INTERVIEW

THE SCIENCE OF STORY-TELLING

Tony Perez

A Conversation with Robert Krulwich and Jad Abumrad of Radiolab

A slow crescendo. Throat clearing. Bleeps and bloops. A series of voices spliced together. *You're listening to Radiolab (lab, lab lab . . .) from* WNYC.

Cut.

Jad Abumrad and Robert Krulwich sit on high stools in front of a couple thousand people in Seattle's 5th Avenue Theater. They've taken their show on the road, re-creating for huge, and not exclusively NPR-looking, audiences what they typically broadcast from the safety of their Manhattan studio. Abumrad—in an untucked button-down and sneakers—fiddles with his laptop, while Krulwich—blazered and blue-jeaned—looks down at his notes. To stage right, a cellist with extravagant tights and a postapocalyptic haircut plays a long, deep note.

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Krulwich begins to describe Aristophanes's speech on the origins of love, his contribution to Plato's *The Symposium*. He explains that in primal times, we humans were born not as individuals but as couples, conjoined at the back. Eventually, as tends to happen in these types of stories, the gods felt threatened by their creation, so Zeus hurled bolts of lightning (cue sound effects, courtesy of Abumrad) from the heavens and split the creatures in two. We were thus alone, but left with the memory of—and a longing for—our other halves.

Over the course of the next hour, Abumrad and Krulwich talk brain scans, Jimmy Carter's hair part, a molecular reading of *Through the Looking Glass*, and antimatter . . . anything that might broaden

their understanding of that particular episode's theme: symmetry.

Radiolab is more than a science show, or anyway, it's a science show for people who might not otherwise bother to tune in to such a thing. Krulwich, who previously hosted PBS's *NOVA*, and Abumrad are flâneurs of the sciences—wandering and wondering, favoring experience over explanation. They tell stories, talk to subjects, interview experts, and bicker among themselves, then piece it all together into the most densely produced hour on the radio—something akin to *This American Life* with DJ Shadow on the soundboard. One minute they'll dissect the minutiae of electrocardiographic monitoring; the next minute they'll break your heart.

Now in its tenth season, *Radiolab* has evolved from a Sunday-night AM-radio experiment to a nationally syndicated show broadcast by over three hundred stations. It has upward of two million listeners and a wildly successful podcast. In September of last year, the MacArthur Foundation saw fit to award Abumrad one of its "genius grants"—no small praise, or sum of money.

I spoke with Abumrad on the phone from his office at WNYC, and I sat with Krulwich over breakfast (well, yogurt and peach pie) at the Edison Hotel's coffee shop in midtown. The following is a composite, chopped and screwed in my best *Radiolab* impression, of those conversations.

TONY PEREZ: There are certain magazines that have stood for a particular aesthetic or way of thinking; I think of George Plimpton's *Paris Review* or Gordon Lish's run at *Esquire*. *Radiolab* seems to have a stable of writers—such as Jonah Lehrer, Oliver Sacks, E. O. Wilson—that represents a different way of talking about science. What is it that you think unites these people?

ROBERT KRULWICH: They're probably better described as teachers. That's the quality you need: to be able to explain science carefully, and slowly, and stupidly if you have to—or *cunningly*, I'd say. We invite people who can put into their voice, somehow, the surprise and beats of making a discovery. That tends to be a teacherly talent. A guy like Neil deGrasse Tyson is extraordinarily good at acting as though he's thinking this for the very first time. There's something of a little boy in Tyson—and in Oliver Sacks, and in Ed Wilson—who comes out and plays. There's a bit of a campfire quality to the whole thing.

JAD ABUMRAD: I think there's a certain attitude at the core of every story we tell, sort of a sense that you're wandering through this world and have to stand back in awe of it. It's a very different attitude. A normal journalist or broadcaster will go to report on a story, figure it out, then report in a very podium-style way what he knows. All the ups and the downs, and the figuring it out, and thinking you know, and realizing you don't know—all of that happens off frame.

But here, it's very important to show how we're moving through the information. You're encountering things that you don't know, and jumping to conclusions that turn out to be wrong. But in the end,

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you go through this very rigorous step-by-step walk until you get to the edge, and you can sort of stand and look at the world in a state of simple wonder. I think that's what it is: the sense that if you actually move through things, you'll get to places that shake your perspective.

RK: One of the tropes of journalism—particularly high journalism—is you go off and learn everything, then you artfully report it back. But it's already done, it's cooked, by the time you serve the meal—as would be the case in most restaurants. In ours, we cook it right in front of you. Presumably, that should bring you in. But it *does* bother some people.

JA: Then there are the form elements—narrative storytelling, wrapping technical details in human experience. All of that binds Robert and me together with our writers. We all share that sense of how to do it. But at the core, it's something to do with curiosity and wonder.

TP: Wonder, even more than science—especially as the seasons have gone on—seems to be at the heart of the show. I came up on the liberal-arts side, the English department, where the best texts aren't about hard answers but about opening up bigger, more complex questions. That isn't how we're typically trained to think about science. *Radiolab* seems far more interested in asking than answering.

RK: That's true. The answers, in some ways, are temporary in science. It's not like religion.

JA: To be completely honest with you, I couldn't care less about science as a geography. My parents are scientists; it's not as if I have any antagonism toward it. But I do have an antagonism toward the institution of science journalism, which seems very much about covering what happens in laboratories—these things that get put out by universities in press releases. That kind of stuff doesn't interest me at all.

In your question, you sort of put your finger on it. It's sort of about mystery, but it's not pure mystery—if that were the case, you might as well just sit in your dorm room and smoke pot. It's a wrestling match between *that* impulse and what the scientists are doing. There's a rigor and a specificity and an empirical approach that scientists have, which I could never do without.

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At the same time, there's that sense of just being completely amazed. The show is the tug and tension between those two things.

TP: And how does that tension develop?

JA: In every piece, we start by mystifying something. You want to have this gunshot of amazement at the top of every story. Then you proceed to *de*mystify it. Then you *re*mystify it at the end in a new way. If I could distill every story I tell to those three moves, I'd be happy. You begin with sort of simple, cheap wonder, you go to science—to someone who can analyze the underlying assumptions—then you put it back together in a new way, but where you can still stand in amazement. But it's not cheap anymore; it's tested.

The two impulses pull on each other. Part of my brain is that guy in the dorm room smoking pot and just going, "Wow, is that me in the mirror?" And part of my brain wants to be an adult and understand how the world *really* works. I don't want to kill that first guy, but there should be a kind of armed truce. That's how it works for *Radiolab*. If it's one or the other, I get very uncomfortable. If we do too much hard science without any sense of poetry or mystery, I want to jump out the window. But if everything is silly and soft, and you don't have that sense of rigor, I feel like I'm letting myself and our listeners down. It's somewhere in the middle; it has to be a balance.

TP: I'm interested in that balance of the hard science and the emotional core. Vivian Gornick wrote a great book on writing called *The Situation and the Story*. An insultingly oversimplified explanation is that the "situation" is the series of events that comprises the plot, and the "story" is what's happening below the surface. My favorite thing about *Radiolab* is the way you balance the two. I'm always as interested in the hard science of the situation as I am the emotional core of the story: the exploration of neuroscience *and* the story of a woman in a coma. How do you build segments with both of these elements in mind?

JA: I think it comes from both directions equally, really. The stories are the harder thing to find. It's an easier place to start, for me, when you have a great story that seems pregnant with something. Then I can invite a smarty to talk about neuroscience or whatever. That's easier for me to conceptualize, but that's not always how we start. I know Robert often works the other way. He'll have a broad concept or a new bit of

research that will lead him to go look for the story. The show really evolved in that juxtaposition. You have those two things happening side by side; you have some kind of human experience but you also have a way to examine and understand it.

In my opinion, experience can never be taken out of the equation. It doesn't always have to be a story in that classic "Once upon a time" sense, but even when you're explaining some arcane concept—like the dopamine reward system, which we've talked about fifteen times—even then it has to feel physical; it has to feel like an experience. If it ever feels like a lecture, if it ever feels didactic, we've lost. That's where the sound comes in; that's where the writing comes in; that's where the pictures and visuals come in. It has to feel like a movie. It can never feel like something that's just being explained.

RK: There's a bottom-up approach and a top-down approach. I tend to be more comfortable with broad architectures. In the case of "You Are Here" [season 9, episode 2], someone suggested doing a show about mapping. So I read a book about the map on which the word *America* first appeared. Then we met a mapmaker—a very interesting fellow—and that led to a discussion of place. Jonah [Lehrer] said he could help us explain place neurons [*Ed. note: place neurons are cells in the hippocampus that help create a cognitive map of an animal's environment*], and that seemed kind of interesting.

Meanwhile, Jad was beginning to wonder about people in the South Pacific who go from one *teeny* island across a vast stretch of emptiness to another teeny island without the use of sophisticated navigational tools. How do they know where they are going? Well, one of them claimed it was his testicles. "My testicles guide me," he said, and of course his wife said, "That's ridiculous . . . I don't have testicles and I can do it." We got very interested in that and did a whole series of testicle-related conversations with South Pacific Islanders. The mapping thing began to fall out, but the stuff from Jonah was developing really well. We then found someone who had a problem with her mapping sense. Things kept shuffling.

Finally, a friend called and said, "I have this neighbor who had a terrible thing happen to her. Her boyfriend's a friend of mine; I think he's a great hero, and you should help them somehow." I went to meet Alan, the boyfriend. His girlfriend was swimming in a coma, and he was fighting to pull her back out. I thought that, in his way, he was acting like Jonah's place neurons. And it was just this amazing story. So all of this was going on simultaneously, and the show was in a continuous shuffle. In the end, the maps, where it all started, shuffled out and a sense of place shuffled in.

TP: I'm always impressed by the jumps you make without it feeling like a stretch, those transitions between a profound story and the more complicated material.

JA: Those transitions are the things we'll do thirty takes of over the course of a production cycle, just to make sure we get

them right. We're always trying to figure out the most plainspoken but genuine way of making a connection. It's really hard sometimes, figuring out what the apple has to say to the orange.

TP: Robert, you mentioned that your approach bothers some people. *New York* magazine described you as someone who could simplify science without making it simple, but do hard science people feel differently?

RK: Yes, it *is* abrasive to people. Throughout my career, there's always been a continuous ten percent—the "Fuck you" ten percent—that says, "Why can't you use fancy words?" "Why can't you talk like an adult?" "Why can't you sound like a person who knows what he's talking about and articulates it from a place of knowledge and power?" This is a choice that we make. *Radiolab* chooses to put two people, who, admittedly, don't know a lot at the beginning, on a path where they quarrel and wonder and poke and ask and whisper to each other—that stuff is done on purpose.

TP: Where does that resistance come from? Is it academia?

RK: Yeah, mostly. I would say pedants of one kind or another, but they would probably feel differently. It's interesting; on my blog, I'm very clear that the voice there is a chatty voice, not a newswriting voice, but still, it upsets people every day. I say, "You know, this is *not* a news story. We're not in a news setting. This is an essay. You can wander around here and muse. It doesn't have the discipline of an athletically gathered, extremely accurate, honed piece of journalism." People don't always know that.

TP: But part of *Radiolab*'s popularity has to be due to its success in making hard science accessible to nonscience people (like me). I love how you take turns playing the straight man—almost like Carson or Letterman deferring to a guest comedian, acting as a stand-in for the audience, some kind of layperson by proxy.

JA: Most of the time, it's genuine that one of us does know more than the other about a particular topic we're covering. Oftentimes, I'll intentionally keep Robert in the dark. It's often the case that we'll just start rolling tape and I'll explain a concept to him.

TP: I imagine that helps keep the banter fresh.

JA: Yes, sure. And there are times, to be honest, when it's more constructed, when there's a bit of acting involved, when one of us is playing a role . . . but it's a role that's based on a previous version of ourselves. There have been times when Robert knew something that I didn't know, and we actually have had that conversation off tape. We'll carry that into the studio and we'll reconstruct those moments as best we can. We'll improvise, sometimes, fifteen takes trying to get a moment that feels real to us, to who we were before we got into the studio.

People may not like science-y stuff, may not like mathematics, but what everybody likes is a friendship. Something warm that glows a little.

So, yes, the straight man is a construct, sort of a vaudeville trope. But it *is* based on the inequalities that exist within any friendship. At any time, one of us knows more than the other. And we're always trying to get the other guy to see the world as we're seeing it. That's genuine. Where, I think, we depart from the vaudeville trope is that I *really* want Robert to join me in being excited about something, or he wants me, or our guests, to join him. We all want, at the end of the day, to stand together and give each other a big hug. We depart from the shtick, I hope, at the end of each piece.

RK: Even though in the beginning neither of us knows anything, one will become the one who knows, and one will be the one who doesn't know. We'll say, "You take this one," or "I'll take this one." But oftentimes we're guided by actual differences in opinions. We deeply disagree on certain things. It's a source of great happiness to us when one can say, "You *really* think . . ." And we don't try to fake that; it wouldn't work. But we have some very different views.

TP: But the affection you have for each other seems key.

RK: Of course. People may not like science-y stuff, may not like mathematics, but what everybody likes is a friendship. Something warm that glows a little. If something fun and interesting is going on over there and if you're invited, there's a pull. I said to Jad at one point, "The fact that we feel this way about each other is a huge advantage to us, if we're not embarrassed by it. We should act like we feel." The whisper of affection and curiosity and play—mostly play—will get a lot of people into the tent. We could be talking about food, or flowers, or sports, but if we talk about it in this way, we will attract people. That's the way people are.

TP: At the same time, those little arguments and tensions certainly keep the show moving along. Are there particular differing beliefs or opinions that you keep coming back to?

JA: Absolutely. There are instances when we disagree, and there are real disagreements—friendly, but real. Anything to do with God, and that comes up relatively frequently. These are big questions we're examining, religious-sized questions. It's easy to talk about God when you're talking about the birth of the universe. There are

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questions that get you to that place very quickly. And we do disagree about the nature of things. The question, are humans special? is one of those overarching thoughts that continually barges its way in. Robert and I disagree about that. He tends to take the point of view that we are, and I take the view that we aren't.

TP: Robert, do you see this battle between science and religion as something of a false binary?

RK: Well, if you're asking, "What happens after death?," "What is the conclusion of everything?," or "Where do we all come from?," there are now scientists who propose answers. They didn't used to, but they do now. So there are two different stories and they are, I suppose, rivals. I don't think you can simultaneously believe in heaven *and* a death of all sentience, that is, when your nerves and muscles decay, that's the end of you. Those are conflicts.

But on the other side, if you're asking ethical questions or *why* questions, then I think they can coexist. Why do nice people have terrible things happen to them? Well, because there is a randomness to the world, and accidents always happen, and there is no message in it, no lesson in it . . . *or*, there is, and there is some author outside of things who is discriminating. I don't think science can say yes or no to that, or even try. In that area, the area of *why*, I think there is a place where you can be of two minds. I don't know why, but I'm quite comfortable being of two minds.

TP: How do listeners respond to that sort of thing?

RK: *Radiolab* has a very broad audience, and among the people who listen are lapsed Christians. Former students at Bible schools, preachers, people who have come from various evangelical traditions in which questioning is not really welcome. Some of these people listen and notice that we keep asking questions and that we're comfortable as questioners, which is the most viral thing we've got. We're getting people to examine fundamental questions gently, but the real accomplishment is we give people a little more power to wander in a territory where they might not ordinarily. That feels like a great thing.

TP: Considering that the same people pushing creationism are the ones stripping public radio of federal funding, is it difficult to navigate a world where every idea in

the marketplace, regardless of its validity, is expected to be treated with equal weight?

JA: Honestly, no. I would have expected to, but we've never bumped up against that. We're lucky in that we work in a place full of people who are deeply committed to our content and editorial mission. No one here would ever try to impose a false sense of balance; they would never tell us what to say or think. When Robert and I get into arguments that touch on a tension between science and religion, it's perfectly genuine; it's for no reason other than what we're feeling and thinking in the moment. People will yell at us in our comments field online, but that's about it. We've never gotten any pressure from one group or another. I always assumed that it's because we fly a little below the radar. I don't know if that's the case anymore, but I just assume that the people who like the show like those arguments. They don't run away from them; they enjoy them.

RK: No, not really. I don't know why. Maybe because we haven't ventured yet into stem cells; we've done "Where does life end?," but we haven't done "Where does life begin?" So far, for some reason—it isn't any calculated reason—we haven't walked right into that territory. Part of it is that we do only ten shows a year. We can't afford to do something that's so topical that it goes stale. We need shelf life, so part of our logic has been to avoid things that are "right now."

But maybe we haven't felt the pressure because we haven't gotten into the middle of the debate. We are talking with *This American Life* about doing a joint program about global warming, so maybe that will do it.

TP: Well, I'm glad to hear Michele Bachmann isn't coming after you.

JA: Not yet.

TP: Does the current political climate worry you? Do you think public radio is in danger?

RK: No, I think it's unbelievably healthy. The programs that most of us have heard of are ninety-eight percent paid for, then the government puts a couple of pennies on the table. What's at risk are those stations in eastern Montana or Alaska that don't get a lot of listener support but do get a lot of listeners. If you live in a remote area, it's a way to hear something that isn't the CBC or the BBC. That is at risk.

I live in New York City. WNYC was owned by the city of New York, and about fifteen years ago, the listeners got together and said, "You're having a budget crisis. Can we buy it from you?" The then-mayor, Ed Koch, came up with a price and the listeners bought it. It didn't hurt. That station has produced one show after another. It's entrepreneurial and it creates a culture of yes as opposed to a culture of no.

The NPR culture, at this point, is all about "What can we do to not tick off the congressman from Knoxville?" That's no way to run a network.

TP: How does what you're doing fit into the public radio paradigm?

RK: We are thinking about public radio *a lot*. What happened in public *television* is that a group of people, very roughly of my generation, came in during the 1970s and said, "This is wonderful! We'll make magazines; we'll do *Washington Week*; we'll create *Sesame Street*; we'll do British-theater things that you can't get here."

But the usual process is that somebody gets fired and someone replaces him. Lou Rukeyser walked into *Wall Street Week* in 1972, and in 2002 he was still doing exactly the same thing, endlessly and over and over again. The people who came after couldn't get jobs because these people never left. There is something not unlike rigor mortis that has set into public television. I *think* it's dead.

So about fifteen years ago, a bunch of folks in public radio, led by Ira Glass and a guy named Jay Allison, said, "Uh-oh, this sound has become so predictable that you know you're listening to public radio as soon as you graze the dial across those 90s and 80s stations." Ira and some friends created the Third Coast International Audio Festival for the express purpose of trying to seduce kids who were then Jad's age. That's where Jad first encountered a lot of these radio people. Jay created PRX, which basically enables you to put your own thing on the radio; it's essentially an ongoing job fair, and it's moderately successful. *Radiolab* was part of that, and I thought, "Here's this young guy who has a set of beats in him that I've never heard before."

TP: Jad, you really developed the sonic aesthetic of the show. Can you talk about how that evolved or why you thought it would be a good format or style?

JA: I guess I could make up some bullshit about what I think I was doing, but I don't really know. The show began when it was just me on Sunday night from 8:00 to 11:00 on the AM frequency here in New York. I didn't know it at the time, though I had an intuition, but no one was listening. Really, no one, like, probably *zero* listeners. I was just making it up and trying to create a sound that made sense to me. Not having grown up around radio, I had no idea what broadcasting *should* sound like. I was listening to *This American Life*, so I had that sound in my ears. I was trained as a composer and had been listening to a lot of really complicated, layered, avant-garde music. I knew that stuff could be alternately annoying or absorbing, so I wanted to work that. Not in a way that felt experimental, just in a way that made sense to me.

The mood that I thought about in the beginning was the sense of a dream. When you listen to someone tell you about a dream, it's almost like you're in a dream together. That's encouraging to me, that there's a kind a trance people enter into when they hear a story. I wanted to create a sound that somehow induced that trance. But at the same time, there's something very exciting about breaking it up with strange blurts and spastic noises. There is always a tension between a kind of dreamy wash and a more percussive alienating sound. I was trying to work those in, but it was on a purely intuitive level.

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TP: Robert, what did you initially think of Jad's style?

RK: I thought it was very important that his sound get on, and get heard, and get joined, and get elaborated upon. One of your jobs or duties at a certain point—if you're an impresario (which you always have to be, in a way)—is to take what you know and stare at what you don't know. When you hear something that strikes you as at least vaguely beautiful—a lot of times what Jad does is vaguely ugly to me; I don't understand it, but I can hear my *kids* liking it and listening to it as ordinary fare, as if it understood their beats—you have to think, *If that brings in an audience, let's do that.* There are a lot of parts of *Radiolab* that I don't understand, but I *know* it has this reach.

So I just say okay. Jad has final cut on every show. It has to end with someone, and it can't end with me. I'm going to die at some point—I mean, I hope I die earlier than he does—so it should be his. That's part of the transfusion that is required in any of this.

NPR was the one thing my generation made that wasn't there before. We got CBS, we got NBC . . . we made PBS, but we fucked it up. NPR turned out to be a gift, but only if it becomes the next generation's property. If it's just their parents' radio, then it will die. *Radiolab* is a way of dealing with that.

TP: How much time do you spend on a given episode? Are you still doing ten a year?

JA: Yeah, plus a bunch of shorts—I don't remember exactly how many, probably about fifteen. We do one episode every six weeks, and that's pretty much the full arc. We'll have a show that's incubating in the background for a while, where you know you have one thing and you're looking for another or you need more research, but once we finally hit go, it's six weeks start to finish. Some shows come together really fast, and others just don't want to be born . . . you have to drag them out kicking and screaming.

RK: But the process by which we do all of this is insane. We'll take up a subject, we'll go out and interview people—often together, but sometimes apart—somebody does a cut, then we take the cut into the room and start talking; we'll say this doesn't work, or that doesn't quite make sense, or we need to get someone else. Then we do it

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again. We switch roles or we throw things out. Gradually, it starts coming together. Everything goes through nine or ten passes before it gets close, then we start with the music. Once it's scored, we ask, "Should we change our voices to react to the music around us?" What you get at the end is the sum of fifteen or twenty performances. It turns into a very fluid thing, but it's entirely artificial . . . except that it isn't. And it's insane. I've never done anything like this before; it makes no sense. The reason we can do only ten shows is that it's just that stupid . . . and it's as close as we can get to making something that's perfect.

JA: The sound stuff doesn't really enter in until about the fifth draft. That's when I kind of close the door, and when the show starts to sound like the show. Everything will be in place, but the musicality below the surface isn't there yet. It never really sounds like *Radiolab* until about that fifth draft.

TP: When do you know that it's done, that it's perfect?

RK: That's Jad. I'll make suggestions, but he doesn't have to take them. It's up to him at the end of the day where our final beauty rests. Though, it's interesting to me, either because he's seduced me or because we were doppelgängers from the beginning, we often agree. It's one of the crucial things, whether you're making a movie or a radio show—and maybe it's true about writing—to know when you're done. It's sort of like flower arranging. You have elements. You put them into a bowl. There are incomprehensively large numbers of combinations that could be made, but at a certain point, you feel somehow satisfied. It's a mysterious feeling. And if you feel satisfied together, it's a doubly mysterious feeling.

TP: More and more of my "radio" consumption is coming through podcasts. When I turn on the radio, I hear *Car Talk*, or *A Prairie Home Companion*, or a painful local call-in show. With podcasting, I listen, at my convenience, to the shows I like—*Radiolab, Bookworm, The Best Show on WFMU*. Considering the growing access to technology, is this the direction radio is going?

JA: I definitely see that as the direction we're going, and the kind of show we're interested in making. We see the podcast

audience growing rapidly, and I'm glad about that. The kind of stuff we're making just lands better on an iPod than it does out of a box. People can experience it more intimately, because we're in their ear canals. It's much, much easier to comprehend all the stuff that's happening on the show if you've *chosen* to put it in your ear than if it's just randomly coming out of your car stereo. For us, podcasting has been a blessing.

RK: We create a very jewel-like production; it's very layered. When you stick two things in your head, you are a prisoner of what's coming in, and you can't help yourself. You become a coauthor. Radio is much more intimate than TV, but even the seven feet you're away from a radio is a big seven feet, from the storyteller's point of view. Once we're inside you, there's nothing else; it's like sex. You're in. You can have a conversation that's almost sexy in its intimacy, and its colors, and its subtleties. You can't have that just shaking someone's hand. When you fuck 'em, you can do all kinds of interesting things. That's the big difference. We didn't expect it, but it's made all of the difference to us. We went from seven thousand subscribers to fifty thousand, then Ira put us on his show and we jumped to a quarter million in an instant. We keep growing and growing, and I think it's because we are podcast friendly.

TP: Will that format change the way people are producing content?

JA: I don't know if it's the direction all radio will go, but I do know that kids below a certain age just don't own radios anymore. That's kind of an interesting situation. I don't know what that will mean for radio as a whole, if it will just migrate onto smartphones and things like that.

I do think that there's a serendipity that happens when you turn on old-school radio; you hear things you weren't expecting to hear, and that's kind of beautiful. A lot of the people who like the show began with those little collisions that happen when you're in your car and some story comes on. So there's a part of me that's sad that maybe that is happening less. I don't know if this has been your experience, but I subscribe to a lot of podcasts and listen to maybe one percent of them. There just aren't enough hours in the day. I wonder if that happens often, if people are actually listening to as many podcasts as they have.

But I will say, if you just stroll through the top twenty on iTunes or something, there are a lot of different sounds. I've been listening to Marc Maron's podcast a lot recently.

TP: I love his show.

JA: Yeah, he's really interesting, aside from those fourteen-minute commercials. He's this great, kind of unhygienic character. Whereas sometimes public radio personalities are very anesthetized and squeaky clean, he's not, and it's incredibly compelling. To me, it's great that there are these cool things sprouting up in meadows just adjacent to us. I like that, and I think they benefit us.

TP: What episodes or segments typify, for you, what *Radiolab* should be, both in terms of form and content?

JA: You mentioned the story of the woman in the coma. On a pure storytelling level, I feel like that is everything I want from the radio. There isn't a ton of science or philosophy inside that story, but if you ask me why I actually turn on the radio, it's so I might hear a story like that. And that's a case where we just got lucky.

But in terms of *Radiolab*, and the sound and synthesis we're aiming for, I think of the "Words" show [season 8, episode 2] and the different moves we make. We start with a woman who describes meeting a fellow who had no language until he was twenty-seven. It's just a pure story. Then we go to a really complicated psychology experiment involving rats and people in a white room—it was a terribly difficult experiment to explain, we must have done fifty different versions of it and it wasn't working in terms of the mood, or the scoring, or the explanation, until it suddenly did. But I remember reading about the experiment and saying to myself, "This is incredible. This gives me a completely new way of thinking about the power of words."

I can remember that feeling, but everything that happened after that was difficult and frustrating. It was all an attempt to reconstruct, for the listener, that feeling. We eventually got to a place with that story where I was really proud of it. It achieved a certain kind of dreamy poetry that's perspective-shaking in a way that I felt when I first discovered that idea. So I liked the balance in that first segment between a very narrative thing and something extremely cerebral and abstract. Overall, I think that show really captured the full palette of our moods in a way that sometimes shows don't.

RK: "Words," I think, was very special. I don't know how well you know that episode, but there's a guy who can't hear, and he discovers that things have names. The surprise of that not only shocks him, it also delights him. It allows him to find a place in the world. I just thought that was one of the more beautiful stories we've produced.

For some reason, I like the show about stress, with Robert Sapolsky. There's something about Sapolsky. If there's an E. B. White for your ear, it might be this strange neuroscientist from Stanford University. I don't know why it is, but he's just the most compelling storyteller. He talks about his father dying, then putting on his dad's shirt and putting his dad's pencils in the shirt pocket and mourning his father by becoming him. He'd lecture his class at school by telling them that even though the exam was coming up, and they all wanted to know what was on the exam, it was more important that they call their parents. He realized that he'd just *become* his father for a season. I found that completely bewitching.

It's always the occasions when the idea that's being examined and the heart that's being examined, which carries the idea, become so entangled that you can't stop thinking and you can't stop feeling. That's when you hit it.