Priming the Unconscious Mind with John Bargh

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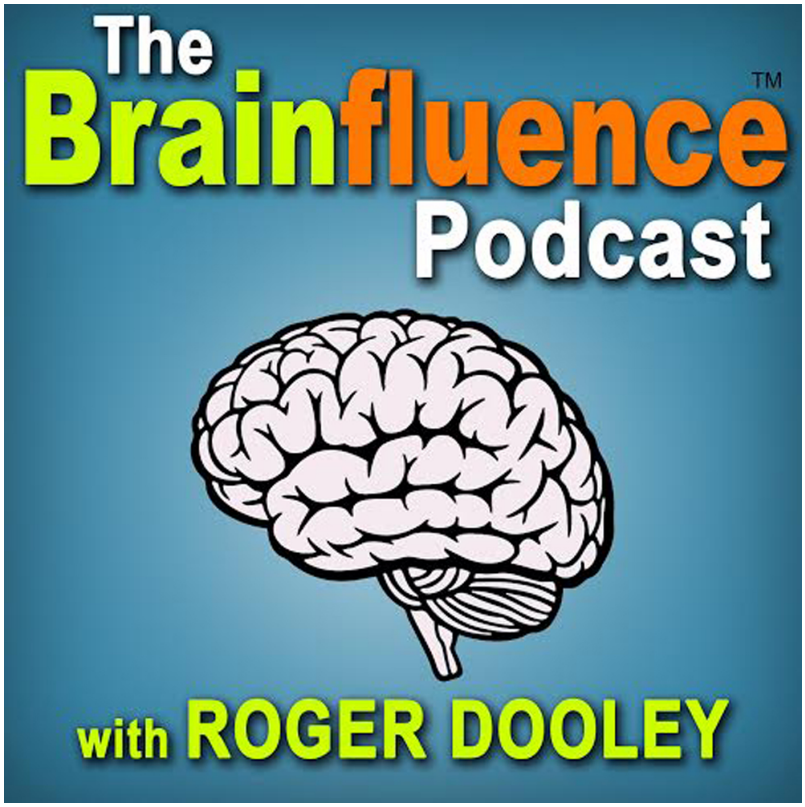

Full Episode Transcript

With Your Host

Roger Dooley

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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 Dooley: Welcome to the Brainfluence Podcast. I'm Roger Dooley. I'm really excited about this week's guest, because I've been citing his work in my speeches and writing since my early days in applying brain and behavioral science to marketing. If you've read Malcolm Gladwell's "Blink," you'll be familiar with his work.

John Bargh is the James Rowland Angell Professor of Psychology and Professor of Management at Yale University. Before moving to Yale, he was a professor of psychology at New York University for 22 years. John is the author of nearly 200 research papers, and he has received many awards and honors including a Guggenheim fellowship. Much of his work is focused on non-conscious drivers of human behavior. His latest book is "Before You Know It: The Unconscious Reasons We Do What We Do." Welcome to the show, John.

John Bargh: Oh, thank you, Roger. It's a pleasure to be here.

Roger Dooley: John, you founded the Automaticity and Cognition Motivation and Evaluation Laboratory at Yale. That's got to be one of the more mouthful lab names, but fortunately it translates to ACME for short. What is automaticity, and why have you devoted so much effort to studying it?

John Bargh: Roger, I started in psychology back in the 1970s. It was the time, a very heady time in psychology. We were overthrowing behaviorism and B.F. Skinner and all this idea that we had no role to play in the world, we were run

by the environment stimulus response like rats, and it was called the Cognitive Revolution. The Cognitive Revolution reintroduced the idea that you could actually study the conscious mind, the mind in the middle, and understand how it mediated, how it responded back to the world, and of course it does. I mean, it was just a really silly time with behaviorism, saying our mind didn't matter at all, but it was the first time we could start studying the human mind and thought and reactions to the world scientifically, with the scientific method.

There were two types of thought right off the bat that were discovered in the '70s. One was as we usually experience, the sort of deliberate, conscious reasoning that we're aware of and we intend, and it might be a little limited in terms of how much we can keep in mind at one time, but it's what we usually think of when we think of thought and our conscious experience. The other one is more automatic. Now, that's the kind of thing that, when you learn how to drive or type, after a while you can do it without much thinking. It doesn't require much attention. You make these responses to things going on on the busy highway without having to stop and think and decide. It's more automatic. These things are skills. They come with practice and experience, and so these are the two types of thinking.

Unfortunately, in social psychology we started to find in the 1980s that things like stereotypes and biases and prejudices and assumptions about individuals based on their skin color, gender and so forth, also became active in this automatic fashion, so people didn't even realize they were making assumptions about people or categorizing them based on these superficial physical features. This is still a huge area of our field, but the idea

of automatic processes that are triggered by the outside world you don't even know you're doing, yet they lead to your behaviors, they lead to your assumptions about people, your likes and dislikes.

That's what I studied, starting in graduate school at Michigan in the 1970s, and then I went to NYU and now at Yale. That's why our lab is called automaticity, and ACME.

Roger Dooley: Great. Well, before we get into some of your fascinating research ... and the book is chock-full of great examples from your own work and that of other people ... the social science area a few years ago was kind of rocked by a paper that said that more than half of the famous social science studies couldn't be replicated. I think there's been some pushback against that study since then, but what are your comments on this? Certainly some of the priming work was in that category.

John Bargh: Right.

Roger Dooley: We can't seem to replicate that now.

John Bargh: Yeah. That's a great question, and I'm glad you're giving me the chance to respond. I haven't been given many chances to respond to that. A lot of things were said back around 2012. Even "The Economist" magazine had a cover story, something about how science goes wrong. Actually they mentioned this behavioral priming at the beginning that really got into the pharmaceutical research. You know, my sister works at a genetics research lab, Amgen, and she was saying the same thing, that they couldn't replicate 25 percent of the studies on which they based their pharmaceuticals, so it was a widespread issue in science.

The good thing about psychology ... there's good and bad. The good thing is that psychology faced this right off the bat and started really taking it seriously, I think more so than many other sciences, and started looking at how do we show or how do we go back and see what studies do replicate and what don't, because we want to build a solid evidentiary base for our field, and that's the good part of it.

One thing they found that is certainly true of our research in the past and many others, including famous researchers, is that we often drew conclusions from a very small sample size. We would do a study with 40 or 50 people and then make conclusions about people in general, human nature and all of that. I think one very healthy step forward based on this replication issue is that often small samples don't replicate because they are more variable. The larger your sample you base your study and conclusions on, the more stable and reliable that's going to be, and I think that's really healthy.

It's like I do a lot of fantasy baseball, rotisserie baseball. I play that. If you base your conclusions on a player after just three or four games and they make a lot of hits, well, that's a small sample size. It might not be a great hitter for the entire season. The more games you have to base your decisions about a player, the better your estimate of what their real ability is going to be. That's one healthy thing, the drive towards larger sample sizes and power.

Unfortunately I think that there's been a sort of a bias in the studies targeted for replication in that they don't fit the person's theory or presumptions about how the mind works, and then something seemed counterintuitive. I think this is the biggest danger in the problems, especially

why priming's been targeted, because a lot of people in that side of our field didn't think that this could be true, and they didn't really know our 25-, 30-year history of our field and all the findings and said, oh, it didn't fit with their theories and their assumptions and therefore was suspicious, and so they tried to replicate it.

I've always said from the very beginning that we already have a tool in our field and in the medical sciences too called meta-analysis. That is a statistical tool that looks at effects over hundreds and hundreds of studies, and over all of those studies with very large numbers of people and all of that, you can see whether an effect is real or not. Here's the bottom line, which is great for me, and I wish the word was out there more. All the scare headlines from 2012 about behavioral priming not being real and there's a train wreck coming and all this kind of thing ...

Roger Dooley: From a Nobel laureate, no less.

John Bargh: From a person who I had a lot of contact with back then, email and otherwise, yes, Daniel Kahneman. What happened was, well, people said, "Look, let's do a meta-analysis. Let's find all the behavioral priming and motivational priming studies," and they found 350 or something like that, "and let's see if there's a real effect," and I held my breath. I said, "Look, I'm putting my money where my mouth was." I said early on I believe in meta-analysis. Now someone's saying, "Okay, we're gonna do a meta-analysis and we're gonna see if those effects are there or real," and I said, "Okay."

You know, I said, "I'll abide by whatever the meta-analysis says," and it took them four years. This paper came out in 2016. It covered 350 studies, and at the end of it they concluded ... they actually began the paper with all that

history from 2012 about the train wreck, and the avalanche of failed replications coming out with scare headlines that were very prominent in the media. At the end of the day, when they did their meta-analysis, their conclusion was behavioral priming is a robust, reliable effect, that is stronger the more important the goal is for the individual. The more important the behavior is, the stronger the effect, and it's very robust and reliable with a very decent effect size.

At the end of the day, the conclusion of the meta-analysis was it's a real effect. Now, that word doesn't get out much, and you don't see the replication people talking about that very much, and there's been other successful behavioral priming studies with very large ends that have been published. Those don't seem to be mentioned much.

There was a very recent paper put out with another replication of a priming study, and it's marked on Twitter and it's marked as not replicated. If you look at their actual study, they did replicate it, and so this is my problem, that if you have ... we should be scientific, we should be open-minded, we should be fair, and when something does replicate, let's admit it did, and if it doesn't, it doesn't.

It seems there's a proneness to just make a big deal about the failed replications, and sometimes even when they do replicate your study ... as in this most recent "Nature" human behavior paper ... they claim it didn't replicate. If you look at the actual paper, it did, and we know it did. That's my issue, that there's some preconceptions about what should be true and what not, and even the replications are not really playing all that fair with the actual ... even their own studies.

Roger Dooley: You know, I think there's probably a couple of factors there, John. Some of the priming studies are so surprising and counterintuitive, they sort of ... you know, some people are going to say, "Well, I don't believe that." I know people who have been in marketing for years, in direct marketing, and we found that by changing the cover of a catalog, we could increase sales ... or decrease sales, we don't want to do that ... by 10 or 15%, really. You know, I've had people say, "Well, there's no way that I'm affected by the cover, whether it has Image A or Image B on it. I open it, and if I need something, I buy it." People just deny that they're affected by something that isn't logical or rational.

I think the other piece is that, you know, if somebody publishes a paper that says, "Hey, science is BS," that's news, and somebody else publishes a paper later on that says, "Well, no, science isn't actually all BS," well, that's not really news, newsworthy.

John Bargh: That's right. That's right. You know, there's something out right now where ... probably you've heard of this famous marshmallow test, the Walter Mischel.

Roger Dooley: Right, yeah.

John Bargh: Yeah. Well, they did a replication of that, and they found it. They found the marshmallow effect and it predicted a person's self-control later on in their life, just as before, but they found important individual differences and couldn't understand why this effect happened for some people and not. When you control for those individual differences, the effect goes away. The media that I've seen says, "Oh, here's yet another psychology famous study that doesn't replicate," and that's not what happened. What happened was it did replicate, and now

we understand better who shows this effect and who doesn't. We have a better understanding of the moderators and mediators, and that's how science progresses.

I think you're right that this is an example where often the media is just really ready to jump on, "Oh, look, here's another time when a psychology study failed." It faces sort of a popular bias that I've faced ever since the 1970s that psychology is not a real science. You know what, it's tough to predict human behavior. Look what a great job all the statisticians and pollsters did in 2016 predicting the behavior of American voters in the Presidential election. They didn't do such a great job, with all their statistics and power and surveys, because human behavior is difficult to predict, and that's what we're trying to do in our studies, and it's very complicated.

There are so many things going on and it's a tough thing to do, but I think there are well-meaning people out there really trying to understand what's really going on and to get that information out to the general public. We're doing the best we can. It's too bad that there's a feeling fostered that what we're doing is bogus or can't be trusted or we're making this up. It's just too bad, but that's actually true of a lot of our society now with fake news and everything else. People don't know what to believe.

Roger Dooley: Right. Well, I think there's been an increase in distressed journalism, part of it just fostered by a lot of rhetoric. I think one other odd little factor, I've been on the periphery of journalism for a lot of years, and headline writing is both an art and also a potential pitfall. I've seen articles written by thoughtful journalists where the headline, which is written by a separate editor, pulls something out of the

article that doesn't really represent the article, sometimes even contradicts the thrust of the article, but the headline writer thought that it would attract attention, get more clicks and so on. By and large they do a great job, and that's what they're supposed to do, take a humdrum article and get people interested in it, but sometimes that can work against them.

John Bargh: Absolutely.

Roger Dooley: You mentioned something else, John, about the sample size. Coming from the direct marketing business, something that we would do is test mailing lists, and the typical test size is about 5,000 names, and if you had a 2% response rate, by and large that would be a reasonable indicator of how the much larger mailing to that list would respond. What we would find is mostly that worked, but you would get these anomalies where on a given test, you might test 20 or 30 different lists, and one of them would have a pretty high response rate.

Like, "Wow, hey, that one's doing pretty well. That's going to be profitable. We should mail to that." Then you do it to a larger quantity and they didn't perform the way that sample did, and you realize that if you run enough tests, then you're going to get a few false positives in there. I think that's been an occasional criticism of researchers, that they'll run 30 experiments and write about the one that worked. I think that's something that marketers have to watch out for too. Even if you're following normal guidelines, you can still get these occasional false positives.

John Bargh: Absolutely.

Roger Dooley: I want to move on to some of the really interesting research you describe in the book, and John, one of the studies that I've written about before involves a hot and cold coffee cup, so I want you to explain that experiment. That was really fascinating.

John Bargh: This is great, Roger, because also it's a nice segue out of the replication thing, because basically here's what we did. We noticed that for so long in human history even, we talk about warm individuals and a warm family or a warm environment or a warm friend, or we talk about a cold father or a cold boss, and we all know what that means and why we use these words, hot and cold or warm and cold, as temperature words.

We started figuring out, well, it turns out when you describe somebody as warm or cold in an impression study, impression formation study, those are the most powerful things you can say about a person. It changes the meaning of everything else. Someone who's warm and sensitive is very different from someone who's cold and sensitive. The "sensitive" changes, and so why is that? Why do we use those words?

What we started looking at was there's an interesting attachment theorist, John Bowlby, who wrote about attachment and loss back around 1970, about how children bond with their parents, and he really focused on breastfeeding. He focused on the fact that the infant is being held close to the mother, is getting nourishment of course, but also the body warmth keeps the baby warm. Over our evolutionary history, keeping warm was an issue. We didn't have central heating, we didn't have homes and it could be very cold at night, so keeping warm was important as well as food.

He said, "You know, the infant is associating, in their experience, the being cared for and the being held close and protected by your parent with the warmth." This cue of the body warmth is probably associated with being attached to the body. That's why we talk about something that's warm. He actually said this is an evolutionary kind of thing.

We started thinking, you know, interesting, because this very early experience of the infant with warmth, you have the physical warmth but it's conflated with social warmth, with the fact that you can trust that person who's holding you close or caring for you, so is there this connection? I was struck by ... well, I'll tell you the Dante story in a second ... but we were struck by that and so we said, "Okay, look, what if we substitute a warm or cold coffee cup for the actual words warm and cold?" We did the same studies they used to do with the words "warm" and "cold," but we didn't use the words.

Everything was the same for everybody, except they just briefly held a hot cup of coffee that we had in our hands and said, "Could you hold that for a second, I'll get your forms for you," and then gave them their forms, but they just briefly held something that was a hot cup of coffee, or a cold cup, an iced cup of coffee. This was done in May and June when people have iced coffee outside.

They either held the hot or the iced coffee and then they filled out these forms, and we got the same effects that these people had been finding for 70 years with the words "warm" and "cold," even though the words were never presented. Aha, so there is some kind of connection with the warm and cold experiences and feeling, "Oh, yeah, this person's warm and friendly and on my side," or, "This

person's cold and unfriendly and against me," friend or foe, which is so critical to our impressions of people. Are they with us or are they against us?

Now, that study actually has been replicated a lot, and people have had trouble finding, with our original procedure ... which actually goes back 70 years to the 1940s, so it's not like the most up-to-date procedure ... but what's nice about it and why I feature it in "Before You Know It" is because since that study was done, neuroscience study, especially at UCLA, has actually shown there's a small part of our brain, the insula, where sensations of physical temperature like warm and cold are directly connected to our feelings of social warm and social cold.

They do these studies where they have people hold something warm or cold while their brain is being imaged in a magnet, and they also have them text their family and friends or do something like that. They do a social warm, talking to their friends and family on their phone, or they touch something warm or cold. It's the same part of the brain. It's directly hardwired. This guy Bowlby from 1970 was exactly right. It's not just the infant learns it, it's hardwired.

One thing I try to do in "Before You Know I " is to give life hacks. Like, "Well, now that we know this, what can we do?" I say, "Hey, man, hug your kids," because this channel of feeling warmth is a primitive, direct signal. They're little babies. It's a direct signal to them that they can trust you. It's a direct connection that causes them to bond with you.

Roger Dooley: Right. We've had Paul Zak on this show. Paul's an expert, and I think he would give the same advice based on

neurochemistry. He's taken blood samples and found that hugs ramp up the oxytocin.

John Bargh: That, and oxytocin is much more powerful as a hormonal effect on this than what we do. We're just talking about neurophysical experiences and the insula being activated, but oxytocin is much more powerful. It's just we can't do a study like that, because it takes 30 to 45 minutes to ramp up. The lag of using that would be too much for an incidental study like ours.

What I really like is we were looking at things like with a magnifying glass, if you will. We were looking at these effects with our instrument that's like a magnifying glass, and now basically with mineral science, you're looking at the same effect with a microscope, and you're looking at it with much more powerful ways to see if there's really something there.

The neuroscience confirmed what we found. Whether you can find it easily with another magnifying glass and all that, that's fine, but we've moved beyond that. We've actually located that there is a direct connection in the mind, and study after study with the neuroscience shows it's there. It confirmed what Bowlby said too and it confirmed our study too, so that warm/cold effect is there.

I just tell all parents out there, "You may have a great relationship with your kid, your toddler, but that warmth thing tells them. It helps them bond." What they also find in research on kids to see how bonded they were with their mother or father at age one, at one year of age, predicts how many friends they have in grade school, predicts how well they get along in high school, predicts how many breakups they have in their 20s with relationships. That is a very key critical period of their life,

very early on with their mother and father. If you can do something like hug 'em, hug 'em, have them feel that body warmth, dad's as well as mom's, that will help them the rest of their life.

Roger Dooley: Uh-huh. When I first read about that coffee study, I advised people who were say going into making a sales call on a customer or going into a meeting where they needed to be persuasive to bring a hot cup of coffee for the other people, definitely not an iced drink.

John Bargh: Right.

Roger Dooley: Would that advice still be active?

John Bargh: I think so. I've always done that. I thought it was hospitality, you know. Even in the summertime, I always offer people coffee. The old Budweiser Clydesdale ads, Christmastime ads, used to have the horses arrive and the doors were open to a place and there'd be a fire going. It's the old days of the fire being the center of conviviality and warmth, and the Great Thaw of the Middle Ages and all that. There's something about physical warmth that leads to trust and friendship, and that's very natural and it's actually hardwired in our brain.

Roger Dooley: Well, there's one hack that folks can use. Now, other studies that you talk about showed that advertising really worked, although maybe not in a way the advertisers intended, and that was tests that showed advertising for tasty foods in other content, and people saw it with or without the tasty food ad. What happened then?

John Bargh: Well, I don't know if they don't intend it or not. I think a lot of this research is out there and known to advertisers with large budgets for research, and it’s proprietary

information, so they don't publish in the scientific journals and get the word out because it's in-house and proprietary. I know that's going on and of course it is.

What we basically did was to show a little five-minute comedy with Drew Carey, "Whose Line Is It Anyway," a show from like 10 years ago, just five minutes of that, and it was naturally with a commercial break about halfway through. There were three little 15-second or so commercials, and all we did was vary whether people saw food-related commercials or not. It actually turned out not to matter what kind of food. Healthy food like Kashi and stuff like that was just as effective as Lay's Potato Chips or something like that.

We had a food condition and a not-food ad condition, and what we did was to have a bowl of Goldfish crackers in front of them with some water while we watched the show, just sitting there incidentally. What we did was we measured how many Goldfish crackers they ate, just by weighing the bowl before and after. You know, we weighed how much of the Goldfish crackers they ate. If the food ads were on there, they ate ... in our study anyway ... 45% more of the Goldfish crackers.

What this idea is is sort of a contagion effect, sort of a "What you see is what you do" effect, which is also featured in the book. It's sort of natural. It happens on Facebook, it happens on social media, it happens in real life, that what you see other people doing makes it more likely you'll do the same thing, and that's definitely true with ads. With food ads and other kinds of ads, if you see people eating, it makes you more likely to eat yourself.

It's something actually to watch out for. I like to eat. I like to have dinner. We watch "Jeopardy" or something and

we have our dinner, eating our dinner in front of the TV. It's a nice fun thing and a lot of people like to do it, but you might actually turn out to eat more because of the food ads on there than if there weren't food ads, maybe more than you intended. The other thing about it, you know, there's a good side and bad side. That makes people eat? Well, if you know about it, then you can control it if you want to. You can do something about it.

The bad part was a couple of years ago there was a study in the "New England Journal of Medicine," I think, of researchers with a large national sample of teenagers. What they found was that the more alcohol ads, like beer ads and Captain Morgan, alcohol ads they saw on TV, the more they drank. These are teenagers, who are not supposed to be drinking. The kids who saw these ads, three times more. They drank like 30 drinks a month compared to 10. Among teenage drinkers, it really affected how much they drank.

You know, I've got teenagers, and you might be watching your football game. There's lots of alcohol ads on the Sunday afternoon football games, so it's something that CNN picked up on it and got the word out that, you know, you might be more careful. If you don't worry about your own ads, that's one thing, but you might watch out for the kind of things that your teenagers and your kids are watching, because that also ... it affects their behavior too.

Roger Dooley: Yeah, no doubt. You know, I guess food ads are a pretty sort of obvious prime. Lay's Potato Chips would probably prefer that you go out and buy their branded product rather than consuming Goldfish, but nevertheless. I'm wondering as you look at ads, whether they're print ads or

TV ads, if you see occasionally things that you say, "Wow, there's a prime, but it's a little bit more subtle."

John Bargh: I love watching ads. I always have tried to figure out how they're working, what's the intent, what's going on behind them. There's a lot of emotional things going on in ads. For one thing, maybe it's just what I watch, but there are so many pharmaceutical ads on now. It's like almost every ad. We're watching CNN, we're watching these shows like "Jeopardy" and things like that, and there's a lot of pharmaceutical ads.

They tend to always convey visually a very wonderful kind of relationship with a supportive family member if you've got some bad disease, an almost heroic kind of countenance that "I'm going to make this," and you see the heroic look on the people's faces. As everyone knows, they have to say these things legally, all the terrible side effects of these pills, which are usually pretty horrible, and they go on for like 15, 20 seconds of all the terrible side effects, but the visuals are all this happy, wonderful thing.

You know, it's not so much an automatic thing maybe, but our brain is 80 percent vision. What we're looking at is really what's causing our reactions to the ad. All those words with all those things about the side effects, they know that people aren't really listening to those. They're really looking at the happy people, the heroic people and all of that. It's just interesting to watch and listen to these ads with all these terrible things that are going to happen to you possibly if you take these pills, and yet they obviously work because so much advertising is being spent on these kind of ads.

Roger Dooley: Uh-huh, that's a great example. It's sort of that there's the system one message that's visual, and the system two message that is verbal.

John Bargh: Right, right.

Roger Dooley: People really aren't paying attention to it. If the FDA required them to illustrate the side effects visually, that would probably be a whole different story. I think we'd see a lot less pharmaceutical advertising.

John Bargh: You got it. That's absolutely what would happen, right.

Roger Dooley: One of the more depressing things that I read in the book was about gender priming. We just had the first Miss America contest that did not have a swimsuit competition. Not everybody was a big fan of that move, but there's actually some science that you describe in the book that says maybe that's a good idea, right?

John Bargh: Yeah, yeah. It's really ... it's sad, because these stereotypes in the culture that really affect people who are members of those groups, and they're debilitating to the extent that you can sort of buy into what the culture says that your group can or can't do or should or shouldn't do. There's sort of a dumb blonde kind of thing, or a good-looking woman can't be smart at the same time. It's almost like you can't have both.

You know, it's not fair. You can't be beautiful and also smart. If someone is very good-looking, there's the assumption that they're not very smart or something like that, and so women are culturally, historically, almost asked to choose to be the brainy one with glasses or the beautiful one, and play down how smart she is because

it's not attractive to men if she's so smart and it's threatening to them, something like that.

Studies have actually shown that if you ask women to try on a swimsuit just for product testing and you ask men to do the same thing ... if you ask them to sample some tea or different products and one of them is to try on a swimsuit, and this is privately in a dressing room ... and to say what they think of it, afterwards if they tried on the swimsuit, they actually scored lower on a math test in a separate study.

It's just the idea of focusing their identity on this beauty aspect of how you're supposed to be good-looking actually causes them ... these are University of Michigan undergraduate women. These are students who have a history of success in academia. They have a very strong academic identity, and yet they're still prone to this stereotype that women are not supposed to be smart, they're supposed to be beautiful. You emphasize one aspect of their identity, and then it also causes them to do these other things without realizing it, like not be as smart and not do as well on tests afterwards.

The really sad one for me is the study we have in the book that's a famous one with five-year-old girls, five-year-old Asian-American girls. If you emphasize their Asian identity by doing a coloring, coloring a cartoon in that has kind of an Asian kind of cultural theme to it, they do better than average on this five-year-old math test. They're randomly assigned to these conditions and all that. If you just happen to have them color in a picture of two girls playing with dolls ... you know, their girl identity instead of their Asian one ... now they do significantly worse on the math test. By changing the priming, or

activating one identity versus the other identity, you move around their academic or math performance.

It's like they know already at five years of age that girls aren't good at math, and that's so sad because it's before they even get into first grade. We used to think that we could do something, get 'em in first grade. Get 'em like, "Yeah, girls can do STEM, girls can do math, girls can do science," but they've already got that from the culture, from the cartoons, maybe from their peers from who knows where, and these were kids at a Harvard preschool, so you really doubt it's the parents. It could be, but the parents are more like tiger parents. They really want the girl to succeed, and yet they still have this in their head at age five and it affects their behavior without their realizing, unconsciously.

Roger Dooley: Is there a way to counteract this affect, maybe by using some kind of a positive prime, maybe having images of famous female scientists or something? Is there some way to avoid the situation?

John Bargh: I think there has to be and there is. I focus the last couple of chapters of the book on what can we do about this, and the number one thing that we can do is accept that these things really happen, because if we stick our head in the sand, we're not going to do anything about them and we'll be at their mercy. Accepting that they're going on, yeah, I think we can structure our world so that we do have these positive reminders, people who are good role models in ways that we ourselves can also perform.

For example, Abe Lincoln was known for his honesty and his humility, and that's not a bad portrait to have in your wallet to remind you of Abe Lincoln, because it'll remind you of those wonderful traits. If you put Einstein on your

wall, on the other hand, all the Einstein priming in the world won't make me Einstein. It might even make me depressed because I'm not as smart as Einstein and never will be. I think things that we are capable of are really good visual kinds of things, reminders.

Now, here's the key. It's funny. If we know we're doing it, it won't work. It's like we can't tickle ourselves. We know what's coming, so it ruins it. If someone else tickles me, yeah, I'm very ticklish, but I can't tickle myself. If we know we're doing it, it won't work, but the thing is to leave it up there, because there'll come a time when it becomes part of the background, becomes part of the woodwork and you won't remember why you did it anymore, and then those things will actually start working.

I do think that's good. We have to be careful with primes we put around us. I think of for example let's take a classic male office worker, having a picture of his wife on the desk. That's great, but you think about it may trigger romantic kinds of ideas and maybe sexual. You know, romantic and that kind of thing. That's maybe not what you want to have going on in your mind without your knowing it at work. Yeah, I'm just thinking, you've got to be careful. Maybe a family context, your kids too. Be careful what you've got up there, because those kinds of things can be triggered, and maybe not in the context you want to pursue them.

Roger Dooley: Uh-huh. Well, in my office, John, I have two intentional primes. Specifically, we were shopping for a house that had ten-foot ceilings rather than the more common eight-foot ceilings, because there's some research showing that higher ceilings make you more creative. Then also on my desk I've got an Edison-style light bulb, because there's

also research showing that exposure to light bulbs causes people to be a little bit more creative. I don't know if those things have been replicated or not, but I figured, hey, if nothing else, maybe there's a placebo effect.

John Bargh: Well, it's not so far-fetched. The idea of a bright light, you know, being bright, that would work.

Roger Dooley: Well, that's a different way of interpreting it. The way the scientists interpreted it was that this was actually reminding people of Edison and his creativity. That light bulb has become a symbol. In a cartoon, if somebody has an idea, a light bulb goes off over their head.

John Bargh: Yeah. Yeah.

Roger Dooley: We'll see. I'll report back to you in about 10 years.

John Bargh: Okay. Let's find out, yeah.

Roger Dooley: Do you have any primes you use on yourself?

John Bargh: I have a lot of my daughter at work. It's almost like that Homer Simpson famous one where he has to go back and work at the nuclear power plant, and he puts up something in front with a lot of pictures of his baby, Maggie, and it says, "Do it for her." Like you said, when the times were especially tough with the replication thing and the attacks and all that, it was a tough time to go through.

Those pictures on my desk ... and I'd put her little drawings on the wall and things like that in my office. She wrote on the chalkboard once when she was I think four years old, five years old, "Daddy, I love you," and she spelled "daddy" wrong, D-A-D-E, like Dad-e, and I've

never erased that. That's still on my chalkboard, and now she's 12.

Things like that inspire me. Things like that, you know, I'm doing it for her. She's made my life wonderful, and that's what life is about. It really helped me get through. I'm not sure those are primes as much as associations that I have and reminders of why I'm there and how good I have it in my life, even if things might not be so great that day.

Roger Dooley: Great. Well, that's probably a pretty good place to wrap up, John. Today we're speaking with John Barge, author of "Before You Know It: The Unconscious Reasons We Do What We Do." If you have any doubts about human behavior being influenced by non-conscious drivers, you'll want to read the book, or give it to a friend who swears there's no way they're anything but rational. The book is just chock-full of examples of these often really surprising behavior changes caused by very subtle factors. John, how can people find you and your work online?

John Bargh: Well, thanks for asking. We have a website, BeforeYouKnowItBook.com. We have a Facebook page, Before You Know It Book. I'm on Amazon with my name, as an author. Those are our media outlets, and we update those and put stories up and do bindings and things like that, keep in touch with our readers. My lab is called ACME Lab at Yale, and you can get on there and see our scientific publications and things if you want to, but really it's BeforeYouKnowItBook.com and also on Facebook.

Roger Dooley: Great. Well, we will link to those places and to any other resources we talked about on the show notes page at RogerDooley.com/podcast, and we'll have a text version of our conversation there too. John, thanks for being on the show.

John Bargh: Roger, I really appreciate it. Thank you.

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.