology. Indeed, today's

increasing possibilities for modifying human capabilities through biological and technological means are further compounding existing accounts of human nature.

In Part 3, I embark on the challenging task of formulating a more comprehensive theory of human nature, which I call *emotional amoral egoism*. It represents a synthesis of insights from a variety of disciplines, including neuroscientific findings. It posits that there are three characteristics common to all human beings, across all ages and cultures. Chief among them is our *emotionality*. Extensive research into the human brain has revealed the centrality of emotions in human experience and their profound impact on key cognitive processes. In fact, emotions shape how we perceive the world, how we process information and how we remember events.<sup>20</sup>

In addition, we are all born *amoral*. I do not use the term ‘amoral’ in the traditional sense to denote indifference to, or lack of awareness of, the concepts of right and wrong. On the contrary, I believe that most human beings have moral sensitivities and the capacity to form moral judgements. However, a preponderance of evidence suggests that human beings possess no innate understanding of good and evil and that their moral judgements shift according to circumstances, both personal and political. This is what I mean when I describe humankind as amoral.

In spite of being born amoral, we do not enter the world as the entirely blank slate envisioned by Locke (1632–1704). Instead, I prefer to conceive of the human mind as a *predisposed tabula rasa*.<sup>21</sup> By ‘predisposed’ I mean that we are endowed by nature with a powerful survival instinct, one which pushes us towards actions which maximise our chances of survival. It is in this sense that human nature is fundamentally *egoistic*: the third commonality we all share. Therefore, while humankind is capable of being both good and bad, survival instincts are so powerful that people commonly act according to what they perceive to be their general self-interest in a given situation. No matter how selfless an act may appear, some form of self-interest is likely to be lurking beneath the veneer of altruism. This element aside, our moral compass and our life-guiding values are largely shaped by our upbringing and environment, both personal and political. Admittedly, and despite lacking inborn moral concepts, we possess some innate pro-social emotions, such as empathy and sympathy. However, whilst the latter can contribute to what could be described as ‘moral sensitivity’, the link between emotions and morality must not be mistaken for an innate ‘moral grammar’, especially as our pro-social affinities are often biased towards in-group members.

Our emotional amoral egoism is genetically coded yet can be modified by the totality of our environment. In other words, whilst endowed with predilections stemming from our genetic make-up, our brains remain malleable, especially in early life, and, therefore, susceptible to external influences, both good and bad, including from drugs and psychotherapy and, more recently, advances in bio-, molecular, nano- and computational technologies, which could be so significant as to ultimately change what it means to be human. In light of this interplay between genetics and environment, I believe that the traditional nature–nurture dichotomy loses its meaning.

Furthermore, contrary to longstanding philosophical beliefs, comparatively little of what motivates us is generated by reason alone, as our emotional nature has the upper hand in driving our behaviour. Not only are we compelled by emotions, but our brain is pre-programmed to feel good. We have an instinctual motivation to repeat behaviour which activates the reward centres of the brain. My theory contends that there are five main drivers of human action through which this neurochemical gratification is sought. I have called them the *Neuro P5*: *power, profit, pleasure, pride and permanency*. By *permanency* I refer to the quest for longevity and the desire to leave a legacy which extends beyond death.

Drawing on philosophical insights from recent work in neuroscience, Part 3 calls into question many long-revered beliefs about human nature, including the role of rational analysis in influencing human behaviour and the nature–nurture dichotomy. To situate my theory of emotional amoral egoism in relation to its historical antecedents, Part 3 closes with a table which facilitates direct comparison.

Part 4 uses my neurophilosophical theory of human nature to pave a richer and more practical understanding of how our emotional amoral egoism can trigger fear, conflict and division and how these are manifested through some key issues and policy challenges that humanity is facing today, such as human enhancement, inequality, Big Data and fake news. When left unchecked – whether by positive socialisation, egalitarian norms or institutional constraints – the egoistic character of human nature will trigger a relentless quest to fulfil our need for the Neuro P5, even at disastrous cost to self and others. It is possible, however, for us to harness the defining dynamics of human nature in ways which promote peace and security. My understanding of human nature as malleable and subject to external influences highlights the key role of the environment in shaping our moral compass. As I argue in this section of the book, sustainable improvements in the human

condition can only unfold in a context which reconciles the ever-present tension between the needs of human dignity and the emotional amoral egoism which is innate within us all. By *dignity*, I do not mean the mere absence of humiliation, nor do I refer exclusively to the inherent worth of every human being. Rather, I use this term to describe a condition in which nine universal human needs are recognised and fulfilled: *reason, security, human rights, accountability, transparency, justice, opportunity, innovation* and *inclusiveness*. I believe that sustainable improvement in the human condition can be achieved through a new good-governance paradigm which is capable of balancing this tension – a paradigm I call *dignity-based governance*. Dignity-based governance involves, at the very least: (1) countering human amorality with *justice, accountability* and *transparency*; (2) channelling human egoism to benefit society through *opportunity, inclusiveness* and *innovation*; and (3) assuaging vitriolic human emotionality by providing *security*, safeguarding *human rights* and fostering a society based on *reason*.

Thus, Part 4 applies the lens of emotional amoral egoism to a wide range of imminent security concerns and demonstrates how dignity-based governance can help us navigate these issues. Chief among them are the downsides of globalisation, interdependence and interconnectivity. For all the opportunities it offers, globalisation has brought about major challenges, including shifts in social, ideological and cultural constellations which are unsettling previously established identities, as well as increasing the number of conflicting resistance identities (see Chapter 4.2).

Today, cultural diversity is a fact in almost every region of the world, due to the increase in human mobility, migration and the existence of diaspora communities. At the same time, deeply ingrained in our brains is the fear of the ‘other’, a reflex which is triggered by encounters with the unfamiliar. This widely unconscious bias makes us susceptible to ethnocentrism, which mistakes the *familiar* for the *better* in every circumstance. Our natural inclination towards us-versus-them thinking is often instrumentalised for political purposes and can easily degenerate into xenophobia, discrimination, alienation, ethnic tension and violent conflict (see Chapters 4.3 and 4.4).

Indeed, tensions between groups with different outlooks and values are a major source of instability across continents. In Europe and beyond, the past few years have seen rising polarisation, with political attitudes diverging towards ideological extremes. Sectarian polarisation, operationalised by exogenous national interests and manipulation, continues to ravage many societies, especially in the Middle East. In the

United States, levels of social cohesion decrease as American citizens are increasingly polarised along partisan lines. Political and religious extremism is tearing apart families, communities and societies throughout the world. The internet, in particular, is accelerating the polarisation of pre-existing attitudes. It creates so-called echo chambers in which the constant repetition of one-sided views exacerbates pre-held prejudices, fears, or in-group tendencies, which at times become so extreme as to lead to the commission of violent acts against the 'other'. *Fear-induced pre-emptive aggression*, a by-product of our emotional amoral egoism, plays a major role in fostering resistance identities, polarisation, xenophobia and ethnic conflict. Chapter 4.4 illustrates how dignity-based governance can prevent conflicts through its focus on inclusiveness, reason and education, as well as through the monitoring and regulation of both political discourse and the entertainment and gaming industries.

Whilst xenophobia and conflict are old phenomena in the history of humankind, Chapter 4.5 devotes attention to some more recent security concerns, including Big Data and human enhancement, as well as issues which have not traditionally been the object of political analysis (such as the meaning of life) but which are instrumental in shaping today's security landscape. There is a strong correlation, for example, between radicalism and the quest for meaning, and the latter plays an important role in holistic approaches to development and politics. Thus, Chapter 4.5 shows how my theory of emotional amoral egoism can be harnessed to improve understanding of a wide range of issues and how dignity-based governance can contribute to maximising the benefits and avoiding the risk associated with these issues.

Importantly, dignity-based governance can instil in us greater concern for the welfare of distant others. Most recently, the Covid-19 pandemic<sup>22</sup> is contributing to the sense that people everywhere belong to a shared community of fate.<sup>23</sup> From the point of view of moral cosmopolitanism, this is positive, since it may help to create a sense of community with what might otherwise be seen as distant 'others'. However, due to our nature and evolutionary history, when faced with the need to intervene in favour of non-co-nationals, our loyalties and commitments often remain incredibly parochial. Applying my theory of emotional amoral egoism, I discuss how we might account for the limits of human compassion (Chapter 4.6). At the same time, I demonstrate how, by fulfilling what we perceive emotionally to be our basic needs, dignity-based governance can enable us to apply reason to our interactions with others and, thus, extend our sense of moral obligation to the whole of humanity.

To unlock the best in human nature, dignity-based governance must be ensured on both the domestic and global levels and must be accompanied by harmonious interstate relations. International relations must, therefore, be guided by the paradigm I call *symbiotic realism*, which is premised on the idea that, since we live in an interconnected and interdependent world, international politics can no longer rely on zero-sum and relative gains, but rather must be a multi-sum game, with non-conflictual competition and absolute gains. In light of these considerations, Part 4 illustrates the benefits of incorporating neurophilosophical reflection into political analysis. On the one hand, it demonstrates the impact of our innate predispositions on key security issues. On the other, it highlights the extent to which external factors determine how we act on the genetic heritage we carry with us and, in light of this, how our emotional amoral egoism can be channelled for the greater good of humanity through dignity-based governance.

Finally, Part 5 provides some concluding thoughts on the security and societal implications of the theory of emotional amoral egoism and offers practical and actionable steps for policymakers and governments. By illustrating what the aforementioned threefold balancing act means in practice, the final part of the book demonstrates how dignity-based governance is the most effective tool through which to bring out the best in every single human being.

By exploring human nature from a neurophilosophical vantage point, I hope to breathe new life into an old debate and spark new insights into how our innate tendencies shape the world in which we live and how they can be constructively harnessed for the greater good of all, at all times and under all circumstances.