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“Big Questions About the Human Being: Bioscience and Islam in Dialogue”

Episode 5: Are Our Lives Pre-determined? The Questions of Free Will and Human Agency

Dr. Aasim Padela:

Welcome to another edition of *Big Questions About the Human Being: Bioscience and Islam in Dialogue* with me, Aasim Padela. I'm so glad you chose to listen to this podcast today. But did you really choose? Or was it preordained for you by some deity to listen to this episode at this exact moment? Or did the sequence of events from the Big Bang until now set up a sequential path by which you were predetermined to listen to this episode? Believe it or not, some scholars would agree with each of these views. They would say that you were fated in some way to be listening to me right now. Or, for that matter, for me to be recording this when I did, so that you could listen. Yet, if all is determined by physics and math, or our biology, then what about free will?

Do humans have any agency over the things they do and the decisions they make? In this episode, we will examine these questions from bioscientific and Islamic perspectives. We'll hear from experts on genetic predispositions that influence behavior. We'll also look at how a sense of agency, or the lack of it, makes an impact on some of the most challenging dilemmas for human societies. We'll hear about the role that agency can have in the rehabilitation of criminals and in the choices people make for good or evil in situations of atrocity. Let's start by examining a fictionalized case based on a true event, to get us thinking about how the question of free will plays out in real-life situations.

Dr. Raudah Yunus:

A 25-year-old gentleman is charged with disorderly conduct, causing physical injury to a bystander who then had to be rushed to the emergency room. You are an expert witness brought to the court during sentencing to advise on the moral culpability of the defendant, given his diagnosis of antisocial personality disorder and his genetic predisposition for such. Should he receive a shorter duration of jail time as punishment compared to an individual without the disorder? What would you advise the court?

Dr. Aasim Padela:

While we consider that, let's examine what scientists and philosophers say about free will. We'll start with Peter Ulrich Tse, a Professor of Cognitive Neuroscience at Dartmouth College. He shares his definition.

Peter Ulrich Tse:

Free will involves a world in which there are multiple possible futures, which I can select. And in order to do that, I have to internally model those external possibilities. So I have to have a kind of realistic imagination. So free will is very much tied up with my ability to bias outcomes in the world through my own actions and for my own reasons, such that that future which is open in the world actually comes to pass.

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So the first part of that definition prompts a question about the world. Is the future predetermined in some way? Or are there different possibilities we might be able to influence? The second part prompts a question about ourselves. What kind of capacities do we need to have in order to exercise free will? Philosophers have debated these questions over millennia, including [Gregg Caruso](#), Professor of Philosophy and Applied Ethics at Fairfield University. He gives us an overview of the four current philosophical positions on this question.

Professor Gregg Caruso:

I think the best way to understand at least the traditional version of the problem of free will, it's a question of how to reconcile free will with the thesis of what's called determinism. And determinism is the thesis that facts about the remote past, in conjunction with the laws of nature entail, is only one unique future. There's a position called libertarianism, not the political conception of libertarianism, but the metaphysical one, which says that if determinism is true, agents lack free will. But libertarians believe we do have free will. So they try to make sense of an indeterminate conception of free will where agents can have free will in a way that requires the falsity of determinism. There's another position called compatibilism, and it is what it kind of sounds like. It tries to make compatible these two different beliefs, the belief in free will and the belief in determinism. It says for an agent to be free and morally responsible, it doesn't have to be the case that determinism is false. It just has to be the case that agents act either voluntarily or with some form of what's called reasons responsiveness, their ability to respond to particular kinds of reasons for action.

Dr. Aasim Padela:

Wow. That's quite a lot of different concepts for us to remember. I mean, I'm beginning to wish that we had the ability to show a Venn diagram in our audio podcast. So before we move to our next definition, let's break it down a bit. You will all have to imagine the Venn diagram in your own minds. There are two crucial questions. First, free will: Is it true or false? And second, determinism: Is that true or false? We heard about the libertarians who say free will is true. Determinism is false. We then heard about the compatibilists who say free will is true *and* determinism is true. So now we come to the penultimate category in our imaginary Venn diagram.

Professor Gregg Caruso:

The hard determinist view was the view that determinism is true and incompatible with free will; either because it's incompatible with agents having the ability to do otherwise, or because determinism excludes agents being the appropriate source of their actions, since the ultimate source of actions drains back to these antecedent conditions, like upbringing, genetics, prior experience, heredity—factors that are ultimately beyond the control of the agent.

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Hence, proponents of that position say free will is false *and* determinism is true. Gregg Caruso himself rejects free will. But unlike the hard determinists who we just heard about, he believes that the whole question of determinism is irrelevant to his position. He explains by introducing us to the very last category.

Professor Gregg Caruso:

I'm what you would call a hard incompatibilist, which means whether determinism is true or indeterminism is true, we would still lack free will.

Dr. Aasim Padela:

In other words, he is saying free will is false and determinism is irrelevant. And don't let the unfriendly sounding term "hard incompatibilism" fool you. Many of its proponents are, in fact, motivated by a concern for fairness. They start from a concept in philosophy called the basic dessert. In its simplest boiled-down form, it means that good actions should be rewarded and evil actions should be punished. But, hard incompatibilists ask: Once one has rejected free will, then how can there be justice in praising or blaming people for their actions? Because they deem actions to be beyond the individual's control.

Professor Gregg Caruso:

And that's because agents are no more in control of determined events than they would be in control of indeterminate events.

Dr. Aasim Padela:

Now that we have a map of the philosophical positions, let's take a closer look at free will from a neurological perspective. Professor Tse argues that there is an underlying assumption in the debate.

Professor Peter Tse:

Many other scientists and philosophers argue that we don't have free will. I would say that they typically misplace free will in action. They think of free will as being tied up with doing this versus that. I would argue it's much more fundamentally about imagining this versus that and then setting about doing it. And so action is downstream of volitional processes involved in the imagination. So that somebody, for example, who couldn't even act at all, someone with the locked-in syndrome, for example, could nonetheless attend to the radio or attend to the sound of the television or attend to their memories.

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Dr. Aasim Padela:

That is quite interesting. Although I am a physician, I don't think we spent any time in medical school learning about the neuroscientific foundations of free will. If free will can be located in the volitional processes that precede action, could one say this is wired in our brains?

Professor Peter Tse:

I would argue that yes, there is a neuronal basis for free will. It concerns how we essentially rewire ourselves. So neurons typically are thought of as generating action potentials or firings that go along their axons, which then make other neurons also fire. I would argue that neurons are actually doing quite a bit more than that. They are also rewiring each other's conditions for future firing by changing the synaptic weights of neurons, not necessarily making them fire. Neurons essentially are placing conditions upon their inputs for firing. So a neuron might fire to the presence of a cat in the world, and we have found such neurons. But I can also change the synaptic weights on that neuron such that it will now become a dog detector, not a cat detector. So we have some volitional control over what our neurons will respond to in a bottom-up way. How exactly do we do that? Although I think neuroscience doesn't yet fully understand how we change synaptic weights volitionally, I think it's clear that we must be doing that because otherwise we couldn't see what we want to see.

Dr. Aasim Padela:

But if the neurons are creating synaptic weight in different directions, could that actually mean that something is already happening before you seemingly make a choice? And if so, does this mean that the actual moment of choice is predetermined? More than 40 years ago, neuroscientist Benjamin Libet performed experiments that seemed to suggest that we in fact don't have conscious free will, at least not in the way that we think we do.

Professor Peter Tse:

The essence of his experiments is the following. He has people move their finger or hand while watching a clock. And he tells the subjects, move your hand basically whenever you want. And moreover, tell me where the second hand was on the clock when you first felt the urge to move. Well, it turns out that the urge to move might be 300 milliseconds or roughly one-third of a second before I actually move my hand. But when we do lots and lots of such trials, we can see that there is a kind of activity in the brain that precedes even my urge to move, something like, say, one second before. So at time minus one second, I see brain activity that is indicative of my eventual finger movement. And then at one third of a second prior to me moving my hand, I have the conscious urge to move. And then I do move my hand.

Dr. Aasim Padela:

So something is happening in the brain, the so-called readiness potential before the conscious moment of choice, which is termed the "W judgment." Professor of Social and Cognitive Neuroscience, [Emilie Caspar](#) of Ghent University in Belgium, explains the significance.

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Professor Emilie Caspar:

The results were pretty striking because what he observed is that this W judgment happened indeed before the actual movement, but several hundred milliseconds *after* the initiation of that readiness potential in the brain. So it actually questions fundamentally to what extent our volition is really different from our body or is just the product of a specific brain activity. Does our brain somehow decide and we don't? But that's a difficult phrasing because in a sense, we are our brain, we form a unity in a way.

Dr. Aasim Padela:

Professor Caspar was so intrigued by this that she reproduced the experiment. She suggests that even if any choice is made unconsciously, there's still a moment to exercise a veto over our actions.

Professor Emilie Caspar:

I have indeed reproduced the work myself. I wanted to see if this time delay between the W judgment and the action was similar across individuals. That matters because actually in the original paper of Libet, the authors interpreted this very short time window between these two events as the veto period. So we may not have free will, in the sense that our volitional processes are caused by brain activity, but we may have this short time window to decide to voluntarily inhibit or to veto an action previously determined by the brain. And I wanted to see if that veto period would be different with people from various degrees of impulsivity. And so I did this task on dozens of participants and I also investigated their basic impulsivity traits with questionnaires and I indeed saw correlations. So those with a short W time period between the W judgment and the movement itself, so those who have the highest impulsivity traits also had the shorter time window. That may due to a lot of different factors, but it's interesting to see that we may also observe variabilities regarding this critical time period.

Dr. Aasim Padela:

Libet's original conclusions are often cited to support the lack of conscious free will, but those conclusions have their critics. Among them is Professor Tse.

Professor Peter Tse:

The experiments of Benjamin Libet have been interpreted by some people to mean that consciousness is not causal in the universe and that there is no free will. And I think that that is wrong for a number of reasons. One way is that of course brain activity has to precede any motor act, but we don't know what percentage of the preceding motor activity corresponds to volitional activity or non-volitional activity. And I would say the Libet experiment is just kind of barking up the wrong tree in that finger movements that have no meaningful purpose at all are not where the action is in free will. Where the action is in free will is not in physical action it is in internal deliberations in our imagination. And Libet's experiments simply don't examine free will where it happens.

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Professor Tse raises an interesting point. He claims that the core of free will consists of conscious choice rather than the action resulting from that choice. So it is in some ways in our brains. But what about the influences on us beyond our own conscious choices? [Han Brunner](#) is Professor of Genetics at Radboud University in the Netherlands. He describes his first clinical encounter with a family seeking help for an unusual problem.

Professor Han Brunner:

30 years ago I was a young doctor. I was in clinical genetics and this family was referred to us. And it was essentially it was one woman who had a son who had this problem and she had two daughters. And because this is something that affects only men and is transmitted by women, she worried about her daughters and she wanted us to find out whether her daughters were or weren't carriers.

Dr. Aasim Padela:

So how did this inherited trait manifest?

Professor Han Brunner:

Now the interesting thing about it was that it wasn't severe intellectual handicap. The problem was behavior. So their behaviors are impulsive and they were impulsive of different kinds. So there's impulsive aggression, usually verbal like threats, the 'I will kill you' type of thing. And then there's abnormal sexual behavior which is all kinds like exhibitionism and voyeurism and suddenly grabbing a woman. And there were some instances of two of this woman's brothers who went and set houses on fire.

Dr. Aasim Padela:

Professor Brunner set about tracing members of the family, taking blood samples and analyzing their DNA.

Professor Han Brunner:

It took us five years. It was difficult then to find a gene. And we found it was in the monoamine oxidase gene. I told the family what it was and they were very grateful. There was not something they'd done wrong, but it was a gene. The gene defect is the underlying problem, but no gene codes for behavior. So what happens is that if the gene is not working properly, if MAOA is defective, then what you get is that there's less balance in the brain. And that means that there is a propensity towards impulsiveness. Now, that doesn't mean that this will always happen. In fact, it doesn't happen most of the times. And when unfortunate behavioral incidents happen, there's usually some kind of thing leading up to it, which could be a lack of sleep. It could be some other change that has unsettled the person. If the environment is unstable, that will increase the risk. So it's a bit like all of us. We can all fly off the handle if we're provoked, but the needle has shifted a bit. So it's a balancing. It's not black and white.

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Dr. Aasim Padela:

So we now have a much more nuanced picture of what free will may be and where it may reside. At the same time, the idea of determinism is also coming into better relief. There is no single gene that codes for behavior. But as we've heard so far, genetic predispositions or factors such as impulsivity may shorten the window for an individual to voluntarily veto an action. So is there anything that can help us lengthen that window? How can we veto negative actions and increase our capacity to choose well? [Dr. Gwen Adshead](#) is a forensic psychiatrist who works with mentally disordered offenders. She shares her experience of helping violent offenders face up to their behaviors.

Dr. Gwen Adshead:

A therapeutic sense of agency is turning out in the research to be a very important aspect of successful therapy. When it comes to therapy for offenders, then one of the goals of therapy is not just to help people feel better, but also help them refrain from offending in future. And that's something that in my experience, many offenders do want to do. And we've all noticed this process whereby people often start in a kind of position of denial. Of course, the most extreme version of that, it wasn't me. And then there's a less extreme version. Well, it wasn't me. It was my illness that made me do it. And then as treatment goes on, people say, well, I did do it, but I was mentally ill at the time. So you're not saying you were compelled to do it, but you're asking to have your blame mitigated somewhat because of your mental state. And then there's a state at which people say, I did this. I did this thing. And often that's the point at which they experience great shame and great distress, and sometimes relief. But the taking of responsibility enables a greater sense of agency. And it's certainly not about excusing them for what has happened in the past. But rather, it seems to me to be a process of ultimate respect, of taking people's previous cruelties very seriously, and helping them gently, gently to take responsibility for them.

Dr. Aasim Padela:

We have heard that the simple but far from easy act of taking responsibility can lead to a breakthrough. That even violent offenders may increase their sense of agency and reduce their risk of re-offending. Professor Caspar investigated what happens to people's ability to take responsibility under conditions where their sense of agency is suspended: specifically when they're following orders.

Professor Emilie Caspar:

I have developed a paradigm where people must decide between different moral behaviors, moral decisions, such as do I choose to hurt somebody with real electric shocks to increase my own monetary gain or not? And people were doing that either freely, so they had, for instance, 60 trials in which they could decide, or they were following my orders as the experimenter to give a shock or not to another person. And I have looked at different brain processes. I have looked at the sense of agency, at empathy for pain, responsibility, moral conflict, so all these processes that are happening in the brain when we make moral decisions. And what I have

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observed overall is that when people follow orders, there is an attenuation of activities in those brain regions. So I think it's very interesting because it may perhaps explain why people can conduct, for instance, atrocities when they follow orders, because their brain is impacted and it does not process the environment in the same way as if they were free.

Dr. Aasim Padela:

Now, all of us have heard the term "following orders" in relation to atrocities. It chillingly invokes the ultimate denial of individual moral responsibility. The study yielded evidence that when someone has started on the path of following orders to inflict even the mildest of harms, such as an electric shock in laboratory conditions, that this sets up a change. The activity in the brain regions for empathy and decision making becomes observably reduced. This is groundbreaking work. It suggests that maybe individuals habituated to following orders have a little less agency, less ability to disobey, even in the face of stark moral wrongs being committed. But if following orders sets up a self-reinforcing cycle, then what does it take to break free from that cycle? Professor Caspar has also recently begun researching which traits are shared by people who disobey orders, and instead they become rescuers.

Professor Emilie Caspar:

For me, they are exceptional, because when we look at genocides, there are different stages that occur, such as dehumanization, hateful propaganda, classification. And those steps are known to influence people's behavior and the way they are going to react. And I think genocide rescuers are pretty fascinating in this sense, because they were from the same context, they were in the same environment, and yet they resisted. And they not only resisted by not participating, but they resisted by going against the orders and risking their own life to save others. Genocides are known to be crimes of obedience, with many people participating, but it's not the only factors or source of influence that is at play during a genocide. So other possibilities could be that perhaps rescuers are less sensitive to intergroup biases, because they have evolved in an environment that values most shared humanity, like the fact that all human beings are the same, and we are not split into different groups.

Perhaps rescuers also are less sensitive to risk. We also observed, for instance, in one of the studies we conducted last year, that rescuers, compared to perpetrators and bystanders, they had much more role models in their lives than the other groups. So when they were children, many of them witnessed their parents or relatives also rescuing people. So perhaps that has shaped their moral development in a way that they could see that there is another option that is not just following orders or following social dynamics. They are rare, first of all, many died because of their rescue actions, so they are not easy to find. But I really see the value of studying them and understanding how they can resist and how they can somehow regain their own free will in this context.

Dr Aasim Padela:

Professor Caspar's discussion about rescuers reminds me of the process of character formation. According to Aristotle, as well as Islamic theologians such as Imam al-Ghazali, our moral development requires us to have moral exemplars. Admittedly, I am simplifying it a bit,

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but the general idea is that one learns to act good by emulating those who do good and then eventually habituating towards the good. Here are some promising signs then, from this early stage of research. A person's sense of agency may be impaired if they are conditioned to obey. Conversely, agency may be strengthened by belonging to inclusive communities and having strongly moral role models. Some signs of hope, then that we may be able to nurture agency to foster resistance to moral harm. And now we return to our overarching question. So, what is the verdict of our scientists and philosophers on whether we have free will?

Professor Emilie Caspar:

That's a very good question. And honestly, after all these years of research, I'm still not very sure of the answer. Because when we make a simple decision, the brain takes into account our life, our past experiences, all these sensory inputs that we may not even consciously perceive to help us make that decision. And so in that sense, I don't think we have free will because we are not aware of all the different factors that influenced this final decision to make that action instead of that action. But I do think that we have a degree of freedom in the sense that we may not be fully determined by everything that happened before and that we may still have the possibility to rectify some actions or to decide otherwise.

Professor Gregg Caruso:

Agents are still causally responsible for their actions. That is, they could be legally accountable in a monetary sense for the wrongs done so as to repair and restore, and perhaps have them financially recoup for damages that were done. But we would have to reject some fundamental sense of moral responsibility, the sense that would be needed to justify, for example, retributive punishment.

Professor Han Brunner:

I do very much believe in free will. Free will has come up in the context of this gene. I think even though there is an effect of the genetic makeup and it makes a person somewhat more unstable, that doesn't in any way take away their free will, I think.

Professor Peter Tse:

You might have a situation where at the present moment you have no choice but to act a certain way, but then you might say, well, I have no responsibility for it because I have no choice. However, in the past, we had the capacity to imagine becoming a different kind of person and then exerting ourselves to accomplish that. One analogy would be going to the gym, right? So let's say right now I'm quite weak. I can't lift 50 kilos. I might say, well, I have no responsibility for that because I'm so weak. I can't do it. But let's say that a year ago I realized that I would in the future be in the position of having to lift 50 kilos. Well, I could have gone to the gym and trained myself and then today had I done that, I would be able to lift 50 kilos. So even though it's true that right now as I am, I cannot lift 50 kilos, I have responsibility in part for that because I could have created myself to be a different kind of body by sculpting my body by going to the gym. And I would argue that's also true of the mind. I have the

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capacity to sculpt my mind and my character such that in the future I would become the kind of person who could not, for example, commit murder.

Dr. Aasim Padela:

We heard a range of views there from professors Caspar, Caruso, Brunner, and Tse. And finally, from Dr. Adshead. She echoes the idea that free will may be, as in Peter Tse's analogy, a muscle to be built:

Dr. Gwen Adshead:

My position is that we all have the capacity to make choices that are cruel and unusual, to pick a phrase from the US Constitution. I think we all have that capacity. But I equally think we have a capacity to make good choices, to make choices that build up our lives together. The practicing of virtues, the repeated practice of thoughts that are healthy and contribute to well-being and flourishing, not just of yourself, but other people, these are things that we can practice. But they do involve intention, both intention and attention. And it boils down to kind of taking your mind seriously. Really taking your mind seriously and what goes on in it. And being able to develop that capacity to observe yourself thinking.

Dr. Aasim Padela:

Well, where does that leave us? It seems that there is no singular scientific perspective that can answer our questions definitively. We still don't know whether our actions are predetermined due to the Big Bang, or because of our genetic makeup, or because of what we ate in the morning. Some scholars, as you've heard, argue that we have choice. Leaving aside whether this is in the imaginal realm or in the world of action, others hold that all choice is an illusion. I may be dating myself here, but I loved the Matrix movies. I have vague memories of dialogues between Neo, Morpheus, the Architect, and even the Merovingian, about choice. They were running throughout the series. One particular exchange has been burnt into my mind. Morpheus says, "Everything begins with choice", and the Merovingian replies, "Choice is an illusion".

Film clip (The Matrix)

You see, there is only one constant, one universal. It is the only real truth, causality. Action, reaction, cause, and effect. Everything begins with choice.

No, wrong. Choice is an illusion created between those with power and those without.

Dr. Aasim Padela:

I mean, can we ever really get outside of our brains or the Matrix in order to truly know? Science and philosophy do not have a singular or complete answer. It seems that of all the big questions we've considered in this series, this is one where there is the least agreement amongst our science and philosophy experts. And we'll invite three of these experts to weigh in again when we explore the ethical questions that free will raises for ideas

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of crime and punishment. Let's now turn to the Islamic theologians and Muslim thinkers on the matter. To begin our exploration of Islamic perspectives, let's start with [Professor Abdurezak Abdulahi Hashi](#), a core project team member with a doctorate in Islamic studies, who is presently professor in the Department of Biotechnology at the International Islamic University, Malaysia. He initiates his discussion of the laws of nature, that you will likely agree lie beyond our control, by reminding us about some fundamental aspects of the human being.

Professor Abdurezak Hashi:

The human beings, we can see as a body, structure: the cells, the genes, the tissues, the muscles, the bone. They are three-dimensional components taking space and time. And in that level, they say, human beings are controlled and governed by the universal laws. The laws of gravity, for example, control it. Surely if I go to a high altitude and then I throw myself, the gravity will pull me down to the ground. So in that case, there is no free will. There is no moral responsibility there. Why? Because in that sense, I am governed by the natural laws. In the Islamic tradition, we call it *sunnatullah*. So, surely in that sense, in that aspect, you are not accountable. You are not responsible for whatever happens to your body. Why? Because your body is like any other structure that takes space and time.

Dr. Aasim Padela:

As a listener, you may be thinking that what Professor Hashi just said is so obvious that it need not be stated. Yet, I found that many Islamic theologians begin diving into complex topics by starting with a very broad 10,000-foot generalization. So just bear with him a bit. I promise you it will get a little more interesting in a short while. Okay, so it's easy to agree that we have no control over, and therefore no responsibility for, the effects of natural laws on us. Professor Hashi continues by considering an aspect of human nature that is more nuanced in terms of moral accountability.

Professor Abdurezak Hashi:

You notice that we have what we call natural instincts or desires, if you will. In the Islamic tradition or in the Arabic language, they call it *al-jibilāt al-Tabi'iyah*. The instinct of, for example, hunger, the desire to fulfill your sexual needs, for example, that aspect is different from the one we mentioned just now as a body. Because these are inclinations that are inborn, natural, gifted. Not acquired, but they are there, part of human nature. You are not responsible for having, let us say, sexual needs or why you are hungry, for example, or why you are thirsty. You are not blamed for that. But fulfilling it in a decent way, that is your responsibility. In other words, having it is not an issue, but fulfilling it and directing it into the right way is something that you can control. It is something that you can manage. It is something that you can direct it. And that is the beginning of the moral journey for the human being.

Dr. Aasim Padela:

This view of how moral responsibility applies to natural instincts reminds me of something we heard from Professor Caspar earlier. Her experiment identified a brief window of

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opportunity during which we can exercise a veto over a particular impulse. Her results suggested that when an impulse arises, we do appear to have an opportunity to refrain from acting upon it. It is interesting that this neurological evidence seems to align with the Islamic understanding of impulses arising from natural instincts. While they are blameless in themselves, we are responsible for channelling them in an ethical way. Professor Hashi continues to explain how our intellect allows for moral responsibility.

Professor Abdurezak Hashi:

You have now the faculty of thinking or intellect or rationality or reasoning. Here is where the moral responsibility now becomes fully realized. Whereby now, not only that you have inclinations, but that you have a faculty of mind which helps the individual to distinguish between what is right and what is wrong. And in the Islamic tradition, they use the word *bulūgh*. I think the English, the right English word is maturity. Whereby an individual now has reasoning or they call it *‘aql*, or intellect if you want to use that word.

Dr. Aasim Padela:

So far, it makes sense. We are not responsible for natural laws acting upon our body. We have inborn instincts and desires which we can channel. And then we have voluntary acts which we can pursue. And these two latter domains are the domain of responsibility governed by our intellect. Another of our core project members, [Professor Mohd Yusof bin Mohamad](#), also from the International Islamic University of Malaysia, chimes in here. Professor Yusof is an Assistant Professor in Health Sciences, and comments on the theological importance of the intellect or *al-‘aql*.

Professor Yusof Mohamad:

In Islamic worldview, the *‘aql* is very important because we are a special creation of God as being given the rational capacity. But this rational capacity is used first to understand the revelation. Because the revelation given by God, the Prophet Muhammad, peace be upon him, the Qur’an, and the authentic prophetic traditions, you need *‘aql*, you need mind to understand it. You need to understand it whether it’s this obligation taken literally, or this obligation taken contextually. And how to worship, how are your actions towards others, how are your actions towards the environment, what the good deeds you need to do and what the bad things you need to avoid. That’s the purpose of *‘aql*.

Dr. Aasim Padela:

What I think Professor Yusof and Professor Hashi are getting at is that human beings are endowed with rationality in order to make choices, and are then held morally responsible for those choices. It would make little sense, pun intended here, to be given the gift of intellect or the burden of responsibility, if one’s actions were fully determined by a deity or by the laws of nature. Against this backdrop, Professor Hashi explains a core tenet of the Islamic faith.

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Professor Abdurezak Hashi:

This equation is addressed within one of the six tenets of the Islamic faith, known as *al-qada' wal qadar*. Then the subject is addressed are the subjects that we are addressing today. Are human beings free or are they predetermined? *Qada'* basically means predestination or preordained. *Qadar* basically means destiny, or fixing or measuring, or fated. So a Muslim is required to believe in the divine destiny or in the divine predestination. Predestination basically means the knowledge of God, which covers everything and everyone from beginning to end. Eternal knowledge that is covering all. *Qadar* means destiny, which means everything exists in the knowledge of God but at a certain point everything will be brought in to its right time to exist and appear manifested. So you have the knowledge of God that is covering everything including you and I. But *qadar* means God makes things at the right time in the right place and then they appear according to the plan and the design of God. *Qadar*. So therefore, in Islam we believe that God knows everything including your behavior, my behavior, and your action and my action.

Dr. Aasim Padela:

So if everything is in God's foreknowledge and he brings all actions about, then are we not determined? As Professor Hashi pointed out, the core principles of *al-qada' wal qadar* raise questions about the ways in which our lives are fated and where free will lies.

Professor Abdurezak Hashi:

Then the question comes: Since God knows everything before I am born to this world, He knows what I'm going to do, He's going to, He knows who am I and where am I going to exist and so forth, then am I free for my actions? Or is it something that is already being ordained, you know, determined for me? Are we free for our actions or actually we are not free for our actions? Whereby God has decided everything and God knows everything and what you are going to do is already being decided by God therefore you are just like a machine, you are just programmed, you are just doing what you are being destined for, you cannot go beyond that.

Dr. Aasim Padela:

The tenet of divine decree tells us about aspects of the fatedness of humans which prompts the kinds of questions about free will that we're asking about in this episode. And as Professor Yusof explains, it also points us towards certain attributes of God.

Professor Yusof Mohamad:

In Islamic view when we talk about the divine decree that's the word in the Qur'anic Arabic is *al-qada' wal-qadar*. *Al-Qada'* means the divine decree to make it very easy for us to understand at least there are four criteria. Number one we believe that the God is omniscient which means that God is all-knowing. All-knowing past present and future, God knows everything. And second thing is that the knowledge of God is in written form we put it on the preserved tablet they call it as the preserved tablet. And the third thing is that the will of God always, what we call, is much more higher than the will of the creations. Which means

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whatever things that happen in this world only can be done with the permission of God this is the third thing. The fourth criteria is that God is the one who create our actions. Now you might ask: How is it possible that God created our actions? Because, in Islamic faith there are many verses of Qur'an on these things, that Allah created the actions to us good and bad but we are the one who's choosing that particular action.

Dr. Aasim Padela:

So we've heard about the human faculty of intelligence or reason, which gives us the capacity to choose and that this capacity comes with moral responsibility and accountability for our actions. We've also heard about the tenet of divine destiny and predestination which informs us of God's foreknowledge and omniscience. Professor Yusof then further described that our destinies are metaphorically written down in a preserved tablet. For Muslim listeners, he was signaling to the prophetic tradition that the first thing God created was the pen and that he commanded the pen to write all the things he has ordained until the day of judgment. Those decrees are preserved in the tablet, *al-Lawh al-Mahfūz* so to speak. With that said, how do you reconcile all of this with free will and choice? Professor Yusof provides an overview of the spectrum of Islamic thought on this topic.

Professor Yusof Mohamad:

In Islamic theology or Islamic school of thought, indeed we have a spectrum. We have a group we call it *Jabariyya* school of thoughts. They believe that everything is governed by God and they were quoting certain verses of the Qur'an when the God mentions that God created all of all of our actions. So they believe that we are living like a puppet so it seems like to be like an essentialist, to be like what we call hard determinist: that we do not have any control whatsoever, everything has been determined by God. We have another group which is the Mu'tazilites, who believe that, no, we cannot subscribe evil to God. So humans are creating their own actions and humans are accountable on their own actions, we cannot subscribe these to God. And the mainstream, the Sunni groups, believe that we are in the middle. In which that we do have laws as mentioned earlier, and things that being governed by God. God is the one who knows everything, God's created our action. But we have the ability to acquire those things, based on our intention. So when we have a certain intention, God created a particular action, we chose to take it so we are being accountable on the choice that we took.

Dr. Aasim Padela:

The three positions within Islamic thought that Professor Yusof described appear to have some overlap with the spectrum of secular philosophical positions we heard about earlier in this episode. The *Jabariyya* school of thought is akin to the hard determinists, albeit with a different conception of the nature of predetermination. Secular hard determinists would cite naturalistic forces like evolution, whereas the *Jabariyya* school of thought sees predetermination as coming from God. The Mu'tazilite school of thought shares a similar outlook with libertarians, as they believe that humans possess free will without constraint. The mainstream Sunni school of thought is akin to compatibilists, in that both take the view that we have at least some ability to exercise free will, even though there are things that are beyond our control. To nuance this further, the Sunni school of thought that professor

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Yusof is referring to are actually at least two schools: the *Ash'āri* and the *Maturidi*, and one may even add the *Athāri* as well, all with further nuance. But for now, let's stick with the division he presented for our conversation.

Professor Yusof Mohamad:

I will say that this more middle path in which there are laws, we are governed by God, there are things that are beyond our control, and there are things that actually we have a choice. That is why we go to many verses of the Qur'an, for example in *Sūra Al-Zalzala*, Chapter number 99, stated that one deed that you are doing it, either good or bad, going to be (held) accountable on the day of judgment.

Qur'anic recitation

فَمَنْ يَعْمَلْ مِثْقَالَ ذَرَّةٍ خَيْرًا يَرَهُ وَمَنْ يَعْمَلْ مِثْقَالَ ذَرَّةٍ شَرًّا يَرَهُ

So whoever does an atom's weight of good will see it and whoever does an atom's weight of evil will see it (Q 99:7-8).

Professor Yusof Mohamad:

So because scholars were thinking that if we do not have free will then all of these punishments make no sense. All of this reward make no sense. And all of the purpose of life is no sense, make no sense. So the mainstream believe that, no, we are accountable for our own action, we have a free will to choose, and we are going to be accountable of that on the day of judgment. For every single deed, good and bad. So I will believe them taking more on middle stance more, or we can call it as a compatibilist.

Dr. Aasim Padela:

Professor Hashi cites several Qur'anic verses to support this middle stance, with its underpinning of divine justice.

Professor Abdurezak Hashi:

Now we focus on the aspect of justice. When we read the Qur'anic verses we notice that God is just. Chapter 4 verse number 40, God makes it clear that God will give a fair retribution to everyone.

Qur'anic recitation

إِنَّ اللَّهَ لَا يَظْلِمُ مِثْقَالَ ذَرَّةٍ ۖ وَإِنْ تَكُ حَسَنَةً يُضَاعِفْهَا وَيُؤْتِ مِنْ لَدُنْهُ أَجْرًا عَظِيمًا

Allah never wrongs anyone even by an atom's weight, and if it is a good deed he will multiply it many times over and will give a great reward out of his grace (Q 4:40).

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Professor Abdurezak Hashi:

In other words, someone gets punishment or reward according to their deeds. Whereby it makes it clear, for example, Chapter 45 verse number 22, the Qur'an makes it clear God will not do any injustice to anyone but he will give a fair account to everyone according to your deeds.

Qur'anic recitation

وَخَلَقَ اللَّهُ السَّمَوَاتِ وَالْأَرْضَ بِالْحَقِّ وَلِتُجْزَىٰ كُلُّ نَفْسٍ بِمَا كَسَبَتْ وَهُمْ لَا يُظْلَمُونَ

For Allah created the heavens and the earth for a purpose, so that every soul may be paid back for what it has committed and none will be wronged (Q 45:22).

Professor Abdurezak Hashi:

If you read chapter 18 verse number 29, Allah *subhānahu wa ta'ala*, says: truth has come to you, that's a revelation in prophethood, but whether to accept it or deny that's your choice. Very clear I will say in the original text وَقُلِ الْحَقُّ مِنْ رَبِّكُمْ فَمَنْ شَاءَ فَلْيُؤْمِنْ وَمَنْ شَاءَ فَلْيُكْفُرْ Truth has come to you, but it's your choice whether to believe it or not to believe it. Why? Because after all you will be accounted according to your choices.

Qur'anic recitation

وَقُلِ الْحَقُّ مِنْ رَبِّكُمْ ۖ فَمَنْ شَاءَ فَلْيُؤْمِنْ وَمَنْ شَاءَ فَلْيُكْفُرْ

And say, oh Prophet, this is the truth from your Lord. Whoever wills, let them believe and whoever wills, let them disbelieve (Q 18:29).

Dr. Aasim Padela:

Okay, so now let's recall our epistemic framework. These Qur'anic verses are the highest epistemic grade, and seem to be pretty clear about moral accountability and about divine justice. So how do we understand theodicy—or the problem of evil—from an Islamic perspective? Professor Yusof continues:

Professor Yusof Mohamad:

In the Islamic concept we believe that God created everything, good and bad. But it depends on you, how you're going to guide it. Now it comes to the first thing, the first part that God is the Most Omnipotent, the issue of omnipotence of God. So when you claim that the bad's not coming from God then it's as if God's not able to create something bad. It's not the issue whether God is creating good or bad. The issue is that, what is our choice? So that is the school of thoughts in Islamic views. But the mainstream views is that we believe that everything comes from God, but yet God gives us the freedom to choose. Because there are creations of God which do not have this kind of choice, for example the angels. So in the Qur'an, for example chapter number 6 mentioning that the angels when instructed, they will follow God 100%, they're not against God. But there are other creations of God, which is us, which have

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the ability to make a certain choice. So now it comes to the question why there are creations of God that're not going to have any free will are the angels, but there are other creation of God who have a choice? It is because God diversifies the creation, to show that He is very omnipotent. And when he gives a choice and he put them to a test, that is why in the test you have good, and you have bad options.

Dr. Aasim Padela:

What we've heard so far from our Muslim thinkers are that both predeterminism and free will are included within the Islamic theological framework. Professor Yusof reflects on how belief in free will can benefit individuals and society.

Professor Yusof Mohamad:

The way I look is that because the implication of having a free will, for example, let us say we believe that all of the things happen in this world are deterministic and not we do not have any choice, then we have a problem of how do we justify criminal behavior? And those people are just coming to the judge and say, oh my lord, it's not me it's my genes. He's going to deconstruct the socio-religious and the judicial system because crime can simply be mitigated. But having said that, we do acknowledge, yes, there are certain behaviors, maybe due to diseases, but we must go to procedures, as neuroscientific evidence imaging etc., to prove that. The second thing is that it gives a motivation for us if we believe that, yes there are certain things that beyond our control and there are certain things that we can do to motivate ourselves. Then we can have a more, I will call optimistic life. More motivation towards a good life.

Dr. Aasim Padela:

And reflecting on his own position on the free will question, Professor Yusof turns to philosophy more than to science.

Professor Yusof Mohamad:

It is uncertainty in the results of science that opens to the interpretation. So we can't really claim that science put the nail to the coffin to this issue, which means that no, we do not have a free will. But having said that, even science could not tell us whether we are completely free. That is why I believe that the philosophy comes in, because saying ourself is free does not mean that we need to really go beyond the laws. We can say ourself is free even within the laws, that is why I much more subscribe to the idea of compatibilism. You know you are living in a governing law, but at the same time you can choose specific actions that you want to you do.

Dr. Aasim Padela:

Within the compatibilist perspective Professor Yusof just described there is a nuanced understanding of human nature which includes the capacity for both good and evil. He goes

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on to explain that we are born with a blank slate, but that we need to follow divine guidance in order to resist evil inclinations from taking root.

Professor Yusof Mohamad:

The Muslims believe especially based on the Qur'an, that the God-given both natures, good and evil, ingrained in ourselves. But under normal circumstances humans are being created with the pure *fitra*, they call it as *fitra*, pure innate disposition. But rather later on, due to the environment factor, due to the upbringing, they have two tendencies either to choose the good ways or the evil ways. It depends on them, but both are being given to them because part of the test. When they were created they were created in a very clear, we call it the *fitra* that is very clear, like a blank slate. But later they develop the tendency to choose. And the human nature, based on the Qur'an, is to tend to have more weaknesses because of the inclination of Satan and etc. They try to whisper and try to deviate a human being. That is why we always constantly need guidance from God. God knows what we're going to choose in future, but God does not impose on us. And under certain criteria you are accountable on what you do. So you can't simply say that this is something that God has done to me and I do not have any say on this.

Dr. Aasim Padela:

Well, human moral accountability is clear then. However, Professor Yusof continues, there is a set of criteria applied to determine whether an individual has acted with their full rational capacity.

Professor Yusof Mohamad:

Number one, you must have a sane mind. In the Islamic perspective, you must have a sane mind. And second thing is that you must reach maturity. When you reach to a level of maturity and you know what is good and what is bad, then the third thing is that you are not being forced. And the fourth thing is that you must have a knowledge on it. You must have a knowledge that that particular thing is wrong. And of course, under certain things that are based on the innate disposition, we might think that this particular thing is wrong, right? But there are certain things that become very subjective. For example, we take a robber. When a robber tried to rob a bank, for him it's good. Because he gets more money. But for the victim or for the bank, it's not good because you're going to take the money from them. So God himself, the Creator, in Islamic world view, when God is the one who creates the robber and also the one who works in the bank, knows what is good and what is bad. But having said that, there are certain universal good and bad, which can be known by our *aql*, our rational capacity. So rational capacity is important for a Muslim in order to execute a certain action. And this must be based on the revelation. I would say there are similarities here in which that both views subscribe that when you have a lacking of mental capacity, you are not totally accountable. But in the Islamic worldview, sanity is very important.

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Dr. Aasim Padela:

And what if the conditions for sanity aren't met, with regard to a particular individual carrying out a given action?

Professor Yusof Mohamad:

It's a diminished responsibility. For example, when you are being convicted to a certain crime, and it shows that you have a lack of mental capacity. And this must be done based on a medical perspective. For example, you do neuroimaging, evaluation of behavioral tests, and it shows that you actually do not have control. That is why for us to understand the free will, we need to understand a few criteria. Number one, it must be you have the intention. Second is that it must come from yourself. And third, the ability to do otherwise. Which means that if you are performing certain actions that leads to crime, if you are not able to do otherwise, that means you have some issues with your own body, issues with your own brain, and issues with your own mind. So when you are having the lacking of a mental capacity, and depending to the judge that going to evaluate you and the jury, so of course you're going to have a diminished responsibility.

Dr. Aasim Padela:

And while the Islamic framework provides criteria for assessing whether an individual has rational capacity, it can draw upon resources of science to provide the evidence with which to make that assessment. For Professor Yusof, these different domains that religion and science can bring to bear upon the question of free will point to complementarity, not conflict.

Professor Yusof Mohamad:

Now talking about the conflict, do we have a certain clear conflict between science and religion? I would say no, because number one is that science operates in different ways. Science is talking about the mechanism, and etc. And does not really talk about why do we have these things. But religions mostly are complementary to what science has been mentioning. So I would say that it works at operationally a different level. So I don't see any clear conflict on these things, because science is very uncertain. And science does not discuss about moral obligations. Moral obligations are more on philosophy, right? More on ethics. And that is discussed in religion. So in religion, it's very clear that we are accountable for what we do. Science talks about how does the brain's activity influence the protein build up, and how those proteins work together in order to form a certain behavior. But science does not discuss whether this person should go to jail or not, whether this person is actually accountable or not. That is more on moral discussion, more on philosophy, more on ethical paradigm. That is why I see there's not a clear conflict happening between these two paradigms.

Dr. Aasim Padela:

Well, that brings us to the tricky subject of punishment. You might recall the case we opened with. You're a clinician asked by the court to weigh in on whether to commute the sentence of an individual with antisocial personality disorder, someone who assaulted a bystander. Based

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on what you've heard today about genetics and theology, what would you recommend? Now that you've had a think about it, I want you to hear from our panelists. Professor Gregg Caruso rejoined us to consider if, like him, you deny free will altogether, should any offender be punished?

Professor Gregg Caruso:

The issue of punishment is a complicated one, and I think it definitely directly connects to this issue of free will. If you ask someone why should we punish this wrongdoer, one answer you might give is they deserve it. And that notion is what is often referred to as the retributive notion of punishment. That retributive notion of punishment requires a kind of free will. So if free will skepticism is correct, retributive punishment is not justified. But there is other reasons you might give for why you should punish someone, like punishment is necessary to deter crime, or it's necessary to keep society safe, or it plays a role in the moral formation of the wrongdoer. Those are forward-looking justifications for punishment, and those are perfectly consistent with the rejection of free will. But I would add, I also have an approach that I've developed that's what I call the public health quarantine model. So, for instance, if I were to come fly to see you in person, and somewhere along the lines I contract Ebola, I think everyone would agree the state would be justified in quarantining me, i.e. restricting my liberty. And on my model, that justification is grounded in what I call the right of self-defense or prevention of harm to others.

Dr. Aasim Padela:

I imagine if you're like me, you've never thought in this nuanced way about punishment. We all likely think of it as retributive or restorative. I mean, we have verses in the Bible and the Qur'an about eye for an eye, which suggests a retributive model. And in our legal context today, courts try to make victims whole for their loss. A public health model is interesting. We won't delve into it much in a deeper way in this podcast, but I encourage you to look it up. And Dr. Gwen Adshead also joined us to consider how this kind of public health model can be implemented by sentencing for treatment, not only for punishment, giving examples from sentencing possibilities in Britain.

Dr. Gwen Adshead:

I think it's important when we think about sentencing to remember that sentencing is not just about the individual. The sentencing is the court's response on behalf of all of us. Because when people commit a crime, a particular crime of violence, it's committed against all of us. It's not just the victim. So when the court goes to sentence, they are sentencing, I think, not only as an act of condemnation, but they are also sentencing for protection. So sentencing is really complicated. It's not just about risk management. It's also about sort of condemnation as well, but also about whether there's something that could be done for this person. So, for example, people could be put on probation with a treatment requirement. And in fact, particularly since there's some reason to be concerned that putting people in prison may actually make them *more* antisocial rather than *less*. So we need to start getting thoughtful that we need to be having more joined up thinking, I think, between mental health services and criminal justice and particularly in probation. And that's the real-world meeting of the

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role of the sentencer and what can be learned about what's going to help that person: How risky is he and what could we do to make him less risky?

Dr. Aasim Padela:

Next, we asked Professor Han Brunner: Can the kind of genetic predisposition that he discovered in one family be used in the court of law to say, my genes made me do it?

Professor Han Brunner:

The question has been raised whether one could use this in a courtroom. And in fact, it has been suggested by some lawyers in various court cases in the United States and in Italy. I know of a few examples. I think generally, I would say these people have a tendency towards impulsive behavior, but then still the gene or the gene defect does not explain their behavior. If a person from the family that I reported on, if that person did something bad and I was asked to testify, I would tell the court that they had a condition that does affect them. But I wouldn't tell the court that they had a condition that took away their free will.

Dr. Aasim Padela:

Returning to our Muslim thinkers, Professor Yusof points out that there is a methodology to follow in ascertaining the level of rational capacity, and hence the level of responsibility, that an individual bears.

Professor Yusof Mohamad:

The first thing is that you must examine the evidence. You must go for neuroimaging. You must go to genetic testing, etc. So then you must have the behavioral assessment, whether this person has the ability to do otherwise. So if it's proven that that person is not able to do otherwise, of course, we can go for the defense and tell the judge that he is not able to do otherwise. So based on that, then we can go for the mitigation cases. But if a person just claims, and using the excuse of genetics, of course, we're not going to take that for consideration. So based on the evidence that's provided, if it reached to the level of certainty, then I believe that the judge or the jury is going to have a good decision on that.

Dr. Aasim Padela:

And Professor Hashi expands on this, to tease out the respective roles of theology and science.

Professor Abdurezak Hashi:

In any given circumstance, in order for you to make a judgment or to make an analysis or to make a conclusion on moral and legal responsibilities, there are two levels. They call it *tasawwur* and *tasdiq*. *Tasawwur* basically means conceptualization or description. So let us say when a crime takes place, we want to understand what are the causes of that crime. So therefore, we check the person, mentally, psychologically, whatever. Then we send to who?

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We send to medical doctors, to psychiatrists, and to other relevant professionals who are related to that case in order for them to describe the condition and attributes of that individual. Because we want to know the true picture of what caused this crime. And I'm sure this is similar to the Western world as well. So when the judge receives the report from those experts and professionals, then the judge now works on to build the judgment. And this is what they call *tasdīq*. So there are two levels. *Tasawwur* first, and then you have *tasdīq*. So in the Islamic tradition, religion and science go hand in hand. I put in that way because science is in charge for describing realities, understanding cases, so the job of medical doctors, the job of scientists, their job is to put the realities of things in front of us, to describe, to tell us about the mother nature and its elements, right? The theology and jurists or jurisprudence, if you want, they provide judgments. But the descriptions of what is going on and realities are provided by scientists.

Dr. Aasim Padela:

And this role of bioscience, to furnish evidence within an Islamic legal process, provides an apt example of the complementarity and integration of religious and scientific perspectives.

Professor Abdurezak Hashi:

So in Islam, this is where, you know, they talk about integrated approach, whereby scientists and expertise, they tell us what is going on and the legal groups or judges, they give us the judgment. So both science and theology are needed in this case, in the Islamic tradition. And I'm sure this is the case in Christianity, this is the case in Judaism as well, because religion basically provides these values, while science gives us, you know, the concept and the understanding and description. So we don't see any contradiction between the two for us.

Dr. Aasim Padela:

All right, we're near the end here. So we've heard a range of views on the case study from our interviewees on crime and punishment and the possibility of quarantine or treatment in addition to, or even instead of, punishment. And we have heard views on the importance of establishing rational capacity, while not allowing the excuse of genetics to remove moral accountability altogether. And we've heard about how science can generate the evidence needed to be taken into account, but that the ethical import of that evidence must be weighed. So let's return to the epistemic framework from episode one. When someone claims, my genes made me do it, or even God made me do it, are those claims supported by evidence? Are they probabilistic guesses? Or are they falsehoods dressed in explanatory clothing? From a clinical scientific perspective, I would argue we're much closer to falseness than certainty in such claims.

There's a weak link between gene variance and actual human behavior. And as clinician scientists, we must be honest about those limitations. As ethicists and religious adherents, we must be careful not to undermine a person's moral culpability without compelling justification. That said, I personally don't believe prison is particularly rehabilitative. So I might still argue for an alternative sentence, but on other grounds. Ultimately, I'll leave you to draw your own conclusions. While today's episode stretched the mind, our next one takes us

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beyond it—literally. In Episode 6 we'll be asking: Is Extraterrestrial Intelligent Life out there? A discussion on Human Uniqueness. It's our final destination in the big questions journey. So invite your friends, share this series, and bring new listeners aboard. The last episode will be, well, stellar. Until next time, wishing peace to you and your loved ones, Dr. Aasim Padela.

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