

Praise for

The logo for 'Thought Economics' features the word 'THOUGHT' in a large, bold, black, sans-serif font. Above the letter 'O' in 'THOUGHT', there are three small, black, teardrop-shaped icons arranged in a slight curve, resembling a thought bubble. Below 'THOUGHT', the word 'ECONOMICS' is written in the same bold, black, sans-serif font, stacked on a second line.

THOUGHT ECONOMICS

'If you value those who think differently, read *Thought Economics*. Challenging traditional thought structure is what it's all about. I'm so glad this book exists.' Rose McGowan, author of *Brave*

'The remarkable thing about *Thought Economics* is that it isn't just thought-provoking, but genuinely thought-generating. It is a watershed in our understanding, and our understanding of understanding. Vikas Shah hasn't just moved the needle, he's fashioned an exciting new one.' Dexter Dias QC, author of *The Ten Types of Human*

'A must-read collection of interviews with incredible people – and also me.' David Baddiel

'It's a joy to dip in and out of these learnings and insights.' Sophia Amoruso, author of *#Girlboss*

'An incredible collection of interviews with the people that have shaped our world.' Heston Blumenthal

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To every single interviewee who has given up the most precious commodity they have – time – to speak to me.

Thank you.



FOREWORD

BY LEMN SISSAY

Nomenclature and Thought Economics. A title needs to be unique to avoid the search-engine crash of discovering it corresponds with an obscure naked yoga cult in northern Kazakhstan. Vikas's Thought Economics website was original from the start and its name serves as the first unique phrase in this entire project. You have chosen well.

As I am writing this, the United Kingdom is in lockdown. Previous to the pandemic, 'lockdown' was a description of cell-bound prisoners. 'Lockdown' enabled officers to search the cells, one by one, for contraband. Now we are in lockdown in our own homes, searching ourselves, one by one. Meanwhile, Covid-19 prowls across the globe with scant regard for boundaries and no respect for governments, for organizations, for us. The virus as terrorist, cloaked in invisibility, wreaks havoc wherever it is. We place ourselves indoors to protect ourselves, we wear masks – and we are faced, most of all, with ourselves. It is up to us. Our thoughts. Our economics.

Resilience is needed. Hope is needed. Family is needed. Business is needed. The arts are needed. Government is needed. Friends are needed. All are represented in this book. Their value appreciates with need. We see more clearly what is precious, that which should be maintained and that which must be jettisoned. 'I hope that everyone could wake up in the morning and wonder what their purpose is. This

is the main question of our existence!' (Marina Abramović).

But there is a gift in lockdown, a gift to governments and societies of the world. We have experienced now what happens when we place the wellbeing of fellow humans above profit and war. Another advantage to lockdown is *The Book* as a source of solace. The paper book is regaining its rightful place in tandem with the screen. On the arrival of the internet two decades ago, the book faced its greatest challenge. Today, there are more words passing between more people than *ever*. It was at the beginning of this revolution that the *Thought Economics* blog came to fruition.

In this book, Vikas converses with some of the most inspiring minds on the planet. It is an intimate and expansive expedition into what happens when a good question is asked of a great mind. Page after page of cross-thinking and counterintuitive insight. Through his questions, Vikas draws the brightest minds into seven chapters. Here, for example, in Chapter 7, chess master Garry Kasparov talks about democracy:

More and more young people are getting interested in politics, and we should praise Trump for waking them up. Democracy is not something that is granted for ever. Ronald Reagan once said, 'Freedom is never more than one generation away from extinction,' and our democratic instruments have got rusty, as people assumed they would always work automatically.

So a Russian chess master quotes a past American president to describe what is happening in the world today. It reminds me of the dynamism in Matthew Syed's *Rebel Ideas*, in which he encourages different sources of thought for the boardroom to stimulate innovative ideas. Likewise, this book is fizzing with ideas for the boardroom, and for you. There is an urgency to *Thought Economics* that perfectly matches our times. The chapter headings say it all.

I am proud to say that Vikas Shah is a friend. Oftentimes I would call him and he would say, 'Can't talk now, got an interview.' A week or so later I'd receive the interview in my inbox. It could be a

conversation with Arianna Huffington, or the world's richest philanthropist, Melinda Gates. The list is jaw-dropping: Nobel prizewinners, record producers, global artists, particle physicists, prime ministers. 'How do you get these incredible interviewees?' I'd ask him. 'I phone them,' is his response. And then the penny drops. He gets incredible interviews because he's an incredible guy.

If the art of the question is without question an art, then Vikas is Picasso. When a critic said to Picasso that he couldn't paint a tree, it is alleged Picasso replied, 'He's right. I can't paint a tree, but I can paint the feeling you have when you look at a tree.' Vikas draws such detail from his interviewees. No stone is unturned. The prime minister answers a question next to the artist. The insights within the answers stay with you. And then there is the simple pleasure of hearing masters of their craft like filmmaker Paul Greengrass speak about why they make art:

There is a beauty to the collective experience of going to the cinema. The great David Lean used to say that when he was a boy, and went to the cinema, he looked at the beam of light coming down towards the screen as if it were the light coming through a cathedral window; it gave him a pious sensation – and there's something to that. Cinema has a mystery, a magic.

I liken *Thought Economics* to the *Paris Review*. Read this book. Keep it for years. The wisdom in it will stay with you for life. Whether you are a CEO or the cleaner where the CEO works, there is something in here for you, something that could change your life, something that could encourage you to keep going in the direction you are going. There is no pretension here. The interviews are easy to read and, above all, nourishing. Right now, *Thought Economics* is a vital addition to our world.



INTRODUCTION

I have no business writing this book. I'm neither a journalist, nor a professional writer. What I am, however, is curious. I was the kid who kept asking questions in class, the one who tracked teachers down while they were on their well-earned breaks to ask nice simple questions like, 'So, how does the universe work?'

My day job is in the world of business, and I guess you could call me an entrepreneur. But I don't want to unnecessarily glamorize it by making you think of shiny people getting out of shiny private planes into shiny cars, checking the time on their house-priced shiny watches, before passing the big shiny gate of their gigantic architect-designed home. That's not me. My companies are all firmly part of the small-business world.

The reason for my profile is more to do with the journey than the numbers. I started my first business when I was fourteen, which probably seems quite old by today's tech-entrepreneur standards, but back then it was considered quite a fresh-faced age to be in the cut-and-thrust world of enterprise. That business, Ultima Group, was in web design and software development, but we also had a little side-hustle called *Independent Software Reviews*. This was one of the first online magazines, and my colleagues and I reviewed computer games, software and music. We didn't realize how early we were to the table as an online publication, and before long this side-hustle gained momentum

and we were receiving over half a million unique users per month. Back in the early days of the internet this was a huge number. We built one of the world's first content management systems (which we called the 'flatpack web') and syndicated content around the world. I suspect one of the only reasons we didn't capitalize more on the success of this publication was that we were all kids. This business (and the publication) came to an abrupt halt as the first dotcom bubble burst in 2001, but the writing bug never quite left me.

My generation was perhaps the last to be habituated with long-form content; we grew up with newspapers, journals and books, rather than the omnichannel video, podcast and social formats that became the norm by the start of this century. We also saw the world shift rapidly as technology gained prominence in our economic, cultural and social transactions and ideas became visibly the new engine of power. We have always talked about markets, the economy, culture, society and politics as phenomena that exist outside ourselves, when, in fact, they are the product of ideas, of people. They are not apart from us; they *are* us. That was my 'aha' moment, though it took some time to brew.

Fast-forward to the year 2007. Combining a need to fix my frustration at the lack of long-form content and my desire to write, I created a blog. It didn't even have a domain – it was simply thoughteconomics.blogspot.com, a very simple blog without any design templates on Google's free blogging platform. The name Thought Economics was born of the fact that it was thinking, ideas, concepts – the products of thought – that create our world, and so perhaps my blog could explore that. My plan was simply to publish the occasional long-form article myself on a topic of interest and include interviews with interesting people I'd met or got to know over the years. There was no strategy here – it was simply a way of indulging a hobby alongside my day job(s). I didn't want to editorialize or turn the interviews into opinion pieces, but rather I transcribed the conversations and posted them as they were.

The more interviews I posted, the more the traffic grew, and it quickly became apparent that there was an audience out there

who really enjoyed long-form interview content in a way that was raw, unedited and (quite importantly) not behind a paywall. By 2008, I'd started to regularly get emails from readers all over the world suggesting topics and individuals they would like me to approach – and that's really where I returned to that aha moment. I made a pivot (to steal the start-up parlance) – I bought the domain thoughtconomics.com, built a proper website (albeit in WordPress) and began my mission to capture interviews with the individuals who I felt had made a meaningful impact in our time.

One of my first big-name interviews was with Jimmy Wales (founder of Wikipedia), and this experience taught me an important lesson: be more prepared. Jimmy was the first household name to grant my humble little blog their time. I sent him the questions I wanted to ask, and his response was quite simple: 'I've answered those all before, try again.' From that point on, I committed not only to research every interviewee in more detail, but to work with them to prepare questions around the areas they were most passionate about, and most interested in.

Rather miraculously, and only a few months later, I had a call booked with one of my personal heroes, former astronaut Buzz Aldrin. I'd done some pretty nerve-wracking things in my career thus far, but here I was, early evening UK time, waiting by the phone in my office for Buzz Aldrin to call me. The interview went well, but towards the end a particularly memorable moment reminded me that I was doing something quite unusual. My dad was in the office, as we had planned to get dinner together that evening and, mid-interview, he came over to me:

Dad: Do you want a cup of tea?

Me: (Hits mute on the phone.) No thanks, Dad, I'm a bit busy here ...

Dad: Who are you on the phone to?

Me: Buzz Aldrin.

Dad: Bollocks. (Laughs as he walks back to the kitchen.)

I'd almost lost sight of how incredible these opportunities were in the excitement of growing my new website, but the disbelief my

friends and family had about who I was speaking to made me realize what an absolute privilege it is to be able to get one-to-one time on the phone with some of the most influential and interesting people on the planet.

After I'd published my interview with Buzz, a journalist from a major newspaper emailed me and asked, 'So, how did you get hold of him? We've been trying for a long time.' I get asked this a lot, and my honest reply is that I just don't know. I just asked! Of course, for every interview I publish, what you don't see is the slew of rejections. I would estimate that every interview I get is the product of at least twenty approaches, and hence nineteen rejections. Sometimes it can feel personal – in the process of writing this book, I reached out to one leadership expert in the USA, and his office replied, 'Aren't most of the interviews on your site fake? I'm sorry, this doesn't pass muster.' A pretty god-awful reply, which can trigger a whole host of emotions, until I remind myself that I'm approaching people who get asked for interviews constantly, individuals who have a natural guard up and also who will have layers of people around them, primarily to protect and defend their time. In many ways, Thought Economics has been an exercise in determination for me, to prove to people that it is possible to do absurdly ambitious things if you have the tenacity and resilience.

When I was approached by my publishers about turning some of my conversations into a book, I worked through some of my favourite interviews and was struck by the common themes that ran through a lot of my questions and their revealing answers. The first was identity and the eternal question of who we are, what our purpose is, and what our place is in the world. This also led to many questions about culture, the paste that binds us together – our art, our music, our literature, everything that's really important and feeds into our ideas on identity and belonging. That notion of belonging extends to those fundamental biases we carry in our own society. Discrimination in all its forms has resulted in pain, suffering and inequalities through the choices we have made about who is in or out of our tribes and groups – and has often been the cause of the conflicts we have seen as a backdrop to

most of human history. Alongside these obvious challenges, society has made huge progress in peacebuilding and the greatest governance experiment of our times, democracy, which has created the political, legal and economic framework on which entrepreneurs have created the innovations, ideas and businesses that have pushed our world forward, creating a backbone for our economy, providing employment, opportunity and solving many of our most pressing challenges. All of this, however, would be impossible without leadership, and in every single interview I have done, it is those leadership qualities – the ability to inspire, to pull people together, and achieve the impossible – that have shone through.

Without a doubt, there are gaps within these chapters. There will be major topics or individuals you feel are missing; there may be perspectives that have not been addressed, or truths that need to be told. Thought Economics is constantly evolving, and interviews are being added regularly. I'm passionate about diversity of thought and perspectives, and will always do my best to make sure that it is represented across the site.

The best and worst of humanity has come as a result of our ideas, and at a time when so much of our world is feeling culturally, socially, economically and politically unstable, it's on all of us not only to talk openly and honestly about these issues, but to take in as much diverse knowledge and as many opinions as we can, in a bid to understand them more deeply, rather than simply skim-reading enough to troll each other on Twitter.

It is in the spirit of creating that depth of understanding that I am committing a minimum of £10,000 of the royalties from this book to two organizations: In Place of War, an international charity I chair, which works across thirty countries in communities impacted by conflict, using the arts, research and entrepreneurship to build sustainable peace and opportunity; and the University of Manchester, England's first civic university, closely linked to Manchester's development as the world's first industrial city, and a place that is carrying out world-changing research in many important areas. Both of these are charitable organizations, and both are fighting for knowledge, the power of

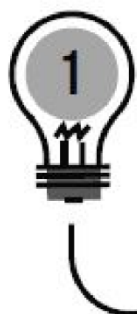
thought, to be the light that shows us ways to change the world.

It is an honour to share these conversations with you, and if you want to share your feedback, or have suggestions for any new interviews or topics, you are always welcome to email me: vs@thoughteconomics.com, or tweet @MrVikas.

Vikas Shah MBE

July 2020, London

www.thoughteconomics.com



ON IDENTITY: WHO WE ARE

‘Reality is not a collection of objects with properties: it is a network of interactions and relative information.’

CARLO ROVELLI

Who are you? Well, physically, you’re mainly a bag of water. That sounds unremarkable enough, until you realize that the amount of water on our planet has remained reasonably constant since the earth was formed about 4.5 billion years ago. Thus you, me and everyone around us are big bags of ancient water, which has cycled through oceans, rivers, forests and between each other. You could also be described as a bag of stuff, of matter, of atoms. Again, that sounds unremarkable enough until you realize that the stuff that forms us was made deep in the heart of stars, billions of years ago and, through processes that we still don’t fully understand, came to form you and me – strange super-monkeys that are intelligent enough to contemplate their origin and place in the universe.

Even the fundamental question of what we are when we refer to ‘I’ is fraught with doubt. Every day our body is changing and regenerating physically and developing mentally. It’s unlikely, for

example, that you have many cells in your body now that were present at your birth, and the connections in your brain will be vastly different today than even a decade ago. When we refer to the self, we are really talking of the experiential continuity that has brought us to this present moment. You are in effect the result of your own idiosyncratic path through the gamut of reality, and the fact that those experiences are unique to you creates the self as an individual that exists as a phenomenon in time, irrespective and apart from any other individual. Understanding the self in this way is important. You are a unique and beautiful living experiment that is conscious enough to observe itself. The experiment of you is informed by a constant process of learning, given context by our education. To put it another way: we live, we learn. And that last point – learning – is critical. For most of history, deep thinking and self-discovery were tasks largely left to the intelligentsia and those who ruled their domain, whether it be religion, politics or nobility. The rest of us had to be passive and obedient enough to be useful, and relatively predictable.

As our species has progressed technologically, however, it has also become ever more protean. A citizen is no longer defined by 'what' they do, but rather exists as an individual who is able to learn, to question and to grow. Our new diffuse culture has also created the opportunity for humanity to innovate; we can explore who we are and what we are capable of in more dramatic ways than could ever be imagined. In the 1950s, for example, it would have been impossible to conceive the total sum of human knowledge being contained within a human-made computer network, or that we would have the technology to decode our very DNA, or that billions could be educated digitally in communities that still lack basic access to food and water. But less than half a century later, those things are taken for granted. The pace of change socially, culturally and technologically in our world is increasing rapidly, meaning that the shape of humanity even a decade from now will be significantly different to today, and invariably will require a different set of cognitive, emotional and spiritual apparatus to that which we currently wield.

Identity and who we are is so key to how we view everything

else in our world that I wanted to start this book here. In this chapter are some of the conversations I had with artists, whose work naturally seeks to explain our place in the world. It also contains parts of some of the interviews I conducted with spiritual leaders for whom faith is a shared narrative of our experience of humanity, and with academics whose research and study are helping us to understand the beginnings of life itself. I have also included some of my interviews with leading physicists, who spoke to me about our place in the universe. Understanding identity, however, would feel incomplete without delving into the stories of our time, and so I'd also like to share conversations I had with some inspirational writers, who gave deeply beautiful accounts of who we are.

Why do identities matter?

Kwame Anthony Appiah: Identities essentially involve a few key elements. We have a label with ideas about how to apply it – to others, and by others. The label gives us a way to think, feel and do things and also consequences for identifying and thinking under that label. We also have the reality that in a society, the label affects how other people treat you and shapes how you treat and see them. For those of us who have an identity, it offers a conception of who we are, and helps us to think about how we ought to behave, who we belong with, with whom we should have solidarity, with whom we have conflict and who is on the inside and outside. Some of this, of course, can lead to negative outcomes, but there is a positive role of identity in shaping who we are. Modern life has allowed more identities, with more packages of expectations and behaviours for people who have those identities. In modern society, too, we can reject labels altogether and say, 'I'm not a man! I'm a woman!' or 'I am a man, but being a man doesn't have to be like that, it can be like this ...'

How can we find our identity in this world?

Elif Shafak: I have always been very critical of identity politics. It saddens me to see how within my side of the political spectrum – the liberal left in general – many people, especially young people, want to defend identity politics as a progressive force. It is not. Identity politics can be a good starting point to raise awareness, but it cannot be our destination, it cannot be where we end up. The answer to a tribal instinct is not to retreat into another tribe. The way forward is to challenge the very mentality of tribalism. When I examine myself, I can see clearly that I do not have an identity. Instead I have multiple belongings. I am an Istanbulite, and I will carry Istanbul with me wherever I go. I am attached to the Aegean, the other side of the water, so Greek culture is also close to my heart. I am attached to Anatolia, with all its traditions and cultures: Armenian, Sephardic, Alevi, Kurdish, Turkish, Yazidi. I'll embrace them all. I am attached to the Balkans – Bulgarian, Romanian, Serbian, Slavic. I am attached to the Middle East: put me next to someone from Lebanon, Iran, Egypt, Iraq – I have so much to share with them. At the same time, I am a European by birth, by choice, in the core values that I uphold. I am a Londoner, a British citizen and a citizen of the world, and a global soul. I am a mother, a writer, a storyteller, a woman, a nomad, a mystic, but also an agnostic, a bisexual, a feminist. Just like Walt Whitman said, 'I contain multitudes.' We all contain multitudes.

How have identities shaped society?

Kwame Anthony Appiah: Class has the virtue of being a kind of social identity that's tied to something objectively real, that being your socioeconomic options. In some ways, our societies are becoming increasingly economically polarized and one of the challenges for those doing well out of the system (the club classes) is to distract people from the power of identity because if people organized around class identity, they would presumably be deposed since those at the bottom of the hierarchy are larger in number, and presumably they would wish to take action to reduce inequality. It's a puzzle to me why

class doesn't play a bigger role in our politics. We use identities to make ourselves, to define ourselves with and against people – and we have to make a conscious effort to see this, else we will over-assign significance to identity, as we do in the world of gender. Women and men are far more similar than our gender ideologies suggest to us and we've been trying very hard for a couple of generations to push against the bad consequences of gender discrimination and patriarchy (the gender parallel to white supremacy). We've been trying to drive it out of our system, but people keep falling back into it. You cannot get rid of identities, but you can reform them.

Why do so many people build identity just on what they do?

Rose McGowan: I remember coming to a point where I realized that just because someone has a business card with their occupation on, it doesn't define who they are or actually what they do. Why don't those activities, which you don't get paid for, which are your interests and passions, also qualify as being what you do; and why aren't they, in some ways, more valuable? The two can certainly dovetail, but for most people these 'other' activities are dismissed as hobbies – or 'useless talents' – because they don't make money. Those talents are actually there to help you to define yourself. I want to push society to grow, and four years ago when the #MeToo movement began, that was the idea: to see if we could push at the overall thought structure, and break those conversations that were happening over and over again. It was a bit like a cultural reset.



When people gather, I always think it's interesting to hear the topics of conversation that ensue most often. If someone says, 'So, tell me about yourself,' the natural response is often to start with your occupation – 'I run a business', 'I am a lawyer', 'I am a doctor' and so on. When my first business collapsed following the dotcom

bubble bursting, I came to realize very abruptly that defining your identity by what you do is dangerous and also limiting. We are capable of so much more than our jobs, and worth more, too. For as long as we've asked questions, religion and spirituality have been sources of answers, providing comfort and explanation for billions. I was born into quite a religious Hindu household, and saw this first-hand as my parents and extended family turned to religion to provide answers to the challenges of everyday life. As for me, my school, while grounded in faith, as many British schools are, had roots in science and in secular enquiry, and so my entire world view has been framed with this nuanced lens of deep respect for scientific and spiritual answers.



What does it mean to be alive?

Sadhguru: Not everybody is alive to the same extent. Life is available to us in many different dimensions, at different levels of sensitivity and perception, and unfortunately, not everyone is alive to the same extent; and that is why I've dedicated my work to get people to their fullest possible 'aliveness'. The fundamental purpose of life is to know life in its full depth and dimension. If you want to know life, the only way is for you to live your own life at its peak. You are incapable of experiencing anything outside of you. What you think of as light and darkness are within you, that which is pleasure and pain happens within you, agony and ecstasy happen within you. Everything that you ever experience happens within you, and it's your own aliveness that gives you access to the more profound dimensions of life to be experienced.

What does it mean to have a life well lived?

Jordan B. Peterson: A life well lived means that you spend a

substantial amount of time addressing the troubles of the world – trouble with yourself, your family, your community. Everyone has a sense that things are less than they could be, and everyone is affected by the suffering they see around them. It seems to me that lays a moral burden on us that can't be avoided, and that the only way to rectify this burden is to confront it and try to do something about it. People inevitably find that the worthwhile things they've done in their life – the things that give them strength and forbearance and a certain amount of self-respect – are acts of responsibility that they have been undertaking in the face of serious problems.

Making happiness the key pursuit in life is just hopeless. It's just not a pursuit that's going to fulfil itself. Life is already complex enough to make us anxious, painful, disappointed and hurt: that's not a pessimistic viewpoint; it's the truth. My experience has been that it takes very little time to talk to someone, so that if you really listen to them and get below the surface, you'll find out how many truly difficult things they're dealing with on a day-to-day basis. You do see people in rare periods of life where they're comparatively carefree, but that's not common, as far as I'm concerned. The idea that impulsive gratification and 'happiness' are going to rectify life's problems just strikes me as naïve beyond tenability, and so it's no surprise that life is just a constant disappointment for people.

Anish Kapoor: Those moments of full involvement, when you lose yourself, those are the moments when you are most alive. There's a moment when you look at good art when time changes. It's as if time no longer exists, becomes longer, or is suspended. There's a moment of reverie when you're fully immersed in something apart from yourself. One experiences this sometimes in meditation. These inexplicable, wonderful and mysterious experiences we have never leave us. I was recently in the desert of Namibia, one of the most beautiful places in the world. In this space, there were a lot of dead animals – carcasses that were just there. Every time I encountered one of these dead animals it made me think, 'This is a good place to die.' Why? Somehow, living and dying bode well in those open, harsh,

fundamental spaces.

Sam Neill: I don't expect to be remembered for anything much, if at all. I remember once reading a quote along the lines of, 'you should hope that after you've gone, your name may be a sweet sound on someone's lips ...' I thought that's probably about as good as it gets. Films evaporate like everything else and it's culture that decides what is important and what will get remembered.

Why do humans feel a sense of difference from other species?

Yuval Noah Harari: Because we dominate and exploit other species, we need to justify this to ourselves. So we tend to think that we are a superior life form, and that there is a huge gap separating us from all the other animals. This was not always so. Prior to the Agricultural Revolution, hunter-gatherers did not feel very different from other animals. They saw themselves as part and parcel of the natural world, and as constantly communicating and negotiating with the animals, plants and natural phenomena around them. However, once the Agricultural Revolution gave humans power over other animals, they began to see themselves as essentially different. So they invented various religions that elevated humans above the rest of creation. We normally think that religions such as Judaism, Christianity and Islam sanctified the great gods. We tend to forget that they sanctified humans, too. One of God's main jobs is to account for the superiority of man over animal.

How can we find meaning in our lives and a basis for morality?

Steven Pinker: If anything, the belief in God gets in the way of a moral and meaningful life for reasons that go back to the *Euthyphro*

by Plato. If one believes in God as the granter of moral truths, one can still ask, 'Well, how did God himself arrive at those moral truths?' and if the arbitrary answer is that they were a whim, or a personal preference of God, why should we therefore take those arbitrary preferences seriously. On the other hand, if God had good reasons for the moral precepts that [he] advances in scripture, why don't we appeal to those precepts directly. The endorsement of a supernatural entity should be irrelevant.

In answering the question of how we make our lives meaningful, we must look at the basis on which we find morality, and that morality ultimately hinges on a notion of impartiality. I cannot argue that my own interests are special and yours are not simply because I'm me and hope that you take me seriously. Finding meaning is different to finding morality, and comes down to recognizing our place in the natural world, our inherent vulnerability, and the many ways in which the laws of nature have no concern for our wellbeing – if anything, they appear to be grinding us down. Finding meaning is also contextualized by the law of entropy – the second law of thermodynamics – that disorder increases without the infusion of energy and information and the process of evolution, which is indifferent to our individual wellbeing. Indeed, it is a competitive process and means that we are always vulnerable to pathogens, parasites, spoilage, organisms and vermin – not to mention our own competitive instincts that lead to humans often becoming their own worst enemy. That is the reality we are born into.

What is 'life' and what does it mean to feel alive?

George Church: Most discussions of 'What is life?' get tangled in assuming a dichotomy, a sharp line sought between life and non-life. In contrast, I favour the idea of a quantitative spectrum of levels of 'life' or 'replicated complexity', with higher levels of such replexity being more alive than merely replicated simple structures like salt, and more alive than arbitrarily random complex structures like fire. To

maintain their high replexy life status, these systems 'feel alive' – that is, they typically use senses and responses to deal with potential threats and opportunities. The urge to live is often aimed at supporting survival of offspring around them.

Jack Szostak: We certainly don't fully understand how life emerged on the early earth. One of the most exciting aspects of modern science is that this is now a question we can really get into. People spend a lot of time coming up with a definition of life, which doesn't seem like a fruitful exercise. We don't need to precisely define life in order to study the origin of life; what we need is a pathway that goes from the chemistry of the early earth, to more complex states, and then a transition to simple cells and modern life; in other words, a continuous path from chemistry to modern biology. It's filling in all the steps in that pathway where the interesting problems lie. If you try to simply define the dividing line between life and non-life, you won't really be attacking the important questions.

Can every life have meaning?

Marina Abramović: I hope that everyone could wake up in the morning and wonder what their purpose is. This is the main question of our existence! So many people are lost, taking antidepressants and drinking, and often because they don't want to face this fundamental question, or because they don't have time to face this question. It's often easier to take antidepressants and become a zombie instead of posing this question to yourself. Life is a miracle. It's the most beautiful gift in the world. We're temporary visitors to this planet and we have to be happy. And to be happy, you have to understand that death can come at any moment, at any time. Once you accept that, you see that every moment is precious.

Where do you find joy in life?

Sam Neill: You know when you're happy, you know when you're unhappy, and you know when you're in between, but I think happiness is elusive, especially now. The impact of our current [Covid-19] lockdown has been devastating on people to whom life is already unfair – it's been brutal, and life is changing so fast right now. Whatever we do today will be out of date next week. This business of finding happiness is hard during these dark times.

How can you conquer your fears?

Bear Grylls: Time, experience and a whole bunch of narrow escapes has taught me that the best way over our fears is not to run from them, but to face them and walk right through the middle. This way they often shrink. When we refuse to face stuff, though, then fears tend to escalate. That's the irony. We all have fears; it is what makes us human. But in essence, I try and see how that fear is there to sharpen me, not frighten me. I try and use it to keep those senses alert and ready. It is always present before big adventures, and I guess I have grown a little more used to it – but as a team we never get complacent. It is good to be honest about those fears, as is the case for me with skydiving. Ever since my free-fall accident I have found it hard to do, but it is a key part of my job, and knowing that hand is on my shoulder from one of the crew before I jump always helps me.

What do you fear and hope for the future of our species?

Yuval Noah Harari: To put it bluntly, I think in the future humans will use technology to upgrade themselves into gods. I mean this literally, not metaphorically. Humans are going to acquire abilities that were traditionally thought to be divine abilities. Humans may soon be able to design and create living beings at will, to surf artificial realities directly with their minds, to radically extend their lifespans,

and to change their own bodies and minds according to their wishes. Throughout history there were many economic, social and political revolutions. But one thing remained constant: humanity itself. We still have the same body and mind as our ancestors in the Roman Empire or in ancient Egypt. Yet in the coming decades, for the first time in history, humanity itself will undergo a radical revolution. Not only our society and economy, but our bodies and minds will be transformed by genetic engineering, nanotechnology and brain-computer interfaces. Bodies and minds will be the main products of the twenty-first-century economy. When we think about the future, we generally think about a world in which people who are identical to us in every important way enjoy better technology: laser guns, intelligent robots, and spaceships that travel at the speed of light. Yet the revolutionary potential of future technologies is to change Homo sapiens itself, including our bodies and our minds, and not merely our vehicles and weapons. The most amazing thing about the future won't be the spaceships, but the beings flying them.



It's difficult for me to disconnect my own sense of identity from religion, though I am not someone who is 'religious' in the sense of following the dogma or tenets of a specific faith. Rather, like so many people in the world, I do believe in the interconnectedness of things and find a sense of wonder in the incredible truths that science brings in the explanation of everything. That said, however, I do often find myself, like so many people, wondering about the notion of God, and the spiritual.



How did religion and science emerge in society?

Justin Barrett: There are a number of different answers to this difficult question, and at this point we don't have compelling evidence

to support one over another. The lens of your own theoretical orientation, and what evidence you are prepared to count, will also determine this. Some people assert the fact that we see evidence of symbolic behaviour around a hundred thousand years ago; for example, the Blombos Cave in South Africa.

Getting from symbolism to a belief in a higher power and the supernatural is a bit of a stretch. Material evidence suggests that a hundred thousand years ago, Homo sapiens were cognitively capable of the kind of thought that seems to be critical for religious thought. Whether or not they were engaged with it is something else. Fast-forward to around thirty to thirty-five thousand years ago, and we begin to see elaborate cave paintings and shamanistic depictions of humans and animals, which many people assert are in keeping with supernatural thinking. I'm sceptical. If we go back to twenty-five to fifty thousand years ago, we start to see very deliberate symbolic burials where people are being buried with goods and their bodies adorned. One could argue this suggests a belief in the afterlife. Maybe we're looking at the evidence wrong. Maybe we should be looking at when our ancestors seemed to have the right kind of conceptual capabilities that meant, when operating under normal conditions as we understand them today, it seemed to compel people towards religious thought.

What is the role of spirituality in our lives?

Sadhguru: The word spiritual has been hijacked by the religions of the world. Spiritual refers to the experiences in your life that have gone beyond the physical. Right now, everything you experience is happening to you only because you can see, hear, smell, taste and touch out of the sense organs. You cannot see or hear something that is not physical, you cannot taste, touch or smell something that is not physical. Your entire experience of the world right now is just physical in nature. You may say, 'What about thoughts and emotions?' They're physical too! They happen in your brain in the same way as

digestion happens in your stomach. Whatever is physical within you right now is an accumulation from the planet. It's something you have gathered over time. When you were born, you were not the way you are right now. You slowly gathered your body. What you have gathered, you can claim as being yours, but you cannot claim it is you. So, what are you? The iPhone is now considered far more useful than the eye. For a whole lot of people, the smartest thing about them is their phone. If you have a phone, the more you know about it, the better you can use it, yes? So, if that's true of an iPhone, why do we not think of the eye in the same way? That's spirituality: to know this piece of life in its entirety from the origin to the ultimate end.

Bear Grylls: Well, for me, my Christian faith has been such a rock and backbone through so many ups and downs of life and adventuring. It is that real guiding force in my life that calms me, leading me home and strengthening me when I am tired.



I'm not altogether sure that science and religion are the antagonists that we sometimes think they are. Ultimately, they point towards the same basic human need to better understand who we are, and our place in the universe. The latter question has firmly become the domain of science in the past century, and the more we have come to understand the universe, the more we can be rapt with awe, not just with the almost unimaginable scales that we are dealing with when we think about space beyond our own solar system, but also at the unimaginably unlikely events that conspired to cause the Big Bang, and life in the universe. The most exciting and mind-bendingly complex area of study tackling these big questions in the twenty-first century is quantum mechanics, which examines life on an atomic and subatomic scale. It's the closest thing we have so far to a working model of how everything works. To understand more, I spoke with three of the world's foremost physicists and science communicators.



Can quantum mechanics help us understand the fundamentals of life?

Sean Carroll: We don't know a lot about the origin of life; we actually know more about quantum mechanics than we know about the origins of life! Life is this extremely complicated ongoing chemical reaction, and it needs to have started somewhere. Did it start automatically when the right conditions came together, or did it require some unlikely fluctuation to cause something unlikely to happen, which became robust and sustained itself? We don't yet know. It might be that life started as a very unlikely event that owed its existence to a quantum fluctuation; but we also know that life depends on chemistry, and chemistry depends on quantum mechanics. There are certain very, very specific features within biology that seem to rely on quantum mechanical phenomena in their own right. Photosynthesis is the most obvious one, our sense of smell might be another. Some people are saying that the connections between neurons in our brain also rely on quantum mechanics in some way. This is a frontier; this is something that we don't understand the details of. Life is hard enough to understand classically!

Does quantum mechanics have philosophical implications?

Jim Al-Khalili: The founding fathers of quantum mechanics were steeped in philosophy, and those different philosophical schools took quantum mechanics into different directions. In the history of science, we talk about it boiling down to an argument between Einstein and Bohr in opposing camps. Einstein believed there is a physical reality, an objective reality out there which physics was trying to explain. Niels Bohr was influenced by a school of thought called positivism,

which said that if you can't agree a way of choosing a view you give up and go for a beer. It's pragmatic, instrumentalist. Essentially, Bohr said that the job of science and knowledge was epistemology, not ontology. The job of physics is not therefore to describe the world as it is, but to give us a way of saying what we can say about the world. Perhaps more than any other field in science, quantum mechanics has raised the question of what the job of science is. Is it reflecting what we can know but not touch? Or reflecting the world as it is?

Sean Carroll: There's a very good reason why many of the best and most influential scholars working in the foundations of quantum mechanics are people who have a PhD in physics but who are now employed as professors of philosophy. The type of thinking that a philosopher brings is well suited to the types of problems that quantum theory raises, and if you take quantum theory seriously, you're going to get a lot of philosophical questions – what those questions are, and what the implications are of those questions, will depend on your favoured version of quantum theory. Many-worlds theory, for example, doesn't just lead to different equations and quantitative predictions; it changes what we mean by personal identity. There is me, right now, here, but if I believe in many-worlds, at every instant, as the universe branches, there will be thousands of copies of me, thousands of copies of people who came from the same past self (me) but who are different, not the same as me. They are different people, living in different universes, but who share a common past identity. In the classical world, there is an idea that your personal identity stretches from the moment of your birth, to the moment of your death, in a unique line. Here's the thing: we have done experiments that show that what quantum mechanics says about the universe branching is absolutely happening. It's not that it can't be measured or understood, but rather that it requires a change in perspective.

Carlo Rovelli: They [the philosophical implications of quantum theory] are very vast. Quantum theory shows that the naive

materialism of the seventeenth-century mechanical philosophy is wrong. In other words, the real world is far different than material entities having definite properties at every time. I think what quantum theory really shows is that the properties of all entities are only defined at interactions and in relation to the other entities with which they interact. That is, reality is not a collection of objects with properties; it is a network of interactions and relative information. Life on earth is extraordinary in its diversity, yet the shared origins of that life are revealed through the science of genetics.



We now know that we share 98 per cent of our genes with chimpanzees, around 90 per cent with domestic cats and 85 per cent with mice. It's also interesting to note that we have a 60 per cent genetic similarity with bananas. As humbling as it is to understand our insignificance in our vast universe, it is also interesting in any discussion about who we are to consider the common ground we share with other species and living things on our planet when we contemplate our own existence.



Do other species experience consciousness like we do?

Carl Safina: Consciousness is simply the thing that feels like something. If you can feel or be aware of anything, that is consciousness! When you're given general anaesthesia and you're completely knocked out and not aware of anything, that's because you're unconscious. It strikes me as one of the symptoms of our chaotic confusion about the nature of the rest of the world and our relationship with the rest of the world that we don't understand and are continually confused over whether animals with eyes that can see, ears that can hear, noses that can smell and skin that can feel are

'conscious'. That's a very strange thing to still be asking. When I talk about consciousness, I mean that you're aware of things. Some people think consciousness means the ability to plan for the future, and things like that – that's not consciousness; it's something we learn to do, to the extent that we are capable of doing so.

How has your work with chimpanzees and great apes changed your view of humanity?

Jane Goodall: Louis Leakey wanted me to go and study chimps because he believed that 6 million years ago we had a human-like common ancestor. He was interested in Stone Age man, their skeletons, tools and so on – not behaviour. He felt that if there was similar behaviour exhibited between humans and chimps today, perhaps that behaviour would also have been present in the common ancestor and, arguably, in Stone Age men and women. From my perspective, it was a bit of a shock to find that chimps can be brutal and violent and even have a lot of warfare. I had expected them to be like us, but nicer. Because we have this tendency towards violence in certain situations, one can probably assume this trait [to be violent] has been with us in the long course of our evolution. Violence, at least some of it, is probably genetically based. You don't have to think much about humankind to realize that we are a very violent species. The difference between us and chimpanzees, with whom we share 98 per cent or more of our DNA, is not a sharp line. It's a blurry line. We are part of the continuum of evolution, and are not the only beings on the earth with personalities, minds, thoughts and feelings. We now realize how alike we are – kissing, embracing, holding hands, patting on the back, family bonds, war. But at the same time, we understand we are different. But what is it that's made us different? If you've got something that is as like us as chimps, you have somewhere to stand and observe the biggest differences. For me, our sophisticated way of communicating with words is that crucial difference.



Studies in anthropology tell us that art appeared before language – and that makes sense. We are a deeply expressive species, and we want to communicate not just through the written or spoken word, but through music, sculpture, painting and the many forms of art that culture has produced. There is something primal about our connection with art that helps us know things in a way that other forms of expression cannot. In my own life, I can attest to this. When I was going through a period of extreme depression, it was art, in particular poetry and photography, that helped me make sense of the world, and also to communicate what I was going through when I felt I couldn't. I explore art a lot more deeply in the next chapter, but I found from my conversations with some of the world's leading artists that the reason for the existence of art is as much to do with our expressions of self-identity as it is to do with connecting with others.



Why does art exist?

Antony Gormley: Art is the way that life expresses itself. It is something that all human beings do across all cultures and all continents. Creativity is intrinsic. When we tell a story in conversation, we are sharing an experience and offering it as a gift. This is the model. In telling and sharing, the experience is transformed. Visual art is not as intrinsic as singing, speaking or dancing, but is an extension and a concentration of the need to make sense of what happens to us. The need to express abstract registers of time and deep space, and something of the life of the body, has never altered. Art is not a luxury, an object of exchange, a profession or a career; it is an intrinsic part of being human. Art is an open space where hope and fear, future and past, come together; where the self – making sense of individual experience – becomes collective.

Marina Abramović: It's interesting to find the reason why cavemen had to make drawings in the middle of caves inside deep mountains. It looks like human beings, from the start of our existence, had to be expressive. The need to create is in our DNA. Hundreds of millions of people live without art, but I believe it's the oxygen of society. Good art has many layers of meaning. It can predict the future, it can ask the right questions (though it may not answer them), it can be disturbing, it can open your consciousness and really lift your spirits. Good art is a generator of energy; it's beautiful. People need to share this beauty with each other. Life can be so grey, and art gives it a touch of something else. If the artist is connected with divine energy, then the spiritual element can create immense power. For me as an artist, I see the public as an engine. I provide the key for the motor, but the audience becomes the work and functions without me. I create without even being aware of the consequences and possibilities. We are so lost right now – we have lost our spiritual centres. Just looking at art is not enough anymore; we have to be part of it.

Anish Kapoor: How can it be that we ever survived without art? As a species, we are afraid and fear is something one can perhaps push aside, but fundamentally it won't go away. Art is perhaps the means through which one shares fear, understands someone else's fear and knows a kind of fundamental humanity. Art is the means by which we understand the insignificance of being; what is a hundred years when seen in the context of hundreds of thousands, or even millions of years. In this way, art may be of even greater importance than life itself. Art can dare to ask questions such as, 'What is consciousness?' Science doesn't seem to get too far and offers a mechanistic explanation of this strange phenomenon. Art can speculate about this, and other fundamental questions, and give non-linear, poetic answers.

What is aesthetic beauty?

Philippe Starck: Nothing, nothing. Beauty, firstly, does not exist. It's

just an opinion at 2.39 p.m. in London today, for example, and that's why I have no respect for this word 'beauty'. It is too volatile, which means it's nothing. You can change, whatever time you like, your opinion of what beauty is and what is beautiful. Today, this encourages vanity, cynicism, marketing, business, advertising, and everything like that. Beauty is definitively being turned into greed, to make business work, and to give some fake reason for people to buy more and more useless things. That's why I cannot accept beauty in its current form. For me, beauty is an obsolete word, from a time which was clearly bourgeois. I would, though, prefer to speak about coherence, harmony and balance of parameters. Sometimes you see a place, a painting, an action, a project, a child, a cat – anything at all – and you have a very strong structural feeling, which is very incredibly emotional. For me, I have had this feeling less than five times in my life, but in front of you sometimes, during one second or less, you can feel this emotion and say 'it is'. It's because the light was perfect, the temperature, the angle of view, your view, everything – all of the hundreds of parameters made this thing well balanced. Some people call that beauty – we can call it harmony.



Even if we live to the ripe old age of ninety, between a quarter and a third of that time will be spent in education. It makes sense; our world, our society, our economy and culture are all extraordinarily complex and to gain the cognitive apparatus we need to get by requires a lot of learning. It's also true that we spend the majority of our most formative years on this planet in some form of education and, perhaps inevitably, that education will have a profound impact on who we are when we grow up. I know my own world view and interests were inspired by my teachers at school, and it takes only a cursory read of autobiographies to realize how true this is for many others, too.



Why does humanity not access so much of its potential?

Deepak Chopra: Most people live under the hypnosis of social conditioning, meaning they do not question their everyday reality and rush to conform. Social conditioning is how we are educated, which in today's world is just an overload of information. Let's not forget the word education comes from the root *educare* – which means to nurture, support and bring out that which is already present in the mind. It should be the case that education brings out the potential for insight, creativity, wonder, curiosity and higher states of consciousness – things that are present in every single child that is born – but social conditioning camouflages and suppresses this, and pushes people to conform.

What is the role of education in society?

Ken Robinson: Education has four key roles in society, each of which is connected. Firstly, education serves an economic purpose, something which is often disputed. In the history of the philosophy of education, there have been many discourses and arguments about whether education should have any extrinsic purpose or whether it is an inherent good and should be done for its own sake. At every level, people do consider, however, that becoming educated will bring economic advantages to them personally, and that if their kids go to school and do well, they will be in a better economic position than they would have been otherwise. This is one of the reasons why governments invest so much money in education – they correctly assume that a well-educated population will be in a better position to contribute to economic prosperity. The big issue of course is to understand what kind of education we need to meet economic purposes these days. Secondly, education plays an important cultural role.

One of the reasons that we educate people – particularly our young

people – is to initiate them into the cultural values, traditions and ways of thinking that characterize our communities. This is one of the reasons why there's such a heated contest over the content of a curriculum. Whenever people try to create divisive standards or curricula, it quickly becomes a very heated discussion. Thirdly, education plays an important social role. We expect education to play a role in helping students understand how their societies work and how they can play a part in them. Particularly within democratic societies, as John Dewey once said, 'Every generation has to rediscover democracy.' The fourth area is personal. Education should be about helping individuals discover their talents, their purpose in life, their sensibilities, their interests, and to enable them to live a life that's purposeful and fulfilling in its own right. In America just now, there's been a problem where kids have not been completing high school (I hesitate to use the word 'drop-out' as this implies they've failed the system, whereas, in fact, it's often the other way round – kids are just disengaging). As soon as we treat education as an impersonal process, a mechanistic and data-driven process, as soon as we lose sight of the fact that we're dealing with living, breathing human beings, then education ceases to be anything worthwhile.



While the deep gaze of my cat may indicate that he is, indeed, having an existential crisis, it is highly likely that we humans are the only species on earth who are acutely aware of our own mortality, and that of all of our friends, loved ones and other species. It would be easy, therefore, for us to treat our lives as ultimately futile, but instead we expend an inordinate amount of our limited time on this earth in the noblest of pursuits: that of finding meaning. We are meaning-seeking animals and we need that something to help us make sense of life, who we are and why we're here. In the broadest sense, this is perhaps why we turn to art, religion and science as modes of enquiry to make sense of the world around us. In turn, we use the domains of the arts to better understand ourselves, and our place in the world. After all, identity

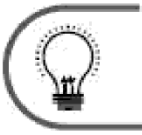
is meaningless without a context.

Much of our language has been developed around the linear, functional needs of society, but art is something else. As Anish Kapoor and Antony Gormley explained to me, art is a space where you can speculate, explore and generate non-linear answers. It's that hard-to-describe sense that we all have sometimes where a piece of art, music or even nature can spark a profound sense of understanding. This is a deeply intrinsic part of who we are – we are a storytelling species, and the earliest evidence of our species on this earth shows signs of that need to share our experiences as offerings, as gifts, to each other.

Our cognitive abilities have given the modern us a freedom beyond the immediacy with which the rest of the living world experiences life, but with that has come a sense of superiority beyond what we are. As Yuval Noah Harari says, this was not always so; it was only following the Agricultural Revolution that we began to see ourselves as essentially different from the rest of the animal kingdom – a strategy that once again manifested itself during the industrial era, as people were separated and classified by race to justify dominance and exploitation.

Like it or not, however, we are still animals. We have biases and characteristics that are part of our essential nature, which have been developed over tens of thousands of years, passed from generation to generation, optimized for a different world, one without the level of social interaction, technology and capability that we have today. It is because of this that we need to constantly learn and relearn what it means to be who we are. It also raises the question about who has the better deal: my cat, gazing out of the window waiting for the next bird to fly past, or me, gazing out of the window, wondering why life matters if all of us will die anyway. The best position is perhaps the middle ground – that we enjoy the experience of living physically, mentally, intellectually and culturally, while realizing that we are only temporary visitors to this beautiful world.





BIOGRAPHIES

Marina Abramović is a Serbian conceptual and performance artist, known for her work pushing the limits of the body. She is a member of the Royal Academy.

Professor Jim Al-Khalili is a theoretical physicist, best-selling author and broadcaster, and a University of Surrey Distinguished Chair, where he has also held a personal chair in physics since 2005 alongside a university chair in the Public Engagement in Science.

Professor Kwame Anthony Appiah is a British-Ghanaian author, cultural theorist and Professor of Philosophy and Law at NYU, and was awarded the National Humanities Medal at the White House in 2012.

Professor Justin Barrett is an American experimental psychologist and author, and Director of the Thrive Center for Human Development.

Professor Sean Carroll is a theoretical physicist and a research professor at the Walter Burke Institute for Theoretical Physics in the California Institute of Technology Department of Physics.

Professor Deepak Chopra is an Indian-born bestselling author and alternative medicine advocate. Founder of the Chopra Foundation, he is Clinical Professor of Family Medicine and Public Health at the University of California, San Diego.

Professor George Church is an American geneticist, molecular engineer, and chemist, widely known for his contributions in the sequencing of genomes. He has co-founded several companies and is a founding member of the Wyss Institute for Biologically Inspired Engineering.

Dame Jane Morris Goodall DBE is an English scientist and conservationist, considered to be the world's foremost expert on chimpanzees, and has received many honours for her humanitarian and environmental work.

Sir Antony Gormley is a renowned British sculptor and artist, creator of the *Angel of the North*, *Another Place*, *Field for the British Isles* (winner of the Turner Prize in 1994), *Quantum Cloud* and many others.

Bear Grylls OBE is a British former SAS serviceman, now a survival instructor, Chief Scout, bestselling author and television presenter.

Professor Yuval Noah Harari is a historian and philosopher, and the author of international bestsellers *Sapiens: A Brief History of Humankind*, *Homo Deus: A Brief History of Tomorrow*, and *21 Lessons for the 21st Century*.

Sir Anish Kapoor CBE is a leading British-Indian sculptor and member of the Royal Academy, who specializes in installation art and conceptual art.

Rose McGowan is an American actress, activist and *New York Times* bestselling author. She was named one of *Time* magazine's people of the year in 2017.

Sam Neill is an actor, writer, director and producer, best known for his starring role in *Jurassic Park*, and more recently in the hit TV show

Peaky Blinders. He also owns his own winery near his home in Queenstown, New Zealand.

Dr Jordan B. Peterson is a clinical psychologist and Professor of Psychology at the University of Toronto, and author of multimillion-copy bestseller *12 Rules for Life: An Antidote to Chaos*, which has been translated into fifty languages.

Professor Steven Pinker is Professor of Psychology at Harvard University and internationally bestselling author of books including *The Language Instinct*, *How the Mind Works* and, most recently, *Enlightenment Now: The Case for Reason, Science, Humanism and Progress*.

Sir Ken Robinson (1950–2020) was a *New York Times* bestselling author, and an education and creativity expert. His TED talks have been viewed over 80 million times and his ‘Do Schools Kill Creativity’ presentation is the most watched TED talk of all time.

Professor Carlo Rovelli is a theoretical physicist and author of international bestsellers *Seven Brief Lessons on Physics*, *Reality is Not What it Seems* and *The Order of Time*, which have been translated into forty-one languages.

Sadhguru is an Indian yogi and author, and in 2017 was awarded the Padma Vibhushan, India’s second-highest civilian award, for his contribution to the field of spirituality.

Dr Carl Safina is an ecologist, MacArthur Foundation ‘Genius’ grant-winning author and founding president of the Safina Center.

Dr Elif Shafak is a Turkish-British author, academic and women’s rights activist. Her books have been translated into fifty-one languages and she has been awarded the *Chevalier de l’Ordre des Arts et des*

Lettres in France for her contribution to arts and literature.

Philippe Starck is a French designer, architect and inventor. He is the powerhouse behind over 10,000 creations, including interior design, furniture, yachts and hotels.

Professor Jack Szostak is Professor of Genetics at Harvard University, and has been awarded several times for his contributions to genetics, including the Nobel Prize for Physiology or Medicine in 2009 (which he shared with Elizabeth Blackburn and Carol W. Greider).



ON CULTURE: THE CONTEXT OF HUMANITY

‘There’s something which impels us to show our inner souls. The more courageous we are, the more we succeed in explaining what we know.’

MAYA ANGELOU

It’s impossible to remove humanity from culture; it is the context into which we are born and live our lives. In his 1658 painting *Blind Orion Searching for the Rising Sun*, Nicholas Poussin depicts the blind giant Orion being directed towards the healing rays of the sun by his servant Cedalion, who stood on his shoulders acting as his eyes. This metaphor explains well how culture comes to us. The generation of the living Cedalion is able to see further, by standing on the back of those who have gone before us – Orion. We inherit their now as our history, and build on it.

Culture is not a thing – it is everything. Every selfie, every tweet, every TikTok, every painting, every sculpture, song, novel, article, blog post, video. Everything we do as a society has a deliberateness, an aesthetic that goes beyond the function and

allows that act to have a place in time and a purpose that we imbue. Our cultural artefacts are the components of telling the story of who we are.

John Berger, in his 1972 book *Ways of Seeing*, summed this up unsurprisingly beautifully: 'It is seeing which establishes our place in the surrounding world; we explain that world with words ... but words can never undo the fact that we are surrounded by it. The relation between what we see and what we know is never settled.' Being able to identify a 'thing' and understand the meaning of that same thing are also different and change over time. In the Middle Ages, for example, there was a belief in the physicality of hell that meant that fire became a real-world manifestation of that belief as an all-consuming, burning and painful phenomena – conversely, the concept of hell would also have carried significantly less significance had it not been for that physical embodiment. To put it another way, it was not enough to simply hold a sign up that says hell is bad. For us to get it, we needed the visual, the metaphor, such that we could temporarily accommodate the experience of hell into our being to make sense of it.

Growing up, my family used to visit India every year. Not just to see relatives, but usually to travel, often to far-flung remote parts of India where, as a child, I was thrust into a world very different from my suburban home in Manchester. Indian life is steeped in art and metaphor; things are not merely said with words, they are told with stories, pictures, dance, food and every tool at the creative disposal of the population. The intensity is deafening, like the surface of a stormy sea, until you are immersed into it, underwater, at which point everything makes perfect sense. It is perhaps because I experienced that profound cultural immersion at an early age that I spend a lot of my life seeking it out, whether that's through my own creative outlets (photography and poetry) or through consuming as much culture as I possibly can.

We are a storytelling species, and our shared stories are integral to our evolving collective identity. In this chapter are my conversations with some amazing novelists, including the great Maya Angelou, Elif Shafak and Yann Martel, who spoke to me about those stories that shape us. Of course, stories are told

across so many forms, and to understand I have also included here some of my interviews with poets, including Lemn Sissay, George the Poet and Sir Andrew Motion; artist Tracey Emin; chef Heston Blumenthal; musicians including Black Thought, Moby, Lang Lang and Hans Zimmer; filmmakers Ken Loach and Paul Greengrass; as well as two of the most iconic photographers of the last century, David Bailey and Rankin. Their answers were fascinating to me, and paint a vivid picture of the most complex phenomena of humanity: our culture.



What is the role of storytelling in human culture?

Ed Catmull: Storytelling is our fundamental way of communicating with each other and informing each other. If we start from the beginning, one of the most rewarding things for the child and the adult is having the child on your lap while you tell them stories or read to them from a book. You are not only telling a story, but forging an emotional bond in doing that. Then, as a child, you go to school and receive another form of storytelling, where you're told the stories of our past, our history and our culture; what happened with our presidents, kings, revolutions and heroes. Whatever those stories are, they are always simplifications of what happened. We can never live through the events of the past – the only things we have left are the stories. The art form of storytelling is trying to figure out how you capture the essence, to inform someone about what's important in what happened, but they can never live it themselves.

Why do we write?

Maya Angelou: We write for the same reason that we walk, talk, climb mountains or swim the oceans: because we can. We have some impulse within us that makes us want to explain ourselves to other

human beings. That's why we paint, that's why we dare to love someone – because we have the impulse to explain who we are. Not just how tall we are, or thin, but who we are internally, perhaps even spiritually. There's something which impels us to show our inner souls. The more courageous we are, the more we succeed in explaining what we know. When a poet writes a line that immediately translates from a black person to a white person, from an old person to young, or when a rich person writes a line that a poor person can comprehend, that's a success.

George the Poet: There's something magical in these sounds we call words. Words are loaded with meaning which is unique to the human experience. In all our hundreds of thousands of years of experience, we still don't know what a dog's bark means. Those sounds don't carry a specific relevance with us. We've been handed down language from generation to generation, and within it is coded so much human experience that when those sounds are organized deliberately with emotive effect? It's the closest thing we have to magic.

Yann Martel: I write because it passes the time in a creative way. I have the usual allotment of daylight hours, and between writing and pretty much anything else, I'd rather be writing. What's beautiful about writing is that it contradicts King Lear: something does come of nothing. Where once there was nothing, now there is a story and writing that story feels like the building of a cathedral. It's a slow, deliberate process. An initial idea leads to research; research leads to further ideas; ideas and research lead to copious notes; these notes become the structure of a story; then comes the writing and the rewriting until finally the story emerges, flowing as if it had been created spontaneously, with no premeditation. Creating that illusion, working on it, is deeply satisfying. As for why we write in this deep way, I think it's connected to our quest for meaning in life. Animals don't seek to understand why they are. We do. And stories – art in general – are the best way to find meaning, which, as an aside, is why religions, another meaning-creator, always tell stories.

What has been the role of the written word in social change?

Maya Angelou: It's interesting, but this made me think of an incident in the American Revolution. There was a patriot named Patrick Henry. The soldiers of the time were poorly fed, poorly dressed, poorly clothed, cold, wet and hungry. In order to keep their spirits up, Patrick Henry wrote inflammatory but beautifully eloquent lines. Since most of the soldiers were illiterate, he used to go up and down the rows of soldiers reciting these lines. One of them was: 'I know not what course others may take; but as for me, give me liberty, or give me death.' His words aroused order in the fighting men and, for a while, made them forget their misery. The written word, when it is really eloquent, when it doesn't have to be parsed or taken apart, when it speaks from one flame to another, speaks to a dying flame and reinvigorates. That's when it's powerful. That's true of all the passions, be they romantic, patriotic or otherwise. The written word confirms that you really can be more than you feel yourself to be right there, in that moment. When I was a young girl, I would read Shakespearian sonnets. At one point I thought Shakespeare was a black girl, a black American girl in the South. I had been sexually abused when I was young, and I stopped talking altogether from the time I was seven till the time I was about thirteen. At the time, I thought everyone could look at me and see that a man had abused me, and that they thought I had liked it. I read, 'When in disgrace with fortune and men's eyes, I all alone bemoan my outcast state,' and it connected with me – and then teachers told me that Shakespeare was a white man, an English man, that he lived four centuries earlier. I thought they couldn't possibly know what they were talking about. No white man could know what I feel.

Andrew Motion: Poems create change, but not in the same way that someone passing a law can. Poetry can't make you put on a seatbelt while you're driving! Poetry creates a world of possibilities and ambiguities, and allows us to see our world through a number of

perspectives. If that is having the maximum effect on us, it will impact on how we behave in the world. Poems can also help us to crystallize ideas of the past. W. H. Auden once said, 'Poetry makes nothing happen,' and I know what he means. We might read that as a disappointment, but it might also be a relief! The rest of our world has this imbued intentionality – it's designed to make something happen. Auden writes about the 1930s as a low, dishonest decade. His writing profoundly affects our sense of what that time was like. If we face our present and future, and come to terms with it by understanding our past, Auden is actually a very good example of how the crystallization of a moment can change our future.

Lemn Sissay: Poems ride on horseback ahead of our journey. They are fierce chroniclers of the past and wild predictors of the future. They are statements of the present. If you want to know the voice of the people, listen to the poets and watch the artists. We learn more from the poets and the arts about the human condition than through any other medium. But poetry alone is dead. It must connect inside the poem, otherwise it is soulless, self-indulgent twaddle.

George the Poet: Poetry has no hiding places. You can't write poetry without making a stance. All you have is your words, and those words have to resonate. The most powerful will resonate universally. Human truths always prevail. If equality is true, if love is true, in the space of poetry it will come to the fore. You can't hide behind music, physical actions or anything else – you have to speak and be understood. The truth of poetry goes hand in hand with social change.

Black Thought: Art has always played a role in revolution, evolution and change. Art has always been a great changing force, the great common denominator, and a force to help people understand the world we live in and the people within that world. The darkest times in our history have brought about some of the most interesting art, in every genre. All the best forms of expression have come about during more trying and turbulent points in our story. Hard times are good for

the arts — that's when people rise to their calling. When times are tough, that's when people look inside, find their purpose and speak to it. Art is a catalyst, a narrative, and is made up of the personal stories of the people who choose to be a part of its movement. Through art you can discover, at a very deep level, that there are other people in the world who feel the way you do, who see things the way you do, or want the change that you do. Art is our time capsule. It speaks to generations to come about what it was like to live in these days and times.

What is the role of storytelling in our culture?

Maya Angelou: We use it to encourage the new generation to understand something to allow them to step forward without going back, without having to repeat everything. That's the basis of folk tales such as Aesop's fables. The aim of storytelling is to get a message across, so the next generation can take it on without having to go back repeating my mistakes, or the mistakes I let myself make, or was fooled into making.

Yann Martel: It is the glue that binds us together. With no stories — personal, familial, local, national, global — we are nothing; that is, we're solitary animals, dumbly crossing a plain, not knowing where we are going or why. Stories define us, telling us who we are, giving us direction.



I didn't realize the power of poetry until I needed it. At school, poetry was something you had to study and dissect, like a frog; it never really meant anything to me, and I didn't understand it. But getting older, and experiencing the ecstasy of love, the pain of loss, as well as the depths of darkness, I realized that poetry has a power. It's not just words that rhyme — for me, it's like painting with words, and it somehow connects you deeply and directly to

emotion and understanding like nothing else. Poetry became very personal for me as I went through a decade or more of serious depression. I was practically unable to communicate what I was going through until I found poetry gave me a voice. So, it's a part of culture that I hold extremely close to my heart.



What is the role of poetry in culture?

Maya Angelou: Poetry is written word, but it's also music, so it has a double strength. The written word, when in prose, has music within it, but it's not as heavily endowed with it. If you listen to poetry when it's spoken, you're drawn in. There's a magnetism that draws you to it and that's partly because of the music. People also don't stop to realize that the lyrics in The Beatles' songs, in blues and in spiritual music are all poetry. Young people say, 'I don't like poetry,' but they may love Elvis or Ray Charles, and they're all poetry.

Lemn Sissay: Poetry is at the heart of revolution and revolution is at the heart of the poet. What is the role of the poet in culture? I'm unsure if it's a question for a poet to answer. Although I have seen poets read for presidents and have read poetry in newspapers, I've seen poetry celebrate boxers and beauticians. I've seen poetry set to classical music and poetry in deep house music. I've seen poetry in punk rock and poetry in the charts. Poets nominated for the Mercury Prize and poetry at the National Theatre. Adele began as a poet. Amy Winehouse began as a poet. Don't think of me as someone desperately trying to find a link with an age-old tradition and the modern day. Just take a closer look and use your God-given eyes. Poetry is more popular now than it has ever been since the beginning of time. Big statement, right? But it's true. It is the poet's role to create. That is the only role in culture. I wish more people did it. I wish more people sat on the branch and cast their line into the vast open space of the

imagination. The poet must express herself through the poem. This is how she proves herself to be alive. Cultural commentators of one sort or another will define the role of poetry and promote their definitions ad nauseam. The one consistent is the poet as creator of poem and this is all she need know. I wouldn't want to limit its role by defining it unless I'm coaxed down a rabbit hole. Sorry.

Saul Williams: The perceived distancing of poetry from the people is only true of some societies. If you go to Ireland, for example, poetry is very much alive – kids can recite Seamus Heaney. In the Middle East, kids can recite Rumi. Some cultures realize that poetry represents their essence. Poetry will always bring us back to our centre, and regardless of how far out we've gone in the spiral of business or capitalist mayhem, poetry always brings us home. Poetry operates in a safe space, but it's not always required to be safe. In many nations, poets are imprisoned! They can incite. They hold the keys to dismantle the system. They can make things clear, and can help our understanding of religion, humankind, society, gender and so many other topics. Poetry addresses the common stories of humanity in simple and complex forms, bringing light to these topics. When you identify poetry as culture, you are identifying the essence of culture. Something that isn't talked about in America much is the fact that when Alexander Graham Bell first created the phonograph (the record player), the first people he recorded were poets. Before radio, the most common pastime in America was to gather around the table after dinner and recite poems. The first recordings ever were poets. Just think about how important that is.

What makes a truly great piece of writing?

Maya Angelou: The truth. It either tells the truth, or it's not of very much use. If it tells the truth, whether it's Tolstoy writing it or Germaine Greer, Toni Morrison or Langston Hughes, or even Confucius, if it tells a real truth, a human truth, then the old white

man who's sitting on his porch in Savannah, Georgia, or the Asian woman in San Francisco, or the rancher in Kansas, can all say, 'That's the truth.' Autobiography enchants me as a form. Years ago, I was asked by an editor in New York whether I would consider writing an autobiography. I said, 'No, I'm a dramatist and a poet,' and he said, 'Well, it's just as well you don't try. To make an autobiography, to write it really well, and to make it of importance, is almost impossible.' My close friend – like a brother – was James Baldwin. I know that editor said to James, 'Maya Angelou refuses to write, I don't know what to do,' and James said, 'If you want Maya to do something, tell her she can't do it.' Fifty years later, he still denies it.

Yann Martel: A great piece of writing contains a suitcase that can be opened at every age and affect us. So the *Iliad*, for example, despite being nearly three thousand years old, still moves us because of the situation the characters are caught in, the tragedy of their excessive emotions and the tragedy of the arbitrary pains that are sent their way by fickle gods. This suitcase can't just contain an emotive charge. That's essential, of course – if we feel nothing for a piece of writing, we will not involve ourselves with it. But the effect must go deeper. A great piece of writing must also illuminate intellectually. It must make one think differently. It's those two – emotive charge and intellectual insight – combined in a masterly fashion that allows a text to sail through time, ever fresh.

How does the written word sit alongside other forms of culture?

Maya Angelou: The written word is the base of culture, the spine. The other limbs and torso that attach to the spine, still depend upon the spine. Without the written word, there can be no other form of communication. One of the sadnesses I see today is young people who have no belief or faith in tomorrow. You see people who go from knowing nothing to believing nothing, and that's very sad. When

people allow themselves no vocabulary with which to explain themselves to other people, and reduce their utterances to 'yeah', 'mmmhmm', 'I dig', it's very sad. You cannot, then, explain the delicacies of existence and the nuances of the human mind.

Yann Martel: We're verbal animals. Words are used in nearly every interaction between human beings. Not that silence and gestures don't have their place. But words are it. They make us human. So they find their way into nearly every human activity. Everything we do can be done to the song of words. We can speak as we make love, as we fight, as we dance. So there's no art form that I'm aware of that doesn't make use of words, at least in the conception. Visual arts and choreography, for example, may not use words in the final work, but words, spoken and written, will likely have been used earlier. So to answer your question: words sit alongside other forms of culture very well.

Can fiction and storytelling counter ingrained narratives around gender, sexuality, race, etc.?

Elif Shafak: Over the years, with each new novel I came to meet readers from diverse backgrounds. For instance, in Turkey, when you look at the people coming to my talks or waiting in the queue to have their books signed, you will notice how different they actually are. Among them are lots of leftists, liberals, secularists, feminists, but also Sufis and mystics. And then, conservatives and religious women with headscarves. Among them are Kurds, Turks, Armenians, Greeks, Jews, Alevis. To me this is incredibly important. In a country where everybody is divided into mental ghettos and isolated cultural islands, it matters to me that literature keeps its doors open to people of all backgrounds. I have to tell you, many of my readers in Turkey are xenophobic. This is the way they have been raised. So, if you ask their opinions about minorities, most probably they will say highly biased things. Likewise, many of my readers are homophobic. This is the

only narrative they have heard in their society. But then the same people come and say to me, 'You know what? I have read your novel and this is the character that I loved the most,' and maybe the fictional character they are referring to is Armenian, Greek or Jewish, gay, bisexual or transsexual. I have thought about this dilemma a lot. How is it possible that people who are more biased and intolerant in the public space tend to become a bit more open-minded when they are alone? I don't think it is a coincidence.

What is the role of the written word in youth culture?

Maya Angelou: I don't mean to look down on Facebook and the like, but somehow, because we have technology – and because the television and other hangers-on have arrived – it seems things have changed. Texting has entered into the psyche so thoroughly that hundreds of people are being killed because they text while driving, and text while walking – and even walk into walls! It's really sad. I am not talking about throwing away technology. We have to build on our strengths and use what we have that has proven to be of use as fully as possible. Youth are not without their heroes and sheroes. Sometimes, especially when you hear the statements and utterances of their heroes and sheroes, you wonder why they chose them. I'm very blessed – I'm a six-foot-tall African-American woman, and when I go to the stadia, five thousand or ten thousand will pay to hear what I say. It's a blessing. Just now, a producer from another programme told me that I have over 3,800,000 fans on Facebook, and most of those people are young. That tells me people are asking for something, they want something. I try to tell them the truth, and hope it gets through. I'm not the only one; there are lots and lots of people who care enough about young people to try and tell them the truth, and encourage them to strengthen themselves.

Do you think writing must have an ethical or moral