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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: Welcome to the Brainfluence Podcast. I'm Roger Dooley. Our

guest this week has an interesting past. He's worked as a biologist, a rock climbing guide and an environmental consulting, and an environmental educator. Today, he's a

science writer, but even there he's taken a different path by focusing on a human element. His work has appeared in the New York Times, Nature, Scientific America, Harper's and National Geographic. His new book is, Suggestible You, The

Curious Science of Your Brain's Ability to Deceive, Transform,

and Heal. Welcome to the show, Erik Vance.

Erik: Well, thanks for having me.

Roger: Well, Erik, you're joining us today from Mexico City, right?

How's the traffic these days?

Erik: Oh, the traffic's a lot better than it used to be. It's gotten a lot

better, but not we have bikes, we've got Metros, we've got all

kinds of stuff.

Roger: Well, that's good, I lived there many years ago, and oh boy, it

was brutal. I'm glad to hear it's improving and hopefully the

smog situation has improved a little bit too.

Erik: Yeah, it's, as we say in Mexico, [Foreign Language 00:01:19]

Little bit by little bit, where I think we're getting better. But, there's a lot more here than just smog, there is, as you know,

amazing food.

Roger:

Oh, yeah, it's a beautiful city, though yeah the food in it, right? I love the people in Mexico City too. Just, when I was living there, they were always very welcoming. When I tried to speak Spanish, even poorly, they would be happy to help out and they enjoyed the fact that I was at least making the attempt. Anyway, this book, Suggestible You, is really interesting because it really parallels a lot of the stuff that I've written about. In fact, we both write about some of the same research, although perhaps from a little bit different perspective. The common theme is the power of expectations.

You talk about the individual of humans being sort their brains are expectation generators, and if you can set those expectations, you can actually change reality for those people. Obviously when you're talking about a placebos in a medical sense, that's true. It's true for marketers as well. One of the things we both wrote about, were the wine studies that show that what you expect from a wine sets your expectations, and give people a taste of an inexpensive wine like Two Buck Chuck, and tell them it's a \$50 wine, and they'll experience much better wine than if they think it's a \$5 wine.

Erik:

You know, it's interesting you bring that up. There's sort of been a sea change over the last decade or so, and I'm sure you know about this. I talk a lot in the book about medicine, but I think a lot of it applies to marketing where we're going to understand how it applies to our perceptions in the everyday world as well, as we learn more about this. But, there has sort of been a sea change from whether it's a medical thing, or whether it's tasting wine. We once thought that, if you thought that a wine tastes better, or if you thought you were feeling better, it was just something that you were telling yourself, or something that wasn't true but you were kind of convincing yourself it might be true.

What we found is that, certainly in the case of medicine and presumably in the case of tasting wine, you actually are experiencing these things are real. You literally are, in the case of medicine, healing yourself and in the case of wine, the assumption today is that it does actually taste better. You're actually having a better experience because of your expectation, which is really wild when you start to try to wrap your head around that. The fact your body can just make that so.

Roger:

Yeah, in the case of wine, they've demonstrated that with FMRI, where they show the areas associated with pleasure light up more when people think they're drinking a \$50 wine. As you say, it's not just a verbal adaption that, "Oh yeah, this is a \$50 wine, so I better say good things about it," their brains are actually experiencing that better wine. And of course the documented placebo work shows the remarkable power of these expectations.

Erik:

In the case of pain relief, I talk a lot about the mind's ability to release endogenous opioids, which are basically morphine-like chemicals that the brain release into itself as a way to essentially medicate itself. They call it the internal pharmacy. I'm actually very curios to know what the analogue would be for the wine drinking. You mentioned the FMRI studies, but what does that actually mean? These are real chemicals, these are things that you can measure. They're not just wishful thinking. This is measurable facts. That's one of the things that once you wrap your brain around it, this whole world just kind of opens up.

Roger:

So, Erik, you tell the remarkable story about a surgeon who became a homeopath and was really successful at that, but then totally reversed gears and abandoned that practice and is actually arguing against homeopathy now. Can you explain

about that. That seemed like such a strange sequence of events.

Erik:

Well, it's a really interesting story. Natalie Graham is her name and she works Germany, where homeopathy was created. She was sort of a standard young doctor who was introduced in this world of quick turn around for patients and constant pressure to move on to the next patient, move on to the next patient. See a patient as a group of symptoms. I think it was really unfulfilling to her. It wasn't until she had had a car accident that caused her some pretty debilitating symptoms afterwards related to post traumatic issues that she discovered after trying lots and lots of different medications, she discovered homeopathy. She got so into it that she actually became a homeopath herself and ended up proselytizing to this thing that she really believed was helping people.

Roger: You should probably explain what homeopathy is, just ...

Erik:

Of course, no, of course. So, homeopathy is this alternative form of health care that involves, I guess like sharing like. It's a whole separate set of logic that, most of it involves taking some sort of chemical and diluting it down to the point where there's literally nothing left in the dilution anymore. It's basically just water. There's no scientific evidence that it works, or that it has an effect beyond placebo. So, she became a real booster for homeopathy and really struggles to get respect in the field of medicine.

She decided to write a book about homeopathy and how effective it was. Through the course of writing this book, she realized that actually it wasn't any more effective than placebos, which a lot of scientists have shown this again and again. She ended up writing this book sort of condemning homeopathy and got stuck in the middle. What interesting about that isn't necessarily, "Oh, scientists were right or homeopaths were

right." My question is, "Well, then in that case, what's the placebo effect?"

If this thing helps millions of people around the world and it's basically run through the placebo effect ... She tells one story about she was proscribing melted snow to one of her patients. Melted snow is water, like literally it's water. If you could proscribe water to people and help them get batter and this saved this patient's life pretty much, who was trapped in her house and couldn't leave, then what is that effect? Let's lay aside whether or not there's some sort of magical property to homeopathic remedies. What's the placebo effect?

I try to kick off the book from that perspective of, lets put aside what's real medicine and what's not. Let's talk about how these "not real medicines" operate in the brain. What's interesting is it led me down this massive rabbit hole and in the jungles of Mexico and in the streets of Beijing and all over the place. Just as with you tasting of wines, it turns out that your expectation, your beliefs can trigger real effects in the body and that's a measurable phenomena, and that's what's amazing about all of this.

Roger:

One thing I found interesting, Erik, in parallel to marketing was Dr. Graham's conclusion that what made homeopathy work was the story associated with the treatment and so the melting snow was a story. Rather than giving somebody a glass of water, and of course you pick up just about any marketing text these days, and it will tell you the importance of story, both to engage the reader's brain and to be persuasive. That's echoing exactly here in the effectiveness of placebos. They work best when there's a story attached to them.

Erik:

Yeah, and the storytelling element of this is so important. It's a big part of ... I don't just talk about placebos in the book, I also go into hypnosis and false memories, and what all these things

share, they all share some element of expectation, but they also share this storytelling. That is such a big part of how we generate expectations in our brains. We are storytelling creatures. This is who we are, this is what we do. A big part of the way that we can access these beliefs is by telling a story. That story, it could be something like, "I'm going to give you this pill, it will go on up to your brain, it will spread all over, it will cause soothing experience in your brain."

My favorite example was this average pharmaceutical commercial that says, you know, they have these pictures of someone like red on fire, they take something and it cools off and becomes blue. Well, that's a story you're telling it's a very simple story, but it's a story you're telling. Or, it could be something like the complex story of marketing, that goes into the marketing a can of Coca-Cola and what Coca-Cola means versus Pepsi. These are all the stories that we tell ourselves about what's going around us, it's how we make sense of the world. It's wild to see how this can affect your body, when that story becomes so real that it almost has to be true.

Roger:

Mm-hum (affirmative). I guess the element that you see popping up in multiple places is the theatrical aspect, starting with maybe Franz Mesmer who came up with his ... Mesmerism is named for him. He had this great story about magnetism and in fact, what he was doing was hypnotizing people perhaps. You describe the shirt that he wore that was leather and lined with magnets and that made him no doubt much more convincing and effective in what he was doing.

Erik:

Mesmer was the master of these things. He was the sort of odd 18th century character, who is a doctor, who believed that the world sort of ran on magnetism, that the planets moved from magnetism, the tides moved from magnetism. We know today that this isn't true, gravity and a host of other forces are at work

there, but he also thought this magnetism could be controlled by his mind, so he created this whole, it's almost like homeopathy, there's a whole external logic. This whole thing that seemed to work with itself, but only with itself.

He had this wonderful parlor where he would go in a play weird music and turn down the lights and he had this crazy clothing and he was very aware of the power that storytelling and that the theatre can have on our expectations. He had Paris kind of in the palm of his hands for many years. High society would come and get healed from all kinds of different maladies, including Marie Antoinette, who I think probably triggered his eventual downfall, which came from an investigation from the king, Marie Antoinette's husband.

It was led by none other than Benjamin Franklin, who sort of debunked all of this. But, he had tapped into this amazing ability of our brains to take an expectation and basically force it to meet reality. That's what we're talking about. We're talking about create an expectation and when that doesn't work out, your brain steps in and makes that into reality. That's what he was doing.

Roger:

I think there's a parallel too, later in the book, you talk about a stage hypnotist who parks his Rolls Royce in front of the theatre and then also ensures, even by giving away tickets if necessary that the theatre itself it packed. You've got a couple of things going on there. First of all, you've got this ostentatious show of wealth that immediately implies that okay, this person must be for real. They must be really good at what they're doing, and then there's the classic marketing principle of social proof, when if there's a whole big crowd there, so again, this must be good because everybody is here and they're watching this.

Erik:

Those two are sort of key elements that, as Andrew Newton, who taps into those things. He was a fascinating interview, and

a real interesting guy, and he thinks a lot about these issues, and what he does is he also relies heavily on the power of peer pressure to affect what we ... Some of the people he hypnotizes aren't really hypnotized. If they are, it starts the opposite. It starts when they walk in and they see, he did this before in the old days, and they see his car out front, and they start creating expectation that they would become hypnotized, then they sit down in the theatre and everyone around them is making all this noise and they see all the people in the theatre and they create more of an expectation.

Then it's both the power of suggestibility but also the power of the peer pressure of being in a group. We're very social animals. What more recent science has found is that this also plays a big role in the placebo effects. If you can convince someone that other people have had certain relief from a given placebo trigger, whether it be the pill or just even just rating a certain kind of pain. When you see other people's ratings about pain, it not only affects what you think you're experiencing, it basically affects what your body literally experiences. So, if everyone else calls this, "not very painful," you will rate it the same way even if those people aren't real, even if they're just made up by the scientists.

If you think other people have said this wasn't painful, you will both say it's not painful and your body will register it that way, as if it isn't painful. You're basically killing that pain through your expectations through the peer pressure. This is very new and very exciting because it's sort of, our social lives made real in our bodies. It's a very, very interesting piece of research.

Roger:

I think the parallel to marketing there is perfect too because if simply seeing these elements of what a marketer might call social proof, that okay, this worked for other people 90% of the time, or something like that, that if that can produce changes in

a person's physiology, then that can also work for marketers purposes. Obviously this has to be done in an ethical way. You can't make up stuff as a placebo researcher might just to see what happens, but if you can use these things like testimonials or other indications of success from customer in an honest and ethical way they can be extremely effective.

One thing that I was kind of amazed by, you're sort of a human crash test dummy for various types of suggestibility research. You never met a placebo that you didn't like, I geuss. A couple of things that you did in Mexico, where you actually saw a couple of brujas, which would translate into either a male witch or witch doctor. One was a more modern one to help you with some pain relief, but the other was to see if he could curse you. Why don't you explain about those. I guess the curse wasn't too effective since we're talking here today, well not fatal anyway.

Erik:

Yeah, it's interesting you say that actually because it's like no one understands this stuff better than shamans and witch doctors around the world. This is something that we've been doing for a very long time as humans and something that we tap into all the time. I found the shamans to be very adept at tapping into belief and to the stage like a theatre that we were talking about. What's interesting is in that former case is how much that theatre had changed over the years. This is a place that was famous for its bruja. In the past those would have been this elaborate, dancing, fire breathing, sort of crazy performances and now they're very much just, they look like doctors.

Now they wear white coats and they have ... It's all very anesthetic and they have little plastic squirt bottles. It's all very clinical looking. That's because our expectations of what healing, where healing happens and how it happens has changed. It's happened in this little village too because there

are modern hospitals there now. The brujas have changed too. If you go into a homeopath's office, it's both comforting but it's also reminiscent of a doctor's experience. The way a doctor maybe should be. This is through tapping into all of these expectations that we all carry around with us.

Yeah, that one was fun, but then you have this chapter on nocebos, which is sort the anti-placebo. Placebos are an expectation of something good happening, nocebos are an expectation of something bad happening. That covers superstition, and curses. What's interesting about nocebos, is there's not a lot of research that's been done. I had three chapters on placebos, and nocebos there just wasn't much that had been done with it.

If you think about it, it makes some sense because it's very hard to study a nocebo. You can't go in and make someone sicker with suggestions. It's not right, it's not ethical to go in and tell someone with depression that this pill will make it worse, or someone with Parkinson's, so how's you tell him that this pill will make it worse? I haven't seen a lot of it in marketing literature. How do you make something taste worse, or some experience worse.

Roger: Because there's not usually a big demand for that.

Erik: No, no, why would you want to do that? It's a bit of a question mark. So, I ended up-

Roger: You could do it to your competitor I guess.

Erik: Oh, oh, actually that does makes some sense. I ended up having to go out on my own and explore this on my own and what I ended up finding out. I found out a lot of interesting things about curses and superstition, and then I ended up getting myself cursed just on a lark. It is a surprisingly easy

thing to do. You just have to write a name on a piece of paper. Obviously it's not very involved, because you'd never be able to sign someone up to come down and get cursed if there was a big process involved.

I was interested in how I would respond. I didn't expect a piano to fall on me or something like that but I did expect my own perception, my own brain to respond. Yeah, maybe I'd get sick or something like that. You have to read the book to find out what happens, but it was definitely not what I was expecting. Something did happen and it was not at all what I thought was going to happen.

Roger:

Yeah, that was really a great story. I guess also in that case, the cursed person really, for it to be effective, would have to know about it. In other words, they would have to be informed because if is a nocebo effect, I mean, assuming it's not really a truly a supernatural effect, but it's going to happen remotely where the person isn't aware of it and suddenly falls down a flight of stair, not only do you have to have a plausible bruja or somebody enact the curse for you, but then you have to inform the victim that they've been cursed.

Erik:

That the other thing is there was some debate among the brujas that I talked to about this, but most people say that you have to tell someone they're cursed in order for the curse to work. You have to inform them. I did talk to one brujas who said she was so powerful that you didn't need to do that.

Roger: Not necessary.

Erik: Yeah, not necessary for her, but most of them agreed, you

need to tell them, which says something right there.

Roger: Those other less effective ones that you have to tell them.

Erik: Yeah, that was kind of her point.

Roger:

I found a kind of interesting parallel between the field of neuromarketing and placebo research because for years ... I started writing about neuromarketing a dozen years ago and probably for the first five plus years that I was writing about it, talking to academics about it, you might as well be talking about parapsychology or flying saucers or something. They really wanted no part of it. They considered it pseudoscience.

Even, I think, as recently as five years ago, 50 eminent neuroscientist wrote a letter to the New York Times basically trying to debunk a neuromarketing article that had been written by Martin Lindstrom. But now finally, the corner has been turned. There has been a big, comprehensive study at Temple University that got published. Now, we're seeing other universities, both in Europe and the United States picking up on the field. It's becoming academically acceptable to talk about and do research on. Really, placebo research almost followed that same kind of ark, right?

Erik:

Yeah, and that's 20 years ago you may have gotten a very similar response if you told people you studied placebos and it was sort of a fringy, when placebo science, called it a sort of flaky thing. I have a lot of respect for the scientists who really stuck in there, hung in there and going back to the '70s and even before, really sort of at their own peril, their own career peril, just pursued these questions and wanted to know what was going on. How can you have, by basically taking a sugar pill, how can someone get better? It's a haunting question.

With the advent of neuroimaging, I think, and some of the technologies we now have, it's given the scientists an opportunity to show what many of them already knew, which is these are measurable and real effects in the body and that you're actually tapping into actual chemicals and you can see it.

That has, I think, really opened ... I went to a placebo conference a couple of years ago and almost everyone there, they were neurologists, neuroscientists, they were young, they were really interested in brain mechanics. Not in sociology, not in psychology, or belief.

They really wanted to know how the brain works. This is a great way to look at that. It's the same thing on the marketing side and also hypnosis, which has been largely, is still largely overlooked and derided. These are real effects and it's a great window into the brain. I think now as a young scientist, you can go into both of these fields and not be- [crosstalk 00:23:38]

Roger:

Not be laughed at. Just the concept of the placebo conference sounds kind of amusing for some reason. It's like if you want to go to a real conference, or a placebo conference?

Erik:

All the people in the audience were all cardboard cutouts, which was disappointing. Yeah, in fact, I would say it's even more than that. I think a lot of the scientists who I've talked to going into in both of these fields are looking for blue sky kind of stuff. Looking for open areas that haven't been investigated. There's so many question. I came up with probably 10 different potential Ph.D theses during the course of writing this book that no one has looked at. No one has answered these questions. That just shows how much room there is. How many questions we have unanswered that I can't wait to see.

I think in the next couple of years or decades, we're just going to get so much great stuff out of these fields and how expectation affects not just our mind but our bodies. From everything ... What's interesting, it's all very cutting edge, it's really science into how your expectation affects products you buy, how you see those products, how you interact with those products, but this, this and is sounds very new, but this goes

back thousands of years. This is something that is so familiar to us. I don't know if you feel like that when you did this?

Roger:

Yeah, I do and I think it's exciting that there is this unexplored territory because in so many areas of scientific endeavor, the basic work has been done and now you're faced with really a little stuff around the fringe that is either of no consequence or requires massive amounts of money to explore. There's still room for work in particle physics, but that's something that's pretty hard for most folks to do.

Erik:

And there's a lot for those topics, or for cancer research, there is a lot to learn, but not by me. I can't come up with a really good question that hasn't been answered by cancer scientists. I just, maybe I could after four year's of study, but in this field it's just there's so much open. These aren't small things, these are huge, huge effects in the body that really, really ... And it's also a multi-billion dollar problem by the way for the pharmaceutical industry. Belief and expectation causes billions of dollars of failed trials every year in that industry. This is not little stuff. This is big stuff.

Roger:

I remember I heard Andrew Weil the doctor who focuses a lot on alternative medicine speak once, and he was talking about the placebo effect and said his friend who were medical researchers found the placebo effect endlessly annoying because it screwed up their research into the effectiveness of their drugs. His comment to them was, "Well maybe you ought to look at how to make the placebo effect a little bit more effective."

Erik:

Yeah, of course there this weird line that I haven't really come to terms with myself, between when it's okay to use the placebo effect and when are you lying to your patients? When are you lying to your customers? We have this, I often say that in our society, I don't know why this is, that we think it's okay, we

forgive someone who uses the placebo effect. If that's something that you do and that helps them, fine. But, we have a tough time with people who sell placebos. I never really got comfortable ... Andrew Weil obviously promotes a lot of different placebos. I never really came to terms with how I saw that. Should we be bolstering the placebo effect? Should we be focusing on the placebo effect in addition to these drugs? What about the people who make a living on placebos? You know, it's a very-

Roger:

I know it is a tough line because on the one hand it may be effective and you've got to have that story to go with it, that okay this is an extract from the whatever plant and have a great story, but the story is totally bogus. What are the ethics of that? Even if it's effective. It's complicated.

Let me jump over to something. I'm guessing that most of our audience members have heard of motivation expert, Tony Robbins, and in the book you said that he's actually practicing a form of hypnosis in his stage presentations. It's pretty much the same thing for folks like TV evangelists and even rock bands. What do you mean, how is Tony Robbins, or any of these other folks, how are they performing hypnosis in effect.

Erik:

I should say that, just like the placebos were like a number of years ago, hypnosis hasn't been studied enough. Mass hypnosis even less. I think it's just one of these things that so many questions that couldn't get answered. This actually came from that stage hypnotist who has ... It was more from his experience, and I would love to see someone study this. As a stage hypnotist, what you do is, you have to get people acting as group. Best way to do it is you stand up there and, "Okay, why doesn't everyone stand up and give a hand to the band, aren't they great, okay everyone clap, now have a seat. Okay now raise your hand if you do this or this. Okay, put your hands

down." What he's doing is he's doing two things. He's getting people to act as group unconsciously they act as a group, they're standing up, they're raising their hand. He's getting people to follow his instructions.

For a stage hypnotist these two things are key. You have to be able to create authority in yourself and an expectation that you're going to make all these changes in these folks, and you have to get them acting together so they can get that peer pressure effect in them. I've seen some of Tony Robbins work and if you ever go, the exact same process is involved there. You know, "Everyone, hug the person next to you. Now turn around, hug the person next ... slap five to the person next to you. All right sit down, now get up and stretch." It's a lot of that same methodology.

It's the same thing you see even in churches, and in group rituals that have gone on for thousands of years in various parts of the world. I looked at some of the earliest gatherings of human beings in the new world were based on all of these sort of religious group ceremonies. It's not hypnosis in sort of spiral eyeballs, sort of TV mind control. It's making people suggestible. Prepping them for suggestions that may be positive, may be negative, but this is how you can get that started. It's as old as we are, and it's just as useful today as it was back then.

Roger:

Hmm. Might have to try that in my next speech. Well, we'll see. This is probably a good place to break off, Erik. Let me remind our listeners, that we're speaking with Erik Vance, author of the new book, Suggestible You, The Curious Science of Your Brain's Ability to Deceive, Transform, and Heal. I think the marketers in our audience will find it really interesting, not just from the standpoint from the remarkable physical changes that these suggestion effects can cause, but also that the human

reality is shaped by expectations, and it's the job of marketers to create those expectations hopefully in an appropriate and ethical way. Eric, how can listeners find you and your stuff online?

Erik:

Oh, well, the easiest way to find me is probably suggestibleyou.com. My old work, you can find at ericvance.com. If you want to reach out to me, if you've heard something today that's interesting, the best way to get me is on Twitter @erikvance.com it's E-R-I-K-V as in Victor A-N-C-E.com. I love to hear from people and experiences they had with marketing placebos and physical placebos.

Roger:

Great, well we will link to those places, to your book, and any other resources we spoke about on the Show Notes page at RogerDooley.com/podcast. Eric, thanks so much for being on the show. Really enjoyed the book.

Erik: Oh, thank you very much for having me, this was great.

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.