

Rationally Speaking #149: Susan Gelman on, "How essentialism shapes our thinking"

Julia Galef: Welcome to Rationally Speaking, the podcast where we explore the borderlands between reason and nonsense. I'm your host, Julia Galef, and with me is today's guest, Professor Susan Gelman. Susan is a Professor of Psychology at the University of Michigan as well as the Director of their Conceptual Development Lab. And she's the author of several books including *The Essential Child: Origins of Essentialism in everyday thought*, which has been very influential in the field of psychology. Susan, welcome to the show.

Susan Gelman: Thanks, great to be here.

Julia Galef: I should also mention she's the sister of Andy Gelman who was a guest just a few episodes back.

Susan Gelman: I have stories about him.

Julia Galef: Yes, which I am very much looking forward to coaxing out of her later. I was chatting with Susan before we started taping and telling her that my brother, Jesse Galef, is also a blogger and public speaker, and we have a running joke where, if someone meets me and says "Oh my goodness, you're the sister of Jesse Galef?" then he gets a point. If they meet him and goes "Oh my god, you're the brother of Julia Galef?" then I get a point.

But it sounds like Susan and her brother have a much healthier, less competitive dynamic, so good for you guys.

Susan Gelman: Well, we haven't been keeping tally, I'll put it that way.

Julia Galef: Jesse and I have different tallies in mind for who is ahead.

So, today I mentioned the book *The Essential Child: Origins of Essentialism* and that's the area that we're going to talk about today. Why don't we kick things off, Susan, by having you just explain what essentialism is, and then we'll get into the way it manifests and its effects on psychology in everyday life.

Susan Gelman: Okay, great. I want to make a distinction to start off between essentialism and psychological essentialism.

Julia Galef: Great.

Susan Gelman: Essentialism is an idea that goes back at least to Plato. It's a very old idea that keeps occurring in different contexts and it's kind of a belief about how the world works. The basic idea here is that the apparent world is only part of reality, so we see kind of surface appearances to things in the world, but there's a deeper reality that if we dig deep and try to learn more about the world, we'll

find that there is ever more to learn. About what makes something a member of a category and how things are structured.

Julia Galef: Susan, are you talking about something like, I think it was Plato's idea that there's a true platonic form of a dog or a table, and the things that we see in the world that we call dogs and tables are just imperfect manifestations of that ideal?

Susan Gelman: Right.

Julia Galef: Okay.

Susan Gelman: Right. Plato had this idea of essentialism as an ideal that's never actually represented in the world. These forms are kind of theoretical but we can never encounter them directly. He had this "allegory of the cave," so we're like somebody sitting in a cave and all we can see are shadows that are being cast by some reality that's out there. And so we have imperfect access to the real structure of the world.

Julia Galef: I always thought of it a little bit like there's the mathematical concept of a square, for example, but there's no perfect square that exists in the world. There are things that we call squares but of course they're not perfect squares, because they're made of atoms. They can all be described by this perfect form.

Susan Gelman: Right. Exactly. Psychological essentialism is a little different from that, but it shares some of the same idea of there being a distinction between appearance and reality, or surface features and the deeper features that really matter.

This has more to do with how we organize experience into categories. Every organism forms categories to survive and these are just very prosaic sorts of things, like apples and dogs and houses and so forth. We convey these categories, even for young children, just in the language we use. To some extent, these are human inventions. A word like 'vegetable' is a category that humans invent that allows us to make predictions about the food on our plate and all of that, but it doesn't have a biological reality. There's no such thing as vegetable in the biological world.

What we seem to do very readily, and by 'we' I mean children and adults and people with different levels of experience and education and people all around the world, is that when we hear a word for one of these categories, we assume that it's telling us something about the actual structure of the world. That there is something deeper that causes whatever features are in common that members of a category share, that these categories are stable and immutable. That there are sharp boundaries between categories. It's a way of interpreting our experience that is an oversimplification, that has a variety of consequences for how we reason.

Julia Galef: What are some ways that this would manifest? You've done a number of experiments, I think mostly on children?

Susan Gelman: Mostly on children, but we always have adults as well as a comparison group.

Julia Galef: Oh, interesting.

Susan Gelman: Yeah.

Julia Galef: What are some demonstrations of essentialism where you can clearly see this heuristic or bias at work?

Susan Gelman: Okay. I'm going to tell you first about a study I didn't do, but I love the study. It was by Frank Kyle who's a psychologist at Yale. He told kids these little stories about animals. He would show them a picture of, let's say, a raccoon, and he would tell them "This is a raccoon." He would say "Okay, listen. I'm going to tell you what happens to this." He would describe a series of superficial transformations, like somebody shaved off the fur and painted on some stripes and inserted a sack of smelly liquid and did all these kinds of crazy operations on it.

Lo and behold, when it was all done, he shows them that picture and it looks exactly like a skunk. He'd say to these kids "What is this?" If you were looking at the appearance of this thing, you'd say it's obviously a skunk. It looks like a skunk, and because of these other manipulations it smells like a skunk, and all of that. These young kids, young elementary school kids would say "It's a raccoon. It has to be a raccoon. You can't take the raccoon-ness out of an animal." They were doing something actually very surprising because that is not how children were supposed to reason when he did that study.

Julia Galef: How were children supposed to reason?

Susan Gelman: Well, there's this long history of thinking that children are ... Some people like to put it as children are like aliens. They're so qualitatively different in how they think that they're nothing like the adult human. Children are supposed to be captured by appearances, to only care about the most superficial aspects of what they encounter, and there are lots of beautiful demonstrations where children are much more focused on outward appearances than adults.

Like Piaget, the great psychologist who studied young children's thought has study after study after study, very replicable studies, where children, for example ... You know, you pour water into a tall skinny glass and they think it magically has more water, for example.

Julia Galef: Right.

Susan Gelman: I don't know if you would like to hear other ways that essentialism comes out or, if you want to ...

Julia Galef: Yeah. I'd like to get a sense of how, why it's important. I don't know if there's an overlap between the kind of essentialism you can demonstrate in a lab setting, a controlled environment, and, on the other hand, the kind of essentialism that affects the way that people think in real environments. If you could talk about that overlap that would be great.

Susan Gelman: Okay, great. One interesting thing to me about essentialism is that it has these kind of diametrically opposed influences for the real world, or implications. On the one hand, this belief that a category has a real depth to it and appearance can be deceiving leads children to make a number of inferences that are really pretty sophisticated. If you teach children new facts about animals, for example, they will assume that they should generalize those facts based on the category that the item belongs to and not what it looks like.

If you show children, for example, a flamingo and a bat, and you teach them something about how they feed their young or their internal parts, or something biologically important about the flamingo and the bat, and then you show them another bird, as long as these items are labeled so that it's clear to the child what category each thing belongs to ... The flamingo is a bird, and this other crow, for example, that looks very similar to the bat, is labeled as a bird, they will make an inference from the flamingo to the crow, even though, without those labels they would have assumed that the bat and the crow were more alike.

This essentialist assumption allows children to make more subtle and sophisticated inferences about the world. That's a plus.

Julia Galef: Yeah. Interesting. I'd be curious to hear if there's anything we know about when people, or children, are tempted to essentialize and when they're not. The example of the raccoon that is outwardly transformed into a skunk ... I guess I'm not that surprised that children still say "Well, no, it's still really a raccoon." And I don't know if this experiment has been done, but if you were to take a wooden chair and then cut it and transform it until it is a table -- take off the back of the chair, essentially, or extend it -- I would be surprised if children said "No, that's still a chair." I would expect them to say "Now it's a table." I could be wrong.

Susan Gelman: No, you could be a very good developmental psychologist. That's exactly- Kyle did have, in addition to these biological kinds, he also had artifacts, and you're absolutely right that the intuition both for adults and for children is that you can readily change these things by changing their form. Their outward form affects their function and makes them new things. He had a coffee pot that turned into a flower pot or something like that, and other items like that.

Your intuition that it's not surprising that kids got the raccoon stunt correct - I think you didn't find it surprising because you're an adult and it's how we think. We understand that categories are not just surfaces. Given lots of other ways that children think, that was a very surprising result. You have to kind of think about it in the context of these other errors that kids are making.

Julia Galef: Right, right. Of course it's pretty hard to imagine how surprising something would have been if you didn't already know it.

Susan Gelman: Right.

Julia Galef: About the question of, are there certain things that the brain wants to essentialize and certain things that it doesn't. Do we know anything about that?

Susan Gelman: Yeah. I do want to answer that but can I circle back to something you had asked before?

Julia Galef: Yes, please.

Susan Gelman: You said what are the implications of essentialism for real world living. I started out by saying there's a way in which it's very helpful. In fact, sometimes when I talk about the ways that children essentialize, I feel like I'm providing all this evidence for the benefits of essentialism. Because in study after study we see that kids look surprisingly adult-like in how they think about which properties are inborn. They think that certain biological features are innately capable of developing a certain way. Kangaroos raised among goats will nonetheless grow up to have a pouch and be good at hopping. Then people say "That's great. That's what I think, too. I'm an adult."

It would seem in some ways that, why not just say that essentialism is actually really nicely tied in with the structure of the world. Maybe we have evolved a way of thinking about categories that is basically right.

The other side of it, and this is the point I wanted to get to, is that essentialism can be really deeply wrong, and a lot of the evidence for that comes from how people think about social categories. People are not just essentializing things like raccoons, but they're also essentializing things like male and female or white people and African American people, or other kinds of social categories.

Julia Galef: But there are at least visible differences between skin color and there are biological differences between male and female, although it's not necessarily a clean dichotomous two-category thing. But nevertheless, there are differences.

Susan Gelman: Yes.

Julia Galef: So in what way are people wrong to -- or in what ways are we biased to think of those as two separate categories?

Susan Gelman: First of all, I'd point out that people essentialize things that are categories in some cultures and don't even exist in other cultures, like the caste system, where there are documented studies showing that not only do people think that this has a social reality, but people will report that it has biological reality as well, which there is no evidence for.

Julia Galef: Right. So someone who was born into the untouchable caste is inherently a different kind of person, it's not just they happened to be born into this caste, right?

Susan Gelman: Exactly. It's interesting that high caste individuals are much more likely to endorse that than-

Julia Galef: How surprising!

Susan Gelman: Yeah. Right. We can sometimes use essentialism to support the power structure that benefits us, whether we're doing that consciously or not. Other examples, too. Let's talk about, do you know that infamous conference that Larry Summers, the ex-president of Harvard was at?

Julia Galef: Oh right, he raised the hypothesis that the reason there are fewer women in the upper echelons of science and math is that the standard deviation of women's intelligence is smaller than the standard deviation of men's intelligence?

Susan Gelman: Exactly. What was so interesting to me... I went, I got a transcript of his speech and his comments. They were fascinating from the perspective of someone who studies essentialism because he didn't just say "There's this difference which may or may not be true." I think there's some controversy of even the fact of how stable that is. Even if we assume for the moment that it's true, he then went on to explain that he thought that these were ... He said "Well, there are different reasons why you might expect this to be. There's socialization and there's issues of identity, but then there's also biology. I've talked to my-" I don't know, his 3 year old grandchild or something, which toys she liked to play with and that was evidence that there's this really deep inborn biological difference between women and men that was going to come out, regardless of the environment.

Julia Galef: Does essentialism, in the context of thinking about race or gender differences, does it just equate to a sort of biological or genetic determinist view?

Susan Gelman: Yeah. That's a big piece of it.

Julia Galef: Okay. Can you call that a bias or is that just a hypothesis that we may think is empirically false?

Susan Gelman: I was going to say there are statements that people make that are demonstrably false, but maybe you're ... Are you distinguishing between having a false belief and having a bias?

Julia Galef: I guess I would imagine that biases can systematically lead to false beliefs, but that not all false beliefs are the result of bias.

Susan Gelman: Right. Right. I think there are systematic ways that people reason about categories that stand in the way of even accepting information when it's provided to them.

I think one really great example of this is thinking about evolution. People, even biologists have talked about this, too. Ernst Meyer has written quite a bit about it and other people more recently. People in the US, for example, really on the one hand have trouble understanding evolutionary theory in the way that it's intended, and on the other hand reject it at very high rates. Something like only 50% of US adults think that evolution is real.

Julia Galef: Wow.

Susan Gelman: Part of it is a resistance to thinking about the idea that a category can change. If you think that there are these God-given distinct types that we're provided at the beginning of history, it just doesn't make sense to think of these as populations with variation that are undergoing these shifts over time.

Julia Galef: Right. Right. That reminds me of what seems to be to be a manifestation of an essentialist bias in the field of philosophy. I know that we talked about philosophy at the beginning of the podcast, but that was in the context of a different meaning of the word essentialism. Here what I'm trying to refer to is ways that I think philosophers are subject to the psychological form of essentialism, and the way that impacts their philosophy.

I'm curious what you think of this: There's this whole category of philosophical thought that is asking different versions of the question, what is X, what is an X. One classic, nice, simple historical example of this is called the Sorites paradox, which maybe you've heard of, but for the pleasure of our listeners who haven't: It's basically saying "Okay, so you have this heap of sand and you remove one grain of sand. Is it still a heap? Well yes, of course! But then remove another grain of sand, and then another, another, et cetera." Eventually you have nothing left, but at what point did it stop being a heap?

The listeners of this podcast that have been around longer than a few months will remember my esteemed co-host Massimo Pilguzzi who's a philosopher at CUNY. When the show started almost 6 years ago we sort of had this dynamic -- that was sort of exaggerated for the fun of it, but was still real -- which was that he was the philosopher and I was the anti-philosopher who didn't think that philosophy was particularly valuable or meaningful. My views have evolved

since then, they're more nuanced. I've found a number of types of philosophy that I think are very important and sophisticated and helpful.

But the kind of philosophy that I had been aware of at the beginning of the podcast was this kind of philosophy, which I still am pretty frustrated with. Even when I encountered the Sorites paradox as a freshman in college or something, I just thought "This is so confused. That's not how language works. Words and language don't have precise definitions the way mathematical terms do. They're just sort of approximations, and there's going to be some statistical noise in which things people would call a heap, but there's enough clustering that it's a useful word to have in our language. So of course there's no right answer to when something stops being a heap. You can test experimentally, different sizes of piles of sand and ask people if it's a heap and you'd get some convergence, but not a precise definition. What more can you expect?"

It was confusing to me that the philosophers thought there was a right answer, that this was a meaningful paradox, or that there was a right answer to the question "What is knowledge?" That's a much more recent philosophical ... It's still ongoing. I don't know if the Sorites paradox is still ongoing. Philosophers really do seem to think there's a right answer to the question "What is knowledge?" That some things count as knowledge and other things don't. So a lot of philosophical debate consists of throwing up these weird edge cases where "Oh, what if someone believes that John is in the room for the wrong reason, because John was in the room but then he left but the guy didn't know he left, but then a different person named John came in the room. Is that knowledge?" I'm like "Well, maybe it'll be useful to call it knowledge, maybe it won't, but there's not a right answer to that question."

Anyway, rant over. My question is whether you think this is a manifestation of the essentialist way of thinking?

Susan Gelman:

I think it's related, but I don't think it's exactly the same thing. I think there is overlap there. The cases that you're talking about seem to be ones where there's an assumption that there's some set of necessary and sufficient defining features that if only we can be clever enough and precise enough, we can uncover what those are. That certainly doesn't seem to be the way that humans generally ... How our classification system in the brain works. Like you said, the "weird edge cases." I love that phrase because it's exactly those boundaries that we're very bad at. We're good at central tendencies and representing those, and then it gets really fuzzy the farther you get from your clear prototype of the category. I think that's a mismatch between what the philosopher is trying to do, what they see is their calling is to make things precise and logical and mathematical, but they're talking about concepts that are embedded in language which is a human phenomenon, which doesn't work that way at all.



In fact, we see ... I've been really interested in this side issue that is a way that I think people express essentialist beliefs a lot which is using generic language. Saying things like "Dogs are four-legged."

Julia Galef: Instead of?

Susan Gelman: Instead of "These dogs are four-legged" or "All dogs are four-legged" or "67% of dogs are four-legged."

Julia Galef: It's an interesting contrast between "All dogs are four-legged" and "Dogs are four-legged."

Susan Gelman: Yes.

Julia Galef: It's seemingly expressing the same concept, but the feel is definitely different.

Susan Gelman: It's very different and the thing is, there's a long tradition in philosophy and linguistics of trying to figure out just precisely what the semantics of these expressions that can be expressed with predicate logic. If you were going to take a statement like "All dogs are four-legged" and apply predicate logic to it, it would be nice and simple and easy.

You try to do it with "Dogs are four-legged" and the whole- It just doesn't work because there are no hard and fast rules. We say "Birds lay eggs." Well, only female birds lay eggs. But we don't say "Birds are female." There are more birds that are female that lay eggs because baby female birds don't lay eggs. It gets really hairy very quickly. You can say "Mosquitoes carry the West Nile Virus." But I think it's under 1% that do.

Julia Galef: Good luck to all the people building artificial intelligences that are supposed to do natural language processing! That seems like a hard problem.

Susan Gelman: Exactly. Yet, 2 year olds are using these. You can't even ever show them the meaning of these things. You can't show them dogs as a class, as an abstract kind, but somehow they figure it out.

That's all a long digression to say I think that's what's happening with some of these definitional puzzles that philosophers are working on. What's different, I think, from essentialism, is that they both- What they have in common is this idea that there's some placeholder there and they have a firm commitment that there's something that fills that placeholder. Like, "I know that there's something that makes something knowledge, I just haven't figured out what it is yet." Or I know that something's a dog, I just haven't figured out what makes them dogs.

Julia Galef: It's kind of a reification of this placeholder.

Susan Gelman:

Yes.

Julia Galef:

Taking this placeholder and assuming that it has a real essence, I suppose. Yeah.

Susan Gelman:

Absolutely. In fact, I'm glad you said that, because I think of essentialism as really being a form of realism. These words get reified.

With essentialism, that placeholder is not just a definition, it's thought to be the cause. It's thought to be the thing that gives rise to these other features. If you're trying to define what makes a heap, it's not that whatever rule you would come up with- Let's say you were able to somehow determine what that rule is, even though probably you can't, it wouldn't cause there to be a heap, it would just be that tag that you put next to that word to say "Here's the definition."

With something like 'dog' or 'female' or something like that, you think that this is some core irreducible essence that gives rise to what something is. It gives it its identity and it gives it its features. That turns out to be a problem even for biological categories. It's not the case that each and every dog has exactly the same genetic material. There's not anything even at that molecular level that you could say "This is dog-ness." There's variability all the way down.

Julia Galef:

I've heard it claimed that it's important- that we need to pay attention to the language that we use, when, for example, talking about people with disabilities. Instead of saying 'autistics' for example, it's important to say 'people with autism.'

I can hear the difference. I can hear how 'autistics' is taking the autism and making it central to the essence of those peoples' being or identity in a way that might make people treat them differently, et cetera.

I'm confused about the causality. I can see how essentialism would cause us to use the language we do, but I'm curious whether it works the other way, that the language can affect how essentialist our beliefs about things are.

Susan Gelman:

Yeah. We actually did a study some years back where we were interested in precisely this question. In particular in kids... It's interesting to know in adults, but they're fairly sophisticated about language that's more or less PC and trying to think about the implications of the words they use and that kind of thing.

With kids, what they think, it would be the equivalent at the example you gave of 'an autistic' where you're putting somebody into a category with the noun, versus autistic as an adjective, where it's just one attribute for a person and not the category that defines them. We created categories, and there were things like 'carrot-eater'-

Julia Galef:

As opposed to someone who eats carrots?

Susan Gelman: Exactly. We had the noun phrase, "Rose is a carrot-eater" versus "Rose-" I don't remember the exact form. Some sort of verbal paraphrase.

Julia Galef: Eats carrots whenever she can?

Susan Gelman: Yeah. Exactly. We asked a bunch of questions about "In the future do you think she's going to eat carrots? What if everybody in her family wanted her to stop eating carrots, would she still eat carrots?" And so on. We're trying to get at their beliefs at how inherently being a carrot-eater was central to this person.

We did find that hearing the noun led kid to treat these categories as more stable and less influenced by other sorts of factors. I think the language does matter.

At the same time, we were then interested in, "Well, what implications does this have for how people think about diseases?" There, it's a little more complicated. You could say "Someone is a diabetic" or you could say that "They are diabetic" or you could say that "They have diabetes." My collaborator and I had different intuitions about what would be strongest.

Julia Galef: That's interesting.

Susan Gelman: Yeah.

Julia Galef: You mean about which phrasing or framing would cause the strongest expectations of the persistence of that disease?

Susan Gelman: Yes. One thing that we found- It was sort of a complicated set of results but one of the more interesting findings, I thought, was that with familiar categories like 'diabetes' they didn't act the same way as novel labels.

I think part of it is that there's this ever-shifting meaning ... Language can get very euphemistic. You can start with one label being the strongest way of saying it, and people over time, historically, will shift away from a label if it's considered not polite to use that way of talking, will shift to a different way of talking that at first sounds very non-essentialist and open and all of that, but over time when that becomes the de facto label, it then takes on those same implications.

It's almost like it's not something hard and fast about something being a noun, it's rather what signals that we're talking about a category here. The depressing thing about it is I don't think that you can ever get to really neutral language because when it eventually becomes the accepted means of referring to this kind of person, then you're back where you started.

Julia Galef: Yeah. It's been pretty interesting to read the history of slurs, of racial slurs, which often started out as completely neutral or an attempt at a positive ... An

attempt to get rid of a previous negative word. But then because they were used in contexts and by people with negative intent, they adopted negative connotations, and now they feel inherently like negative words.

Susan Gelman: Right. I think that's the same sort of thing. It gets back to your question about is language influencing thought, or is thought influencing language. I think it shows that it's going in both directions.

Julia Galef: Right. We're almost out of time for this section of the podcast. I have one more, somewhat lighter question: You know how upset so many people got when it was declared by scientists that Pluto wasn't really a planet? Was that essentialism? What was that? I'm so confused by that. Why were they so upset?

Susan Gelman: Oh! Yeah. It's definitely about categorization. Yeah. I think it is essentialism.  
  
Honestly, I hadn't thought about that particular example. I'm going to try to figure it out as I talk here. The essentialist view would be that there is a true and proper category to which this planet belongs. I mean, sorry, to which the celestial object belongs.

Julia Galef: Aha! Your inherent bias is exposed.

Susan Gelman: Yeah. You got me!  
  
It's either a planet or it's not a planet. There are sharp boundaries between the two. We may not know from the evidence which it is, but we have this absolute firm belief that it's one or the other. If you're on the planet-Pluto side of things, having it be snatched out of that category and being put into another category, it's not just saying "Oh, for the sake of convenience, we're going to draw the line here verses here." It becomes a qualitatively different entity, which is kind of ludicrous, because it's still Pluto no matter what. It hasn't changed. I don't think that's how people are thinking about it.

Julia Galef: Right. Also, as sort of a meta-note, I notice how driven I am to figure out which things are real essentialism and which things are not essentialism.

Susan Gelman: You're being essentialist about essentialism.

Julia Galef: Exactly!  
  
On that note, we're just over time for this section of the podcast, so I will wrap things up now and we'll move on to the rationally speaking pick.

Susan Gelman: Okay, great.

[interlude]

Julia Galef: Welcome back. Every episode we invite our guest on Rationally Speaking to introduce the Rationally Speaking pick of the episode -- which is a book, or movie, or website, or something that influenced their way of thinking. Susan, what's your pick for this episode?

Susan Gelman: My pick is a book called "The Bad Seed." It's a novel that was written by William March in the 50s.

Julia Galef: What's it about?

Susan Gelman: It's about a little girl who's a serial killer.

Julia Galef: Lovely! How did this influence your thinking, dare I ask?

Susan Gelman: Okay. First, I'll say how it influenced my thinking, and then I think I need to tell you a bit more about the book. "The Bad Seed" was also made into a play and my high school performed it when I was a student and I had the lead role. I was the evil little girl.

Julia Galef: You were the bad seed! Oh wow.

Susan Gelman: I thought a lot about this. The basic point in the plot is that the reason this little girl is evil is she inherited this from her grandmother who was a serial killer, unbeknownst to the little girl's mother and the serial killer's daughter. It gets revealed over the course of the play.

It's an example of appearance verses reality. Someone who looks very innocent on the surface but turns out to have these demons. It's about how genes determine how someone develops. It has a very biased and incorrect view of criminality as linked to genes and part of one's essence. It has a lot of food for thought there.

Julia Galef: That really does speak to the thing you mentioned earlier in the show where you said that the essentialist bias can ... There may be legitimate reasons to float the hypothesis that such-and-such trait is genetically based, but the essentialist bias pushes us more in that direction. Where we're less convinced by strong evidence against the genetic hypothesis, because we have this essentialist bias. And I think that well before people knew what genes were, there was a strong tendency to think "Your mother was bad, therefore you're bad, too." There's some essence of badness that was passed down from your mother to you.

Susan Gelman: Right. It can skip generations so it can show up in unexpected ways. These are, I think, very powerful beliefs that people have had for a very long time.

Julia Galef: I sure hope that the influence on you was that it got you thinking about these issues in an academic sense?

Susan Gelman: Yes. I did not become a murderer. I'm very law abiding. It just really intrigued me. When the book came out it was really controversial because in order for the book to work, and it was a very popular book and a popular play, it has to assume this essentialist core to it. It has to be realistic for the whole thing to work. On some level it worked very well and people accepted it with no problem. You can see that reviewers were very uncomfortable with it.

Julia Galef: Right. That is interesting. I love when ... I guess this often happens, when the success of a novel or a play or a movie, it's like a mirror turned onto the audience. The fact that it resonates so much for us reveals something about how our minds work.

Susan Gelman: Yeah.

Julia Galef: All right. Wonderful. We'll link to "The Bad Seed" as well as to your book, The Essential Child. Susan, it's been a pleasure having you on the show. Thanks so much for joining me.

Susan Gelman: Thanks for having me, it was great!

Julia Galef: This concludes another episode of Rationally Speaking. Join us next time for more explorations on the borderlands between reason and nonsense.