

Title: Essential Science Conversations Presents: What Do Reporters Look for in Covering Science?

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Mitch Prinstein: Hello everybody, my name is Mitch Prinstein. I'm the Chief Science Officer at the American Psychological Association, and I am so excited to welcome you to our event today, part of the Essential Science Conversations Series. Psychological science continues to make important discoveries about human behavior and brain function. Conveying those discoveries to public audiences via the news media is an important component of our work.

We're very gratified to host two journalists and a leading psychological scientist today to discuss how the news media assesses scientific findings and decides whether to cover them. As well as some tips on how you, as scientists, can effectively convey your work to them. This session will be recorded. My colleague, Dr. Adrienne Stith Butler, Deputy Chief Science Officer, will moderate today's discussion. Adrienne, I turn it over to you.

Adrienne Stith Butler: Great. Thank you so much, Mitch. A warm and enthusiastic welcome to our guest today. I'm so excited about this conversation. With us today are Ellen Barry, who's a long-time reporter at *The New York Times*. Most recently New England correspondent Chief International Correspondent based in London, and Bureau Chief in New Delhi and Moscow. In 2021, she took over the psychology and mental health feed for *The Times*.

Jon Hamilton is on the *Science Desk* at National Public Radio and reports primarily on neuroscience and health risks. He's also reported on Ebola in Iberia and the Fukushima nuclear power plant disaster in Japan. Lisa Feldman Barrett is Professor of Psychology at Northeastern University in Boston. In addition to her scholarly work on emotion and the brain, she's published two books and is sought often by reporters for her insights on her research and commentary on the work of others. Again, welcome to you all.

I'm going to pose questions to our terrific panelists for about half of our session, and then we'll open it up to questions from members of the audience. Audience members, please remember to put your questions in the Q&A box, not in the chat. All right, I'm just going to launch. Ellen, your primary beat is mental health and psychology and Jon, yours is neuroscience. What are the basic elements that you look for in assessing a research study or a story idea?

Jon Hamilton: Which one of us do you want to go first?

Adrienne: Let's see. I was going to say you could choose, but I'll choose. I will say Ellen.

Ellen Barry: I think we're always looking for work that represents a significant shift in the way that the profession is looking at a problem or looking at an issue. An example is, recently the revision of the DSM included grief, prolonged grief disorder as a treatable mental illness. That was a front-page story for us because it showed that the culture and the profession were beginning to approach a problem differently.

I think we also look for debates that are not settled but are provocative and illuminating.

I think we're looking for research about delivery of mental health services now because I think the way mental health services are being provided to people is changing so quickly. We're also looking for fascinating stories; stories of individual researchers, of particular research projects. If you can bring readers into the middle of those inquiries, I think you can get people interested in your work.

Adrienne: Thank you. Jon, what would you say?

Jon: Oh, well, like Ellen, I do look for things that represent some change in the field or in the world. I also am always looking for things that I feel like, "Oh, I've never seen that before," because I see stuff go by all the time. If something jumps out as new to me, I figure it's probably new to the people in my audience as well. Beyond that, I often am looking for stories, especially these days when there's been so much news that's not so much fun to read, I look for things that solve problems. For example, something that solved a problem and represented change.

Recently I did a piece about the development of better hard hats for construction sites. That piece actually did start with a pitch from a PR firm. In fact, there's this company in Portland and they're making hard hats that work much more like the most advanced bike helmets and stuff. You can show that it is going to prevent concussions on the work site, so I did that story.

Adrienne: Thank you. I'm going to pose my next question to Lisa. Lisa, as a university-based researcher, can you share something about your experiences actually doing media interviews, including maybe another tool of advice for scientists who are new to this?

Lisa Feldman Barrett: Sure. I'm really happy to, Adrienne, thank you. In general, I've had very, very good experiences in the aspects of my professional life where I'm interacting with journalists and members of the media. I would say out of, I don't know how many interviews I've done at this point but out of probably hundreds, I've had one interaction that didn't go very well, maybe two where the journalist didn't come prepared. Maybe asked me questions that I found problematic. Or where the way that the article was written didn't really reflect the conversation that we had but I would say for the most part it's been very, very gratifying.

In regarding tips, it really depends on where you are in the process but if we're thinking about beginners, here are some things I would say. First of all, make a decision in advance about how much time you want to spend on this, because very quickly, if you are effective in communicating, translating science to, what we call in my house, civilians, which means non-scientists, you're going to become a very popular person and a lot of people are going to approach you.

You have to figure out how much time you want to spend and make an explicit decision about how comfortable you are talking about where you think your expertise ends. I get asked to comment on a lot of things that are really not in my wheelhouse and may be too far out of my wheelhouse. I try to stick pretty closely to my own

areas of expertise, but you have to make an explicit decision about how far you're willing to go outside your specific training.

I would say ask for questions in advance if you can because they can't always give you that, but it helps you, especially at the beginning, so that you can workshop your answers, prepare your answers in advance, and workshop them with a civilian. At the beginning, I would always talk out my answers to my husband first, who's not a psychological scientist, not a neuroscientist. I felt like if he could understand what I was saying, then probably the journalist would understand.

I would say, sometimes journalists are going to ask you for comment on a very short timeline because they have a short timeline, and you have to be prepared to be flexible like that. Always remember that everything you say to a journalist, no matter how nice they are and how interesting they are, is on the record. You have to tell them if something is off the record. Otherwise, everything is on the record. Everything is usable. That's an important thing. You don't want to be caught off guard. That is often humorous but not always a comfortable experience.

Adrienne: Thank you, Lisa. I'm wondering, Jon or Ellen, if you have any thoughts about Ellen's tips.

Jon: I would add one thing. When talking to reporters, it's not just enough for you to say, this is off the record, you need to actually get an acknowledgement from the reporter that something you're going to say is off the record. Just wanted to add that thought.

Lisa: That's a great thought. I will usually say, "What I'm about to say is off the record." Then you get the acknowledgement. Then I say, when I'm done, I'll say, "Okay, we're back on the record now." I guess one final thing I'll say just is that a lot of my interactions with the media, particularly with journalists, where they're asking me specifically for information about a study that I've done, or a study that's closely related to what I do but I also do some, what I would think of as educational outreach.

I'm often available to journalists just to give them some background on a field or to give them the lay of the land or to help them decide whether they want to do an article or not, or to point them in the direction of other scientists who would be useful to them if I can't personally be useful to them.

I think some of what we do is behind the scenes, you don't always have to be-- not everyone is comfortable being right out there in front with their name being floated and so on in the paper or on the radio. That's also a service that we can provide, particularly when sometimes in certain fields, like in neuroscience, for example, the science is changing very, very quickly.

Ellen: I would just like to add here that, from the point of view of the journalists, the most useful relationships I have with sources of any kind are those relationships that last over time. They're not about one story. They're about the longer arc of coverage and often I will go back to the same person, month-after-month or year-after-year to say, is this a story idea worth pursuing? What's your opinion on this? Just to get a smell test of someone who I trust and those don't always result in a quotation, but I

actually think they're incredibly beneficial to journalists and probably to the experts themselves in terms of being able to shape coverage.

Adrienne: Thank you, Ellen. I have a related question. How can psychological scientists frame their work or present their findings in a way that will get noticed by reporters? Maybe I'll start with you, Jon, and then ask Ellen for comment.

Jon: I would say, think about impact. Show me something-- I'm not saying that it has to change the world but I'm saying often in psychology, what I want is something that changes the way we understand ourselves or other people. I was looking through JAMA this week and I didn't end up doing any pieces out of there but the study that most interested me was a study about depression and PTSD in Flint, Michigan. I was interested because I cover risk, so lead in water, the flint thing, I paid attention to that.

It was really interesting to me to see somebody come at it from the psychological point of view. Maybe a large part of the impact of Flint is actually how people feel about themselves and where they live and the rates of depression and whether they feel frightened or things like that even if the lead poisoning itself isn't an issue.

Adrienne: Interesting. Thank you.

Ellen: I would add that when you're writing about a clinical trial or you're writing about a study, it is incredibly helpful to be able to put flesh on the bones of the ideas or the finding by talking to clinicians, by talking to people who are enrolled in the trial subjects and if it's possible to invite the reporter into the research process, to explain about the AHA moments, to explain about what made you go down this road in your research because the findings themselves can be a good story but, at least for me, to be able to sell it to the newspaper, you need it to be quite holistic and to capture the human experiences.

Lisa: Can I just add a couple of things, Adrienne?

Adrienne: Yes.

Lisa: To Jonathan's point, I think it is important to couch your findings in terms of impact, but I think one thing we know about science is that no single study ever changes how we think about something if we're cautious as scientists. It requires a little bit of finesse, I would say. You don't want to overclaim and I think that in psychology in the recent past, in the last decade or so, there have been these examples of people overclaiming and then the studies don't replicate or there are difficulties. Then we get ourselves into problems.

I think that we're all used to talking about impacting grant applications and so on and we can have really big claims in a grant application because we all understand how that works, about projecting out 10 years and what we think the implications will be for a line of work. When you're talking to journalists, it's your job as the scientist not to overclaim and to be really cautious.

I'm not saying you can't have big dreams, but I try really hard when I'm talking to journalists to say, this is what the findings show, this is my interpretation. I'm going to

speculate. This is my judgment or I'm going to take my lab coat off, now I'm going to tell you what I think as a person. I always try to make it clear when I'm inferring something versus what the data specifically show in a study. I think that's something we could all do a little bit better.

I'll just give you one example. When you're talking about facial expressions of emotion, we study facial movements, and we study how people make inferences about what those movements mean. Faces don't express emotion in a way that can be read by everybody in the world. People don't read emotion in other people's faces. That's what the bulk of the evidence shows. We have to be really careful about, when we're talking about a finding what it really means but at the same time, do it in a way that is enthusiastic and makes it interesting for people to want to read.

I think to Ellen's point I would say, there is research which shows that data doesn't convince people as much as personal experience. I think this is why in popular science writing you often see that scientists will try to hang a finding on a person. They'll tell a story about a person. I think to the extent that you can embed your explanations in some aspect of everyday life, that's often really, really useful. It's not something we do in our scientific writing but it's really, really helpful to do when you're writing for the public or when you're talking to journalists, I think.

Adrienne: Thank you, Lisa. It's very important. You've touched on so many aspects of this next question. I'll start with Ellen and Jon. A scientist's work gets noticed by one of you and you set up a time for an interview, what tips do you have to make this a successful interaction? We've talked a little bit about storytelling and context but what are some other things? Are there items like additional studies, graphics, visuals, what should the scientist bring to the table?

Ellen: I would advise that you think very seriously about what are the main thoughts you want to be quoted on and do that before the interview and focus your mind on that. You can also think about stories you want to tell like if there were breakthrough moments, or if there is an origin story in your own research that could inject life into the story. The more you think about what you're going to say before the interview, the more control you have over it because interviews will often go on for an hour and the longer they wander, the less you know what the quotations are going to say. I would just focus your mind on what is most important, what is the central idea, and how you want to be quoted on it.

Adrienne: Thank you. Jon, what would you say?

Jon: I think I would just add that it is possible to over-rehearse. It's really good to think about what you're going to say. For instance, I'm a radio reporter, and every now and then I will talk to a scientist who is obviously reading prepared answers to questions, and it is deadly, absolutely deadly. It has to sound like a conversation. Actually, good quotes, the same way, they never sound like they mean. Sometimes they are written but rarely does the best quote come from some prepared remark.

I guess what I try to get from scientists, I say, "Tell me the story of your research." To me most studies, they're answers to questions. Why were you asking that particular question? How did you go about getting an answer? Was there, as Ellen talks about, the AHA or the eureka moment when you and your lab realized what you had found?

Then think about, what does this mean? Why should I care? Because those are the kinds of things you're likely to get questions about from a reporter.

Ellen: I guess I would also add that the language of journalism is really different from the language of academic work in that academic language is about precision and it's often very technical and the language of journalism is compressed and plain and colloquial. You have to go into it knowing that that is the way good journalism is. It can be read by ordinary people. You may sacrifice some of the precision in that, but most journalists have goodwill and don't want to misquote you or misconstrue but they have to use plain language.

Lisa: I would just say that from my perspective what I've realized is that good science communication is about knowing what to leave out. Which details can you leave out and still not really change the validity of what you're saying? I think it's also important to realize that to other people, speaking in the language of probability sounds like weasel words, when in fact for us, we understand that we don't really show anything, we definitively forever in all contexts. Everything that we show is conditioned on particular experiment in a particular context. What we're saying that we know is what we know based on the best evidence we currently have, and we know that that could change, but I think that's hard. It's hard to communicate that without sounding really wishy-washy.

That's something that you can explicitly discuss, I think, with the journalists that you're talking to or at least I've had very good experience. For example, I often use metaphors because I'm talking about very complicated neuroscientific findings or evolutionary findings. I need to use a metaphor and all metaphors are wrong but they're well wrong. Some of them are wrong in ways that you can live with for the purpose that you're using them.

I often will indicate, really, that I'm using a metaphor here and I'm using it for this particular reason and the journalist isn't going to write that I said that, but they'll understand the way in which I'm using that metaphor. Then that influences often how they write their article which is beneficial because it's representing the science in agreement with how I think it best should be represented.

Adrienne: It sounds like you're talking about, the language differences and maybe cultural differences. I'm wondering if you could offer like a do and maybe a don't. What should psychological scientists do when they're interacting with reporters and what should, if there's anything, which they absolutely not do?

Ellen: I would say, don't be offended if we can't let you see your quotes because a lot of times our employers explicitly prohibit that. It doesn't mean that we don't care. If you're particularly worried about the accuracy of complex ideas just say, this is something I'm really concerned about, and I want to flag it to say-- I will often call someone back before the story runs just to make sure I've got the language approximately right. Don't be put off if we won't show you the story.

Lisa: Sorry. I was just saying, but ask. I think you should ask every single time, and you should make it really clear that there are multiple ways for people to double-check. Ellen calls back the people she's interviewing, sometimes a fact-checker will. I've even had people actually allow me to see my quotes. I will tell you that 80% of

the time when I'm invited or given access to what's about to be printed, 80% of the time I have a correction, because what is a synonym in a journalistic world can change the scientific meaning of something.

When you're working with journalists who are really dedicated and care about that, which is mostly everyone I've ever interacted with, they want to get it right. It's not adversarial, it's cooperative within the bounds of what the outlet would allow, I would say.

Adrienne: Thank you. Jon.

Jon: I guess I would just add another couple of warnings about why not to sound like a scientist. There are phrases that scientists use that are precise, and there are phrases that scientists use that are really obfuscation. The number of times a scientist has said to me, "Well, the data are all trending positive." What you meant to say was nothing in your study reached statistical significance. Yet it would be the report's fault if they reported that incorrectly but it's also your fault.

Lisa: For sure.

Adrienne: Yes. Any other do's.

Jon: Do ask whether the report's understanding you. I am used to playing dumb or I'm used to being dumb. I will ask over and over. I'm sorry, "I still don't get it. I was an English major. You got to try again." I think many of you out there are prominent scientists and for a lot of reporters, it can be intimidating. They don't want to sound dumb. Nobody wants to sound dumb. You may be saying things that are not being understood, and sometimes if you just gently probe like, "am I being clear? Was that totally clear?" If you get a little hesitation, maybe that's time to try to go back and make sure that your message got across clearly.

Adrienne: Thank you. Going to switch this a little bit. Science denial has become a really significant concern in the US and I'm wondering if you have experienced an affect in your work. That's a question for all of you.

Jon: Who do you want to go first?

Adrienne: I'm going to say Jon.

Jon: Okay. I see what I would call science denial or skepticism as perhaps the biggest obstacle to doing my job right now. It is one that has increased. I've been at NPR 25 years; I've been a science journalist forever. Science skepticism is worse now than at any point in my career. For example, for at least 30 years I've been covering vaccine skepticism. We all know with COVID we got a whole lesson in COVID vaccine skepticism and putting chips in us and affecting fertility.

I started out from the other side where it was what I guess we would call the political left, for the most part, talking about the dangers of childhood vaccines and autism. Now we have the political right but they're both problems of people being unwilling to accept science. It is huge. Every time I do a story that mentions vaccines, I end up spending about half the story trying to cover all of the things that people have heard

said about them precisely because there is so much skepticism, so much science denialism.

Adrienne: Thank you. Lisa, what do you think?

Lisa: I have a lot to say about this, so I'll try to keep it short. I think the problem that I see mostly in my outward facing work towards the public is not science denialism, it's lack of interest in science as if science doesn't really have something to offer that is more than somebody's common sense. If you say something, as I often do, my findings often really counter people's common sense.

People will put scientific findings on par with their own casual observations about the world. I think that's really a problem. I think it's a problem that scientists have lost their authority, to some extent; the authority of science is lost. I would say that all of this to me relates to the fact that people don't understand science, they don't understand how it works. They don't understand what the difference is between observations in a scientific context versus the observations that you make every day in your life. They don't understand what it means for an observation to count as evidence. When does it count, when doesn't it count? Things like that.

One of the reasons I do this in the first place is because what I'm trying to do is some informal science education that people don't even understand what it means when a scientist says that he or she is wrong. It doesn't mean that they did something bad or something wrong. That's how science works. I don't know if science skepticism is related to that, but I think there are really serious issues here and there are issues, I'm going to say a dirty word Now, there are issues that relate to the philosophy of science, like philosophy of science. What is science? How does it work? How is it a different way of finding knowledge than some other ways that we have in our culture?

I think people just don't really understand because they haven't been taught or because there's been a breakdown in science education earlier on, in addition to all the other political forces. I really feel like that's something we could attend ourselves to, that we could actually focus on a little bit more directly about why science matters. What is it? How does it work? Why should you care? How does it make your life better? So on and so forth.

Adrienne: Right. Ellen, I'm interested in your thoughts on this issue.

Ellen: Just building on what Lisa just said, I think the more that you can bring readers, people in the general public, into the process of how studies work, how they're structured and why they are so slow, and why they are so important, I just think the more we can educate the public about that, the better.

Adrienne: Thank you. We are about halfway through, and we have a number of questions from the audience. Some that were sent in just before today and some that are coming in now. The first one actually is related to the topic that we've just discussed. That is, how much science methodology can I presume the general public actually understands? I'll let whoever wants to comment on that.

Jon: Very, very little. I work in a newsroom filled with very, very smart people but many of them haven't taken a math class since high school and are totally intimidated by science. They will see something coming apart and they never even try to look at themselves. They just say, "Science desk, take a look at this. Is this anything?" It's unfortunate because science is not that that-- I was an English major, but you don't have to be able to do a regression analysis to think smartly about science and to think like a scientist. Can it be proved? Is it improved by other people? Are the results consistent? Are they all over the map? These are very common-sense questions and I don't think the public understands that science is not this different other magical thing that you must have a PhD to understand.

Adrienne: Thank you. The next actually two questions that are related and it's about making the connection between scientists and the media. As a journalist, in seeking experts to add to your story, what's your process for finding them?

Jon: Ellen, you want to go?

Ellen: Yes. There's lots of different ways but often if there's someone who has been really useful to me in the past, but I don't want to quote them in every story, I will say, is there anyone you can point me to on suicide? That's a subject that comes up often. If there's someone you can point me to on this question. I explain that I can't quote the same experts over and over again. I often turn to the APA, I get story ideas sometimes from the APA, and then I do searches of published work and look for people who have published on the subject I'm writing about.

Jon: I think because of the kind of story I do I frequently do stories about brain science that are very, very narrow. For instance, the thirst circuits in part of the brain. This is a pretty specific area of knowledge and so it's not something where I can just go to any old neuroscientist and say, "What do you think of this paper?" I spend a lot of time looking through citations. Every good scientist cites a whole bunch of people at the end of their paper, and I start looking through and say, "Who are those people? What was their take?" I try to get somebody who's got a good sense of the field. I love people who've written review articles because they've had to think about it in a slightly broader context.

I guess one of the other things I'll throw out there, especially in recent years, I've really tried to not go to the same people over and over for a comment. In part that's because NPR, like many newsrooms, has had a big push for more diversity on the air. What I've found is that at most institutions there is a senior scientist in the field, but there are a bunch of smart people that work in that person's lab or used to work in that person's lab. They are younger, they are more diverse, and they are often more interesting to talk to. When I'm looking for experts, I find myself trying to now move away a little bit from the same old sage heads that we've gone to for so long.

Ellen: That is also happening in our newsroom where we are thinking a lot more consciously about who we're quoting and what communities they come from to make sure that we're not going back to the usual suspects all the time. That is an effort. It means that you're breaking patterns, but I think it's important and a lot of newsrooms are doing it.

Adrienne: Thank you. Here's a related question. Do you work with media relations staff at universities, and what role do they play in the process?

Jon: I certainly do. I did an interesting thing a year or so ago, which is the University of California system. The entire system, all the PR people in science in medicine got together and they said, "Can we do an hour-long pitch session with you?" I said, "Sure, sure." I got to hear from all the way up and down the coast from UCSF to UCLA to UCSD, and everything in between. I found it really useful.

One of the reasons is that I got to hear and be on a Zoom call with a bunch of the media relations people and I find many of them are former reporters, they often know a lot of stuff. The more they know about my bead and the kind of stories I'm interested in, the more helpful they are. I absolutely have cultivated relationships with people in the media relations at universities.

Ellen: They have the best story ideas and really have a foot in both camps. They understand how media outlets work, and they also understand science. They're absolute gold.

Lisa: I would say from the other side of it though you as the scientist can be very, very helpful to the media staff at your university. We often coordinate in advance of a big paper. We will often help actually write the little blurb, the little page, the press release that gets sent around. We actually have periodic meetings, just regular meetings with our media staff.

Actually, I have to tell you that for a little while, I hired my own media person in our lab, actually, whose job was to make contact with many, many, many different sources. Not just journalists, but also for example, at science museums and at lots of outlets at K-12 schools and things like that. You, as a scientist, can also on the other end be super helpful to your media people so that they can make those connections more effective.

Jon: I think one of the complaints I hear most often from university media relations folks is they say, amazing how this happens, and they're like, "They didn't tell me they were going to be on the cover of *Science*. They didn't tell me *The New England Journal* was publishing." It is remarkable sometimes how labs, and you would assume they would be in good touch with the media relations in their own institution, but not necessarily. There's a lot you can do if you reach out a little bit.

Adrienne: Thank you. Let's see. Here's a question. Could you please comment on what kinds of basic research the media looks for? What makes those types of studies stand out?

Ellen: If you're interested in getting coverage of basic research, I would look for reporters who have been covering basic research because it shows that they have a good basic knowledge of that area, and just read all the science writers, keep an eye on what they're doing and when it goes towards your material, reach out to them.

Jon: I guess I would add to that, that basic science is tricky because it can seem very remote from the everyday world. It doesn't necessarily jump out and say, I'm important, read about me. Depending on what field you're in, if you're a virologist

say, you've been in Clover, and then you get COVID-- There have been opportunities for you to step in at a place where your work is relevant. I think you have to look for that. I think it's also really important that people who do basic research are able to put in context this mouse study with a larger body of work that says something about more than just one lab mouse or rat.

Lisa: Speaking as somebody who only does basic research, so I don't do applied work, all of our work is very basic, I would say that I would agree with what's been said. A lot of our work challenges, even common scientific theories, but a common understanding of what emotions are and how they work. I often get the question, why does it matter? Who cares if somebody has the wrong ideas about how emotion works, and why does that matter?

When I first encountered this question, I thought, "Well, it matters because it's interesting." Would you ask a physicist why it matters whether-- you don't know, why are you asking me this question? Very slowly I realized, it's actually my job to highlight the needle cool factor. If something is just counter to common sense and just really fascinating, it's my job to explain why it's fascinating.

If something that we've discovered really does have an implication for people's lives, why does it matter that people have the wrong ideas about emotion? Because it could cost you your freedom or your life, frankly. If a jurist or if a physician makes the wrong judgment, like makes a judgment that is incorrect in terms of what the science shows us, and that happens.

I ended up having to compile a list of ways in which it matters. Not necessarily this particular study, but this particular study in a context of studies, this is one brick in a larger wall or in a larger structure. In the end, that's what interests people. Because when they understand how their brain works a little bit better in combination with their body and the other brains and bodies they interact with, when they understand something about how their brain makes an instance of emotion, they're better prepared. Whether they're educating their kid or whether they're engaging in a legal proceeding, or whether they're talking to their doctor, it matters. It's our job as scientists to make that clear and vivid for people without overstepping.

Jon: I would just add that you have such a huge advantage when you're working in brain science or the psychological sciences. You're talking about the brain circuits and the response; they are all the things that make us us and we're fascinated with us. We like to understand how we tick. I think actually compared with basic science and some of the other parts of the body, I think you really have a leg up that you can make things immediate to people in a really compelling way.

Adrienne: Thank you. Questions keep coming. Let's see. Lisa talked about going off the record. Could the journals explain what it means to go on background, and how that is different?

Ellen: Sure. I would say off the record is the most stark and straightforward proviso. It means that you want to share this information, but it will not appear in the written material, nor will you be attributed to it. Background often means that the basic ideas of what you're talking about could conceivably be used in the report but not connected to you individually.

Jon: I think Ellen gives a very good definition. The caveat I would add is that having worked in different newsrooms and different places, different journalists sometimes mean different things by different terms. I always advise scientists to have a discussion, not just to get somebody to utter a certain term. If you're saying deep background, background off the record, make sure you know what that journalist means by that term and what they're going to do with the information, just so there isn't some unfortunate misunderstanding.

Ellen: I would prefer to avoid those forms of conversation generally because it may be unclear to one or the other parties. Generally, I would say, you should just not say things you don't want to be quoted as saying, and just keep the conversation completely straightforward.

Adrienne: Very helpful. Thank you. Let's see. What are the best ways to connect with entities like *New York Times* and NPR when we have important or interesting research findings? How should people reach out?

Jon: Ellen, do you want to go ahead?

Ellen: Sure. I would write to reporters, make sure you've been following what their line of coverage is, and I would not be deterred if you don't hear back because we get really swamped with emails, we get swamped with pitches. I would just keep trying. If you know editors, get in touch with editors as well.

Jon: I think Ellen is exactly right, the trick is targeting. There are like 45 people on the science desk at NPR, and even sending to all of *Science*, you're not at all narrowing down to who you want to reach. The more you have a sense of the exact beats people cover, and if you look at reporters, it's pretty easy to figure out. If you look at the last 10 stories they've done, and been willing to wager, you could have a pretty good description of that narrow of what things fall into their coverage area.

I get people who are trying to shortcut that, like I'll do a piece about ketamine which has been a huge deal in treating depression. Then I will get endless stuff from people who are running ayahuasca clinics and pitching every psychedelic drug, and not scientific, just as like, "Oh, we have a clinic that takes people to South America and helps them journey through the same." That is not what I cover, and if you'd have read my story, you'd know that.

Ellen: Also, this has become such a massive commercial market sort of psychology, mental health, all of these. When I started this job, I was really overwhelmed by how many corporate pitches, PR pitches I've gotten. I'm not covering people's businesses; I'm more interested in the treatments and the science. That is a real challenge right now of working in this field.

Adrienne: Thank you. Maybe this one is for Lisa. How do you handle situations when it's clear that the reporter doesn't fully understand the science?

Lisa: That happens frequently, more frequently than you might imagine. Usually what I do is I say, I often find myself saying, "That's not the right question that I would ask, here's a better question that you might want to ask," and then I would explain why it's a better question. You meet people where they are and then you

explain why maybe the foundation of their question isn't correct, or the assumptions that they have aren't necessarily correct.

For example, if Jonathan and I were having a conversation about depression, like Jonathan, we're talking about depression and PTSD, I might say, feelings aren't the cause of depression. Depression is a metabolic illness. It's also an immune illness, and it has other-- but fundamentally, it's a metabolic illness. He might not know that, or he might know that, I don't know, so I might ask. I might say, "Are you aware of this research? blah, blah, blah."

What I wouldn't do is be dismissive or be condescending. I would say the only time I got really a little salty about someone was when I was being interviewed about one of my books on a podcast by a journalist. I would've thought the person would have read the book or at least read the cover of the book, but I got a little testy because I had given up an afternoon of my vacation in the summer for it. That's probably on me.

Generally speaking, I think, usually when somebody asks you a question or they make a claim, it's usually they're unaware of something that you have to make them aware of. So, I try to just say, "Okay, I'm going to take two steps back now and I need to give you this background information, and I'm happy to provide you with other people that you could talk to or with papers that you could look at, or what have you," but I usually try to make it an educational moment. I do that frequently. I would say, I frequently will say things like, "That's not the question I would be asking here," or "That question doesn't have a scientific answer but here's one that does."

I'm really adjusting the kinds of questions they're asking as a way of correcting assumptions that might be incorrect. For example, the amygdala is not the home of every bad thing that happens in the brain, or what have you. Sorry, Ellen.

Ellen: I would also just recommend with the reporter, after the interview, to say, if you have any more questions when you're writing the piece, don't hesitate to get in touch, and then make yourself available because if they call you to double-check something, it's because they really want to get it right. You could do it in a text message or an email. You could do it in an easy way, but I think that's a good way to just create an open door to double-check things.

Lisa: I want to second that, and I would say, I even will tell journalists, I give them a specific thing to put in the subject heading of an email so that I'll see it because, like most people, I'm getting 400 emails a day. I want to be able to see it, or if it's a really important story, I'll give them my cell phone number, and they can text me, but I always make the offer that they can follow up, they can ask more questions.

I'm definitely available and in my experience, it makes it more interesting to them when they learn that they may have had a misconception about something. People don't get egoistic about it. They're more like, "Wow, that's really cool. I totally didn't know that." It's usually a very positive aspect of an interaction when it happens.

Adrienne: Thank you. I think that I am now going to ask the last question and that is, psychologists often do not have an obvious picture or graphic to illustrate what they do for a story, what alternatives are there?

Jon: I can tell you that I work for NPR, which used to be just radio but of course, now the web is a big deal, so we have a whole different set of things we're looking to do. I would tell you that nothing gives the picture editors on the web more trouble than some of the psychology stories. It's a story about depression, or it's a story about PTSD, whatever, it's extremely hard to-

I think they ended up going for sort of mood pictures more than anything else. I don't know what the solution is. It's really hard sometimes to come up with graphics that make a sweeping point like that, and I will tell you, most charts and graphs don't cut it.

Lisa: All I can say is in 2007, maybe 2006, I realized that I had to engage the services of a graphic designer. Because a lot of the ideas that we're trying to communicate are very complicated and unfortunately, to use a cliché, a picture really is sometimes worth 1,000 words but also there are ways, there's a whole science around or a whole field around science communicating graphical depictions of data that are accessible, where somebody can just look at something and then you see it immediately.

I think that the thing to do if you can't afford-- I actually hired this designer on my own dime, and then eventually started building it into grant applications to pay for it. I do this not only so that I have something to show a journalist, but I also do it actually for my talks. I will mockup a talk, even for a scientific audience, and then have the graphic designer help me. Sometimes there isn't a graphic that exists to communicate a finding that I want communicated. So, I'll actually work with that designer to come up with one.

I would say, if you want to make your findings available to the public, this is something that you should consider investing in or get your university to invest in it. It's not very much money. It can be a lot of money, but it doesn't have to be a lot of money. Every scientist I know who has taken this path, who has followed me along this path, has never regretted it and found the images to be very, very, very useful. Whether it's a thematic image or just a graph of some of your findings but presented in a way that's very digestible, easily digested for the purposes of sharing with a journalist or something.

Adrienne: Thank you, Lisa. Ellen, anything else on that? Anything from you on that last point?

Ellen: No. I guess I would just say, generally, get to know science journalists, write to them about their work, engage them not about a particular pitch, engage them about the subject matter. I think that will really pay off.

Adrienne: Right, thank you. I can't believe we are almost at the end of the hour. This has been such an illuminating and fun discussion. I want to thank you all for your insights and for your generosity and sharing those insights and your time with us today. I want to point the audience to several APA resources that are being added to the chat.

The first is an APA Handbook on working with the media. The second is the APA Media Referral Service. APA actually fields hundreds of queries a year for reporters

and we maintain a database of experts to respond to those queries. You are all welcome to apply. Finally, APA partners with the Alan Alda Center for Communicating Science to offer trainings, and they're just fabulous.

Again, thank you all, Jon, Lisa, Ellen, for your time today. It's been wonderful. To everyone in the audience, thank you for joining and have a wonderful day.