Ask A Genius: Set IV

Scott Douglas Jacobsen
&
Rick Rosner

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To three generations of women who support and tolerate me - my mom, Ruth, my wife, Carole, my daughter, Isabella.

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To the love in my life.

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Ask A Genius 115 – Sex as Tragedy

Scott Douglas Jacobsen & Rick Rosner

March 12, 2017

[Beginning of recorded material]

Rick Rosner: Sex as tragedy, I was thinking about how sex makes a lot of people dicks, mostly guys. That took me back to a few years ago when I read a science fiction story that took me back to a couple years ago when I read a science fiction story that presents a humanoid species, but somewhat different than humans because childhood is a time of innocent joy. But then when you enter puberty or adulthood, everything sucks.

You get dumber, body hurts, sex is brutal, and adulthood is a bummer and unavoidable. All of the adults walk around under this cloud of life sucking because of their horrible biology. Then I was thinking of how this relates to humans, and I was thinking of how sex is a tragedy. When you're a child, you're relatively free of sex drive. Sex drives for the most part. Though in today's culture, you can't really avoid it.

I was early seeing porn and everything, but I didn't see a boner, probably, until, at least, nowhere other than myself—took until 7th or 8th grade. I couldn't imagine being a kid today and not seeing one on the Internet by accident. Anyway, let's imagine childhood is an innocent time of joy, but then when puberty hit and sex starts. You're working for the sex man. It's not a good deal. Sex makes people into douches.

It doesn't make people into douches, but it encourages a lot of people's douchery to come out.

S: You opened this with men as guiltier of 'douchebagginess' or 'dickiness' than women.

R: Yea, because, I mean, it goes back to sociobiology: sperm cheap, eggs expensive. Guys can spray their schplooky every place, and can be reasonably happy; whereas, women have a different psychology. Under, I don't know, stereotypical conditions, but, I mean, women are subject to sex and gender-related and romantic related horriblenesses of their own. Sad relationships stuff. It is mostly not dickishness in women. It is maybe stereotypically romantic delusion.

In any case, both men and women, when puberty hits, you're working for the sex man and the sex woman. It's a miserable job. It makes some people into turds. It makes a lot of people miserable. That it in itself is tragic. We have to work for peepee and vagina stuff because that's what drives us because of evolution, and having to reproduce to carry on the species.

S: If I may interject, do these cultural values—that emerge from the same sociobiology, but played out in groups, that are tied to individual men and individual women that have these proclivities that are based in evolutionary pressures and genetic makeup—reinforce what some would see as stereotypes of men as aggressors and women as victims?

R: Yea, it is hard to separate cultural norms from biological drives. So yea, what we've been talking about is to some extent stereotypical, and so making me a little bit of a douche myself for stereotyping men and women, it's not like I'm talking entirely out of my butt. I'm not the first person to notice sex differences, gender differences, in approaches to sex.

S: What would you say to those who say that's not true?

R: Come on, I would say, "Come on." If you're going to do—there was a thing at my old university that was the human—this room of thousands of studies of comparative human behavior across all of the various cultures in the world. I forget the name of the room. If you do statistical studies of how people are, I'm sure you could find various loan cultures where you could probably find a matriarchy where women are the sexual aggressors and are closer to, or have what we think of, guy-like behavior.

If you do the statistical deal, I'm sure that you'll find that, on a statistical basis, men are more rapey than women. The feminist analysis of sociobiology would probably—I don't know—say, I am guessing, sociobiology is justifying male aggression by putting it in a pseudo-biological frame. Maybe, that is true to some extent, but it doesn't avoid the deal that it crosses more cultures than any other way around men are more rapey.

S: Does this then beg the question when someone says, "The social and cultural pressures on men or women to behave in certain ways makes them behave in certain ways as a statistical tendency, if they were to use the same level analysis that you're pointing out."

[Break in the recording]

R: Sex isn't that much of a tragedy. Most of the people who—I suspect many and probably most of the people who turn into horrible people once their sex drive kicks in were probably already horrible people.

[End of recorded material]

Ask A Genius 116 – Laurence Fishburne, Pain, and Pornos

Scott Douglas Jacobsen & Rick Rosner

March 13, 2017

[Beginning of recorded material]

Rick Rosner: Okay, we were talking off-tape. It came up that we noticed that Larry Fishburne's, Laurence Fishburne the actor's, daughter at some point made a porno. I'm sure it was painful for Laurence Fishburne. It is not unheard of for people to do porn the way it would've been unheard of 50 years ago. It I not entirely unqualifying. This is already probably 20 years ago. Jeff Koons did a series of porno ceramics with his wife Cicciolina, which was transgressive.

But it was not disqualifying. He is still among the more prominent artists of our time. He made Kitschy porcelain sculptures showing sex between him and his wife. The trend is it takes more and more to transgress as time moves on, where posing in *Playboy* in the 60s may have qualifying from a legit acting career. Though, even then, Marilyn Monroe's early nude shots made it into Playboy.

Even so, what is considered transgressively pornographic keeps getting more extreme, and I think there are two reasons for that beyond the fact that guys are pervs and need more and more extreme stuff to look at. In terms of the role of what's transgressive or not in society, you mean have BJ ad butt sex jokes in NBC Prime Time sitcoms. Yea, they're trying to be edgy and to catch a youngier edgier demographic, but still you couldn't say pregnant on *I Love Lucy*.

So two main reasons, information wants to be free if I am using that right and I don't know if I am. So our quest for information is going to go into more and more areas that were previously taboo because we want to explore all aspects of life, even the raunchy ones. My wife loves *The Brady Bunch*, and so do a lot of people, but it always annoyed me because it was so circumscribed.

It was so limited in what it could address and so fakey in how it addressed things. I mentioned it before, but even the grass in their backyard as fake before it was a thing. It was lazy 70s TV. That show barely ever went any place that wasn't super safe. Neither did most TV at the time. Now TV and other forms of entertainment can go just about anywhere, which is good for trying to understand the world.

Although, of course, a lot of entertainment is schlock and doesn't even try to understand the world. It throws in crap to try to capture viewers. So thing one, information, eve the nasty stuff, even especially the nasty stuff. Thing two is we are less and less exalted creatures, special and separate from the world. The more science explains who we are, the less we are divine beings, and if we're just natural products of the world along with everything else.

Then everything is fair game to be discussed among the phenomena of the world, and nothing should be taboo because the exaltation, the exalted position, that we thought we were in with

regard to God has been eroded. That's about it for all of that. Oh, no, then there's the next deal, which is, well, if everything we do—good, bad, raunchy, ugly—is a natural consequence of the world and us being a part of the natural world. How do you do ethics?

Scott Douglas Jacobsen: If we love information, and if we remain less exalted, especially now, then we need simple, general ethics.

RR: If you look at the Holocaust, and if you look at genocides, it seems to be something humans do given the right circumstances.

SDJ: Does this make genocide right?

RR: It's not right. But how do you come up with ethical systems that continue to be powerful and help people not do evil in a world where anything can be seen as natural.

SDJ: Does the Golden Rule plus the Hippocratic Oath suffice as components?

RR: Maybe. One argument to be made is just because something is natural, just because we evolved from apes who bash each other's heads in with bones or rocks, or eat each other's faces off, or kill babies from fathers who aren't theirs, or whatever violent apes do—just because something is natural means it is acceptable or allowable. The 20th century view of science is—the 20th century scientific view of the world was random in charge of everything.

No value, really, just random action and that's not exactly it. Randomness isn't in charge of the world. Persistence and order, emerging order, is in charge of the world. Information is order and information is in charge of the world. We live in an information-processing universe. We are information processing beings, and for information to exist there has to be order, and there has to be persistence.

Things have to be able to exist across time. From there, you can come up with a bunch of ethical rules that say that some things are better than others. We're not just left with randomness.

SDJ: So the laws of physics, or the principles of existence, imply order and derives persistence and that persistence will bring further order by implication and that order for any conscious being in that system will be a greater value because persistence is what will keep the beings in that system going.

[End of recorded material]

Ask A Genius 117 – Natural Creatures from Natural Processes

Scott Douglas Jacobsen & Rick Rosner

March 14, 2017

[Beginning of recorded material]

Rick Rosner: Even though, we're natural creatures arising from natural processes. Nobody wants to live in a wasteland where the average lifespan in 40 years. So via evolution, each person is invested in himself or herself from what we've learned about ourselves in our lives about our continued existence. We get to decide whether we continue to live. We can assume the same about other people. There's your Golden Rule.

Scott Douglas Jacobsen: Also, you don't need consciousness for the valuation of persistence. Macromolecules—

RR: Some people could argue consciousness is an emergent thing that is a ride along.

SDJ: Oh no, I would argue something else. Macromolecules like DNA persist over long periods of time through minor variations and self-replication. Same with species. They value persistence for the survival of the species. So in a way, the Golden Rule is implied by survival, in a loose way. So it almost becomes a tautology.

RR: Yea. For the last three minutes of this talk, at least, we've been reasoning sloppily.

SDJ: [Laughing]

RR: But that doesn't mean there's nothing there.

SDJ: There is a there there.

RR: Yea, a world of plants and unconscious microbes and mostly brainless bugs is valuable for its order. In some ways, you could argue, though—this is stuff we haven't worked out entirely, but we can wrap up by saying it is possible to build ethical systems even in worlds that, and beings that, arise via evolution without some overseer or director, or divine power, driving things.

SDJ: What does this mean for most people, speaking globally, who interpret—

RR: Most people just want to live their lives from moment-to-moment. Most people—regardless of whether people have some metaphysical or religious framework to help structure their beliefs, to help give them beliefs. Regardless of whether they have that or flavor of that they have, or whether they don't have that, they specifically try to move away from that. The way some aggressively atheistic people do. People still want to live.

And life as lived is more about experienced moments. What's happening around you from moment-to-moment, what you think about that stuff, and the pleasure and pain you get from each of your experiences, contextual experiences, experiences within the context of what's going on right now, and what you think about it, and what it makes you remember rather than - "contextual experiences" is a bad term.

SDJ: Can I bring it down to earth?

RR: Sensory experience plus thought as opposed to everything filtered through some overarching religious or metaphysical framework. And yea, bring it down to earth.

SDJ: You mentioned "metaphysical" or "religious" twice.

RR: Yea.

SDJ: For me, I see that as half-truth or third-truth because—but true for most people. So metaphysical or religious frameworks for interpretation of the world come from religious texts, for instance in the Abrahamic traditions at least half of the planet. If you take the metaphysical-religious standpoints, the religious, by implication, tends to imply a metaphysical framework, but progressive, humanists, even atheists, agnostics, freethinkers, brights—whatever the myriad terms you want to take on it—make reference, including feminists, to human rights, children's rights, or, in the case of feminists of others, women's rights.

These aren't in the world. They are how people relate to the world, or relate to the world based on documentation, which is typically international such as the UN Charter. So these themselves are metaphysical. So I would extend the statement "metaphysical or religious" to "metaphysical, religious, secular, or otherwise."

RR: Well, yea, I agree with you. Even atheists are embracing a quasi-religious belief system, no matter how much you try to tap dance away from it. You believe in something. And not believing in something aggressively, or even half-assedly believing in something is a stance in belief space and belief world. You have beliefs. However hard you try not to have beliefs.

SDJ: But a consistency exists among them, like the Golden Rule in most religious traditions, even in semi-/demi-/hemi-cults like Scientology or more modern religions such as Mormonism or the Church of Jesus Christ of Latter-Day Saints. You find the Golden Rule—Confucianism, and so on. You also find in the Hippocratic Oath: "do no harm." Between "do no harm" and "do as you would be done by," you have two general principles that can help provide a firm foundation for a shifting higher-order landscape of ethics.

The small world of ethics.

RR: Across every ethical system, there's the idea that "just don't wreck stuff."

SDJ: You have stated this as "respect complexity."

RR: Yea. That there's good in the existence of the world and in our existence and wrecking it for no reason, wrecking those things for no reason, is bad. You don't need a religious framework to argue it. You can argue it—I don't know. You can argue it from a scientific sense of wonder and awe. That still seems like 1980s science TV specials. I'd rather argue it from the point of view of information.

That we're made of information. The universe is made of information, and the way we live, which is across time. How could you live otherwise? That information and the order that supports it is a good thing, and shouldn't be effed with unnecessarily. You might have to blow up the bridge to stop the Nazis from coming across the bridge, but that's in the service of a higher good.

[End of recorded material]

Ask A Genius 118 – Dreams, LSD, Cats, and Art

Scott Douglas Jacobsen & Rick Rosner

March 15, 2017

[Beginning of recorded material]

Rick Rosner: A lot of stuff happens during sleep, and it doesn't freak us out. We lose contact with the world. We lose contact with our bodies. We have dreams where all sorts of weird stuff happen. If any of this stuff happened while we were awakened, we'd be panicked, but thanks to hundreds of millions of years of evolution we have systems in our brains in place that make it so sleep phenomena don't freak us out.

Everybody, for most people I think once in a while, gets a signal through from the sleeping/dreaming brain to your leg because you need to in your brain. That happens to people every few months at most, unless something is wrong. But I a guessing that the shutdown systems aside that the structure of dreams can give information about the structure of consciousness.

In that, all sorts of things—things happen in dream, but they are not totally chaotic.

[Break in recording]

RR: Dreams have a narrative. They have a rough flow. You can describe what happens in a dream as if you're telling a story, but don't because nobody likes to hear other people's dreams. But anyway, there's a narrative flow. This happens then this happens. Often, the things that happens from one moment to another are related to one another. There's continuity. There's a world that feels normal within the dream.

It takes a lot to happen in a dream and for you to realize, "Bullshit, this is a dream. It can't possibly be happening." Which, to me, says that a lot of the information structures in the brain are intact and linked to brain architecture, kind of the way you'd expect The brain is not getting any sensory input. So it's self-stimulating. And I don't know why, and I'm not sure it matters to this discussion.

But when self-created inputs run through the brain, they create recognizable aspects of life. You don't just get crazy noise as compared to, like, when you take LSD. So it's as if I think in dreams you're processing modules—your expert subsystems in the brain—are largely intact in terms of being able to process signals. And you get worlds that aren't pure chaos in your dreams. It's—Dreams are almost what you've forgotten you can't do because you have incomplete information.

Like, in a dream, you forge you can't fly. So maybe you fly as opposed to complete chaos, like on LSD, which breaks down—it gives your perceptual systems and your thinking a hard time, and people end up looking lizardy or weird in a whole bunch of different ways because the expert subsystems that normally process sensory information about people's faces into useable information have been messed up, and you're getting incomplete and crappy results.

So you might see wire-frame-ish faces that look like they're made out of polygons. Your perception of faces is crappy and incomplete because your expert subsystems have been hampered at the neuron level, and they're just—when you're drunk, your perceptions are—unless you are blackout of pass out drunk—your perceptions are largely intact, but just slower and you're more confused.

It seems like it affects neuron-to-neuron processing and breaks down what should be self-contained information processing. Dreams also leave those information processing systems intact. You run thoughts or electricity through expert parts of your brain through dreaming. You still get decent imagery, recognizable imagery, recognizable situations. Ditto with a brain surgeon poking your brain with electrodes and runs electricity through your brain that way.

People don't get chaos. They get sights and smells, besides the smell of burning brain. In schizophrenia, I don't that much about it, but it seems as if schizophrenia can encompass a range of scales of disruption. That schizophrenics hear voices or have other types of hallucinations. That's closer to disruption among or between expert subsystems, where you are still seeing recognizable visual images.

You're still processing, and still getting recognizable stuff. You are just confused where it is coming from, which is your own head. I assume there are other varieties schizophrenia, where things are messed up more on the neuron-to-neuron levels, and you suffer perceptual difficulties similar to the ones you get if you took LSD. Like the—I dunno—famous set of drawings by the cat artist at the turn of the 20th century, that anybody who was a kid in the 70s had *Time Life* books.

This guy was a famous drawer and painter of cats. Then he started losing it…

Scott Douglas Jacobsen: [Laughing]

RR: …and being institutionalized. He kept drawing cats and he went crazier…

SDJ: [Laughing]

RR: …and crazier while the cats got spikier and spikier.

SDJ: [Laughing]

RR: Until they looked like sunbursts, they're kind of awesome. They're pretty as hell. They reflect some kind of perceptual difficulty.

SDJ: They probably came from drawing cats. [Laughing]

RR: It probably did come from drawing cats! Because cats carry toxoplasmosis—researchers suspect that people who catch toxoplasmosis from their cats are more subject to schizophrenia. So he probably [Laughing]…

SDJ: [Laughing]

RR: …caught it from the cats themselves.

SDJ: [Laughing]

RR: Anyway, creams, schizophrenia, LSD, kind of represent a range of derangement from neuron-to-neuron to expert subsystem-to-expert subsystem.

[End of recorded material]

Ask A Genius 119 – Dysfunctionality, Functionality, and Epilepsy

Scott Douglas Jacobsen & Rick Rosner

March 16, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: Also, from the interpretation—from my perspective—on the statements there, the neuron-to-neuron, not necessarily dysfunctional firing but, dysfunctional wiring can be sussed out in functionality for the person-as-a-whole, for the organism-as-a-whole. However, if you take expert subsystems-—and please correct me if I am wrong and if I misheard you—expert subsystem-to-expert subsystem has dysfunctional wiring, so the functionality of that community that is then played out in thought and behavior for that organism in its relevant environment, then it becomes a major issue.

Someone might hear voices or have visual hallucinations, which, in some extreme cases, can be cripplingly dysfunctional for them.

Rick Rosner: Yea.

SDJ: Others can be fine.

RR: Yea. I mean, like, who was it? One of the Russian authors used to have migraines and used to love it when they kicked in—no, they had epilepsy, and he looked forward to the fits because before the fits kicked in reality took on this aura of holiness. That he found extremely satisfying. He knew it was connected to the epilepsy. It might have been Tolstoy or Chekhov. For him, I think, the feeling of being exalted was worth the seizure he was about to have, and he was highly functional.

[End of recorded material]

Ask A Genius 120 – Existential Crises and Coping

Scott Douglas Jacobsen & Rick Rosner

March 17, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: So this leads to a question, which we discussed off tape a few days ago. Which is on the nature of the brain's, not only functionality but the, contingency plans through trial-and-error in evolution have been selected for and in-built. So some critical moments for some organisms—existential crisis of the organism, whether an ant, [Laughing] questionably, or a human, in some cases more obviously, the brain appears to have mechanisms to cope with this extreme inability to handle new information and, if here is such a thing, repressed information or crises of the organism-as-a-whole based on the processing.

Rick Rosner: What you're talking about is when you're in extreme perceived danger, for one thing, things seem to slow down because you're extremely focused on what's happening to you. You're trying to take in as much information as you can, and the normal chatter shuts down. So you have a very clear picture of the situation—sometimes in slow-wo, and for some people in some situations, you get a massive information dump.

Where that life flashing before your eyes thing, which is probably some extreme version of the brain trying to help out with relevant information under stress, that if—that, I assume that, extreme stress triggers extreme focus on associations. Any possible association; when you're focused just on what is happening directly in front of you, then your entire associative structure of landscape switches to cater to that situation.

So you pull up a lot of stuff. I assume that if you crank it to 11. You pull up just about everything, so much stuff that it seems as if your life is flashing before your eyes.

[End of recorded material]

Ask A Genius 121 – Maternity Certainty & Paternity Uncertainty

Scott Douglas Jacobsen & Rick Rosner

March 18, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: That explains part of it. I can explain it with, maybe, a metaphor, or an image, or a model.

Rick Rosner: Okay.

SDJ: Two concentric circles [Laughing], if I understand the idea right, and then an infinite expansion out. In the innermost circle, that will represent daily life and activities, and information processing—emotional, cognitive, otherwise—

RR: Yea.

SDJ: Just around that, the comfortable, but semi-fuzzy, areas of life. Where maybe weekly, monthly, yearly, these activities are engaged in that expand an individual. You're learning how to paint. You're learning how to play an instrument. You're learning how to write a joke. You're learning how to do better on the SAT. Things of this nature.

RR: Okay.

SDJ: Outside of that circle are things completely outside of your frame of reference, the inner circle and the one circle just outside of that. That expanse has infinite aspects, functionally speaking. So at some point, the models—if one is going through a mental illness given information or through circumstance in life comes across information, or is impacted in such a way, that their frame of reference for daily life, and even for the other weekly, monthly, yearly circle, then it is completely outside of the frameworks.

That person is left in a crisis. So what does that person do? How does an organism handle that? So that leads to two questions, and I'll make it quick. First question, how does this increase survivability? Because an organism in this state, obviously—just by observation—is more susceptible to predators in a survival-based ancestral environment. As well, it might make them less desirable as a partner or a mate.

So they may be less likely to pass on their genes. So not only, how does this affect survivability in an ancestral environment? But also, what mechanisms would then come online through selective pressures to be able to guide an organism functionally, quickly back into a functional state in ancestral, survival environments?

RR: Okay, there's a thing in evolution. I just read about it. Some characteristics, or some evolved abilities, are highly adaptive in high probability situations and useless in low probability

situations, relatively useless. So let's assume that if you're in such danger that your life flashes before your eyes, then it's not likely that an information dump is going to save you at that point. That out of all of that stuff that your brain has dumped on you.

That somehow you're going to pick out the right things and save yourself, from the sabre tooth tiger or some other *Flintstones* creature on the savanna.

SDJ: I would add one thing there too. Think about mating partner, statistically speaking, and based on surveys; if you ask a woman, 'what is more critical as a harm to you?' I am paraphrasing. Is it emotional infidelity or physical, sexual, infidelity? For women, it tends to be emotional. For men, it tends to be physical, sexual. So the values are flipped by the sexes.

RR: In any case, there's the unlikely survival in a low probability or low probability of survival in that situation does not have to affect the heritability of a characteristic. That that characteristic, that your brain throws information at you when you're in danger has been shaped by higher probability of survival situations.

Situations that arise more frequently anyway. The whole information dump, you might get in times of extreme danger is just a side effect of helpful behaviors, brain behaviors, with regard to information in less dire and more probable life situations. It's the situations that come up over and over and over, and that are survivable that shape how your brain deals with information when you're in danger compared to the few seconds people might have before their heads sliced off.

So weird information behavior in extreme danger may be less a survival mechanism than a side effect of a survival mechanism that works more reasonably in more reasonable situations. With the emotional versus physical violations, you can probably make sociobiological arguments. Where a lot of sociobiology as applied to humans and other species is whether a male can trust a female to have offspring that are his, then on the other side, whether a female can trust a male to provide a support for the offspring; so that probably helps to determine some of that stuff.

SDJ: There's a term for it too, in evo-psych. Maternity certainty and paternity uncertainty because [Laughing] a woman knows if it's her child. A man ain't so sure.

RR: Yea. So there are behavioral and societal structures in place to reduce that uncertainty.

SDJ: Maybe, as we've discussed in previous conversations, it explains the socio-cultural, or religious, restrictions and taboos around sexuality for women.

RR: Well, yea! Some of the sociobiological behaviors we've adapted—some of them benefit both men and women. Both men's genes and women's genes, say. Since they're driving a lot of this, almost all of it. Some things oppress one sex more than the other. But those behaviors wouldn't be in place if they didn't benefit one gender or another.

[End of recorded material]

Ask A Genius 122 – Alonzo, Kim, Daniel

Scott Douglas Jacobsen & Rick Rosner

March 19, 2017

[Beginning of recorded material]

Rick Rosner: To go back to the dreams and schizophrenia stuff, we can look at autism. Where some people like to say, and people like to say a lot of stuff because autism has a history of people saying wrong stuff about it, people present it as a problem in processing sensory input. But autism, like schizophrenia, comes in different flavors, where on the Asperger range of autism, it's not pure chaos.

It can be a different distribution of mental resources. So a kid can be bad at social cues, but awesome at math or visual arts. Like Alonzo Clemens, I am probably slightly messing up his name. The guy lives in Boulder. From memory, he can do, from images, or knock out a horse that is anatomically accurate with clay, or any other animal. But he's in a group home or was in a group home in the past for people.

[Break in recording]

RR: Alonzo Clemens has a hard time. He's a really nice guy. He can't function on his own in society. He's gotten better over time. But missing a lot of social coping skills. Photographic visual and dextral-finger memory or animal anatomy. Then you have, Kim Peek is it who is autistic with all sorts of numerical processing skills?

Scott Douglas Jacobsen: Memory in General.

RR: "Rain Man," the guy *Rain Man* was based off of.

SDJ: Daniel Tammet too.

RR: So these people, something is—you can look at it.

SDJ: You have also argued for yourself on that spectrum.

RR: Yea, but just a little bit.

SDJ: This is no formal diagnosis, but just self-diagnosis.

RR: I was nerdy. Asperger's, it was less so now. But it has been de-emphasized from autism. Like 10 years ago, it was one of the biggest self-diagnosed mental problems out there. A super model could say, "Oh yea, I was really awkward in junior high. I probably have Asperger's." It's like, "No, everybody's awkward in junior high – 6'1" super model who is dating Orlando Bloom."

SDJ: [Laughing]

RR: My guess is that you can look at various disorders or phenomena in the brain as whether they are disruptive at the smallest—you can look at the size in the brain of the disruption. Taking LSD is like sand-blasting a jigsaw puzzle, so the image becomes less legible as opposed to some forms of schizophrenia, and autism, where it is more a problem with pieces are missing or tabs between pieces are missing. So they can't be connected properly.

But the problem exists among systems on a larger scale. So I think I've said a lot of twaddle here. But I guess the one idea that might stand up is that you can look at consciousness, and phenomena, and disorders of consciousness as whether consciousness is disrupted on the tiniest possible scale – LSD or other possible drugs that make it hard for the cell-to-cell mechanisms to function properly – versus disorders on a larger scale that disrupt communication more among large clusters of cells that are arranged in expert subsystems. Or maybe, it is all twaddle. I don't know.

[End of recorded material]

Ask A Genius 123 – Antisemitism, Old is New

Scott Douglas Jacobsen & Rick Rosner

March 20, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: Antisemitism is increasing, apparently. There are some hoaxes, but, in general, there are things like, for instance, bomb threats directed at Jewish centres or federations. I have noticed this in British Columbia, Canada. You have noted it across America.

Rick Rosner: Okay, well, I have, as a Jew, and not just a Jew, but a Jewy-looking Jew.

SDJ: [Laughing]

RR: I have a stake in antisemitism. I have experienced very little of it. I have experienced very little overt antisemitism. The worst I've been called is Jew-boy on Twitter. I think being Jewy and nerdy in Boulder, Colorado, which is like 98% super Caucasian. When all of my friends were 6'1" blonde ski instructors, that wasn't—being Jewy wasn't helpful in trying to get a girlfriend.

I think if I grew up in New York or Los Angeles—cities with larger Jewish populations—I may have found more of peeps to hang out with and mac on. I was born in 1960. So 15 years after the end of WWII. So it has always been – the potential for antisemitism and the Holocaust – a part of my awareness than people who are younger than me. Antisemitism, much antisemitism and particularly American antisemitism, strikes me as—most racism is stupid.

But antisemitism strikes me as particularly stupid because most people don't have much contact with Jews. I think there are about 6 million Jews in American in a population of about 300 million people, so just under 2%, with Jewish people being concentrated in bigger cities. I grew up in Boulder, which had a population of 20,000 to eventually 100,000, and Albuquerque. My parents got divorced, so I had two families.

There were not many Jews in each city enough to sustain 1 or 2 synagogues. All of the Jews knew all of the other Jews because there weren't that many of them. The Jews in Albuquerque knew the Jews in Boulder and Denver, at least the ones who live there for 4 or 5 generations because you did business across those networks in addition to across other networks. Anyway, not a lot of Jews across most of America.

So I always have to ask, "What is there to be anti-Semitic about?" You can ask this about other small minority members of the population. Most obviously right now: Muslims. I think in the 60s there were like 60,000 Muslims in the whole country. Now, I have a conservative buddy who is freaking out because there are 3 million Muslims in the country, but still less than 1% - which means most people don't have much contact with Jews or Muslims in their daily lives.

I don’t know. It is a dumb stance for me to have, but “if you’re going to be racist, at least base your racism on personal experience, it is bullshit that you’re basing your racism on people you’ve never met and know nothing about.” That opinion itself is stupid because it expects racism to make sense or to somehow be justified.

[End of recorded material]

Ask A Genius 124 – The Never Again Jew

Scott Douglas Jacobsen & Rick Rosner

March 21, 2017

[Beginning of recorded material]

Rick Rosner: There has been a phenomenon since WWII of the tough Jew. The "Never Again Jew," there is a feeling post-Holocaust that—there's a little bit of blaming the victim or sometimes a lot of blaming the victim about the Jews and the Holocaust, saying, "They got easily played. That they were complacent because they were such a part of German society that they didn't adequately feel the threat. That they weren't tough."

"That they weren't skeptical to the years or provocation with aggression of their own. They just stood by and let themselves get swept into the camps." Which isn't a fair characterization, but yea! People could've done better. The Germans were sophisticated about tricking people. It obviously wasn't a simple situation. A lot of people saw what was going on and got out. A lot of people were straight out lied to or coerced.

A lot of people who were in Holland. They thought they were safe. Their government was a Nazi puppet government. They thought they were going to be left alone for the duration of the war. That the Jews were going to be left alone. At some points, the Nazis decided, "Hey, let's kill the Jews in Holland too." The Nazis were crazy. In that, long after the war was lost, they kept working and working to kill more and more Jews.

I think most of the Jews killed in the Holocaust were killed in the 2 to 3 years after it was clear Germany was not going to win the war. You could make a case for killing Jews as part of a theft ring, as part of a crime syndicate, which the Nazis were, and to steal their wealth to propel this war machine. But after 1942, after Hitler got his ass kicked in Russia and it was clear that the Nazis were not going to win, they kept killing more and more Jews for no good strategic reason.

So a lot of or a certain percentage of Jews were sucked into the Holocaust because they couldn't believe the Nazis could be as crazily genocidal as they were. So after the Holocaust, you have the establishment of the state of Israel in 1948, which is founded in belligerence and like, "Fuck you! We are not going to be screwed over again." And now, you have the stereotype, which is based on fact, of the tough, aggressive Israeli Jew – who is not wimpy at all and knows how to use a machine gun.

If you hire an, for some reason many of the moving companies in New York City is, Israeli, and those guys are fuckers, they will do the job the way they want to do…and they don't take any shit. [Laughing]

Scott Douglas Jacobsen: [Laughing]

RR: They're all pretty tough guys, and tough women. Like, what's that Sandler movie? *You Don't Mess with the Zohan*.

SDJ: Okay.

RR: And it is a comedy about a super tough Israeli Jew, and conversely a bunch of pretty tough Arabs. Everyone has been toughened by all of the crap since, not just WWII, but for hundreds of years before that. I caught a little of that bug. I didn't entirely catch it from the Nazis. Some of the wanting to be tough came from taking a bunch of shit in junior high from a bunch of kids and some gym teachers, and one asshole gym teacher in particular.

It helped give me that "fuck you" attitude and help me want to start lifting weights, and eventually become a bouncer. I've got that same ridiculous *Rambo* feeling that if stuff went down in a variety of situations I could wade into it and do okay. I at least have the excuse that in 1928 I won a *Rambo* lookalike contest. So there's that.

[End of recorded material]

Ask A Genius 125 – Trump Administration Possibility One

Scott Douglas Jacobsen & Rick Rosner

March 22, 2017

[Beginning of recorded material]

Rick Rosner: Alright, so now we have this rise in antisemitism as part of the reign dumbassery that goes along with Trump, as what I hope is the culmination of 30, 40 years of tenderizing dumb conservatives' thinking via easy manipulation and the dumbing down of media targeting conservatives, you have proudly ignorant—tens of millions of proudly ignorant—conservatives feeling pride and strength.

63 million people voted for Trump. Not all of them are these belligerently ignorant jerkwads. When Hillary talked about "deplorables," she said half of them are jerkwads. Maybe, somebody can do a survey sometime and can do the breakdown sometime. I know people who voted for Trump who are decent people, but voted and are holding their nose because of economic reasons and some of the attacks policies.

I'm sure that more than 10 million of the people who voted for Trump really dislike Trump and feel really sad every day when sad stuff happens. But those people aside, principles Trump votes, non-jerk Trump voters, leave them out, you have 30 or 40 million jokes, and they reinforce each other on social media, and everybody who is not these people—not everybody—feel that Trump or hope that people who voted for Trump have overreached and will collapse.

The racism and the antisemitism will burnout and collapse under human decency before things get worse. And it might because Trump is doing surprisingly worse at his job than almost anybody anticipated. Trump collapses, if, we can hope that it will mean a flywheel of nationalism and intolerance that is energizing 20-40 million jerks will slow down.

[End of recorded material]

Ask A Genius 126 – Trump Administration Possibility Two

Scott Douglas Jacobsen & Rick Rosner

March 23, 2017

[Beginning of recorded material]

Rick Rosner: Another possibility is that jerk conservatives manage to keep getting elected, and reinforce each other, and it doesn't get better. There's another possibility, which is that the future will happen to everybody and will tend to swamp the current shitty antisemitism with a whole other set of challenges. My conservative buddy is worried about the US being swamped by Muslim refugees, and that they will become 10% of the population.

Right now, we are at less than 1% Muslim. He listens to all of this stuff about the countries that do have a percentage of the population pushing – European countries – 10% of Muslims. He hears the lectures about life being Hell in those countries. But if you go to other sources that aren't conservative or manipulative in that way, other sources say, "No, they're not that bad. People acclimate."

Regardless of whether that 10% level is terrible for the country or not, I tend to think it is not that terrible. Before the population of Muslims in this country reaches 10%, we will have hundreds of billions of AI running around in the country or plugged into stuff in the country. You will have your robot girlfriends, and your Cortanas, and Siris, and sidewalks with chips, and refrigerators that ask if you want more yogurt.

It will be a very woke up world. People's concerns – racist people's concerns for the most part – about issues surrounding Muslims will be dwarfed by the issues associated with AI.

[End of recorded material]

Ask A Genius 127 – Grape Soda, Watermelon, and Fried Chicken

Scott Douglas Jacobsen & Rick Rosner

March 24, 2017

[Beginning of recorded material]

Rick Rosner: I've worked in the entertainment industry. Most of the places I've worked at had other Jewish people because there are a lot of Jewish people in entertainment, and it's dumb to hate those people because the people I've worked with in entertainment, whether they are Jewish or not, have been great because they're smart, funny, and you get to laugh all day when you're working on stuff.

And for the most part, these are people you'd want to hang out with because they are fully human. You can't write good stuff or make good entertainment unless you're fairly well-plugged into the human condition. I don't want to say they're more human than other people. But they have access to their humanity and they're not—you've seen the drawing. They've popped up since Trump has run.

You've seen the old Nazi drawings of Jews popping up all over social media again. Hooked nose and hunched nose Jew, receding hairline, rubbing his hands together over a chance to screw innocent blonde people out of their money, that's not obviously the Jews in the entertainment industry. There are some Jewish people. There are a lot of other non-Jewish people who have gotten rich in entertainment.

But they're a tiny sliver of people who have gotten famous. Not because they're part of a cabal, and everyone else is working for a living and has mortgages and nobody is your—there are no more hunched over whiny Jews than hunched over whiny other people in entertainment. And most people I know – Jewish or not – in entertainment are badasses. People you'd want to hang out with, even if you're from the Heartland.

Guys can turn a warehouse space into a living space. And by the way, we've talked about this before. The positive stereotypes are ridiculous. Why make fun of black people? They are stereotyped for liking foods like grape soda, watermelon, and fired chicken. [Laughing] It has always struck me as a crazy thing to make fun of lack people for, "Oooh, they really like this stuff. This delicious stuff." [Laughing]

Yea! Why are you making fun of people for their good taste in what tastes good?! One more thing, after the Trump election, California and I were, we were, pissed off. But there's nobody to get into an argument in with in LA. LA is fairly uniform. There are not a lot of triumphant Trump dickheads to get in an argument with. My wife and I were at the local taco place and a guy walked in and started talking about Israel.

I got up and was ready to throw down with him, but he turned out to be a crazy guy who gave the cashier a handwritten note saying he note was worth $100,000. So he wandered out. I know anti-

Semites are out there. I get into pointless skirmishes on Twitter. I post stuff on Twitter that would annoy them. But looking at my tweets, that's all my stuff – pissy anti-Trump stuff. That's enough of that.

[End of recorded material]

Ask A Genius 128 – Infinities, Infinities, Everywhere

Scott Douglas Jacobsen & Rick Rosner

March 25, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: So in IC, we have termed something the "Tower of Minds" or the "Ladder of Minds." It is the idea that information spaces contain one another like Russian dolls, like a Matrioshka situation.

Rick Rosner: Or like 'turtles all the way down,' but it is mind spaces all the way up.

SDJ: Exactly, so it's an infinite up, and a finite down, or a functionally infinite up, and a definite finite down.

RR: That whole thing seems problematics. In our experience of the world in a reasonable stance towards the world, the world can't contain infinities. In every aspect of our world, everything is finite. The universe appears to have a finite age – though under IC we'd claim that to be much older than the apparent age of the universe, but the universe is finite in space, finite in the particles it has, and finite in the interactions among these particles.

There are no actual infinites in the world as far as we know. There are theoretical infinities that you can use in various ways to do math and physics, but those infinities help you get a solution to your equation, but not perfectly something infinite in the world itself. So when you have this structure under IC, call it the "Subject World"; that is, a thing perceiving a wider world. We each have a Subject Worlds in our heads.

Information worlds that function to perceive the greater outer world. So you have a Subject World and the Object World. A thing that is perceiving, our consciousnesses, and the information processing in our brains that can abstracted as a mind space, as an information space, and that this mind space or Subject World reflets or analyzes an Object World external to the Subject World.

To extend it further, the Object World consists of matter, which is itself information that is part of a Subject World that implies yet another Object World and that Object World can be assumed to be made out of information that is a Subject World looking at yet another Object World. So that each Object World is actually a Subject World looking at yet another probably vastly larger Object World.

Our minds are supported by our brains. Our conscious experience wouldn't be possible if we didn't have the hardware, which is our brains, and the world that surrounds our brains. Our conscious world would not be possible without that hardware, which is the world and the universe. And then we further extrapolate the universe as made up of the same stuff that our mind space is made of, and that stuff wouldn't be possible without an exterior world that has the hardware that contains that information world.

So we're left with infinite chains of worlds being contained in each other. And that's a really troublesome infinite. That we can't exist, and the that the universe can't exist, without an infinite chain of further universes containing each bigger universe and each bigger universe containing the one below. It seems unwieldy and reflecting of an insufficiently developed understanding of what things might be that we need this infinite just get the existence of our minds and the universe that contains them.

[End of recorded material]

Ask A Genius 129 – 10^70th

Scott Douglas Jacobsen & Rick Rosner

March 26, 2017

[Beginning of recorded material]

Rick Rosner: There are a bunch of ways to tap dance around some of the problems, but it is taking ignorant stabs in the dark. One way of dealing with it is that there is such a thing as a world that can be self-contained. A world of information that doesn't need hardware for it to exist. That seems unlikely to me, but maybe it is possible. There could be fluke worlds which are worlds that have arisen by pure happenstance rather than having evolved over time.

If you imagine it as a string rather than a ladder, you can imagine that maybe the string has an end, and then you have to speculate about what the end is, and one possible end is the self-generating or self-containing information world, which seems unlikely. Possibly more likely is the information world that arose by chance. Instead of being one moment in a string of moments that evolve from simplicity to vas complexity.

A moment of vast complexity spontaneously arose, which you could do via the quantum laws of chance that will arise and then in the moment coming up vanish. One thing that might solve this infinite chain of increasingly gigantic universes containing each other. Another awkward thing is that each successive world is bigger than the world below it. Our brains are almost 10^11th neurons.

We can assume that each of the neurons has, on average, how many dendrites?

SDJ: 1,000 to 10,000, something like that.

RR: Okay, a gazillion. A bunch of them. 10^11th neurons time 10^3rd or 4th dendrites that form a framework for our mental world. And if you would use the universe analogy, then our mental world might consist of 10^15th particles. That if it is an exact analogy that our mental universe's work just like the universe at large, so that the information in our minds can be seen as consisting of protons and neutrons and electrons and all of that stuff.

Then maybe we have 10^15th of those that form our awareness, or maybe a little less, but who knows? Maybe, a little less, then the universe has 10^80th or 10^85th particles in it, so that's a step up from 10^15th to 10^85th. So it is a jump of 65 or 70 orders of magnitude larger than our mental worlds. The information in the universe contains something like 10^70th times more information.

And if that is an average step up, and who knows if it is, and it is not unreasonable, then if you take a step up from the universe – then you're multiplying the containing world instead of having 10^80th particles instead 10^150th, and instead of 10^150th then 10^220th. It doesn't seem like Occam's Razor is operating very well because you need this whole stack of this bigger and bigger universe to support these dinkier and dinkier universes.

Maybe, there's a way around that. Maybe not every containing universe has to be $10^{\wedge}70^{th}$ or $10^{\wedge}65^{th}$ times bigger than th mind it contains. Maybe, universes aren't simply connected along a string of magnitudes. Maybe, there's feedback among the, or maybe there are more intricate and complicated forms of feedback among various information worlds. That somehow at some scale there are complicated forms of containment and feedback among the various information worlds.

That somehow our scales are somewhat self-contained and can avoid the infinity of containers. Maybe, there's no way to tell what the container beyond the container beyond the container is, and that is lost in uncertainty and being lost in uncertainty is somehow an allowable not quite infinity because the uncertainty somehow erases the necessary infinity. None of these are particularly good solutions.

But if IC is a thing, if matter being made of information is a thing, then that'll remain a thing and will be one of the problems to explore, which is, "Does the information need a container? If so does the container stack? And if so, do they stack forever?"

[End of recorded material]

Ask A Genius 130 – The Era of Mortality (Part 1)

Scott Douglas Jacobsen & Rick Rosner

March 27, 2017

[Beginning of recorded material]

Rick Rosner: In the era of mortality – that is, in the era in which every single person dies, which we're drawing towards the end of, one way to be overcome your mortality is to leave some sort of legacy. Either through having kids or making a contribution to culture, but the odds of so successfully are – culturally – super miniscule. There have been 107 billion people on Earth, roughly.

A fraction of those are recognizable as historical figures. It's one in 200,000, depending on how widely you want to throw your net. Most people are super, super forgotten by history. Genetically, things aren't so great either. The idea that your offspring will proliferate and multiply. It helps if you were Genghis Khan and had hundreds and hundreds of offspring. Where some crazy percentage of people in the world now have genes that have descended from Genghis Khan.

Things are about to get even more depressing. In that, the products of unaugmented humans re going to become less impressive in the view of what comes after unaugmented humans, which will be technologically augmented humans in combination with various forms of AI and entities that will increasingly be sophisticated and unrecognizable to us – information processing entities – with their tremendous power will make stuff that is a lot better than the stuff that we make.

And who will tend to look at the stuff that we made as the natural products of the organisms that we were – kind of the same way, not quite as bad—we don't give much artistic significance to wasps' nests and birds' nests. It is what birds and wasps instinctually make. But there's going to be more than a hint of that in future people looking at our stuff. Yea, it's what they made, images of the world around them, and they wrote stuff trying to figure out how people work.

[End of recorded material]

Ask A Genius 131 – The Era of Mortality (Part 2)

Scott Douglas Jacobsen & Rick Rosner

March 28, 2017

[Beginning of recorded material]

Rick Rosner: From the point of view of future people, "They wrote stories about people contending with natural human drives, generally the reproductive drive." Everything to them that we've produced will seem pedestrian and unremarkable. We're about to enter an era of say slightly less creepy eugenics. The first era where people tried to practice eugenics. Eugenics is the idea that if you let superior people reproduce and inferior people not reproduce, then you'll improve the human stock.

It is a garbage idea for a couple of reasons. One is the people in charge of deciding who is superior have generally always been racist assholes. Reason two is that seeds of greatness aren't exclusively contained in having supposedly superior parents. Humans' reactions to their own genes and those genes themselves are more flexible and less determined by parental lineage. Great people can rise from a great variety of genetic background and circumstances.

And when you have a bunch of racist numb nuts…

Scott Douglas Jacobsen: [Laughing].

RR: …trying to determine what those lineages and circumstances might be—when you look at the white supremacists, they are almost never the people that you would consider starting the human race from – a lot of them look like they were delivered with forceps. It's not that white supremacists think they're better than everyone else. They just want to be put in a superior position from everyone else.

They claim that they are better, but really all they want is an advantage based on their race.

[End of recorded material]

Ask A Genius 132 – Racists and Social Advantage

Scott Douglas Jacobsen & Rick Rosner

March 29, 2017

[Beginning of recorded material]

Rick Rosner: Racists don't really seriously entertain the idea – well, I don't know. A lot of them are deluded and proud advocates of their Viking forebears that want to pass on their genes.

Scott Douglas Jacobsen: [Laughing].

RR: They just want to exercise social advantage. If they can convince other people to give white people privileges, then that's fine regardless of whether they're actually superior or not.

SDJ: [Laughing] I am reminded of cults, where the leaders the followers that all of the followers are gods within the cult framework of seeing the world, and the cult leaders just happen to be at the top of that hierarchy. It is an arbitrary, non-empirical basis.

RR: It is like Amway. You do a good job and move up the pyramid of godhood.

SDJ: Yes.

RR: So, anyway, you see them on Twitter posting really good looking white people pictures. They say, "All of these people will go away if white supremacy or if isolated white populations aren't defended, if white nations aren't defended." It ignores are the superhot mixed people.

SDJ: Also, it is icky and based on old disproven theories in outmoded biology, in pseudoscience biology.

RR: For the most part, year. But we're about to enter an era of effective gene tweaking.

[End of recorded material]

Ask A Genius 133 – Gene Tweaks

Scott Douglas Jacobsen & Rick Rosner

March 30, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: With objective criteria, that you can count, say genes on a genome.

Rick Rosner: You that if you tweak a gene that influences the HGH (Human growth Hormone) someone makes during adolescence, say. Parents who want a big athletic kid might be able to tweak the HGH regulator and get a kid who's 6'4"/6'5" when otherwise that kid would've been 6'1". There's a genetic error that shows up in humans and other animals. It is the muscle suppressor gene.

That is sometimes absent. Then you get these super animals and babies. That have something like twice the normal amount of muscle because the suppressor gene is absent. You can Google like "double muscle animals" to see these crazy dogs, and crazy cows, and there's an Olympic athlete that has this condition. I haven't Googled it. Anyway, they have double the muscle of a regular person due to genetic error.

That would be fun for a lot of people and for a lot of ambitious parents to have a muscle baby that grows up to have a career in something athletic. Similarly, we may find out tweaks that may regulate the speed at which your brain shoots out dendrites for mental flexibility.

SDJ: There was a study a while ago about rats. I am probably misremembering this. They found a gene that codes for cortex size, complexity, and so on. I believe the gene also coded for the kidneys. They tweaked it. The question was, "How smart was it?" However, they [Laughing] couldn't find out. Do you know why?

RR: They died early.

SDJ: [Laughing] It exploded. It exploded [Laughing].

RR: [Laughing].

SDJ: [Laughing] By the way, it also coded for the gonads. So I could imagine rats walking around with their testicles in wheelbarrows like Stan Marsh's dad in *South Park* when he microwaved his testicles, put them in a wheelbarrow, and started walking around. So these multivariate - to use the term that they use - effects come for single changes. So the evolved complexes are staggering.

But if you can know relative probabilities that are relatively safe, then why not? It seems reasonable.

RR: Yea. And eventually – by "eventually," I mean the next 20 years, we will figure out most of the helpful gene tweaks, and anybody who has the wherewithal to grab some of the tweaks will.

So if you're reproducing now, and have any kind of—the idea that, I don't know. People don't think about the idea of genes surviving when they're having kids. Somewhere encoded in us is the idea of our kids carrying something of us.

That is under the new era of gene tweaking. It's not something that most people worry about, probably. It is part of that or kind of that whole deal where the future will kick our asses more than in the past.

[End of recorded material]

Ask A Genius 134 – Christof Koch & Consciousness

Scott Douglas Jacobsen & Rick Rosner

March 31, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: You say that phrase: "The future is going to kick our asses" – a lot. It is face value descriptive when I think about it more. It is less descriptive when you take into account the various combinations of new people that will arise. New people relative to us now. I mean much more than – as you've noted in previous discussions – with the 3 million people, or 1 million people, with insulin pumps in their bodies, or pacemakers, or Parkinson's pacemakers.

Rick Rosner: 1% of the US population, say, has some kind of circuitry in 'em. Most of them pacemakers. Some of them are cochlear implants. Some of them are insulin pumps. You've got the in-brain pacemakers for people with Parkinson's. Probably a zillion experimental ones like visual arrays in the back of your eyes for blind people.

SDJ: Also for augmented consciousness, if you want to take a flight—there was a recent rat study, they looked at its brain. They hadn't seen it before. It was a neuron that went around the circumference of its brain. Proportioned to us, it is huge. We have large structures that are wired deeply like the corpus callosum.

RR: What does that neuron do?

SDJ: They think it might be key to consciousness. There's a researcher named Christof Koch. So he and his team did the research, looked at the rat, and found two other neurons, less big, coming out of, as it turns out, a single area. They emanated from the single source called the claustrum. It has been associated with consciousness. By which they mean, the experience of you being you, and the observation of you being you, and so on.

RR: Let's talk about that for a bit. We believe – you and I – that consciousness is an or goes along with, or emerges from the chatter of the, subsystems of the brain. Every part of the brain chats with every other part of the brain. So every conscious part of the brain knows what is going on in—the conscious parts of the brain that are evolved in being involved in conscious awareness are roughly aware of everything that's going on consciously along with some stuff that's just being reported to consciousness from processors that are themselves not entirely part of consciousness.

That is, you have the chatterers, the expert systems, that are fairly transparent in sharing what they're doing. Then you have other things that we're less conscious of, but still aware of, like walking and breathing. We're aware that we're doing those things without most of the time very consciously very controlling them. But we get status reports. Like right now, I have a semi-bummed knee. I am aware of it.

It makes me slightly more aware of what I am doing while I am walking, but still walking is still not something that we are usually 100% conscious of. That was a lot of babble for not much. But anyway! It seems reasonable that consciousness would be helped by synchronizers or rhythm keepers like music. Some kind of rhythmic stimulation, which helps some people focus. It just kind of keeps every or all expert subsystems rooted in the now.

Maybe, it can prevent you from spacing out. It lets you focus. Some other stuff that lets you focus depending on what your personality is, is some minimally, not painful, but minimal physical stimulation like chewing gum or biting your nails. Sometimes, I bit my nails. I pick at myself when I get tired. There are places on my body where I tend to look for zits or little ingrown hairs.

The stimulation from attacking myself like that helps me focus when I am sleepy. So this giant rat neuron that wraps around the rat's brain. If it is sending some synchronizing signals, it would be a way for the rat – it doesn't cause the rat's consciousness – to maintain focus, more aware than it would be otherwise. And we can assume that we have some kind of stimulating system in our own brains that helps us stay focused.

That stimulation can be itself either conscious or unconscious. A conscious system is something that amps up our excitement and stuff that in any kind of objective reality would not be that exciting, like for guys seeing anything vaguely girl-shaped.

SDJ: [Laughing].

RR: It revs up our libido-based attention. My dad who just turned 86, but when he was younger was notorious for being fantastically distracted by any woman who gave off any hint of any attractiveness. It was ridiculous. It wouldn't matter that the woman was attractive or not. If she made any kind of gesture in the direction of gender-based attraction, like wearing a skirt, or wearing high heels, or any kind of tight top, it didn't matter how the woman actually looked.

My dad, his jaw would drop and his eyes would the Tex Avery thing – 'awooga!'.

SDJ: There's another layer to what you're saying. So there's the time-keeper. Assuming all of the premises that you've laid out, let's assume that the big ol' circumference spanning neuron, the next level is the attention to what, and the attention is to reproduction or anything "girl-shaped" …

RR: …That particular thing is based on sex drive. But just about anything that happens to us is important to us way out of proportion to any kind of objective significance.

SDJ: The world from natural science remains the non-important world. You do not find values in the world. You find values in organisms making evaluations in relation to a world.

RR: Yea.

SDJ: You don't find meaning in the world as a statement in and of itself as a descriptor.

RR: The world itself does not contain meaning, but we provide the meaning.

SDJ: In a way, so rather than meaning in the world, you derive meaning from the world, but that "from the world" implies an information processor – in IC language.

RR: You have to construct meaning.

SDJ: Yea, same with values, but those values are evolutionarily, or biologically, or information processing constrained.

[End of recorded material]

Ask A Genius 135 – Sports & Consciousness

Scott Douglas Jacobsen & Rick Rosner

April 1, 2017

[Beginning of recorded material]

Rick Rosner: You look at sports or being a sports fan. A team often has nothing to do with you. Yet, your happiness depends on the happiness of the team. Particularly in times when other things suck.

Scott Douglas Jacobsen: It is genetic too. This stuff, this culture, attracts men more than women.

RR: We look for things to make significant to keep our interest going. In the early 80s, I was having one of my first big boyfriend-girlfriend relationships. But I knew this was during the age of Wayne Gretzky, and also before the Internet. When you wanted to know what Gretzky did that night, you had to wait for the newspaper the next day. I knew that even if I had a shitty night with my girlfriend that Wayne Gretzky would deliver me some juicy statistics.

Some possibly record-breaking numbers. I would look forward to that. Similarly, like right now, I look forward to the Yukon Women's Basketball team, if they can extend their 110 game streak to the end of the season and into the subsequent season. I am looking at Russell Westbrook to see if he can tie or break the record for triple doubles in a season. These people have nothing to do with me, but their performance makes me happy.

SDJ: We can relate this back to evolution and survival. Men as a strong statistical tendency in primates build a system, create a hierarchy, compete in the hierarchy. Women select men in that hierarchy. I think the sports-attraction, which seems obviously overwhelmingly men in most or all sports comes from that same drive. It is a system with hierarchy and men competing, or men identifying with that hierarchy and that competition if they watching.

So this is deep, deep in us.

RR: There is also the attraction of narrative. Where we are paying attention to a story…

SDJ: That's a good point.

RR: …the division between us and the participants in the story tends to go away. We are watching a movie or reading a book. We identify with people to the extent that we forget that we're not the people, which is both computationally efficient—because if you're immersed in a book or a movie, it does you no good to be constantly reminded that you're not part of the book or the movie. People get annoyed when something takes them out of a book or a movie like a jarring thing, like a continuity error or something from the past that you find out of place.

Something like from the 60s. You want the pure experience of being immersed in that world. I just watched Hidden Figures, which is set in 1961. There's a lot of action that takes place in parking lots. One thing that took me out was that the parking lots were full 1957 Chevys. The '57 Chevy was the most beautiful car of its era. It is a very familiar looking car. That was the era of tailfins and elaborate break lights.

The '57 Chevy pulled off the fins in a subtle beautiful way that the other cars messed up. When they wanted to make the movie, they needed cars from that era. So they got a shitload of '57 Chevys because those are the cars that survived for years. Other cars haven't made it that long. So they put out a call for cars and got a bunch of Chevys. I noticed that. It took me out of the movie.

[End of recorded material]

Ask A Genius 136 – Crowd Psychology

Scott Douglas Jacobsen & Rick Rosner

April 2, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: I wonder if crowd psychology relates to that hierarchy of competition. So men create a system, build a hierarchy, compete within that, very few men will make it to the top. And it will get more exaggerated the bigger the population. Maybe, with crowd psychology, there's something where the more men not necessarily consciously realizing that they're lower on that system's hierarchical layering.

They de-individuate. They become more group minded. They lose themselves in it – watching sports would be one example.

Rick Rosner: I'm sure tribes of gorillas wouldn't—there's that number like 150, which is the number of friends and acquaintances you can have in mind, at most. We can't have that many people in mind. Somebody hypothesized that is the maximum number of primate troops before history. But now, we live in aggregations and cities with populations in the millions. And yea, that means, we have to find sub-groups that provide the satisfaction of hierarchies.

Where we don't have to rank ourselves among the millions, we can either rank ourselves as part of a group. If you follow an NFL team, one of 32 groups. If you follow an NBA team, there are 30 NBA teams, maybe. If pro baseball, there are 30 MLB teams. Then you have narratives, each around those teams. And so yea, you have to either—people join amateur sports leagues. There's a process through which—when you go to school, people take themselves out of contention when it becomes apparent to them that they're not going to win in this particular area.

A lot of people go into science, I assume, because they want to be an Einstein or a Newton. They either dropout or pick a specialty where they can excel. There aren't that many cosmologists or general relativists, or people trying to unify gravitation and quantum mechanics. There are probably thousands of people working on that. But there are millions, or even tens of millions, of people working in physics.

SDJ: I suspect 1 in a 1,000 or 1 in 4,000 can take on those most difficult fields, have the general ability to do it. Even among those that would dare to do it, they may not have the general ability to do it.

RR: There are two manifestations of that. One is people taking themselves out of the field. Another is crackpots who being inexperienced in the field decide that they can take in on. It is apparently a super common thing. That everybody who is a credentialed physicist working at a university. Anyone who has a public presence as a physicist gets hit very frequently – I don't know how frequently, probably not every day. It could be every month.

But they get hit with a unified theory of everything, or a new field theory. I am one of those crackpots. But I know better than to try to talk about my stuff to credentialed physicists because I

don’t want to be disappointed. I keep thinking that if I keep working I will have a defendable theory. But until then, I don’t dare. There have been a couple times, when I talked to my teacher in Group Theory a CSUN about meta-primes.

She blew me off savagely. At which point, I thought, “Fuck it!”, so I dropped the class. It is not the right way to approach someone as a dumb shit after class that is only vaguely related to what you’re teaching. Of course, she had her own shit to worry about. Anyhow, to circle back to what this thing started about, which is legacy, I guess the best chance at having any kind of legacy that survives into the future is for you yourself to survive into the future.

SDJ: [Laughing] The best immortality is to keep living.

RR: Yea! Where Newton made a lot of contributions as a younger man, but I am sure it didn’t hurt to live to 88 at a time when almost nobody or some tiny fraction of everybody lived that long. Even though, the great revolutionary scientists are stereotypically known to do their best work as young people. It helps if you can live for another 40 or 50 years after you come up with your great theories to defend them, and to just be a continuing symbol of what you came up with.

When people think of Einstein, they don’t think of the young Einstein with black hair. The guy had black hair for a normal length of time. he didn’t have the crazy poof when he was 30. That kicked in in his 50s. He managed to stay around until he was 76 or 75. He had about 30 years of scientific celebrity. Alright, he becomes the world’s greatest scientific celebrity shortly after General relativity is proven.

He came up with it in 1915. They proved it with evidence from an eclipse, after the world war, which makes it 1919. He lives until 1955. So 1919 to 1955, so 36 years to be th world’s most famous scientist. So anyway, he hung around. That helped his immortality. So yea, if you want to have a shot at immortality, eat right, exercise, take metformin, keep looking around, take aspirin, floss your teeth, maybe get a long-term partner or part, or both, and masturbate.

[End of recorded material]

Ask A Genius 137 – The Claustrum Zap

Scott Douglas Jacobsen & Rick Rosner

April 3, 2017

[Beginning of recorded material]

Rick Rosner: Hope to hold off long enough for the immortality stuff for the big thought cloud that is coming.

Scott Douglas Jacobsen: Two things, the big neuron, the other two that are with it are attached to the claustrum. They did an experiment on a lady. When they zapped the claustrum, she stared blankly.

RR: This is a rat?

SDJ: This is a lady.

RR: Wait, what? Wait a second, hold on, they zapped a person-person…

SDJ: Yup.

RR: …in a certain brain area that is associated with consciousness in rats.

SDJ: The claustrum.

RR: Okay, the claustrum. But the human claustrum does not have these big ass neurons?

SDJ: I do not know if they have checked. But the claustrum has been associated with consciousness and the reason that they thought three neurons, especially this big one that went around the circumference, was because they emanated from the claustrum in the rat.

[End of recorded material]

Ask A Genius 138 – Coming Online

Scott Douglas Jacobsen & Rick Rosner

April 4, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: They zapped her brain and she went out with a blank stare into space, then they did it again and she came online. They could do this…

[Fingers snapping by Scott Jacobsen]

…in a snap. Then they had, I remember the number, 171 cases of veterans of war, combat veterans, that came out with, I guess, damage of varying degrees to this. So big sample size, relevant damage, to the relevant parts of the brain, and they found that the level of damage and the level of problems of their consciousness was associated with the level of damage to their claustrum. So there.

Rick Rosner: That reminds me of some kinds of anesthesia don't block pain as much as the memory of pain. I've had 2 colonoscopies. They give you this stuff, and I don't think – I forget if you're out or not—I guess you're out. Regardless of whether you're out or not, you don't remember the colonoscopy. I think you're awake-ish, and they can talk to you. But you lose the memory when they try to talk to you.

So obviously, there's stuff that can knock out memory of what's going on. So if the claustrum is a consciousness facilitator, that doesn't necessarily make it the seat of consciousness. It being a consciousness helper. I think it would be easy to become confused about what it signifies.

SDJ: It seems like a relay. If you zap it, and it's off, I guess, you lose the memory because when she woke up she had no memory of being out. So it seems to be a relay of relationships with being online, being conscious, and recording – or not recording.

RR: Yea, a lot of stuff goes offline when you're asleep. You can be thinking about physical movement and most of the time that doesn't cause you to have physical movement. Everyone has the deal where a signal gets through and you jerk your leg. Sometimes it wakes you up. Sometimes, you talk in your sleep. But mostly that's shut down because it's convenient or helpful for the brain to not having everything online.

But because there's something controlling something online doesn't mean that's the seat of consciousness. It just means that it has the ability to regulate everything it needs to do to be fully conscious. It's the cop who says whether you can put on your show rather than the group of players in the show, possibly. Though it may not just be the cop. It might be the time keeper. The guy on the Roman ship who beats the drum that keeps everyone rowing to a rhythm.

So we could talk about how it might work or what it might suppress to make you not conscious because the idea that consciousness is just cross-chatter among all of the different subsystems in

the brain, then the idea that one gatekeeper can shut down all of the chatter seems overly ambitious for just one part of the brain.

SDJ: I agree with that, but I think in the context of legacy – a legacy of which you're alive and processing in some manner matters only if the lights are on, if you're conscious. I am trying to tie that back into what we were talking about for about 20 minutes. That was one big thing that I was thinking about, talking about legacy again. Sorry [Laughing].

RR: Well, one thing that will happen in the future as information processing entities become more sophisticated and powerful is that the quality of human consciousness will appear relatively trivial. So the way we can look at a dog and what a dog wants and think, "Okay, you're a dog and want three things mostly, and are dumb and confused by most things in your life as a dog." Then you can look at a guinea pig and get more frustrated along those lines.

Because guinea pigs are cute and can be affectionate. They mostly want food and to nest, and rabbits are slightly cuddly. I guess they'll come to you because they associate you with food. Then you can get to iguanas. I have never had one. They just don't seem to be balls of fire to any great extent. They want stuff, but they don't appear to be the highest wattage things in the world.

SDJ: Some of these animals are more genetically complicated than us. So relative, within their…

RR: …but their brains aren't, their behaviors aren't…

SDJ: ...but in their species frame, they might seem more individuated in the same way we do. So what you're saying is what the AIs or future people will see our internal-to-species bell curve will not really seem like one at all.

RR: Yea, I mean you can have genius animals, but a genius rabbit is still a rabbit. Octopuses, I think Gwyneth Paltrow doesn't even eat them anymore.

[End of recorded material]

Ask A Genius 139 – Inexpensive Big Brains

Scott Douglas Jacobsen & Rick Rosner

April 5, 2017

[Beginning of recorded material]

Rick Rosner: I feel weird eating octopuses because I read too much about how smart they are, but then I read that they only live for 2 years because they are trash animals. They are high-predation animals. They are animals that generally due to their lifestyle get eaten at a high rate, like possums, where possums only live for 2 years. Octopuses only live for 2 years on average because they don't have a lifestyle where they aren't eaten. They get taken out.

But possums are crappy and stupid while octopuses are really smart. They fall apart after 2 years, which seems tragic for a really smart, curious, and sometimes friendly animal. It just shows that cognition, in some instances, can be super cheap. It is not that expensive to grow a big brain, and a certainly as synthetic brains become cheaper and cheaper in the future. It is going to lead to a re-evaluation of the kind of consciousness that we have.

The entities that come after us will be like, "Yea, you guys are not overly interesting products of the natural world."

Scott Douglas Jacobsen: Where does that lead dignity? I am not arguing this from my position, but I am taking the perspective, as with many of my questions, of others that might have a question about this. So I am asking on their behalf, as "as if."

RR: Okay. Yea, then let's talk about dignity, we used to be holy creatures. We used to have a touch of God in us. We used to have the magical presence of consciousness and a soul, and man a little lower than the angels.

SDJ: Or think about Aristotle even, it was about men. Men were ascendant in many of these traditions as well…still!

RR: Regardless of whether it is just men or grant this divinity to men too, and to minorities, and—we were exalted. Awareness of ugly bodily functions was generally sequestered. There's always been a literature of the scatological. There was writer from 2,200 years ago named, I think, *Simplicissimus who may have written about filthy trickster characters. There have always been profane writers.*

But they have been hidden away. But there has been exalted literature—nobody in A Tale of Two Cities, the action doesn't stop so somebody can take a shit. Nobody jerks off in Dickens that I know of, or in Plato.

[Break in recording]

RR: TV, for the first 30 years of TV, didn't talk about pee and doody, and butt sex. All of those boundaries have been erased and we are thoroughly biological creatures in everybody's

understanding now. You can look at the wave of zombie stuff as a manifestation of the decay of degradation of humanity. Zombies are like a hyper-aware version of our biological basis. I don't watch *The Walking Dead* at all.

But what I think what happens on that show, I think this is season 5, or 6, or 7. Most of the zombies on that show. I don't know how long the world of *The Walking Dead* has been going on, but it is probably a couple of years since the zombie plague. So most of the zombies are 2-years-old at least. That means they are extra nasty, extra rotten, because these are people who have been scrambling along the ground or standing in a corner for a long time.

Which is a metaphor for our awareness of our own groundedness in biology, so yea, our best hope for immortality is to hope to live long enough to defy our natural circumstances and hope for technological glorification, technological exaltation, by becoming part of some information processing entities or entity that goes beyond human, which will start happening in the next few decades.

Which isn't the happiest thing, but the idea of legacy has always been an iffy proposition. 59:00

[End of recorded material]

Ask A Genius 140 – Computational Power

Scott Douglas Jacobsen & Rick Rosner
April 6, 2017

[Beginning of recorded material]

Rick Rosner: If you want to add processors, you might have to run the cable up through your neck, which seems like it is probably not the best way to do it. So I think if you're going to start laying in extra computational power. You gotta do it on the inside of the skull. That, maybe, the fanciest supped up brains in the future will maybe have an added layer of computational capacity that wallpapers the inside of your skull.

Or sits as an added layer that wraps around your brain, that can over time, perhaps, drop tendrils into your brain in the way your brain links up more thoroughly with itself by sending out a zillion other dendrites. Also, if you wanted to get sneaky about it, you could probably "alienize" the back of your head. You don't want to give yourself one of those *Mars Attacks* giant veiny skulls.

Scott Douglas Jacobsen: I was thinking about war again [Laughing]. War is like a drug for nations as a whole - sufficiently enough people with sufficiently enough fervor to pursue wide scale murder on either side, or maybe one side. But in hindsight, like decades hence, people look at it with horror, and then with a quaint, "What the hell were they thinking?"

RR: Hold on! It wouldn't be "what the hell are they thinking?" I think the future will look at our history full of war and other bad behaviours. It will be seen as consequences of their limited and evolved nature. You know, when we see like 2 bucks with full sets of antlers battling it out, we don't look at it with horror. We think this is their evolved behaviour and that this we are primates and have these in-built behaviours.

That when populations grew large, these are the consequences of those large behaviours. War in the future will still happen, but in different terms. We are seeing all sorts of war by proxy in the Mid-East with drone-based warfare and robot-based warfare and we've seen with Stuxnet that was deployed by the US plus Israel – a worm virus that got into the centrifuges in Iraq until they spun out of control and then fizzed out Iraq's initiative to build nuclear bombs.

So we have war by proxy. Future war will probably be more concerning because we have been at war with Russia for a year without knowing it. Russia was fighting with us in our election and wrecking it via hacking. Whatever their term is for destructive propaganda, fake news, now, Russia has infected several tens of millions of Americans with complete distrust of news that was trusted for straightforward journalism that has been trusted for centuries.

That's war. Yea, they may look back at wholesale slaughter with horror. Hitler might be in the 3rd place for people he caused to die compared to Mao or Stalin, but the loss of information processing entities in the future may be as horrible but played out in less flesh-based ways.

SDJ: I think about the importance about image. I might be remembering something vaguely from Errol Morris when he was talking about the power of image, or the frame of an image, or what is an image leaving out, or does it have color, is it black-and-white or not, what is its title and description, what is its era, what is left out of the standard rectangle or square frames, or is it high fidelity or not.

RR: You're talking about Errol Morris's presentation or thesis that any kind of photography leaves out more information than it captures, right?

SDJ: Yea. I also relate it to what sparked this part of the conversation, which was seeing an image of a Sherman tank, but an old one – still driving around, worn out, and crushing a car. I thought about wars that, to your example. The bucks, they clang heads, and they clash. We think, "That's part of their genetic heritage in bucks competing with one another for dominance."

We consider that part of the end of result or near end result of their reproductive life cycle based on the genes in tandem with the environment, but that's us looking at a whole other species. Maybe, people in the middle future. They are still us or have elements of us because they come from that for the most part. I think there still will be a sense of horror, or of quaintness or vague pity. [Laughing] A high definition consciousness pity.

RR: It's not dissimilar. I've offered a couple analogies that you've—like the buck, you said it wasn't that on point, but when we look back at a costume drama set in 1810. We feel sorry for the people. These were people who had to shit in chamber pots. They'd be lucky to live into their 50s or 60s. A lot of that stuff is hidden from the viewer, but we are supposed to enjoy the picturesqueness and the idyllicness of it.

But these people, you have to feel for those people given the limitations of their lives. My kid does a lot of work and research on people of that era, like the Brontë sisters. There were 5 sisters and a brother. Only one lived past 30, Charlotte, who was gone by 39. Jane Austen, I think she was gone by 41. They died like crazy. And they had limited means of expression.

[End of recorded material]

Ask A Genius 141 – The Brontës and Austen, and War

Scott Douglas Jacobsen & Rick Rosner

April 7, 2017

[Beginning of recorded material]

Rick Rosner: Women, particularly, lived constrained lives in the domestic sphere, largely. The Brontës and Jane Austen, the Brontës first published using male pen names.

Scott Douglas Jacobsen: [Laughing] Something else you mentioned, or was implied by what you said. You mentioned body count with Hitler as number 3, and Mao and Stalin as number 2 and 1.

RR: All of the deaths attributed to Hitler. He killed 11 million in the camps, of who 6 million were famous for being Jews. Then there were the deaths by the horrible conditions of war. You can assign him 30 million deaths. Then Mao via his various social revolutions, then may 40 or 50 million. Between Mao and Stalin, one has 50 million to him and other has 40 million. Given that those were acts of mass slaughter under repressive regimes, you're not going to get accurate body counts anyway. Go ahead.

SDJ: Each of those cases. Hitler with racist and specific an anti-religious ideology, against Jews as a people and a tradition. Mao with communism and the attempts to unify China's provinces into a single country.

RR: Hitler wasn't anti-religious. Hitler had or promoted a certain mysticism, if not exactly—

SDJ: Oh! That's where I clarified before. It was racist and specific anti-religion: Jewish tradition.

[End of recorded material]

Ask A Genius 142 – Hitler, then Mao & Stalin

Scott Douglas Jacobsen & Rick Rosner

April 8, 2017

[Beginning of recorded material]

Rick Rosner: You can call that racism or antisemitism if you want. But anybody he thought sucked or was evil or an exploiter, they were thrown into a hopper – gays, communists, the retarded. People he didn't like; groups he didn't like. Also, you can view Nazism as a specific criminal enterprise where Jews had a lot of shit to steal. So it is a good way to get all of their shit by first squeezing them and then killing them.

It's not that he just hated Jews. He wanted their shit.

Scott Douglas Jacobsen: The other big 2, China's Cultural Revolution and the attempt to have a unified country. In the interim of that or during that, killing millions and millions of people, Stalin as far as I know was a communist God-complex figure killing millions of people. I am trying to get at an ideological foundation for a lot of this war—well, not even war, just mass killings based on ideology.

RR: The idea is if you get rid of everybody who is against, then who is left is people who are not against you. You can keep finding more and more people against you. Once you set up the mechanisms by which you can kill people, and the bureaucracies by which you can kill a lot of people, it becomes easy to kill people. Nobody ran or did any kind of analysis under Stalin or Mao, or Hitler, as to possible or positive consequences to not killing a shitload of people.

Hitler could've put himself in a super great position had he stopped really early in WWII. He was winning the crap out of WWII until he decided to invade Russia, and then that ended and the war was lost as early as 1942, when he marched and tried to take Leningrad. But until then, he was just easily sweeping through countries. He took France, Czechoslovakia, and Poland.

[End of recorded material]

Ask A Genius 143 – Pareto Distribution of Killings

Scott Douglas Jacobsen & Rick Rosner

April 9, 2017

[Beginning of recorded material]

Rick Rosner: Had he just been content to do that, he wanted a 1,000-year Reich. He would've not gotten that, but he would've been able to hold onto an expanded Germany that was prosperous. He could've been talked out of some of his terrible ideas, which included killing 11 million people he did not like. But nobody under dictatorships—there's no mechanism for that kind of re-evaluation.

Scott Douglas Jacobsen: Of the people that won out in the all-time murder sweepstakes, killing sweepstakes…

RR: Yea.

SDJ: …[Laughing] This—I don't think this has been applied to it. So I think this is a first thought, possibly. I believe you could very strongly apply a Pareto Distribution to killings. Where you have a few people at the head of directives and ideologies that drive all of this stuff, it is probably a dozen, and they dominate the landscape as if they are the Dirac, and Einstein, and Bohr, and so on, of physics, but of murder.

RR: Are you talking about the Zipf Distribution?

SDJ: Yea! So these are—for instance, Einstein, Newton, Nohr, Dirac, Feynman, Edward Witten, who are some other big people? Stephen Hawking, Stephen Weinberg, others – because I can't think of others off the top. Some of these people are some of the most cited physicists, at least, if not scientists, ever. So they have made tremendous contributions, but the citation levels for most academics is not much. It's probably below double-digits.

[End of recorded material]

Ask A Genius 144 – Zipf's Law-Pareto Distributions

Scott Douglas Jacobsen & Rick Rosner

April 10, 2017

[Beginning of recorded material]

Rick Rosner: Anyway, Zipf's Law.

Scott Douglas Jacobsen: Yea, Zipf's Law, Pareto Distribution, apparently, this dominates any official formal mainstream form of competition: sports, science, arts, humanities. Picasso was massively productive. Most artists aren't. Poets: Shakespeare, Ezra Pound. These people produced large volumes, very popular, lots of sales – J.K. Rowling.

RR: Basically, what you're calling a Pareto Distribution or can be called Zipf's Law, it is likely in any field that that field, whether human endeavour or something else like the population of nations, you have a biggest one and a much less second biggest one, and a much smaller third biggest one. You have one or two giants dominating fields and a bunch of also-rans well below.

SDJ: Yea, these are the people we talked about before. These are the people that lose themselves to the sport watching the sport.

RR: Like frickin' Yukon women's basketball team has made it to 25 consecutive sweet 16s, they dominate. You have among the countries of the world. You have China with a population of like 1.5 billion and India at 1.3 billion, then it drops way down. Are we in 3rd place? I don't know. The US with 330 or so million. It keeps dropping. Brazil with 250, maybe, million. Eventually, you get down into dozens of countries with under 10 million.

SDJ: Yea! Music: Bach, Beethoven, and Mozart. The three most commonly referenced.

RR: State populations. California, 35 million. Texas, probably 25 million. New York, probably 20 million. Then you've got 30 states with populations under 10 million.

SDJ: Yea, and if your human endeavour is to kill a lot of people that you don't like, you can have a simple model in mind, "Get rid of all people that disagree with me or that I don't like. So I can have only people around me that I like or who agree with me." In a dark analytic way, you can take Zipf's Law or Pareto Distributions into the world of mass killings.

RR: Hold on, hold on. What Zipf's Law reflects, or Pareto, a perfect storm of circumstances, a rare confluence, a rare conjunction, of the conditions necessary for super mass murder. Germany was a super special set of circumstances. This country was pissed off by what it felt was being mistreated after WWI, a charismatic leader, a rich minority that you could drum up a lot of hate. Same with China.

Huge population in place. Charismatic leader. A change in government as the communists took over after WWII. Stalin, a charismatic leader taking over after a fairly recent revolution. Just looks like there are necessary circumstances. And they don't arise that often. India would be a

place that could have been potentially a site of 20th century—it has the population to support mass murder. Other circumstances, fortunately, were in place.

[End of recorded material]

Ask A Genius 145 – Wrestling Trans and Fake IDs

Scott Douglas Jacobsen & Rick Rosner

April 11, 2017

[Beginning of recorded material]

Rick Rosner: There are four factors that other people are lucky to have one of. The Zipf-Pareto represent the luck of getting the trifecta, quadfecta of circumstances.

Scott Douglas Jacobsen: Also, it can have an individual choice. A top player in one curve distribution can jump into another. One case, which was interesting, was a man who became a trans-woman and was a wrestler, and began dominating [Laughing] women's wrestling.

RR: There was a kid in Texas that went 159 and 0 because she was born a girl, but is trans, and is undergoing treatment, and was a good wrestler anyway. Now is living in Texas, but Texas being Texas, they won't let her wrestle as a boy. So she as a boy is going to wrestle a bunch of girls to wrestle, and she unbeatable. He's unbeatable. He's a boy now, but being forced to wrestle as a girl.

It is also colonizing—there can be the "Colonizer Effect," which is the first organism to open a niche will be super productive if it is a new niche. I opened a sport where I am the all-time champion because I am the only contestant. Fake IDs, in bars, I caught 6,000 of them. I am the only participant in the sport. Others may temporarily partake in the sport. Someone may come to LA and work at a bar while they try to make it as an actor.

Somebody who is a bouncer for 3 months in between other stuff may catch 2 dozen ideas. I was rapid for IDs. I caught 6,000 of them. I caught another 6,000 people inside of bars. People in bars that sneaked in, in side doors, and found them and booted them out. I was the king of fake IDs

[End of recorded material]

Ask A Genius 146 – Women's Rights, Selection, & Society

Scott Douglas Jacobsen & Rick Rosner

April 12, 2017

[Beginning of recorded material]

Rick Rosner: I have a buddy, Ted, who was rabid for fake IDs. He went on to have different adventures in life. He didn't stay a bouncer for life. He caught many, many IDs, but well below me because he didn't treat it as this pursuit that occupied a 1/3rd of his life.

[End of recorded material]

[Beginning of recorded material]

RR: You and I talk about the future and the way it will change things in the next century or two, but we don't talk about when it will get her. There's a big futurist named Amy Webb who said that you should not worry about the future and then should focus on the near future. You were, off-tape, talking about her – ba-ba-ba—say what you said.

SDJ: She would identify as a women's rights campaigner, defender, and so a feminist—

RR: No! I thought we were taping and you said did a TED talk. Say what you said.

SDJ: Yea! So I don't think she would be going through a rabbi for dating. So she made her own formula with some math. She found her best match. Her end message was that 'when women that their standards are too high that her standards were not high enough.'

RR: You said that she said that women should be selective as possible.

SDJ: Selective in this sense, women should be as selective as possible because women are often told that they are too selective. Her message was women were not selective enough.

RR: She developed a candidate population somehow according to her criteria and then went with the guy who best fit those criteria.

SDJ: Then you transitioned into the pill, which was Margaret Sanger in 1960.

RR: That makes sense in terms of now in that we're a mobile and information-rich society. We can find out a lot of information about a lot of potential partners. If you look at historical statistics, the average distance—most people in Brooklyn in the 1920s or in London married within a few blocks of each other. They married in a very close radius and made do with whomever was available within their radii of accessibility and information.

A lot of people on hooking up in Brooklyn found people married people from the same block or building – 80, 90, 100 years ago – because people didn't have much wherewithal to reach further. Also, they died earlier. They had to marry faster because they lived shorter lives, then they had to divorce if the partnerships weren't ideal. People had to put up with more limited expectations.

But now it makes more sense to access a lot of people, but that model of coming up with a list of boxes to be checked harkens back to an older model of marriage that has it being an economic unit or a business partnership. A union that addresses all of the various tasks of adulthood including having kids.

SDJ: People needed more kids! Their lives were shorter. They married earlier. The chances their kids would survive were lower.

RR: Yea! Mortality was higher. So family sizes were bigger. People needed to start earlier. What that leaves out, the Amy Webb model, assuming that she or we—

SDJ: You were saying biology is in charge, not us.

RR: Well, you talked about a study that about a third of men and women say marriage is one of their life goals. I assume this is people who aren't married.

SDJ: Yea, I think with 'marriage as one of the most important goals in my life.' Very important.

RR: So this has to be among people who aren't yet married.

SDJ: [Laughing].

RR: That sounds like a lot of younger people, saying, "Yea, I may or may not get married." If you look at them 10 or 15 years later, most are married or in long-term relationships. Where those young people think they're in charge, but evolution is in charge, it wants you to hook up and reproduce. One that happens during your life is you'll probably end up hooking up.

[End of recorded material]

Ask A Genius 147 – The Amy Webb Model

Scott Douglas Jacobsen & Rick Rosner
April 13, 2017

[Beginning of recorded material]

Rick Rosner: Anyways, the Amy Webb model leaves out or seems—I am a child of the 60s and 70s, and a model like that I find scary because it leaves out sex and romance. But if you look at the history of everything, in the 1960 the pill comes onto the market, it takes about a decade to saturate most of the population. Before the 60s, sex was very secret and I'm sure a fair percentage of the female population had sex and much lower than now.

It was hush-hush. There was a lot of prostitution for men. The Hippies are having sex in a more relaxed way. By the 70s, the sexual revolution is hitting all of society. Most people are having pre-marital sex.

Scott Douglas Jacobsen: And people are having less sex now.

RR: In the 70s, everything sucked but sex. TV, food, décor…

SDJ: [Laughing].

RR: …No video games. Everything stank. People in the 70s were towards the skinny side. There was less porn. So if people are having less sex, things are awesome. TV is awesome. Food is awesome. Social media is awesome, but a big time suck. We're bigger too. Our bodies are stuffed with food and our heads are stuffed with porn. So sex with other people is less of a priority instead of a being the #1 thing as it was in the 70s.

It is among the, say, top 4 things. So in the 70s, somebody might want to – before settling down – hook up with 10 or 20 people to try things out. I managed to hook up with 16 different women.

[End of recorded material]

Ask A Genius 148 – Computers & Mating

Scott Douglas Jacobsen & Rick Rosner
April 14, 2017

[Beginning of recorded material]

Rick Rosner: I had a not very awesome sexual career. Now, I believe people's sexual numbers are lower than my 16. But now given the decreasing importance of sex, the wanting to do a lot of experimentation with a lot of people to find out what you want is a less of a priority. So the idea that you could find somebody compatible via computer matching makes that more feasible. I mean, you can use apps to find a lot of people to have sex with.

But you still have to go out and have sex with, but this computer matching thing is probably more for people who part of a generation where sex isn't the number one thing.

Scott Douglas Jacobsen: Also, our explicit categories that we then crystallize online: age, sex, sexual orientation, eye color, hair color, height, intelligence, occupation, hobbies, interests, likes of music. Since there are computers now, and they're going through dumb AIs, basically, but functional ones, computers are kind of in semi-charge of human mating to some degree now.

It is actually the future generations.

RR: Information is more in charge.

SDJ: Yea, it is a system that filters information rather than our intuitive processing.

RR: When you go on an app, when you use an app that helps you look for a partner, to some extent, as you're indicating, you're acquiescing to the system to decide what is important.

[End of recorded material]

Ask A Genius 149 – Biology Trumps Social Constructivism

Scott Douglas Jacobsen & Rick Rosner

April 15, 2017

[Beginning of recorded material]

Rick Rosner: People use Tinder sometimes for romantic purposes. Not just for a fuck buddy at 11:30 at night. Grindr is totally thought of as for finding fuck buddies, but even Grindr – I just saw online that they are bringing out an online magazine.

Scott Douglas Jacobsen: [Laughing].

RR: A lifestyle magazine because they are hoping to de-emphasize that it is something that you simply use to have sex with people. There are ones that are not explicitly for sex like Match.com, Plenty of Fish, Christian Mingle. There are dozens of them. They let you to some extent fine tune your criteria. They have done a lot of the criteria for you. You don't have to figure out what might be important for you.

SDJ: There has been a huge social experiment in Western countries, Nordic countries especially. So some of the wealthiest, freest countries on Earth by measures that are internationally well-respected: measuring democracy (measures of freedom in other words) and measures of wealth (so you can do what you want with your life, build your own life)—because when you're arguing for biology being in charge, then you're arguing against a social constructivist view, basically.

Those are the two main categories. The one big piece of evidence that supports you, highly, is that the more free, in terms of the rights that are granted to people, as well as the money to do what you want that an individual citizen has or a general citizenry have, men and women, if you categorize them by sex, the greater the divide becomes between them. And so what you would think would be genetic actually exemplifies itself more. The social constructivist would say—

RR: Hold on, say in simple terms what you're trying to say here.

SDJ: Sure! It's your environment or it's your genetics. If you have more freedom in a society, you would expect that the sexes would, on a social constructivist view, go closer together in terms of their preferences and what they do with their lives and how they build their lives. What happens is the opposite, which is the biological view, which is what you're saying.

RR: Which is what—you're saying that when you look at free societies, men and women's behaviours remain kind of differentiated.

SDJ: Not only remain differentiated, but even more so.

RR: They become even more. Guys become even more playas and horndogs, and women become—

SDJ: That's the face value. That's the simple view of men and women. Full-breadth men and full-breadth women of what would be considered men and women by most views, women become more feminine and men become more masculine. I do not mean more 'macho.'

RR: They have more signifiers. Guys lift more weights, drive pickup trucks. Women may dress girlishly.

SDJ: Maybe not "girlishly," but maybe adultly feminine.

RR: Heels, skirts.

SDJ: So what I was more pointing out was two views, it is either more environment or it is more biology. Biology is what you're saying and I am agreeing there. You had a whole continent that was a big experiment. By many, many metrics, well-regarded, freer, wealthier societies – Western, Nordic, Scandinavian countries, men and women's differences don't attenuate. Men and women do not become more alike. They become more different. So biology is in charge. Biology is really in charge.

RR: Yea, what gives people girl boners and boy boners.

SDJ: [Laughing] Sure.

RR: Yea, which goes against the idea that if you try to raise ungendered children, if you let boys play with dolls and girls play with army men or trucks, everybody will—that's the way everything is a social construct and gender roles are a social construct and girls will be as happy with toy trucks and boys will be as happy with dolls, but when they actually set up experiments. Boys still like trucks and girls still like dolls.

[End of recorded material]

Ask A Genius 150 – Breadth of Search

Scott Douglas Jacobsen & Rick Rosner

April 16, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: Yea, strongly! That doll-truck difference probably came out of the 70s and 80s with the self-esteem movement.

Rick Rosner: There was the no-fun granola lifestyle. The free to be you and me. The public television, there was a certain egalitarianism that had a joylessness attached to it. It was kind of like moving into a clean, equal future that is like the *Star Wars* future because it is underpopulated with foolishness and sleaziness. It's why *Blade Runner* looks like a more fun world to live in than the *Star Trek* clean plazas of the 25th or 23rd century.

SDJ: This came from – what some would consider a scourge of – theories devoid of empiricism.

RR: One more thing before we move onto the future. This has to do with another topic: breadth of search or width of search. Peoples' are higher now because we search more among people for potential partners as opposed to if you're living in 1922 Brooklyn.

SDJ: [Laughing].

RR: There's more settling then. There's an algorithm there. If you want a piece of fish to cook for dinner, and if you only want an 8 ounce piece of fish, and if you're looking in the pre-packaged fish in the grocery store, and most of the packages have run about 12 ounces, your search strategy is that you pick up a couple packages and see that they're mostly running 12 ounces and find one that is 10 ½ ounces.

You hold onto that one until you find one that is less than that. You take the second one that sets a new record for smallness and then you settle on that because any further search is a waste of time. You will not get significant improvement. You search once. You find 10 ½ ounces. You search another half dozen and find one that is – I don't know – 9.8 ounces. Even though, it is not the 8 ounces you were looking for. It was close enough and any further search among the fish is a waste of time.

So you settle for one that is 9.8 ounces because you may never find one that is 8 ounces, which may not be among the packaged fish. Also, is it worth searching through another 20 packages of fish to find one that is 9.6 ounces? Probably not, there's your settling strategy. To some extent, because the world have 7 ½ billion people in it, you're going to settle at some point if you're going to settle down with a partner.

You're not searching through 3 ¾ billion people in the world of the opposite sex. You're not even searching the entire population of the city because it would be a huge pain in the ass, but the point at which you settle can be further along. Instead of having to pick up each package of

fish, if there were an app that just listed the weights of all packages of fish and showed you th one with the more ideal weight, you'd go with it.

Now, we have technology that widens the scope of search and that means that on average who you settle for is selected from a larger population using more criteria and might be expected to have less settling in it. Less horrible than the 3 guys that you had to choose from in Brooklyn in 1922.

[End of recorded material]

Ask A Genius 151 – Cohabitation and Marriage

Scott Douglas Jacobsen & Rick Rosner
April 17, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: That makes me think. That makes me think. It is an astute point. There has been data that has come in on more recent relationships. Live-ins? What do they call them?

Rick Rosner: Cohabitating?

SDJ: Yea. Cohabitating, that's the one. So people that get straight married. They stay together longer and have more durable partnerships because they don't get divorced as often as those that cohabitate and then get married. I don't know the reason why, but apparently that's a thing.

RR: It could be a bunch of different reasons. It could be that people who cohabitate fall into relationships more easily. You can divide people into two populations with regard to relationships. Hot people who find it easy to hook up, and less socially able people who find it harder to hook up and tend to hold on more. They want to hold onto the existing relationship more.

My family has that kind of divide between the easy hooker-uppers and the harder-hooker-uppers. So some people find it easy to hook up, and boom! They can break up with someone if things go badly.

SDJ: It could be social consequences too.

RR: Yea, people may be more religious or more traditional. There's too many variables in there to pin it down. I would think that—the way marriage and romance was presented via media through – well, up until now – most of the 20th century. There's the soulmate and happily ever after. I would think that there is a lot of disappointment in relationships when it turned out not to be that, when you have a divorce rate of the last 80 years of 50%.

SDJ: That's a misleading number, just intuitively. People who divorce more skew that number. It's actually probably lower. People who have repeat divorces up that number.

RR: It's still a good rule of thumb. That half of all marriages end in divorce.

SDJ: Yea, it is probably more like 40% because if somebody divorces 4 times or 3 times, or 2 times.

RR: But they still had a bunch of marriages that ended in divorces. You're trying to differentiate people and marriages. What you're saying is that there might be a lot of long-term marriages and people who have a shitload of marriages average is of divorces up. Still, overall, a good rule of

thumb is 50%, and if you want to adjust for more modern numbers, it is probably 45%. You can look for more subtle trends, but half of all marriages end in divorce.

That high rate among the things that cause it might be high expectations cause by entertainment, where people expect to find their soulmate and to find relatively friction-free long-term relationships. And if the rate is dropping, one factor might be or two related factors might be the access of information via the internet about how things really are and about how entertainment reflects a lot of less romantic models of relationships.

Which show that many relationships are troubled and most relationships aren't free of having to work on them, you always had a dark undercurrent of presentation of relationships in books and movies and such, but those weren't mainstream entertainment. It is like *Revolutionary Road* by Richard Yeats, maybe, in the 50s that presents a sad disintegrating marriage. Most people went to Rock Hudson, Dorris Day comedies.

SDJ: I feel like the romantic delusions are fed to women more and social pressure is a big reason for men becoming married, which are two different things.

RR: There's the idea of romance porn for women. Guys have porn porn and then women have romance porn, which used to be harlequin novels.

SDJ: Yea, it's love that doesn't end badly.

RR: The plot of a harlequin novel is a woman has a series of brief satisfying dates or just friendly relationships with just wimpy men and then she meets a manly man. He meets all of the stereotypes. He's rugged, strong, but he's really mean to her. It's a little bit like you took Pride and Prejudice and dumbed it down to the ultimate degree. The guy is an asshole, but they somehow are overcome by their mutual attraction.

But then he's even meaner. The woman doesn't know what to do. At the end of the book, she finds out that he's really a nice guy, who loves her deeply, and was only mean because he hated the loss of control that he felt around her because he was attracted to her.

SDJ: [Laughing].

RR: At that point, he morphs from being the complete asshole he's been the whole book into being a loving man who want to settle and marry and have kids, almost immediately.

SDJ: [Laughing] So it's also saving him from himself.

RR: That's just the template. In the 70s, you could've gone out and bought 200 of these novels that have the same plot, except in one he works on an oil rig, and on another he's a sheriff, and another he's a cop. Only the settings and the occupations change.

[End of recorded material]

Ask A Genius 152 – Bodice-Rippers and the Future

Scott Douglas Jacobsen & Rick Rosner

April 18, 2017

[Beginning of recorded material]

Rick Rosner: Or it takes place in the 18th century. They call historic romance novels "bodice-rippers." A bodice is the top that a woman wore. A bodice-ripper is the rugged man who is overcome by his lust and just tears her shirt off and takes her, and only later turns out to be a good guy. You can go online. If you Google "bodice-ripper," I'm sure you can find the cover of dozens of romance novels with the woman's shirt semi-off and the guy's shirt is fully off.

Let's talk about the future. Probably the best known predictor of the future in any kind of detail is Ray Kurzweil, who is the guy who took up the banner of the Singularity. That by the 2040s we're looking at a potential utopia because AI is going to—we're going to build AI and AI is going to further AI until it is smarter and smarter until all solutions to human problems including aging have been figured out by the 2040s.

He's written probably half of a dozen books. In some, he's put out long year-by-year predictions about what will happen. His track record is not horrible. So we can look at his predictions and look how well he's done and then look at the future predictions and see how he'll do. For instance, he wrote a book called *The Age of Spiritual Machines,* which is about AI in 1999. Then he made a bunch of predictions for 10 years hence.

You, Scott, can go on Wikipedia and look up predictions made by Ray Kurzweil. He's got a list of about 18 predictions. 2009, as predicted from 1999, majority of reading is done on displays rather than paper. He got that one. I'd say most people. Most texts would be made by speech recognition technology. He missed on that one. Intelligent roads and driverless cars will be in use. He missed that one. That's more a 2019, 2020-something thing.

People use personal computers the size of rings, pins, credit cards, and books. Semi-got that one. Fit bits are somewhat the size of that and tablets are the size of books. Most portable computers don't have moving parts or keyboards. He got that one. You press your screen, but it doesn't really have a punchable keyboard. Desktop PCs are still common. Individuals still use portable devices. True.

I don't know if it true for 2009, but 8 years later it is true. Personal computers worn provide monitoring, pretty close, but halfway. Devices provide high-speed access via wireless, got that one. Digital products such as games, books, and software typically acquired a files via wireless network and have no physical network associated with them. People can talk to their computer to give commands. Got that one.

[End of recorded material]

Ask A Genius 153 – Ray Kurzweil and the Future

Scott Douglas Jacobsen & Rick Rosner
April 19, 2017

[Beginning of recorded material]

Rick Rosner: Most of what he got true was for 2015 and later. Even over a 10-year time period, what he said would take 10 years, it took closer to 15 years, which is probably true for reasonable science fiction. Things that can be reasonably expected to come to pass will come to pass, but take twice as long as the futurist thinks. A guy named John Brunner wrote a couple of books in the later 60s called Stand on Zanzibar and The Sheep Look Up.

It was the word 10 years hence from the 1960s. The fashion trend I remembered because I was a horny little kid and it made me excited that people in the future would let you wear clothing that would allow you to see their panties, "Wow, I cannot wait for the future."

Scott Douglas Jacobsen: [Laughing].

RR: It didn't happen in the 70s, but, by now, performer—the idea of performing in a swimsuit or a skirt that is missing anything like a leotard-type bottom is a common thing. The panties came to be, but it took 30 years. Computer displays built into eyeglasses for augmented reality are in widespread use. Not really, Google Glass didn't work out. People thought they were assholes and it didn't catch on.

Computers can recognize their owners face from a piece of video, pretty much. A $1,000 computer can perform a trillion calculations per second. Yup. There's increasing interest in massively parallel neural nets and other chaotic computing. Research has been initiated on research engineering the brain based on non-invasive methods. Elon Musk mentioned the enterprise.

What he thought would take 10 years is taking 15-18 years or more, for 2019, 20 years after he writes this book, he said for $4,000 you should be able to buy a computer with the computing capacity of the human brain.

[End of recorded material]

Ask A Genius 154 – 'When is the Future Going to Get Here?'

Scott Douglas Jacobsen & Rick Rosner
April 20, 2017

[Beginning of recorded material]

Rick Rosner: We were talking about when the future is going to get here. We talk about the future a lot without pinning down when it will happen and what it will do. I consider the election disrupted by the future. That is, disrupted by forces that have never played so large a role in an election, one thing is that actual jobs lost to AI and to robotics. I saw a statistic yesterday that for every robot in a factory, then you cost 6.2 human jobs.

People like to say that we've had increasing automation for 3 centuries, since the beginning of the Industrial Revolution, and people found work after each disruption. I believe that is a harder case to make now. There are probably millions of people in this country who have lost jobs to automation. They are pissed off. People also lost jobs to economic cycles, to offshoring and outsourcing, but automation puts constant pressure on the job market.

It squeezes it down and down and down. Those pissed off people and other pissed off people have been manipulated via computer hacking of information that generate social media bots. They have been manipulated into mistrusting longstanding American institutions. Most prominently, most importantly, the media; so this is a trend that may have shown up in previous elections, but it exploded in this election.

Senate is just beginning to have hearings on exactly how much we were fucked over by Russia. We have another national election coming up in 2018, which also includes all sorts of state elections. There is no guarantee. In fact, there's no guarantee that we will be able to fight off that same electronic manipulation of people with propaganda and bots filling social media with bullshit.

In fact, you can pretty much guarantee that that's going to happen. There are elections coming up in France that Russia is trying to mess with. Russia is trying to mess with the alliances in Western Europe such as NATO. He influenced Brexit. Russia's efforts to destabilize Western democracies and will continue to be fairly successful. So that's one form of futuristic disruption that is already here.

Other forms of disruption include a bunch of effects of vastly improved medicine. That within 20 years not only will the genome be entirely figured out – that is, say 90% of the effects of manipulating the various genes in a human genome will be known – along with a lot of other potential feedback loops in the human body. Living things live and move through the environment and have flexibility to deal with various conditions of life using feedback in the body.

[End of recorded material]

Ask A Genius 155 – Feedback and Disruptions

Scott Douglas Jacobsen & Rick Rosner
April 21, 2017

[Beginning of recorded material]

Rick Rosner: Rocks have very little feedback. Living things have all sorts of feedback systems that help maintain, help living things survive under changing conditions. Some of those feedback systems are not know yet. I know a guy working on this stuff. He's got a theory that as evolved creatures we have lots and lots of feedback systems that may not be at the gene expression level. It may be among all sorts of systems in the body that haven't been discovered yet.

Yet people are working to find out all of the different interactions among various systems in the body at all sorts of different levels. The molecular level on up to the organ level. Within 20 years, most of those things will have been found out and many of those mechanisms within the body will be addressable via medical therapy if things go wrong or if things wear out, which will lead to all sorts of disruptions because we can pretty much figure that—

One disruption is that at first richer people and richer countries will have better access to life extending and life improving therapies than people in poorer countries, which hasn't been a significantly contentious issue yet because under the current conditions we all die pretty soon. The highest average lifespan is still not 90, even in the most developed countries in the world. And then in the most hellacious countries in the world, the average lifespan might be 50.

Those are so fucked up that they have other things to worry about besides getting pissed at people in countries living significantly longer than average. But the average lifespan for countries starts surpassing or approaching 100, and creeps up towards 120.

Ask A Genius 156 – Elements of a New Set Theory (Part 1)[1]

[1] These sessions and the correspondence are different expressions of the same ideas. In correspondence, we discussed this:

> ***SDJ: With the ICST explained before (I trust), the distinctions in time seem tenuous. Even as an emergent property in the universe, the range of the emergence of time depends on velocity with the minima, v=0, and the maxima, v=c. The velocity in this range determines time. Where time in an ICST framework, time is probabilistic, finite, and dynamic. It's an "as needed" emergence of time in an "as if" universe with a "good enough" ethic.***
>
> ***RR:*** *Don't exactly understand the question. However, assuming apparent age of universe is proportional to the amount of information in the universe (but it might be age^3), then adding a million years of added history = 1 million/13.8 billion = 1/13,800 more information has been added to universe's total. But this isn't your question.*
>
> ***SDJ: …Not the question, but an interesting thought to consider.***
>
> ***RR:*** *Explain further please…*
>
> ***SDJ: …It seems in the right path to me. It goes to one of the more basic distinctions in an IC universe: outskirts and center. The outskirts are frozen information, relatively speaking. The data will be used later. The center is active because of time. But why time there, and nearly no time or no time in the outskirts? It seems to be, in theory, because of velocity. Something with minimal Brownian motion and velocity freezes in time, more extreme versions of the neutron-rich/burned-out galaxies.***
>
> ***That leads to a questions, or a few. That is, the ratio of collapsing of space and freezing of an object in time to its speed. They're interdependent variables in IC. If you slow something down, its space shrinks, then it travels in time slower. If you speed something up, like proton-rich galaxies in full burn, the local space expands and time moves faster. So changing one dial affects the other, what is that ratio? That's an important ratio.***
>
> ***From the why view, moving from the how view, in IC, the object or the information representation is speeding up, expanding space, and in turn creating some time. In that act of creation, its relevance is made. It is relevant to something being processed in the active center because it is an older galaxy flooded with new fuel, so it becomes relevant again, or a galaxy coming alive from the outskirts. That ratio is not only an expansion-contraction of space, speed up-speed down dial on time.***
>
> ***It can probably be considered a metric of meaning, of relevance to the universe. It can loosely put a number on a how, and more importantly a why. But taking any volume of space over a time range, the information contained in it is probabilistic, finite, and dynamic. QM is clear on the probabilistic nature of micro objects. Effective theories are clear on the probabilistic nature of macro objects. The universe is incompletely defined. Our knowledge as agents in the universe is limited, about ourselves and the universe.***
>
> ***Both imply finite information. All of this is dynamic because things are always works-in-progress. So that's why I feel ICST can emphasise those three traits: probability, finitude, and dynamism.***

Scott Douglas Jacobsen & Rick Rosner
April 22, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: Set theory can be applied to the universe to some degree. But what are its implications in a non-information based universe compared to an information based universe, weaknesses and strengths?

Rick Rosner: We can apply set theory to the universe as we understand it in light of Big Bang and Many Worlds Theory. Under Big Bang, you have a universe with a finite amount of matter and a finite age governed by rules of physics. Some of which we know. Some of which we haven't discovered yet. Some of those seem conducive to a set of all possible universes. Where you can imagine, the rules of physics or a set of all the possible rules of physics or the set of all possible combinations of different rules of physics.

Then all of the universes that might exist consistent with those rules of physics plus the rules of causality. Universes that could conceivably happen over time. You could also include the sets of simulated universes that nevertheless conform to the rules of physics. If you wanted to be really inclusive, you could include simulated universes that work well enough based on sets of rules that at least a temporary universe to exist, even if you can't get a full cosmology.

You can imagine putting people in a world with all sorts of weird rules that could not originate naturally, but could exist in a simulation. All of those things are based on rules of what can and can't exist. It is possible to imagine a set that contains all of these possible universes. It is a crazy big set, but it is possible because it is possible to have infinite sets and you're talking about a bunch of elements are definite things, definite universes.

RR: *...Age of universe might = I^(4/3), where I is amount of information. Radius of universe might = I^2/3.*

SDJ: With apparent age of universe proportional to the universe's data, then one million years more history at 1/138,000 more information made. With age, we have time, t. t = I^(4/3). With volume, V, as 4/3pi(r3), and radius, r, as I^2/3, and t = I^(4/3). We have the variables for the larger reference number. (4/3pi((I^2/3)3))*(I^(4/3)) = V. I might have that wrong. Anyhow, another thought experiment. Rather than 1/1.38*10^4 more information from adding 1,000,000 years to the universe.

What about an average 1/1.38*10^4 part of the universe over 1.38*10^10 years? Same amount of information added to it. It is equal to a million years of the net data processing of the universe.
That second thought experiment is more to the ICST point. The formula can go either way, but the second imaginary situation can section off a part of the universe. Then say, "This part over this range of time." That new set is not certain because it is emergent on chance.

It is not infinite in definition because it is not infinitely precise or defined. It is not static because it bubbles, things interact, and the apparent order has an apparent chaos too, at the same time. It is probabilistic or uncertain because it is emergent on the odds. It is finite in definition because it is not infinitely precise or defined. It is dynamic because there's constant rejiggering as the chaotically ordered mess of information processing in the new set is ongoing, expanding-contracting, creating its own time and micro-speeding up-speeding down, and representing something real, vivid, and partial in the mind of some higher-order information processor…

And if you wanted to limit yourself, so these things become—for some reason, if you think that you like working with finite sets instead of infinite sets, then you limit the size of the universe and the variations in rules that you'll tolerate. It can't be a simulated universe that could not have arisen over time. It is the set of all possible universes with 10^{80} or less particles. If that is too daunting, then 10^{6} particles. That seems like something you can work with.

You can use that kind of thinking for the things that set is good at. Maybe, you come up with theorems that every universe based on these rules and every member of the set has an origin in time. Maybe, every member of the set has a finite lifespan. An origin in time seems reasonable based on the rules we know or think we know, or can apply to the Big Bang. That seems like it might be a way to define elements in the set.

Or if not to define all elements in a set, then to define a subset or subsets in a set.

[End of recorded material]

Ask A Genius 157 – Elements of a New Set Theory (Part 2)[2]

Scott Douglas Jacobsen & Rick Rosner

April 23, 2017

[2] These sessions and the correspondence are different expressions of the same ideas. In correspondence, we discussed this:

> ***Scott Douglas Jacobsen: Your associative landscape seems to solve it, if we take the 3-dimensional bumpy landscape with each moment as the focus to solve it. Every moment can be more or less closely leaned to based on the current one.***
>
> ***So if the individual moment associates more with one superset in the set of all sets of logical possibilities for actualization of the universe, then the superset sub-1, universe sub-1, of the current universe moment (one Planck moment, fraction of fraction of a second: 1 tP) will transition into superset sub-2, universe sub-2, over superset sub-3, universe sub-3, because in the set of all sets of logical possibilities for actualization of the universe superset sub-2 associates more with superset sub-1 than the superset sub-3, where superset sub-2 & superset sub-3 could be future or past possibilities. This eliminates the distinction between past and future.***
>
> ***Each moment actualizing into another with apparent, but not real, distinction in time. Only distinction in moment-to-moment. Furthermore, superset sub-4 could not equate to a transition from superset sub-1 because superset sub-4 does not remain in the set of all sets of logical possibilities for actualization of the universe. This creates three big classes of sets. These sets as IC Set Theory, so probabalistic and dynamic.***
>
> ***Standard set theory is certain, infinite, and static. Fuzzy set theory is probabilistic, infinite, and static. ICST is probabilistic, finite, and dynamic. It justifies a new set theory. Big class 1: the set of all sets of logical possibilities for actualization of the universe; big class 2: the set of all sets of logical impossibilities for non-actualization of the universe; big class 3: the set of all sets of the universe. Class 3 contains class 1 and 2. Class 3 is the superset of sets 1 and 2.***
>
> ***Class 1 is the answer to the question, "What can happen?" Class 2 is the answer to the question, "What can't happen?" Class 3 is the answer to the question, "What can and can't happen?" The 3-dimensional non-Cartesian grid provides an image for it. 3-dimensional inflations with flowing into and out of, toward and away, from one another: the stuff, the information represented as spatial shapes, content, and relationships.***
>
> ***We can differentiate sub-events in superset sub-1, sub-2, or sub-3. With sectioning of a select volume from them, we find more probabilistic, finite, and dynamic elements at the bottom most level with the lowest magnitude defined by the information processing capacity limits set by the information in the universe. For us, the Planck scale to the universe seems like the minima and maxima.***
>
> ***ICST maps onto the universe. With the example, it does so, literally. Each instantiation of the smallest units of the universe and the universe as a whole ask Class 1, Class 2, and Class 3 questions, simultaneously. We described aspect of the universe as "Agents of the Universe" from particles to people to planets to filaments. We provide the how from physics. We provide the how from set theory.***
>
> ***We derive the ethic from the physics and the set theory. These foundations set the stage for asking, "Why?" Why these particles? Why these interrelationships? Why these information processing constraints? Why these organisms? Why this form of creation? Why these time and space scales? So that's that.***

[Beginning of recorded material]

Rick Rosner: However, when you try to apply set theory to IC or to a regular quantum universe, it becomes less clear that you could use the normal assumptions and rules of set theory, which, I assume, includes the idea that members of a set are distinct. Not that every member of the set is different, but that every member of the set has a definable existence – like the set of all counting numbers. Every number is precisely defined.

No number turns into some other number. No number is some other number part of the time, but under quantum mechanics, elements of a set can be fuzzy and can change from one thing to another and could may sometimes belong to a set or not belong to a set. If you're defining members of a set of something, according on quantum rules, the set of all things in this box. Well, under quantum theory, not everything that starts in a box, even if the box is tightly sealed, remains in the box.

Because the things in the box exist as quantum probability clouds or points within probability clouds. Those clouds don't stop at the edge of the box. They can sometimes be pointwise particles, can pick a point in the probability cloud outside of the box. If you're choosing members of a set if they're part of the box or not, your elements of the set are not well-behaved, according to the traditional rules of set theory.

Well, under IC, or under quantum mechanics, sometimes you cannot assign definite states to physical systems with the most famous indefinite system being Schrödinger's Cat. If your set is the set of all things with a live cat, well, Schrödinger's Cat only partly belongs to your set, which makes it—why have set theory if you have elements that may or may not belong your set depending on stuff.

IC further complicates it because the delineation of the existence of things under IC, the degree to which things exist under IC, depends on the amount of matter in the universe. When you have a big universe, like the one we live in, with $10\text{^}80^{th}$ particles, especially those with a long history of interacting with the other particle, those are well-established because they have long histories. But if you have a teeny little universe with roughly $10\text{^}3^{rd}$ particles, it will have a much shorter history, much less interaction among the particles.

It will have more particles that are more nebulous and closer to being virtual particles. That haven't left enough of a record for you to definitely say they even exist. They only potentially exist. A universe, a teeny little IC universe is so ill-defined in so many ways that it is not a definite element of a set that you can apply standard set theory to. You have to come up with some new set theory like fuzzy set theory.

[End of recorded material]

Ask A Genius 158 – Elements of a New Set Theory (Part 3)[3]

[3] These sessions and the correspondence are different expressions of the same ideas. In correspondence, we discussed this:

> ***Scott Douglas Jacobsen: I thought about sets of sets of sets and universes in universes in universes. The former do not fit the latter; the latter do not fit the former. Standard logic, math, physics, and set theory equate sets and the universe; the universe equates to a set. "The universe" describes one noun with encapsulation of everything. Sets in standard set theory describe single instantiations of the universe.***
>
> ***No necessary correspondence between the universe and set theory; the universe - as R. Buckminster Fuller described the dynamic, or verb form, rather than asserted static, or noun form, nature of the universe as "universe" - does not map onto set theory in whole. The static describes the dynamic in single instantiations. Sets describe single instantiations of the universe. Set theory applied to the universe describes single time slices. I will explore this later.***
>
> ***Set theory describes elements and sets. The Empty Set ({}), a single element, elements in subsets, subsets in sets, and sets in supersets, and {}, the elements, subsets, sets, and supersets in the Universal Set (U) – and U contains {}, the natural numbers and whole numbers with zero set (N_0), the natural numbers and whole numbers set without zero (N_1), the integers number set (Z), the rational numbers set (Q), the real numbers set (R), and the complex numbers set (C), or "U = {N_0, N_1, Z, Q, R, C}."***
>
> ***{} remains contained in U, or other sets, without explicit statement. Arithmetic does the same. You write, "1 + 2 + 3 = 6," rather than, "0 + 1 + 2 + 3 = 6." Set theory makes one assumption: absolute definition. "Absolute definition" implies infinites. I thought about it. The assumption equates to the problem. This relates to the problems with infinities, and infinities within infinities.***
>
> ***Elements consist of absolute definition or definite precision. "Definite elements" can clarify the idea. The basic premise of set theory becomes explicit with the new idea. An implication of infinite information, and infinite internal and representational precision. Sets consist of elements; sets consist of definite elements. Ergo, definite elements mean definite subsets, definite sets, definite supersets, and a definite U. Definite means absolute precision or definition with infinite information.***
>
> ***The same with standard notions of "1 + 2 + 3 = 6," or "Set A = {x, y, z}." Same with 6 equivalent to A, and 1, 2, and 3 equivalent to x, y, and z, respectively. Logic meets math. For one previous example, "U = {N_0, N_1, Z, Q, R, C}" consists of an absolute definite or definite precision as the definite U.***
>
> ***Standard set theory assumes an infinite digit series – zeroes or complex digit series, or infinite precision, as with standard logic, math, and physics. Standard logic, math, physics, and set theory make the same big, wrong assumption: absolute definition. They work in limited or partial circumstances.***
>
> ***Informational Cosmology, or IC, creates the total framework. An Informational Cosmological Set Theory, or ICST, works from the simplest statements in set theory - the elements.***
>
> ***The elements amount to a general abstract category, which implies operational efficacy in math, logic, and physics too. IC without the assumption of the infinite digit series; IC with the empirical substantiation with the finite digit series shown in the finite universe and its finite constituents – space, time, matter, radiation, fundamental forces – weak, strong, electromagnetic, and gravitational, and particles and their higher order agglomerations. This creates one strength in IC over and above, and against, standard logic, math, physics, and set theory.***
>
> ***By analogy, in an IC or narrative universe, all stories begin, develop, and end. All characters contain finite depth and relations, and so information. A narrative universe begins, develops, and ends with***

Scott Douglas Jacobsen & Rick Rosner
April 24, 2017

[Beginning of recorded material]

Rick Rosner: Fuzzy deals with things that are well-defined. They do not have exact values, but they have exact probability sets. So some of the members of the fuzzy set can take any value between 1 and 2.

Scott Douglas Jacobsen: Whatever that value is, it has an infinite string of digits implying an infinite amount of information.

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agents at various scales with finite depth and relations, and so information. An IC universe follows the evidence with one shift in one axiom: absolute or infinite definition to partial or finite definition. Logic, math, physics, and set theory shift from the bottom-up; IC re-creates the entire landscape with all scientific evidence, too.

Novel versions of {}, N_0, N_1, Z, Q, R, C emerge in this. Probabilistic flavors of {} and other sets with further specification of the information in each. For example, 0.0 differs from 0.00 differs from 0.000 differs from 0.0000, but each can represent {}. Each needs more or less information than the other based on the length of the digit series. {} comes in one flavor in standard set theory; {} comes in different flavors in ICST. Same for every element – not definite element, elements in subsets, subsets in sets, and sets in supersets. Information content implies the flavor, scent, or sound of the concepts in set theory.

Furthermore, this set theory, ICST, does not equate to standard set theory. It means ICST because of the shift in assumption. An assumption, assertion, a fundamental premise, or an axiom supported by all empirical evidence, ever: finite parts of a finite universe rather than infinite parts in an infinite universe. Infinity remains <u>the</u> big, wrong assumption in all logic, math, physics, and set theory.

ICST changes logic, math, physics, and set theory. Even further, ICST maps logic, math, physics, and set theory to the universe, its contents, and other universes, or the non-standard sets of information spaces, or mind spaces, to any size – theoretical or actual.

ICST, with one more axiom, can shift the landscape for set theory. Any set implies 1-dimensionality; definite elements in definite subsets, definite subsets in definite sets, definite sets in definite supersets explain single instantiations in time. For example, sets A, B, and C equate to particles A, B, and C. Each with property sub-1, sub-2, and sub-3. That is, "Set A $_{\{1, 2, 3\}}$," "B $_{\{1, 2, 3\}}$," "C $_{\{1, 2, 3\}}$" describes one event, superset D. One event, D, comprises subevents, A through C, in a single instantiation of time.

ICST makes set theory 2-dimensional. By analogy, the three dimensions of space become compression into 1-dimensionality with the descriptors in sets applied to attributes of particles. The addition of the time dimension, not compressed, creates the 2-dimensional set theory, ICST, applied to physics. Multiple instantiations over time. D $_{\{1, 2, 3\}}$ over, for example, the timeline of a mind space. Each D_n as indicative of a single instantiation of sets A, B, or C, or particles 1, 2, or 3. Advanced ICST incorporates the interactions in the sets. These sets' or particles' values, as shown earlier, remain finite or countable, probabilistic, and indeterminate. The larger the set then the greater the countable, less probabilistic or more certain, and less indeterminate or more determinate.

IC creates ICST. ICST includes all science and its evidence, present and future, because the universe presented by science remains finite, in part or whole. So one shift in one axiom, and one add-on axiom of "2-dimensionality," creates ICST, and correspondence with all scientific evidence. Universe, the verb form, describes the dynamic universe; ICST describes the dynamic universe. Each becomes the other at different levels of precision…

RR: Quantum mechanics deals with finite information and, thus, fuzziness. IC takes that – I don't know if farther than that, but it implies that – I guess it does – even the rules to some extent that the universe is operating under are not operating really well until the universe becomes well-enough defined for the rules to become definite.

I don't believe in the deal where every universe that comes into being through Big Bang processes with spontaneous symmetry being that every universe that comes into being that way randomly picks its own rules of physics.

I feel like the rules of physics are the rules of information, and are, thus, pretty tightly constrained, but the constraints are pretty wimpy when you have small not very old and not very filled with information universes, which makes it hard to tell different universes apart.

You have to come up with a whole version of set theory if you're going to get anything out of it. One that is better able to handle nebulous entities.

SDJ: I think you can draw an analogy to biological systems that are grown. I think the rules of a universe are akin to the growth and development of biological systems, or if you look at the growth and development of a brain over time.

It has relatively well-defined patterns of growth with certain things coming online within pretty tight ranges. So the rules will be pretty tight, but there will be a range of flexibility for them.

In a manner with information processing physics, you have development of a universe over similar timelines and stages of development, but at different scales. There will be consistency.

You noted fuzzy sets imply information, but the rules will be fuzzy themselves. But it is growing.

RR: There's a fuzziness that I don't admit, which is the larger amount of flexibility in picking the rules of physics and picking the physical constants.

I tend to think that all physical constants reflect the amount of information in the universe and the way that the things in the universe are arranged. There's not a whole lot of freedom in the physical constants. They are determined by the conditions of the universe.

You don't get the physical constants first and then the universe evolves according to those constants. The physical constants change in accordance to the changes in the universe based on the rules of information.

The proton-electron mass ratio is probably reflecting the amount of hidden or non-active or frozen information in the universe. That is, matter that is out of the electromagnetic interaction game.

You take a big star and you let it collapse into a neutron star, and beyond that into a blackish hole.

It is not doing a lot of electromagnetic interaction because everything has kind of been mushed together into stuff that neutronium and beyond, where all of the various charges that would be emitting a gazillion photons or just the star at an earlier stage with all sorts of ionized proton and electrons and other nuclei, interacting with each other.

Sending of a gazillion photons via electromagnetic interaction, but a star made of neutronium as far as I know doesn't do a lot of electromagnetic stuff because all of it is locked into this largely zero charged thing.

It is out of the game in terms of—it can still absorb photons gravitationally, but it doesn't absorb photons into electron shells and then emit all of the photons via the electrons dropping back down to a ground state or anything like that.

Even more so for blackish holes, my guess is that the ratio of close to 2,000-1 of protons to electrons in terms of mass and all that reflects at least the fact that there is a lot of collapsed matter than provides heft to the universe and anchors it, and keeps space open and defines space and that defining thing having kind of more impact on, I guess, protons.

Now that I say it is sounds like bullshit – and I'm still going to say it, but that increased definition going to protons more than to electrons.

Probably because protons are more subject to neutrino interactions. Now, I am getting deep into bullshit. Anyway, protons weigh 1,900 times or so more than electrons. I'm guessing that to some extent represents hidden information in the form of collapsed matter.

So anyway, it is not a free-floating constant. It is not like the universe said, "Hey, let's make the electron-proton mass ratio this."

No, it is a measure of something with regard to information.

[End of recorded material]

Ask A Genius 159 – Longevity and Tech Disruptions

Scott Douglas Jacobsen & Rick Rosner

April 25, 2017

[Beginning of recorded material]

Rick Rosner: Future technology will allow current 50-year-olds to live to 95 or 105. They will not see the effects of those extended lifespans for another 20, 30, or 40 years. It will take time for those people to get into their 70s, 80s, and 90. Although, we are seeing the beginnings of the economic effects of just the cost of great medicine. For 10 years now, the country has been tying itself in stupid knots over trying to come up with workable healthcare coverage.

It is kind of an impossibility because awesome medicine costs out the butt and will continue to cost more. So anyway, enough about medicine. There will be disruption over gender roles, which is already happening to a significant extent. Where you have 5% of the population, that is actively gay. That is just claiming gayness as their identity or as the sexuality part of their identity.

In recent years, you have people coming out as trans. It was 1/3 of 1%. Then you have gender queer and the LTBQ, LTBGQ, all of the initials. I am going to sound like a moron, but okay [Laughing]. There are some changes in society that will make people more likely to embrace and experiment with non-heterosexual gender roles. Medicine again will at some point impinge on gender roles as it makes it easier for people to be gender fluid.

That's far down the line. Now, to switch from a male body to a female body or vice versa, or somewhere in between, it takes hormones and for the more serious re-engineering it takes surgery and brutal surgery – turning a penis into a vagina or vice versa is nasty surgery. It is nasty cutting and stitching.

Scott Douglas Jacobsen: It is also self-contradictory ideologically because many of these people advocating for this, taking a distanced view, will say that you can't reduce a man or a woman to the genitalia, but then they would go through drastic surgery - that would be cutting up a penis or a vagina to make the genitalia a penis or a vagina - and then saying that then therefore makes it a man or a woman. It is means to be more extensive to be legitimate.

RR: Legitimate or not, and the politics of it or not, in 60 years, when the gene therapies come to be widely available that bring you 80% of the way from male to female and female to male, and can take you back, there will be lots of people willing to try it out. As I've said before, there is a stereotype of women experimenting with gayness in college.

SDJ: The number of self-identified lesbians has gone up 3-fold.

[End of recorded material]

Ask A Genius 160 – Sex Flex

Scott Douglas Jacobsen & Rick Rosner
April 26, 2017

[Beginning of recorded material]

Rick Rosner: Lesbianism is, I would guess, is one of the more flexible designations given that it has fewer social taboos attached to it. More people like the idea of two women making out. It seems more harmless than two men making out. So who knows what percentage of women make out with a girl in college, if it becomes easier and less brutal to experiment with one's sex, people will do it.

It may never reach more than 15% of the population embracing non-heterosexual lifestyles, but it is more than 3 times the amount of now. 15% of the population means everybody will be friends and close friends with, and in family relationships with, and in other relationships with, somebody who is not traditionally heterosexual. And society has wide swathes of it that tries to deny the presence of non-heterosexuality in their sphere.

It will be impossible. North Carolina is fighting the anti-LGBTQ legislation that has been roiling for a couple of years now. So medicine will make people more willing to experiment. Social media has been and will continue to be promoting of non-heterosexual lifestyles. If you don't know that anybody else is like you, say you have trans feelings, nobody came out as trans in past decades at all.

There were a lot of late in life people coming out as trans. There will still. Trans people come out earlier and earlier because people now know it is a thing and can reach out via social media to get information and to find other families with the same issues. That empowers people. That will continue to be a disruptive force. You can say people should be cool with it and it shouldn't be a disruptive force, but big chunks of the country and the world aren't cool with it at first and then freak out about it.

It will continue to be disruptive into the near and mid future.

[End of recorded material]

Ask A Genius 161 – High Tide Weirdness at 2100

Scott Douglas Jacobsen & Rick Rosner
April 27, 2017

[Beginning of recorded material]

Rick Rosner: We've talked about some disruptive effects, which are already happening. One is increased gender fluidity. There is economic disruption due to AI. The increasing pain in the ass that social media is in all of its different aspects. It is empowering, but often to the detriment of long established standards. This election was at least partially the consequence of dickheads being empowered via fake news and social media and feeling that they are justified in voting selfishly.

You have people driving and texting and walking and texting, and everything and texting. Those are already future effects. I have a rough rule of thumb that the percent weirdness in the world compared to some baseline based on the 20th century as some kind of normal. The percent weird that the world has gotten is just the last 2 digits of the year. 2017, the world is 17% weird. In 2027, it will be 27% weird.

By the year 2100, it will be 100% weird, which – I don't know – maybe it will only be 80% weird in the year 2100.

[End of recorded material]

Ask A Genius 162 – Social Media Hellspawn

Scott Douglas Jacobsen & Rick Rosner

April 28, 2017

[Beginning of recorded material]

Rick Rosner: The truly disruptive effects are yet to come. They will come via the dislocation of humans and normal forms of human society as the peak creatures and the cultural arbiters on the planet. The disruptors will be humans plus AIs. Weird combinations of such, and—individual agents, augmented humans, and also powerful agglomerations of humans plus AI working in thought clouds.

The future hellspawn on social media. Where everybody is super plugged in all of the time and shooting thoughts at each other all of the time, and it is a creepy thought blob that is spreading across the face of the Earth, that will disrupt—you name a human institution and it will be disrupted. Pair-wise marriage was the norm. It used to be that long-term relationships were sanctioned via marriage.

Now, if you look at all of the cohabitating couples in the U.S., all of the couples living together in the U.S., the percent married may have dropped below 50%. When I say traditional 1-on-1 marriage, I am meaning gay and straight marriage, as long as it is between 2 people. Right now, that is still 99%+ of all long-term romantic relationships. They are between two people versus between these poly people.

They are trying to pull of 3-way and 4-way relationships. So right now, we are 99%+. 20 years from now, we will still be 98%+. 50 years from now, 96%+/95%+, I am taking wild guesses. But 80 to 100 years from now, we may be at 80% or less as people enter into all sorts of augmented relationships with a man, and a man, and their sexy AI robot friend. Or a man and a woman, and remotely in Iceland another man who is linked via telepresence 5 hours a day with a couple.

Or some experiment in communal linked thought 85 years from now, where you have 5 people in some kind of pentad relationship. Where they are both physically and intimately mentally linked via some social media app gone wild, that helps them share their thoughts in a more thorough way than just conversation does now.

[End of recorded material]

Ask A Genius 163 – Pillar of Society

Scott Douglas Jacobsen & Rick Rosner

April 29, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: If we take the perspective of marriage as traditionalists would have it be understood, this comes from, as you know, a broadly based religious, but also cultural, perspective.

So how will culture change with it? How will religious institutions change with it? Because traditional religious institutions view marriage, as you know, as a central pillar of and even the foundational part of society, civilize society.

Rick Rosner: There are three things that can happen to religions. People can consider themselves members of a religion, but they buy less and less of the doctrine and the theology.

They take what they want of it for spiritual counsel and spiritual soothing. Religion can be reactionary and get all pissed off about what's happening, which much religion will. Religion can adapt by trying to figure out what is good about new forms of relationships.

What is good is the extent to which new relationships reinforce moral behaviour, in the future, it'll be possible for 4 or 5 people to attempt to link with each other in some intimate way, yet still be forces for good in the world. I just finished a novel called *Christodora*, which is about mostly AIDs activism in the 80s, in New York. People were still trying to figure out what was going on and to get treatment.

You had a movement in ACT UP, where the activists were acting in a way that could be considered fantastically immoral from the point of view of traditional religion because a high percentage of then were or who had been banging the heck out of a zillion other dudes – having bathhouse and semi-anonymous sex. Somebody estimated that if you were in the bathhouse scene in the 70s, early 80s, you might be hooking up with 3 dudes a day per year – so over 1,000 dudes a year.

Traditional religion would tear its hair about that. At the same time, these activists were doing great good fighting for their own survival and anyone with AIDs by making sure that AIDs was acknowledged as an important thing and making sure drugs were made available, not just to people who fit the traditional definition of an AIDs sufferer, which is a gay man because gay women suffered from it too.

Women's symptoms of AIDs were ill-understood in the 80s. They didn't qualify because to get the therapy you had to meet a checklist of symptoms. You have guys high for gay lifestyles, but going great good.

Obviously, some traditionalists had huge trouble admitting or acknowledging the humanity of these people. Reagan took until the last 2 years of his administration before he could say, "Gay,"

in public. Other religions or small fragments of religions adapted and acknowledged the righteousness of the cause, even those viewed as sinners.

[End of recorded material]

Ask A Genius 164 – Religions React the Same

Scott Douglas Jacobsen & Rick Rosner

April 30, 2017

[Beginning of recorded material]

Rick Rosner: So religions are going to react the same. There's going to be a lot of backlash. There will be some religious folk who look for the good in it. Perhaps, they will refuse to see the changes as inherently bad. There may be the coming of new religions. That don't suck. Scientology is a new religion that mostly sucks because it is super exploitative of its people. It is super dishonest in the way that it presents itself to society.

It does a lot of creepy gangster things. At the same time, people can read. *Dianetics* is a big book filled with bullshit. This was written by a guy that was paid by the word, a pulp fiction. But Hubbard tried to make a half-assed attempt to put some reasonable concepts from the social sciences into *Dianetics.*

[End of recorded material]

Ask A Genius 165 – Silver Lining in Bullshit

Scott Douglas Jacobsen & Rick Rosner
May 1, 2017

[Beginning of recorded material]

Rick Rosner: Plus, with Scientology, the deal where you get audited. You hold tin cans in some piece of crap technology while somebody asks you questions about your past until you're okay with what happened in your past, which is a little bit like the talk therapy of psychiatry or other kinds of counselling. Although, Scientology hates psychiatry. It is possible for it to do good for you even though it is basically bullshit.

It is possible for new religions to arise that embrace modernity, morality, and spirituality. I believe IC has at least the teeniest bit of spirituality in its directionality because 20th century science feels cold and random because it is not driven by anything. Nothing is in charge. Randomness is in charge. The random mutations are in charge of organisms. The random breaking of the false vacuum spits out all of the space and time and particles that form the current universe.

I think a more sophisticated viewpoint is that it is not randomness in charge, but information in charge. Information implies persistent in time and order. Time, order, and persistent implies values that are geared towards creation. It is just the tiniest bit spiritual.

[End of recorded material]

Ask A Genius 166 – Spontaneous Symmetry Breaking (Part 1)

Scott Douglas Jacobsen & Rick Rosner

May 2, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: I had a new thought.

Rick Rosner: Okay.

SDJ: What is spontaneous symmetry breaking to you, or in a standard Big Bang universe?

RR: The analogy that everybody uses—there are two analogies that everybody uses. One is a marble on top of a sombrero, but they don't say it that way. They say a marble on a peak, but imagine a marble on a sombrero! It may stay there for half of a second, but it is stable or semi-stable. It is very—stability, when you're talking about the orientation of something in a gravitational field against a surface, is that object when it is in its lowest state, when it has its lowest possible gravitational energy.

It's like a domino when it is face down on the table. Then there is meta-stability. An object is locally stable, but has potential gravitational energy that can be released. So a domino, there's 3 ways to orient a domino: flat, lying along its long side on edge, lying along its short side on edge as you'd stand it up where a 1,000 dominoes have a chain effect when you push them over. Any time you have a domino on edge it is metastable.

Where it takes a little energy to push it over, but more energy gets produced pushing it over then when you put into it. It is metastable. There's energy waiting to be released. So a marble on top of a sombrero is metastable. There's potential energy waiting to be released. This is supposed to be the situation with regard to the Big Bang at the moment it is about to happen, which isn't really a moment because there's no time yet.

[End of recorded material]

Ask A Genius 167 – Spontaneous Symmetry Breaking (Part 2)

Scott Douglas Jacobsen & Rick Rosner

May 3, 2017

[Beginning of recorded material]

RR: Another way people put it is that it is a pencil on edge. You may be able to get a pencil to stand up, but it doesn't take much to push it over. Spontaneous symmetry breaking in the way it is used is that you need metastability, and in each of those cases those setups are symmetrical. In that, a marble on a sombrero is rotationally symmetrical, as is a pencil on edge, but then the symmetry breaks.

The pencil tips over. A marble rolls off the top of the sombrero into the lip of the sombrero. The pencil can't move in all directions at once. The sombrero marble can't move in all directions at once. It has to pick a direction.

It is random, but when it happens then it happens in a particular direction. Now, your deal is no longer symmetrical. Now, your marble is at 1 o'clock or 8 o'clock or sombrero o'clock. A symmetry is broken and in the breaking of symmetry a bunch of energy is released.

All of the energy of the energy that the universe needs to expand into its current form, or much of the energy. So that's what I think spontaneous symmetry breaking is.

[End of recorded material]

Ask A Genius 168 – Spontaneous Symmetry Breaking (Part 3)

Scott Douglas Jacobsen & Rick Rosner

May 3, 2017

[Beginning of recorded material]

Rick Rosner: However, I think you were also implying like emergent order.

Scott Douglas Jacobsen: The universe has limits in information. The spontaneous symmetry breaking seems to me like a factor to consider in informational limits. If the universe was a perfect sphere, it would have infinite information and time.

Rosner: Not exactly, because what looks like chaos to one observer can actually be encoded information to another observer, I think. If you don't know the coding, if you don't know it's information, then

Jacobsen: An observer can take information in part from one sector of a sphere. Another observer can take information in part from another sector of a sphere.

Rosner: If you don't know the coding, if you don't know it's information, then you can't see the information. It just looks random.

Jacobsen: Technically, simple finite principles can produce an infinite product, if given infinite time.

Rosner: If you're adding information…

Jacobsen: …what if the system produces its own information?

Rosner: You can look at the unfolding universe in a couple ways. You've got all of this information packed into the early universe, the first moments of the exploding universe, or the Big Bang universe. That information is encoded into the various velocity vectors that produce the kinetic energy that is built into the system that blows everything outward. Super early universe, everything has got a shitload of kinetic energy. Kinetic energy is like a set of instructions for the universe to expand like crazy. The universe contains its own seeds of space and time, and spatial aggregation, to some extent.

Where the small anti-isotropies of the early universe eventually coalesce into galaxies and stuff, on the other hand, the universe adds—the universe as an information processor—information, and that added information adds order to the universe, and helps the universe build itself as it aggregates, and as order emerges. I think it is a more reasonable point of view.

[End of recorded material]

Ask A Genius 169 – Spontaneous Symmetry Breaking (Part 4)

Scott Douglas Jacobsen & Rick Rosner

May 16, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: In an infinite universe, if something was calculated over time – in an infinite information processing universe, the digit span could run forever. So the complex digit series and complex numbers…

Rick Rosner: When you say, "Infinite universe," you're implying an infinite clockwork universe.

Jacobsen: What about an implied infinite of information based on association within itself? In a standard universe, it has to do with the way things are traditionally represented. Someone gives you a number or a value about the 'real universe' in a standard Big Bang cosmology universe.

The digit series is implied to go on forever. So there's a self-contradiction in the presentation of a standard Big Bang universe, consistently, because there is an assumed infinite amount of information to run that digit series forever.

But in fact, there's not. But at one point, they will say, the universe began a finite time ago. But when we say a year, or a value, or a law, or a constant…

Rosner: What you're saying is that in a standard characterization of the Big Bang universe, there are some implied infinities. And that any time you talk about them, you're, at least numerically, implying something using numbers, which are themselves defined to an infinite extent because you have an infinity of digits beyond the decimal point – which implies infinite precision, which implies infinite information.

Jacobsen: Exactly! it is the big problem that I think is inherent in logic, physics, and mathematics, as standardly presented.

Rosner: I agree that that has the potential…

Jacobsen: …I think provably…

Rosner: …I think it is a danger. However, in quantum mechanics, it is the tool you have to work with incomplete information. People don't view quantum mechanics that way, but that's what it is. It is a mathematical tool to work with stuff that is incompletely defined because it is made out of finite amounts of information. Now, there may even be traps and dangers in quantum mechanics.

In that, quantum mechanics is itself built from numbers and relationships. In quantum mechanics, you have matrices made out of numbers, and numbers are infinitely precise. But I think if you're good about applying quantum mechanics. you can avoid a lot of the problems that you run into, like the singularities.

[End of recorded material]

Ask A Genius 170 – Spontaneous Symmetry Breaking (Part 5)

Scott Douglas Jacobsen & Rick Rosner

May 17, 2017

[Beginning of recorded material]

Rick Rosner: The singularity is one of the problems that you run into. It is a problem because you have all of the matter collapsing into a black hole, into a single point, and so the math falls apart.

But if you hang quantum mechanics on it, the smallest possible point is fizzed out at the Planck radius or diameter, or scale, and there's also a minimum Planck time. Upon which, everything is foam and fuzz.

But there are techniques for dancing around and not getting messed up. Though those techniques themselves may not be the ultimate right answer to what is going on. But it is a reasonable thing to think that infinities are almost always dangerous.

You can avoid them. There might be a healthier theory.

[End of recorded material]

Ask A Genius 171 – The 'Real World' (Part 1)

Scott Douglas Jacobsen & Rick Rosner

May 18, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: To describe the real universe, you need a math, a logic, and set theory, to describe the real universe, and a real universe, especially in an IC universe is composed of finites.

So a set theory incorporating that would be better than standard set theory.

Rick Rosner: Well, set theory itself has infinities in it because it asserts things with infinite precision. Either something is in a set or not in a set. But when you look at an analogous situation in the quantum world, you can say an electron is or is not in the box.

It makes sense. it is one or the other. But when you apply quantum mechanics to this, either it is in the box, somewhat in the box, or not in the box but with this probability, or with this probability even though it is a closed box it will be this percent out of the box.

Within 10^42nd seconds, the electron is functioning in some of these ways. It has a probability wave associated with it. An electron can materialize at any point in the wave. The probability density can be at any point.

That probability density cloud is not exclusively located in the box. Some of it is located out of the box. There is a non-zero chance that the electron can materialize outside of the box. Once outside of the box, it is unlikely that it is going to be back in the box.

But anyway, unlike in set theory, where something is either all in or all out, the electron is not all in or all out. Nothing is all in or all out. Everything is just – or something is just – a thing or not with super high probabilities, so you can pretty much act as if an electron is all in or all out of the box.

Because it is or is not something with super big probabilities, to the extent that you can pretty much act as if the electron is all in or all out of the box because the probability that it is not in any given second is 1/10^47th, which means that in a practical sense you will never find that electron out of the box.

So you're using an infinity that you shouldn't strictly use as a matter of convenience because it is unlikely that it will ever cause a problem in that situation.

[End of recorded material]

Ask A Genius 172 – The 'Real World' (Part 2)

Scott Douglas Jacobsen & Rick Rosner

May 19, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: Also, in an IC universe, zero has flavors: 0.0, 0.00, 0.000, 0.0000, and so on.

Rick Rosner: Okay, there's – what you mean is that if you're looking at the nebulous set of all possible universes that can exist. There's the zero information universe.

Jacobsen: Or the Empty Set.

Rosner: That's the same as the zero information universe. it contains no space, no time, no matter. But because there are quantum fluctuations around that nothing. There are the smallest whiffs of somethingness, which you're call "flavors."

An IC Set Theory would be a set theory operating under quantum rules, which are a little fuzzy and more determinate the more or bigger your set is. The more information your set contains, and the entities or the sets. The optics that comprise the sets are themselves fuzzy.

So even zero is fuzzy because you can't pin that fucker down.

[End of recorded material]

Ask A Genius 173 – The 'Real World' (Part 3)

Scott Douglas Jacobsen & Rick Rosner

May 20, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: These are flavors of the Empty Set. That's one big thing. Also, the indefinitenes of elements in a set.

Rick Rosner: What it leads to is if you can even do set theory if the members of the set are each multiplicitous and can take on all of these flavors, it applies to, say, if your universe contains one atom. And that atom according to the rules, it will probably be a Hydrogen atom.

it will be one proton and one electron, but that minimal universe of one atom is itself going to have whiffs of differences. That one thing in a set. That set of smallest possible universe doesn't just have one element because that one element is itself subject to what you're calling having "flavors."

It is not entirely pinned down, and neither are the rules for defining it. The object is not completely defined, and the rules of confining it to a set are not completely defined. So everything is a little fuzzy, so you have to build increasing order out of these fuzzy constructs.

But since we live in this type of universe, a quantum mechanical universe, it is doable. So there should be some type of math that embraces nebulousness in a fairly systematic way. which quantum mechanics does.

But I don't think anybody has really tried to apply quantum mechanics to set theory in this way. You have fuzzy sets. I don't know if this is really. – I guess if you're going to look for how to do it. Then that would be where you'd look first.

Where you'd have sets, or a set theory, where the objects in your sets can take a variety of values according to a probability distribution. So I don't know. Anyway.

[End of recorded material]

Ask A Genius 174 – The 'Real World' (Part 4)

Scott Douglas Jacobsen & Rick Rosner

May 21, 2017

[Beginning of recorded material]

Scott Douglas Jacobsen: There's also the mapping onto the universe. Standard set theory, which underlies various fundamental fields, is static. it describes single states. So if you describe the universe with only a single state, then you don't have the tools to accurately describe the universe. But if you were to make…

Rick Rosner: …Instead of tools, let's try to visualize what is going on. Under IC, we claim the universe is an informational map representing or modeling something beyond the universe. Analogously to how in each of our heads, we have a mental model of the world around us.

The world around you. There is what you know and what you don't know. What you don't know can take a bunch of forms, your mental state can mean one thing, but it can reflect a gazillion possible realities.

Where you don't know what is going on in China, you don't know if your girlfriend got drunk and kissed a dude last weekend. You don't know if your dog has kidney stones. You only know what you know.

There is this whole set of possibilities beyond the boundary of what is known. That exists as potential flavors that are embedded in the uncertainty of what you know because your model is your best attempt to reflect what is going on now and what will happen.

As time unfolds, you can imagine in a multi-worlds kind of model that your different or nebulous knowledge. You incomplete knowledge of the world will play out in a gazillion ways.

That your future reality can split into 10^1,000th different paths over time. So your model reality reflects a zillion different flavors that that reality could come to be painted based on how the information you don't know beyond what you do know plays out or comes into your awareness.

So one mental model can represent not different futures, but actually presents, at 10^1,000th of them. Each future is a present having its information play out. Even if you were waiting for the future to see the presents play out or the splits, your present that your model represents could take 10^500th models because you have incomplete knowledge.

That incomplete knowledge encompasses a huge number of possible preferences.

[End of recorded material]

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