“ Road Podcast ”

The Moments that Change Us

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SHANKAR VEDANTAM: This is Hidden Brain, I'm Shankar Vedantam. Often in life, we find ourselves wrestling with a decision. And when we do, we tend to focus on the outcome of that decision. How we'll feel once all is said and done. Will I love my new job, or will I miss my old one? Should I move to a new city, or stay close to friends and family? Will having children bring me joy, or will they feel like a burden? We do this with smaller decisions, too. Is this expensive vacation going to be worth the cost? Should I find a new preschool for my child? What major should I pursue in college? Our minds fill

with questions as we try to predict the best paths to take. We make lists of pros and cons, weigh our options, get advice from friends. All this to make our future selves happy. But in running these mental calculations, there's something we rarely consider about the future. We might not be the same person when we get there. Our future selves might think, feel, and value things differently than we do right now. This week on Hidden Brain, we explore one of life's trickiest questions. How do we make decisions about the future when we cannot anticipate who we'll be when we get there? Our lives are made up of experiences big and small.

Some of these experiences flutter by, never to be thought of again, while others make lasting impressions. At Yale University, the philosopher Laurie Ann Paul, who is known as LA. Paul, studies these experiences. She's interested in how they inform and transform who we are. LA. Paul, welcome to Hidden Brain.

L.A. PAUL: Thank you. I'm happy to be here.

SHANKAR VEDANTAM: Laurie, in the middle of the 18th century, there was a young man named John Newton in England. His life story captures one aspect

of this idea that you've been studying for a while. I understand he had a rather difficult upbringing. He was seen as a difficult child?

L.A. PAUL: Yes. And an important thing is that his mother died when he was very young. And I think this made him feel very unhappy and very alone, especially when his father remarried and basically sidelined John.

SHANKAR VEDANTAM: So his mother was religious, but after she died, John soon found himself not just turning away from religion, but turning against it. He became

what you might call a militant atheist. Was his father a source of support, Laurie?

L.A. PAUL: No. Well, his father was distant and unemotional and was focused heavily on self-discipline. So I suppose this was his father's way of supporting him. But John did not find it did not find it helpful. In fact, it alienated him both from his father and from other people. And his character also then started to deteriorate. He behaved badly, he was arrested, he was rebellious, he was publicly flogged. And he also importantly, I think, had this kind of experience of despair where he blamed others and wasn't able to kind of take

responsibility for who he was and how he was behaving.

SHANKAR VEDANTAM: So at one point, he was recruited to join the Royal Navy, but even there, he was rebellious and got punished for it. What do we know about his life at this point, Laurie?

L.A. PAUL: Okay, so I would say recruited is a good phrase. He was press ganged by the Royal Navy. What happened was, I mean, so if you were a press gang, then you were pressed into service as he was. He had some background with the C, so he was especially valuable. But he wasn't

obviously interested in hard work, and he wasn't a model seaman, shall we say. And at one point, what happened was, he was traded basically to a slave ship. The Navy ships will exchange one set of seaman for another, and this is what was happening. He clearly wasn't a very appealing member of the crew, so he got swapped into a slave ship, and this became then very formative for him because he entered the slave trade.

SHANKAR VEDANTAM: So, he finds himself working in the slave trade, and I understand even here, he ends up making lots of enemies among the other men

working on the slave ship. So, basically, he was just not a very pleasant person to be around.

L.A. PAUL: That's right. I mean, well, for someone who doesn't want to be where they are, who doesn't have any kind of religious, shall we say, belief or faith to guide them, to who I think is alienated, unhappy, it's really no surprise that he was completely miserable. And then he also had started to have serious health problems. So I think this added a certain kind of difficulty to his life.

SHANKAR VEDANTAM: So at one point,

John Newton gets left on the coast of Africa, and even the slave ship that he was on basically abandons him. He goes through various experiences and adventures, but eventually finds himself back on a ship bound for England. This is called the Greyhound. But far from being grateful to his rescuers, he spends his days on the ship cursing and drinking, and at one point even falls into the ocean and has to be rescued.

L.A. PAUL: So he's rescued, but that's right. He's not even, he hasn't repented, right? He's, even though he had a difficult time in Africa, he was badly treated, got himself

into trouble. And in general, he sort of just went back to his old ways. And even this kind of near miss didn't seem to have a significant effect.

SHANKAR VEDANTAM: On March 10, 1748, John Newton woke up in the night to find the ship was caught in a terrible storm. What did he do, Laurie?

L.A. PAUL: Well, okay, so a detail was that he happened to have with him a devotional text called The Imitation of Christ, and he had been reading it, okay? And this is before the storm, so this was something that he had been reading as he

was traveling. And then in the middle of the storm, right, he suddenly had the realization that not only was his life in danger and the life of the entire crew was in danger, it was this incredibly intense situation, but he realized that if there was a god, he could expect no mercy. So he realized, at the heart of this incredibly frightening situation where, imagine a small, basically wooden boat being tossed around the sea with incredibly huge waves towering over it, looking like, knowing that at any moment, death could come. And then, at that moment, you realize that you're in a position of vulnerability, and I think someone with religious faith would

then look to God as a protector. And he realized both in that moment that he truly was vulnerable, but given his past life and his past way of being, that even in this moment of vulnerability, he didn't deserve the kind of mercy that God would provide.

SHANKAR VEDANTAM: The story goes that he and the captain of the ship had been plugging a hole, and this was after they had plugged many holes. But when they plugged this one, at one point he says, if this will not do, the Lord have mercy on us. And of course, at that point, he starts to reflect on the fact that he has, you know, railed against God for these many years.

And what mercy could a sinner like him actually expect?

L.A. PAUL: Yeah, exactly. So I think it's like, I think it's a combination of, you know, the realizing that, wait, I'm in trouble. But also, for the first time, maybe kind of comprehending what vulnerability requires. It seems to me that in this particular context, he was able, maybe for the first time, to realize what real vulnerability implied, and also what the promise of being saved from that entailed. In other words, he was able to kind of see the appeal of religious belief, maybe for the first time.

SHANKAR VEDANTAM: So what happened? Did the ship survive the storm?

L.A. PAUL: So it did survive, but I think an important element of that survival came from Newton, because he took the helm for many hours and for most of a day, and used this time, apparently, as he was basically attempting to kind of, you know, having the ship respond to the waves and dealing with all the problems of the storm, also reflected on his situation and who he was and what he was doing, what he had done, his past immorality, his past behavior, the way that he had isolated

himself from other people, and really had a bit of an existential crisis. As the storm subsided, he, I think, sort of also kind of emotionally collapsed.

SHANKAR VEDANTAM: So the battered ship arrives in Ireland, and only hours before a second major storm strikes, and in some ways convinces John Newton that God, in fact, answers prayers. And for the first time in many years, he visited a church and began to pray.

L.A. PAUL: That's right, so it seems like what happened was, after experiencing this intense vulnerability, and in the midst

of that, recognizing the power of being saved and understanding what that really meant and how, in a moment of great openness, you can be saved and recognizing that is, in some sense, as the appeal of Christ. So I think he interprets this, it seems like he interpreted this as a moment of insight, then he was allowed to then return to land and survive. And the ship gets back just before a second huge storm. So he feels like there was a sequence where he experienced a kind of openness and a recognition of the divine kind of power and grace of God. He prays in response. God grants him then the opportunity to survive by getting him to

land in time. After that, basically, he starts going to church and kind of performing devotional services.

SHANKAR VEDANTAM: So in 1772, this was a little more than two decades after that storm at sea, John Newton writes a hymn to describe his own transformation. Many of our listeners have heard this hymn, Laurie. What is it?

L.A. PAUL: It's Amazing Grace. So the hymn begins with amazing grace, how sweet the sound, that saved a wretch like me. I once was lost, but now am found, was blind, but now I see. T'was grace that taught my

heart to fear, and grace my fears relieved. How precious did that grace appear, the hour I first believed. And so you see it here, right? So here's this description, basically, of someone who's finding themselves really in a pit of despair, in darkness and lost, and who's gone through great pain, and then suddenly is relieved from this fear, and can see the beauty of what protection and love and goodness could bring.

SHANKAR VEDANTAM: I'm wondering, Laurie, what the young John Newton, the rebellious man who was always cursing God and drinking himself senseless, what

would he make of the older John Newton, the man we all now remember as the creator of Amazing Grace?

L.A. PAUL: Well, I think this is something that's very hard for any of us to make sense of. So anyone, certainly someone like John Newton, would view the future version of themselves that was kind of committed to a religious perspective as fundamentally unlike them because the way that they made sense of reality is fundamentally how they can make sense of reality, and I think would kind of reject that. Of course I wouldn't be like that. That's just not me.

SHANKAR VEDANTAM: Another transformation that happened in John Newton's life is that he spent some time in the slave trade working on these slave ships, but eventually became an abolitionist and in some ways led the movement against the slave trade across the British Empire.

L.A. PAUL: Yes. This is another transformative experience, and I expect that it was related to his own discovery of both how one can be deeply vulnerable and how protection from the horrors of a problematic and violent world is so

important. And my thought is that he participated in the slave trade, and he participated in some of the atrocities. And so I think he had a direct understanding of the kinds of individual and societal cruelties that were being imposed on people that were being enslaved. And I think to understand how terrible it is to be in a vulnerable position, I think one has to have experienced that. So if you've never experienced that kind of vulnerability, or maybe you've papered over it, I mean, he did lose his mother at a young age, and he was taught to kind of be a hard man and not be empathic and not think about himself or about others. But when he

learned to think about himself and understand himself as a vulnerable person who needed saving, I think that what he discovered when he discovered redemption and being saved himself from a watery grave was, I think, his capacity to understand that there might be other people who could also be vulnerable and needed saving. And so I like to think that his path basically to becoming an abolitionist was lighted by his ability to discover his own redemption and to kind of find connection with other people through that.

SHANKAR VEDANTAM: At one point, I

understand he writes a pamphlet titled Thoughts Upon the African Slave Trade, and it's a graphic account of what happens on these slave ships and includes a confession of his own involvement in the slave trade. I understand the pamphlet sells out. The second edition goes to every member of parliament. He ends up having a significant effect on the slave trade across the British Empire.

L.A. PAUL: Exactly. And so this is, I think, another version where he realizes how badly he had behaved. What he did was he drew from his own personal experience, both what he did as a slave trader and

what he saw as a slave trader, others doing, and recognized that he needed to confess, okay? He needed to confess to his own sins and also describe the sins of others. And obviously, this is the same kind of thing that you see in other sorts of religious confessions of being a sinner. And was able to, I think, demonstrate through implicating himself in the truthfulness of his account, and also the cruelty and outrageousness of what was being done. So he was able, I think, through the pamphlet, to bring home in a particular way the outrages that were being perpetrated and to show the immoral nature of the practice. And this made, I

think, a significant contribution to the political movement to abolish slavery in England.

SHANKAR VEDANTAM: John Newton went from being a man who loved to stir up trouble to a minister who tended to other troublemakers. He went from profiting off the slave trade to an outspoken opponent of it. He died nine months after the slave trade was abolished across the British Empire. We've all had experiences that have had profound effects on us. Sometimes those experiences are big, like witnessing a birth or surviving catastrophe. And sometimes they are small, like

meeting a friend who offers us a new point of view. When we come back, how life-altering events reshape who we are and the psychological challenge of dealing with such change. You're listening to Hidden Brain. I'm Shankar Vedantam. This is Hidden Brain, I'm Shankar Vedantam. We spend a lot of time trying to make plans for our future selves. That is, the version of ourselves that will exist tomorrow, next week, or a year from now. We make these plans based on the assumption that we are going to be the same person tomorrow, next week, or a year from now. But what if this is not the case? What if our future self is a stranger to us? At Yale University, the

philosopher LA. Paul explores this question. Laurie, just like John Newton, the activist Malcolm X also had a number of transformative experiences. Can you give us a quick biographical sketch on how these experiences changed him?

L.A. PAUL: Yes. So, okay. So, it depends on where we want to start. I think he had experiences as a child when his father was killed, and his mother was committed basically to a mental institution. I think that was very traumatic for him. He had an experience when he was in school, where he was told he couldn't become a lawyer because he was black. And as he

developed and grew, he was imprisoned. So, he engaged in some burglaries, and was caught, and then he was imprisoned. But when he was incarcerated, he discovered basically the beauty of reading. And there's a quote where he describes months passing without even thinking about his imprisonment, that he had never felt so truly free in his life. And so what happened basically is Malcolm X sort of embarks on this very kind of literary and intellectual process of kind of self-development. And at the same time, he becomes exposed to the nation of Islam and becomes basically a kind of minister with the group.

SHANKAR VEDANTAM: And at this point, I think many people are familiar with the speeches he made where he preaches violence as a solution to oppression. And he transforms himself basically from being this troubled kid to someone who basically says, violence is the way to rid ourselves of the shackles of oppression.

L.A. PAUL: That's right.

MALCOLM X: And bring about the freedom of these people by any means necessary.

L.A. PAUL: So what he does is he comes

into himself as a deeply, I think, intellectual and powerful and motivating speaker, supporting black emancipation and the black power movement. And he's very critical then, of course, of like the civil rights movement and Martin Luther King, because these are non-violent advocates of a non-violent way of achieving civil rights. And he thought this was kind of, you know, not powerful enough, right? Like he didn't want to fight against racial segregation. He wanted to defend racial segregation as the best way to kind of preserve true emancipation.

MALCOLM X: Instead of you and me

running around here seeking allies in our struggle for freedom, in the Irish neighborhood or the Jewish neighborhood or the Italian neighborhood, we need to, we need to seek some allies among people who look something like we do. Once we get there, allies...

SHANKAR VEDANTAM: So, in 1963, he goes on a pilgrimage to Mecca, one of the holiest sites of Islam. How did this pilgrimage change him, Laurie?

L.A. PAUL: When he goes on the pilgrimage, he discovers that there are Muslims of all different races. He describes

seeing Muslims of all colors, from blue-eyed blondes to black-skinned Africans, basically interacting as equals. Everybody was interested in the same kind of spiritual development. Everyone was making this pilgrimage. And he discovered, through having this experience, it wasn't something that he could think of or conceive of, given his previous experience in the US and how badly he and his family had been treated by white people on a very consistent basis. Also, other members of the Nation of Islam, like there were lots of terrible interactions with white police members in particular. But this experience opened up a new framework for him, where he

thought, wow, I see a way in which Islam could provide a means to overcome racial problems. In other words, it opened up a conceptual space for him that allowed him then to change his perspective and to think that maybe you didn't have to think that white people were devils. You didn't have to have this kind of deeply exclusionary kind of world view.

SHANKAR VEDANTAM: And so he comes back to the United States, and how does this change the message that he's preaching?

L.A. PAUL: It's quite disruptive. He changes

his world view. He changes his message. He starts to rethink the question of racial justice and how to kind of how to get there.

MALCOLM X: First, the white man and the black man have to be able to sit down at the same table. The white man has to feel free to speak his mind without hurting the feelings of that Negro. And the so-called Negro has to feel free to speak his mind without hurting the feelings of the white man. Then they can bring the issues that are under the rug out on top of the table and take an intelligent approach to get the problem solved.

SHANKAR VEDANTAM: So you call the turns in Malcolm X's life, the turns that we all experience as we go through life, transformative experiences. What do you mean by that term, Laurie?

L.A. PAUL: What I mean by the phrase transformative experience is an experience that results from discovering a new kind of experience. In other words, having a kind of experience that you've never had before that's also very distinctive. I mean, you can have a new kind of experience like tasting a new esoteric flavor of jelly bean and it might not change anything radical, but

some new kinds of experiences are very profound. They teach us something new that basically reorganizes the way that we make sense of the world and ourselves in relationship to it.

SHANKAR VEDANTAM: Can you talk a moment about how these transformative experiences are not just something external happening to us, but they're also a way for us to discover something about ourselves that perhaps we did not know earlier?

L.A. PAUL: Yes, so, if it's a new kind of experience, then I think of you learning

something new, or gaining a new ability to represent the world, or to think about yourself as interacting with the world. And so you can learn something about yourself through that experience by learning that you have new abilities to respond in ways that you didn't realize that you had, but you can also create those new abilities in virtue of having the experience. Say you were blind and had a retina operation and gained the ability to see. You would gain all kinds of new abilities, but partly in virtue of having these new sensory experiences.

SHANKAR VEDANTAM: You told us the story earlier of John Newton, and I'm

thinking about what happened to him the night of that storm. You know, he has this terrible catastrophe unfolding around him, but in the process, he's also realizing something about himself. He's realizing that he is vulnerable, that he is scared, that he is calling upon God for mercy. In some ways, the storm is revealing something that's inside him to him.

L.A. PAUL: It's interesting, so the new experience there is first the experience of incredible danger, and I'm sure the power of the storm was also like, you know, the amount of force that he must have experienced with the waves must have

been kind of overwhelming. I'm sure that, you know, you wouldn't normally experience that. So he has this new kind of experience, and this brings home to him his vulnerability in a way that it seems like he probably hasn't experienced since he was a child. And so you're right. So there's this external experience, the storm, that then creates a response in him, which is, I think, a new kind of feeling, a new capacity for vulnerability. And then what he discovers in himself is he feels this vulnerability. And what does he do? He hopes for grace. He hopes for redemption. He hopes that the Lord will take mercy on him. And he then also discovers then this

kind of latent desire to be saved.

SHANKAR VEDANTAM: In both the examples of John Newton and Malcolm X, we see a person transforming into someone they would have considered antithetical to their younger selves. These are examples of dramatic transformations. They underscore the challenge that Laurie has been studying. Why do we think we can confidently make plans for our future selves, when in fact, we might have very different preferences, attitudes, and values in the future? Laurie says that you don't need dramatic moments of transformation to see how subjective experience can

reshape our minds. She cites a thought experiment, first proposed by the Australian philosopher Frank Cameron Jackson, about a brilliant scientist named Mary, who has a very odd upbringing.

L.A. PAUL: In Jackson's thought experiment, the idea is that Mary grows up in a black and white environment. She's never been in anything other than a black and white space, and her skin is painted either black or white, whichever you prefer, so that she doesn't have... She's never had any experience of color. Now, in Jackson's example, she's also a scientist who knows all of the science of color and

the science of the brain, so that she knows basically all the scientific facts about what seeing color involves. And we can even add to it that maybe other people who know about color tell her about kind of, well, color is like this, and red is like warm water, and blue, you know, blue is like cold water, and fire engines are painted red, and that sort of thing. So she has all this information. But she's never left her black and white space. And then the question that Jackson asks is, well, Mary knows all this information. Does she know what it's like to see red? And the thought experiment is designed in such a way that we're supposed to say, and most people do

say this, and I certainly think this, and most philosophers think this, is that, no, Mary doesn't know what it's like to see red. She knows all the scientific facts about seeing red, but that's just not enough. She has to actually leave her black and white space and go out into the world and see red for herself to know. And once she's done that, then she'll know what it's like to see red. Then she can add that to her scientific knowledge, but that's a different thing over and above all of the scientific facts.

SHANKAR VEDANTAM: And is the different thing merely subjective experience, which is at this point, Mary, being a brilliant

scientist, has learned everything about wavelengths and frequencies. She knows all the physics of light. She knows the properties of red. She knows what things are red. She has had the color red described to her in various settings. What has changed when she finally sees red for herself for the first time?

L.A. PAUL: Right. So in Jackson's example, he assumes that we're at the end of all scientific inquiry. So there are no new scientific facts to learn. And Jackson wants to say, well, maybe there's something else to learn about the world that's more than just all the scientific facts in virtue of

having a subjective experience. Learn a way that the first person perspective or the mind meets the world. And that's just not something that you can capture with a kind of third person objective scientific point of view.

SHANKAR VEDANTAM: I mean, Malcolm X had probably read accounts of what people traveling to Mecca experienced, right? He might have read about what this pilgrimage was like, but of course, that's not the same thing as actually going on the pilgrimage himself.

L.A. PAUL: Exactly. And I think also seeing

people performing various acts together and seeing people kind of exercise a kind of devotional revelation is very powerful. He probably responded empathically as well. And so you could know all the science of like empathic response. And still, once you feel that, that's going to be motivationally different. So it's that kind of thing that I want to pinpoint. I want to say that Malcolm X probably knew in theory he would meet people of all different races, right? But when he actually did and interacted with them, he saw that there was a capacity for something and was motivated to sort of change his way of thinking in a way that maybe just physically

wouldn't have been able to do if he hadn't had that actual experience.

SHANKAR VEDANTAM: At a much more trivial level, this might involve the foods we eat, for example, the fruits we eat, for example. If there's something that we haven't tasted before, just having it described to us doesn't quite do it justice.

L.A. PAUL: That's right. My favorite case is the example of the durian fruit because at least many people who live in the US, which is where I live, have never tasted a durian. And the durian fruit is very strange because it's both incredibly foul smelling,

but the taste, independently of the smell, is supposed to be something like, I don't know, strawberry vanilla custard or something like that. And so if you haven't tasted it, I can tell you it's like having a strawberry vanilla custard next to a sewer, and that's pretty evocative. Or it's like eating stinky cheese, but you still don't know what it tastes like. That's just an evocative description.

SHANKAR VEDANTAM: So there's a real world example that comes to mind that perhaps has slightly bigger stakes than eating a fruit, Laurie, and that's the decision to have children. Talk about this,

that we can read books about what it's like to have children, what it's like to raise children, but that's not quite the same thing as actually having a child yourself.

L.A. PAUL: >I think that's right. This is exactly what happened to me when I had my first child. So I became pregnant, and the pregnancy was already a series of discoveries. In other words, what it was like to grow a person inside of you was both something that's exhaustively discussed in various contexts and also completely impossible to understand until you've actually had that happen. And even more so with the process of giving birth.

There's something utterly bizarre about knowing that you're growing a child inside you. There's something utterly bizarre about having to kind of get that child outside of your body because it's far too big, as you realize in a very important and profound way when it's about to happen. And then also the transition from this child that you've known from the inside, moving inside you, to seeing the baby after the birth, it's profound. You know this child in one way, and then you meet this child after you push it out of your body. It's just not something that you can understand unless you actually go through that experience. That was a really enlightening

moment for me, precisely because I saw the connection between that and the trivial experience of like seeing red for the first time or trying a durian for the first time, because I thought, wait a minute, the same structure is here. But this experience, it's so profound and so moving that it's really changed something about me in a very fundamental way.

SHANKAR VEDANTAM: You once wrote a paper on this topic, What You Can't Expect When You're Expecting, and it's about this gap between what parenthood is like as you read about it and think about it and actually then experiencing it.

L.A. PAUL: That's right, and part of the title is a play on a famous book called What to Expect When You're Expecting. And I read that book, and I was so disappointed, because it didn't tell me at all what to expect when I was expecting. I remember getting so frustrated that I threw it against the wall. And so that's why I had to write a paper in response after going through the process of pregnancy and giving birth and realizing that it was profoundly different from anything that anyone could have described to me through testimony or in the pages of a book. When I say, I'm not the same person, what I mean is that what

I care about most in this world has changed as a result of the transformation. I care most about my children, and that's made me into a different kind of person. And so the testimony you're getting from me now about how great it is to be a parent doesn't apply to the person who's, like to me before I ever even thought about having a child. I didn't care about those things.

SHANKAR VEDANTAM: When we come back, deeper problems with not knowing who our future selves are going to be. Also, Laurie asks me to imagine a rather unusual scenario.

L.A. PAUL: I ask us to imagine ourselves, or ask you to imagine yourself traveling on summer vacation, exploring a castle and going deep into the dungeons when Dracula comes to you. And he offers to make you into a vampire.

SHANKAR VEDANTAM: You're listening to Hidden Brain, I'm Shankar Vedantam. This is Hidden Brain, I'm Shankar Vedantam. In life, we very often don't anticipate how much we will change in the future. Sure, we may understand that going through a midlife crisis, or having a child, or falling in love, will have some effect on us. But we

do not expect these experiences to upend who we are at a fundamental level. The philosopher LA. Paul is the author of the book, Transformative Experience. She says the people we were before those experiences may not be the people we become afterwards. How do we plan for the future, when our future selves might be strangers? And what does this mean for how we should live our lives in the here and now? Laurie, one thing we try and do as we are making important decisions is that we try to simulate how we will feel if we went down path A or path B. How effective is simulation in helping us anticipate how we will feel after a

decision?

L.A. PAUL: I do think that we rely on simulation in lots of contexts, and I think it can be very effective when we're relying on simulation of things that are familiar to us. Or, for example, trying to kind of put together simulations of combinations that are familiar to us. So maybe I've never had coconut coffee ice cream, but I can imagine the flavors mixed together and probably could get a pretty good simulation. But when we try to simulate ourselves as being very different, I think there are like two really serious problems that we have there. The first one is related

to the problem of this example of where Mary, who grows up in a black and white room and has never seen color, can't imagine what it's like to see color. She doesn't know what it's like to see red until she actually goes out and has the experience. If you ask Mary to simulate what it's like to see red before she's ever had that experience, I just don't think she could do it. I think she might simulate something, but I just don't think it would be accurate. So the first problem is that our ability to simulate is, I think, just kind of limited in certain ways by our experiences and maybe by the capacity of the human mind. I mean, it might just

might not be possible to simulate truly great pain if you ever haven't had it, like the pain of giving birth or something like that. But there's another problem as well. The other problem has to do with what I think of as the kind of conceptual revolution that we undergo when we change the kind of person that we are. So going back to when we were talking about religious conversion, I think that John Newton as well as Malcolm X, each underwent a kind of conceptual revolution in how they made sense either of the world or of the possibility of God or of the capacity for people of other races to embrace a shared goal. And in all of these

contexts, the kind of conceptual revolution that they underwent may be similar to like the Copernican Revolution, right? In other words, a real change in how you understood the nature of the world also changed how they understood themselves and who they were. And there's another philosophy example that I've been thinking about a lot recently. It's another famous one developed by Thomas Nagel, or at least popularized by Thomas Nagel, about imagining the possibility of being a bat. Okay. And what Nagel says is, look, it's just not possible for a person to imagine or to know what it's like to be a bat. And now that sounds a lot like the Mary in the Black

and White Room example, but there's something extra that Nagel says that I think is really important. Nagel says, sure, you can imagine having wings and flapping upside down and maybe detecting sound through echolocation, the way that human beings do it when they hear someone walking down a corridor. But that's not imagining what it's like for a bat to be a bat. That's imagining a human version of being a bat. And what he's trying to get at there is that there's a kind of conceptual incoherence in imagining yourself as someone else. And it's just there's a way in which you can't do it. On the one hand, there's this kind of inconceivability of it.

On the other hand, you don't even know the nature of the change that's supposed to bring this about. And so you can't even kind of perform some kind of educated kind of forward evolution of how that change would happen.

SHANKAR VEDANTAM: So when we make big decisions, we often come up with lists of pros and cons. Effectively, we're doing a cost-benefit analysis. You have a thought experiment to illustrate this idea that involves vampires. Can you describe the thought experiment for us?

L.A. PAUL: Sure, this is my favorite thought

experiment. So I ask us to imagine ourselves, or ask you to imagine yourself traveling on summer vacation somewhere in Romania, exploring a castle and going deep into the dungeons when Dracula comes to you. He offers to make you into a vampire. And this is a very, you know, this is a rather stunning development in your summer vacation. So you rush back to your Airbnb, and you start thinking about, what do I want to do? And before you left, Dracula said to you, look, leave your window open at midnight, and I will come to you, otherwise, in the morning, leave and never return. It's like, this is a one-time only choice. And if you become a

vampire, you can never go back. So as you reflect, you start looking up information about vampires, and you start calling your friends and talking to them about it, and you find out that all of them have already become vampires. So of course, after getting upset with them for not telling you before, you say, well, like, why didn't you tell me? And they say, well, like, you can't possibly understand. You just can't understand what it's like to be a vampire. You wouldn't know what to make of it. You just have to become one. And of course, they'll tell you that it's fabulous and that you should do it, right? And so you go, well, maybe I should do it. You keep

thinking about it, and then you realize, well, wait a minute. If I can't possibly understand what it's like to be a vampire, then on what basis can I meaningfully and rationally evaluate this as an option and compare it against what it's like to be human to make my choice? I haven't got the information I need. You're supposed to be able to compare the happiness of the person after the choice to the happiness of the person before the choice. But if you basically replace the person, then this comparison doesn't really make any sense anymore.

SHANKAR VEDANTAM: I'm wondering,

Laurie, how we should think about something like advanced directives. In medicine, we ask people, tell us what you would like us to do if you were in this situation, if you were in a vegetative state, if your brain wasn't working anymore, if your limbs weren't working anymore, how much, how aggressive do you want us to be? Tell us what you want. And it essentially is asking people, tell me what you want done with your future self. What is the work on transformative experience? Tell us about how we should approach medical advance directives.

L.A. PAUL: I think it tells us that the

ordinary approach that we have towards advance directives in some deep way really doesn't work. In other words, if you think of an advance directive as something that you would use to make a decision about your future self, like, so for example, let's say you're a committed vegetarian, and so you specify that, and you've been diagnosed with Alzheimer's, and it's coming on fast, so you specify that you're not to be given bacon, no matter how much you want it when you're living in your assisted living facility. Or maybe you're very religious and you specify that you need to be taken to church, or taken to a place where you can worship on a

regular basis. And then, what can happen in these contexts is you lose your commitment to vegetarianism. Everyone around you has bacon and sausage every morning. What you're committed to is enjoying various kinds of gustatory experiences, and you are deeply miserable about the fact that this advanced directive has like prevented you from gaining some source of pleasure like in a life that's diminished in so many other ways. Or you lose your faith entirely, and then you become incredibly upset at being forced to go to these places of worship and participate in this, what you regard as a farce now or something you just don't

even care about. You have so little time left in the world that now you're forced to spend it engaging in these practices. You can see how these sorts of changes would happen. Other kinds of things happen, like with respect to, like there can be kind of catastrophic memory loss or a loss of agency in various ways. And the problem is that when you're trying, you can be told, well, this is a kind of change that's going to happen to you. But until you're actually experiencing that change, there are just dimensions of it that you can't predict. And the thought behind an advanced directive is that you're supposed to lay this out now while you're a rational individual and make

rational choices for your future self, who's unable to make those rational choices. But if you're not able to actually rationally make those choices in the way that we described, because you don't know enough about the nature of that experience to assign it value in the right way or what you're going to care about in that context, because you're going to change as the result of having the kind of cognitive change or the cognitive degradation that's in store. So it seems to me that instead of asking people to perform an impossible task, we should just be more flexible and not require people to have to make rational choices about their

future care before they're actually like embedded in that situation. Now, there is a problem because sometimes people can't make choices at all, like if they're not able to speak or they're not able to kind of advocate for themselves in various ways. And I think part of the reason why people develop advanced directives is because they want their family members to have something from them that guides them. And family members often feel very grateful at having this guide. But again, it's not clear to me that those guides are appropriate for the selves that result from whatever has happened, either if it's like cognitive decline or physical decline or

some combination of that. So you have a guide in how you're supposed to kind of make decisions for someone, but that guide was appropriate to who they were before the transformation. It doesn't fit to who they are afterwards. I think the notion of an advanced directive actually really does need to be rethought.

SHANKAR VEDANTAM: We've discussed in different ways how we find it very difficult to imagine who our future selves are going to be, but that's at an individual level. Do you think the same thing happens at a collective level as well, Laurie?

L.A. PAUL: I do think it can happen at a collective level. I think, for example, when we went through a pandemic, what happened was a kind of collective discovery of the collective effects of, you know, social distancing and like not being able to do things like go to the gym or see people that you regularly saw in some kind of casual way. We discovered the value of casual kind of contact in lots of informal circumstances. It's changed us as individuals and it's changed us as a society. And so, and I think war can do that to a society, and I think massive political upheaval and other kinds of context can do that. And I don't think there are any

straightforward answers. I think it's also just super helpful to understand that this conceptual framework can apply and to recognize that there's an element of true unknown when that happens.

SHANKAR VEDANTAM: I mean, the same thing can also happen with an election, can it not, Laurie, which is, you're voting for a candidate or you vote for a party with some understanding or you're making a prediction of what this party or the president might do in the future. But of course, it's not until you actually get there that you actually see what it's like.

L.A. PAUL: Well, that's right. And you know, it may be that the process of electing someone changes the person who you've elected so that what they were committed to before the election might actually change afterwards. So if the person that they are is changed by, for example, a landslide victory or being surrounded by people who change that person's character or commitments in various ways, then what we end up with as the result of an election process might actually be a transformed candidate, which then is going to change the results in various ways.

SHANKAR VEDANTAM: So sometimes we are actually given that rarest of things, a glimpse into who our future self is going to be. Tell me the story of the inventor Alfred Nobel, Laurie.

L.A. PAUL: Alfred Nobel was a chemist, an inventor, and what he invented was dynamite. And so basically he was a contributor to, indirectly, to the deaths of many, especially when explosives are used in war. And what happened was there was a premature obituary that described him as the merchant of death. And he was horrified when he discovered this, because that was not how he wanted to be

remembered, okay? And so when he got this kind of insight, this sort of unexpected discovery of how he would be regarded by future generations, he dedicated his fortune basically to establishing the Nobel Prize, which obviously is a huge contribution to scientific discovery and innovation and to our intellectual discovery more generally, and changed his legacy fundamentally.

SHANKAR VEDANTAM: LA. Paul is a philosopher at Yale University. She is the author of the book, Transformative Experience. Laurie, thank you so much for joining me today on Hidden Brain.

L.A. PAUL: Thank you for having me.

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