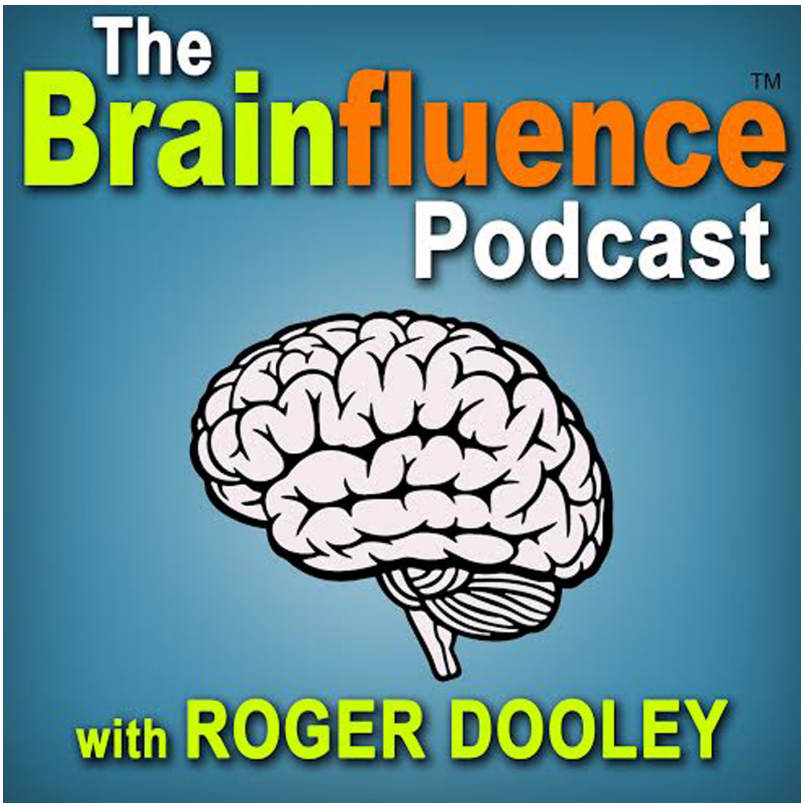
The Strange Order of Things with Antonio Damasio



Full Episode Transcript

With Your Host

Roger Dooley

The Strange Order of Things with Antonio Damasio

Welcome to the Brainfluence Podcast with Roger Dooley, author, speaker and educator on neuromarketing and the psychology of persuasion. Every week, we talk with thought leaders that will help you improve your influence with factual evidence and concrete research. Introducing your host, Roger Dooley.

Roger Dooley: Welcome to the Brainfluence Podcast. I'm Roger Dooley. The majority of guests we have on this show are business experts, but we also try and feature scientists who can help us understand human behavior and decision-making. Today's very special guest has contributed far more to that understanding than most through his research, his theories and his books.

Dr. Antonio Damasio has explored the science of emotions and consciousness and brought groundbreaking insights to these areas. He's the David Dornsife Professor of Neuroscience, Psychology and Philosophy, and Director of the Brain and Creativity Institute at the University of Southern California. His research has been cited over 100,000 times, and his books have been translated into dozens of languages.

He's the author of "Descartes' Error: Emotion, Reason and the Human Brain," a classic that's been translated also into more than 30 languages, and multiple other titles. His new book is "The Strange Order of Things: Life, Feeling and the Making of Cultures." Antonio, welcome to the show.

Antonio Damasio: My pleasure.

Roger Dooley: I love your title, Professor of Neuroscience, Psychology and Philosophy. Was that created just for you?

Antonio Damasio: Almost. No, I think that there was one point at which it also included neurology, because I happened to be also an MD neurologist, and then I thought it was a little bit too much. We'd better not go beyond three. It does reflect what my main activities are as a neuroscientist, someone who does science on the nervous system and trying to understand the nervous system, especially in relation to mind and behavior. It also reflects the fact that psychology is normally the traditional discipline where these studies have taken place, and the fact that all of this is very relevant to philosophy. In fact I do have an appointment in the Department of Philosophy at USC, so it all makes sense.

Roger Dooley: It really does. Well, I think, just in reading your current book, you can certainly see those disciplines intertwining throughout that.

Antonio Damasio: Right.

Roger Dooley: In fact, it seems like neuroscience is infecting other areas, as is psychology. We've had a couple of economics Nobels awarded for really what would be called psychology work, I would say, with Kahneman and then Thaler.

Antonio Damasio: Yeah. It's all about the fact that this is really about humans, about human behavior, about the human mind, and of course the human mind has quite a lot to do with the brain. It stands to reason that when we try to understand these complex problems, you end up resorting to a variety of disciplines. It can be traditional psychological approaches, or it can be modern neuroscience or biology in many cases. Of course, when you try to construct overall interpretations, you end up very often doing what has traditionally been the role of the

philosopher, so it all makes sense. It's all about the huge complexity of humans and human behavior.

Roger Dooley: For years, people tended to treat human beings as rational actors, particularly in the economics area of course, as if their brain was like a computer just sort of weighing inputs and calculating optimum results. Then of course the folks that I just mentioned, along with many others, pretty much demolished that by showing that a lot of our decision-making is non-conscious and driven by emotion, by biases and by other factors, by rules that we aren't really aware of. Kahneman talks about System 1 and 2, and other people talk about conscious versus non-conscious. Are you comfortable with that kind of divide from your standpoint?

Antonio Damasio: People very often think ... and that depends on temperament and on one's style of behavior and action ... people very often think close to their facts, but sometimes they can, as the facts get thought about, they can produce emotions and people can be driven by those emotions, and in fact to the process of thinking and reasoning.

What is very important to realize is that we have these two tendencies within each of our minds. Sometimes you're more so-called rational, sometimes you're more emotional, but it's … that you're only one thing or the other. Not only that, the same person that is normally seen as very rational and staying close to the facts when he or she reasons can under certain circumstances be the most emotional decider.

What is very important is to realize the complexity of human beings and the variety of human beings. We're all human, but we all have differences that have to do, as I

say, with our temperament, with the culture that we come from or the one in which we operate most often, and we need to take this all into account. Too, there are these extremes of the rational and the emotional.

The other thing that is very important for our listeners to realize is that when you talk about emotions, you very often have a tendency to regard them negatively. I think you would agree with that, I'm sure.

Roger Dooley: Well, sure, people say. You know, it's certainly a common concept that if you're going to make a decision, you should take emotion out of the process, but I think you'd probably disagree with that.

Antonio Damasio: I disagree with that completely, because that assumes that emotions come in one kind, one variety, and that they're all bad. You know, it's something to stay away from. This of course is completely wrong, because to make it simple, you have good emotions and bad emotions. For example, when you think about compassion, when you think about admiration, when you think about the emotions that go with cooperation, you're thinking about emotions that are absolutely vital toward normal social life.

Now, most of the time when you think about emotion, you're thinking about the negative ones. You're thinking about fear, you're thinking about rage and anger in general, or about contempt, about all those things that we do not want to be in, if at all possible, and that if you are pushed into, normally bring out the worst in you. It's very important not to denigrate emotions and not to turn them into something to be avoided. Some of them ought to be avoided, for sure.

I like to say that, for example, anger is the sort of emotion that has outlived its use in evolution, but I definitely want to have the possibility of showing gratitude to somebody who is kind to me, or being compassionate to somebody who is going through a bad patch in her life. You have to thread that nuance.

By the same token, reason is not always good advice. You may have a beautiful schema of how a certain thing works or how a certain phenomena operates, and yet that may be too dry and in fact it may dehumanize the decision process. It may take out of the decision process that bit of affect that will make it be more appropriate for the situation, for the person and so forth.

Roger Dooley: In your new book you talk a lot about feelings. Now, I would say that many people use emotion and feelings as being almost synonyms. In other words, I'm sad or I'm feeling sad, but I don't think that would be the way you would use that at all.

Antonio Damasio: No.

Roger Dooley: Why don't you explain how you would distinguish between those two terms?

Antonio Damasio: First of all, the distinction has to be made, and it's vital, and once you read about it and once you listen to it, you realize how important it is. The distinction is this. When you have an emotion, in the proper sense of the term, even the word is already pointing you towards movement, e-motion. It's movement expressed to the outside of an organism. It's something that, if you look at me and I'm emoting, what you will see, for example if I am in fear, is that my face changed. I may have blanched. I recoil, and I have a movement which sort of pulls me back

from where the source of the fear is, and my muscles tense up and so forth.

There are actions, and we think it's not one action only, it's a collection of actions. That's how one should define an emotion. It's a collection of actions that correspond to a response that is actually automated, and that we have literally inserted into our function so that if there is a source of danger, we are going to respond with that collection of movements that is called the emotion. Now, the feeling is very simply the mental experience that you have when you are in the emotion of fear.

Now look at the difference. One thing is the emotion, which you can see. I can watch you and I can tell immediately if you are happy or joyful or if you are in fear or if you are sad. How do I know that? It's not that you're telling me. I know that because that is what is expressed in your physiognomy and what is expressed in your movements of the body and so forth. The feeling is, on the other hand, the ability that I have privately to know that I am in a space, for example, of fear or of joy.

The distinction is critical because emotions are, for all intents and purposes, public, whereas feelings are private. Only I know about my feelings, only you know about your feelings, but anybody can guess at our emotions by observing our behavior. That's a very, very fundamental distinction.

Roger Dooley: Well, good. That sets the stage for talking about the book, I think.

Antonio Damasio: I may add then, and I think that probably I can guess that that's what you're going to say next, is that there are plenty of living creatures in this world that move

about and that have emotions but do not necessarily have feelings, for the simple reason that they do not have minds, for the simple reason that they do not have nervous systems. Whereas we have minds because we have nervous systems, and we are given this huge opportunity of having both emotions, which are public, and the feelings which are ours in private.

Roger Dooley: Right, so feelings require self-awareness?

Antonio Damasio: Exactly. Feelings require a mind, to begin with, because the definition of feeling is a mental experience, and a mental experience that has a value, has a valence. For example, you can have a mental experience of the furniture around you, but unless you're particularly attached to that furniture and that furniture has an emotional value to you, you will not have the experience of, for example, the desk that you're working at with a value of pleasure or disgust or pain.

Whereas feelings at the heart have really this valence, this quality that is either positive or negative, that is either pleasurable or painful, and that's very, very important also to that definition. As you were saying, yes. We have the possibility of having mental experiences. We have minds and therefore we can have access to feelings, beyond having already the possibility of making emotions.

Roger Dooley: Yeah. One of the interesting things about your new book, Antonio, is that to me it reminds me a little bit of physicists who are trying to develop a grand unified theory for the work they do. You're also trying to unite some different disciplines like human behavior, culture and human biology. Initially you would say, well, the connections are fairly tenuous, but what you talk about throughout the book is something called homeostasis. That's probably a

term most of our listeners aren't overly familiar with. I know that I wasn't, prior to reading the book.

I've seen definitions that focus on maintaining equilibrium, sort of like an air conditioner keeps the temperature constant in a room by turning on when it deviates too much from whatever the norm is. The human body does it in maintaining an internal temperature, but actually that analogy really isn't all that good because I think you argue that not only is homeostasis about staying in that sweet spot, but also trying to get to a better spot, right?

Antonio Damasio: Exactly, exactly. I'm very glad that you really read the book. Sometimes people don't read. They say they read, but they don't. You read the book and you understood it. That's better than just reading it.

That's really the crux of the matter, is that living creatures ... and here I'm not talking about human beings only ... living creatures come into this world equipped with this regulation function which I call homeostasis. I know it's not a beautiful word, but let's have it. Homeostasis is more than just a regulation. It's an imperative. If your homeostasis is not working, if the rules for the regulation are not operating very near capacity, you either get sick or you get sick and die.

It's as simple as that. Homeostasis is really the passport into maintaining life, and not only does it keep things on, quote/unquote, balance ... and you're quite right, "equilibrium" is definitely not a good word ... but it keeps them in the kind of balance that will promote the future.

The best way of looking at this, since I know that you have listeners that are interested in economics, is if you're trying to balance your checkbook but end up the month

with a surplus. You have to have savings. That's the way. It's so interesting to think that almost everything that we do in our lives and that we construct in our culture is at the root some kind of forerunner into the world of life, the world of biology. When we talk about surplus and savings, that's exactly what living creatures, all the way up from bacteria, have been doing for millions and, in the case of bacteria, billions of years.

In other words, you pull, you get energy enough to maintain life right now, but you save some so that you can have the next minute, the next hour, the next year. You don't just stay within ... Above all, you don't want to be in deficit, because if you are in deficit, you are endangering the possibility of life continuing. Life is an uphill battle. Not only is it an uphill battle in real day-to-day human terms very often, but it's an uphill battle in the process itself. It's a system that naturally finds fights, the dragging down, the pulling down towards disappearance, and that's what homeostasis accomplishes.

Roger Dooley: I love that checkbook analogy. It reminded me of a past guest on the show and a friend of mine, Mike Michalowicz, who wrote a book called "Profit First," and what that book is about, very, very quickly, is most small businesses tend to operate pretty much at the margin. In other words, they're not making a lot of money for their owners. They're staying afloat for the period of time, and many of them end up going out of business because that point of equilibrium wasn't enough to allow for either growth or for the owner to actually earn a living from the business.

His philosophy is just what you're talking about, doing the accounting in a way that enforces a surplus every month,

that you really can't operate the business without having that small surplus. It may be a small surplus initially, because businesses can't just say, "Okay, I'm going to put half the money in the bank and forget about it,. or they would go out of business, but exactly what you're talking about. Create that surplus and get out of that mode of an unstable equilibrium, where any small upset's going to end up in disaster.

Antonio Damasio: Yeah. And you know, Roger, there are also ways in which ... you just touched on something interesting. Definitely not hoarding surpluses and excess, that would not be good for the business, nor would it be good for a living creature. For example, if you overstock energy in your body, you can end up with something called obesity, and that is very bad for your body. In other words, one thing that your listeners should realize and that I hope they realize even more when they read my book is that there are these connections that are there to be explored between the life as it occurs in the culture and the life that occurs in the plain living creature.

What is so beautiful and interesting is that when you have a very simple creature, say a bacterium, or even a more complex creature but without a nervous system and without a mind, what happens is that all of these devices to procure energy, to transform energy via metabolism, to maintain the life going and sort of push it into the future, all of those things are done automatically. There is no mind directing it. There's no intention. With us it's different.

With us, we have both systems in operation. A human being has the automatic system, because obviously neither you nor I are thinking about how to conduct

metabolism or do our own digestion or whatever function, or what happens for example when you breathe and you bring oxygen into the system. All of that is done automatically, and a good thing too, because if it depending on our will, we would constantly be falling apart and dying. On top of that system that is automated, you also have this system that allows you to reason through the process, very often with the help of emotion, and allow it to give a new direction.

When human beings were confronting huge problems of organization, or when the first societies emerged and for example you had the problems around an agrarian society when agriculture was developed, there were certain problems of relationships, of men and women and who ran the group, who was the director, who was helping, who was commanding, fights and so forth. All of those developments that happened within the culture of people that have brains and were thinking, all of that allowed for a new layer of regulation.

That new layer of regulation came in the form of moral systems, rules for business, systems of belief, and as things developed even more, proper governance, science and technology, and very early on, before science and technology, the arts themselves. The possibility of using music or painting or words to create works of art that could be not only a way of communicating to others, but also a way of creating beauty which really would transfer into an emotion of pleasure. That's the reason why those things were invented in the first place. People realized that they would be a source of pleasure, and guess what, pleasure is about emotions and it's nourishing for the individual. It's nourishing for the organism.

The Strange Order of Things with Antonio Damasio

Roger Dooley: Assuming that these early cultures developed perhaps problems where you need to develop a method of exchange, so ultimately you find a way that farmers can trade their products for perhaps clothing products made by somebody else, either through barter or through some kind of monetary exchange, and this all gets everybody to a better place, how do you then think about somebody who invents their own rules and says, "Instead of following this well-developed system here, I'm just going to go take that stuff because I can. I can either be sneaky or I'm strong," or something, and goes in a different direction with that?

Antonio Damasio: Well, it's open to us. In fact, it's open to many, many organisms, except with us it can be intentional. You have in a group the possibility of observing rules and trying to enhance the commons, and you also have bad actors. You have bad actors who decide, "Hmm, I can take advantage of this and the hell with the others, and I'm going to take it all for me," or for me and my family or my partners. The possibility of bad action in the social world is always present, and of course that's what distinguishes the societies that make it into history and continue versus societies, some societies, that get to be extinguished because they so often chose the wrong path that they could not survive.

What is very fascinating is that even in very simple living creatures, that possibility is present. You can see, if you have different bacterial colonies ... so groups of these unicellular organisms, no mind, no nervous system, not even a nucleus ... and there they are in groups and they have a social behavior. They can ally themselves to promote the good of the colony, or they can diverge and try to torpedo the good intentions of the group.

It's as if ... well, not as if, it's in fact a reality that once you have life and once you have life in a group ... therefore you have a society, quote/unquote ... you are prone to the problems of behavior that goes against the group in order to favor a part of the group. The group overall ceases to be the goal, or the welfare of the group, and the welfare that counts is the welfare of the one or two that diverge.

What is very beautiful about all this ... and I think you will agree with me ... is that these are not just things that we humans are inventing. These are things that are part of our status of living creatures. Life gives us these opportunities, the good and the bad and the indifferent.

Roger Dooley: Let me jump over to a little bit different topic, Antonio. I think today if you talk to most people, I think even a lot of neuroscientists, they assign what we call the human mind or decision-making to the brain. You know, we do FMRI studies to see which parts of the brain light up when people perform some kind of mental task, and then draw conclusions if we're marketers or write scientific papers if we're academics about those findings. The impression I get from the book is that just looking at the brain is too narrow of a focus.

Antonio Damasio: You're absolutely right, and I'm glad you bring that up, because that's exactly my position. Of course, I'm primarily a neuroscientist, but precisely because I'm primarily a neuroscientist, I know that the brain is not alone in the way it operates its decisions, in the way it operates its own thinking and especially its own feeling. The brain is doing this in cooperation with the rest of the living organism, because people have to realize the logic of these things.

The Strange Order of Things with Antonio Damasio

Why is it that we have a brain, and why is it, for example, that bacteria don't? Well, is the brain necessary for life to continue? The answer, no. There's plenty of life in the universe without having a brain to run it. We do not need nervous systems to run life. What we do need is nervous systems when organisms are complicated enough that they cannot do it without the nervous systems. The nervous system is a coordinator. The nervous system is what allows you to put together say the function of the immune system and the endocrine system and circulation, operating in a way that they're not at cross purposes. Without the nervous system, you could not do that in your body or mine, so you need a nervous system.

The nervous system, once it was evolving, also gave an enormously novel opportunity, which is the opportunity of perceiving the world around and the world inside, such that we can create a mental image of the state of our own bodies and the state of what is around. Well, what is around, we appreciate through vision and hearing and touching and smelling and tasting. Those are the fundamental senses. What is inside, we appreciate through something that is called viscerоception or interoception, which is really doing exactly the same thing that we do with vision or with hearing, except it's turned to the inside, so that I know what is the state of my gut or what is the state of my breathing, or how is my heart operating and so forth.

That's something that is in the background of our minds. We're constantly collecting all this information, and if we are sick, we begin to realize it's there. That's exactly the reason why you can have pain and you can have the pain of somebody that is having a myocardial infarction or somebody who breaks a leg. That's all directed to the

inside, and most of the time it's not terribly relevant for us and we focus on what's around us, but that exists. That is something that the nervous system brought, and that's the source. Fundamentally it's in fact the foundation of our minds.

The foundation of our minds is in the state of life within our bodies. That's why to say that our minds, and therefore our decisions and all of our invention, are just the product of our brains is to be too narrow, because it doesn't take into account that the purpose, quote/unquote, in nature of brains is not to do minds. It's to regulate and help regulate the life of what? The life of the organism as a whole, the life of the body. That's the hidden intention, the hidden purpose, the body life.

Roger Dooley: You mentioned the gut, Antonio. Lately there's been a fair amount of research talking about the number of neurons in the gut, and that maybe this is sort of like a second brain, to use I guess maybe not the best analogy. What's your take on that?

Antonio Damasio: Oh, my take is that actually it is the first brain, not the second, because when creatures were evolving, the first creatures that had for example the neural net and had some control of their behaviors, those creatures were literally what I call a floating digestive tract, a floating gut. They were creatures that had a sort of intestine with peristalsis the same way that we do, and what the nervous system was doing was controlling those movements so that you could have the incorporation of water with nutrients, and then go through a process of digestion and so forth.

Definitely the gut is a very important component of what our organisms are. It has a very, very developed nervous

system. All around the gut cavity is a very complex system of neurons, and it plays a huge role in our lives not only because it's a source of many feelings ... because when we have emotions, we very often use as a target of the emotion parts of that digestive tract. That's why, by the way, if people are very worried chronically, they can get ulcers, because they combine the worry with certain bacteria that are in the stomach, and things do not go well and so forth.

You have all of these actions of the gut that are important to maintain life, and that are important to express emotions and therefore give us feelings that are very often giving us indications as to how life is going. Therefore the sort of natural rhythm of humans when they talk about gut feelings, something which is universal.

Then there's one more that is interesting, is that the gut is colonized by bacteria. Although most of the time we think of bacteria as bad partners because we know that there are infections caused by bacteria and that's not good, the majority of bacteria that live on the face of the Earth are actually very good bacteria, and they help us and they do all sorts of things that are helpful to the organism, for the organism to survive.

We have bacteria everywhere in our bodies. We have bacteria on the skin. We have bacteria inside every considerable cavity, and the gut probably has one of the largest shares of bacteria. They are incredible partners in the process of digestion. If you take antibiotics that clean out the colonies of bacteria in your gut, you're going to be in very, very bad shape, and you need to have those bacteria there to help you.

Roger Dooley: Great. Well, I feel like we could talk another hour or two, Antonio, but I want to be respectful of your time. Let me remind our listeners, we're speaking with Dr. Antonio Damasio, neuroscientist, professor and best-selling author of the new book "The Strange Order of Things: Life, Feeling and the Making of Cultures." Antonio, how can our listeners find you?

Antonio Damasio: Oh, they can go to the USC website for me, or if not, I'm on Twitter, and I guess that's it.

Roger Dooley: Great. Well, we will link to those places and to "The Strange Order of Things" and some past titles, and any other resources we talked about, on the show notes page at Rogerdooley.com/podcast, and we'll have a free text version of our conversation there too. Antonio, it's been an honor and a pleasure to have you on the show.

Antonio Damasio: It's been a great pleasure to talk to you. Thank you for your very good questions. Thank you for reading the book, by the way.

Roger Dooley: You're welcome. Thank you for writing the book.

Antonio Damasio: Thank you. Okay, bye-bye.

Thank you for joining me for this episode of The Brainfluence Podcast. To continue the discussion and to find your own path to brainy success, please visit us at RogerDooley.com.