For these,next two modules. I'm thrilled to have a guest speaker.,Amy Adams is the Director of Science Communications at Stanford, and she's going to be talking to you about interviewing scientists and using social media.,I'm Amy Adams, and I'm going to be talking about how to write about science for a lay audience.,And the 1st step in writing for a lay audience is interviewing a scientist about whatever topic we are going to write about., it's also trying to get the scientist to speak in a way that the general public would understand, ,getting them to talk about their work in a way that is interesting and engaging and helps people and the lay public understand what it is that those scientists are excited about.,So this cartoon, I think, illustrates the problem.,In the 1st panel, you have a scientist saying, I filter out earthquake I by looking at the energy ratio between adjacent frequency bands.,And thanks to herself, I am great at explaining things.,And what the public hears is blah blah, blah, earthquakes, blah, blah.,They think they are so smart.,Never trust a scientist. And another scientist from a different discipline here is blah blah, blah, earthquakes, blah blah.,And they think to themselves, that is terrible.,I would never use that much jargon.,But of course, what we know is that this uh, nice scientist man in the final panel really would use a lot of jargon.,And it's part of the writer's job to to break scientists out of that jargon.,And to do that 1st, let's talk about why scientists can't let go of the jargon.,And part of it, it's just that's how they talk all day long.,and so then they turn to you and they talk to you the way they talk all day long.,But they also don't want to be in precise.,Those jargon warns really mean something, and scientists don't want to say something that could be interpreted incorrectly by the public, which makes sense.,They also really just don't understand what people do and don't know.,Some of these words and concepts are so fundamental to them in their work that it is hard to remember that someone who was, say, an economics major and hasn't seen biology or physics or chemistry since high school probably does not remember those words, um, if they ever even knew them.,Um. And also, I think a lot of scientists don't care that the public understand their work, which is some do, um, but many don't.,And that's why we need writers to help interpret them.,So when you're going to write a news story, why is it that you need the scientist to drop the jargon and speak coherently?,I mean, if you're a good writer and you're going to write a story about this science, why can't you just interpret the science yourself and let the scientists keep their jargon?,A number of reasons. One of them is that you want to quote the scientists in in stories you write.,New stories are a great way to help scientists come alive.,To help the public who might be skeptical of scientists or might be intimidated by science, ,this is a way to help the public see these scientists as real people and believable people who are excited about their work and excited to go to lab every day and and learn something new.,And you can help convey that sense of excitement and of real people, UM carrying out important work.,By quoting the scientists in your story, it also makes your story more interesting.,UM You often need their analogies and descriptions.,You know, despite complaints about the scientists using a lot of jargon, UM, ,they have often spent a lot of time thinking about ways of describing their work, or analogies that really, really work.,UM. And you want to elicit those from them, because it helps you tell a better story.,You are the scientist. To seem like real people, they should seem believable accessible.,So the challenge here is that scientists use jargon with each other.,Uh, they do not use lay language with each other.,They use lay language, maybe, um, with with their families, with, um, friends, with people who they consider to be non scientists.,So your job when you talk to scientists and you want to get a,good interview, is to make yourself appear to not be a scientist, which is hard. You need to check your ego at the door,and go in and feel like you can ask,stupid questions. Um, to help the scientists feel like they can use, um, smaller words with you.,Okay, if you read news stories about science, you will see, as we've been talking about, that they usually include quotes from the scientist.,So if you look at those quotes, uh, when you read a news story, think what What kinds of questions elicited good quotes?,Do you want A scientist simply repeating their findings?,We found that protein A interacts with protein b Um.,That's not the kind of quote that that really conveys, conveys their excitement, or shows them as real people.,What you want to get the scientists talking about is, what is the big picture?,What's the significance of of Why of protein A interacting with protein B, or whatever it is that they found?,Why is that important to people?,Why are they excited about it?,Who's going to benefit from this work?,What did they think when they got the result?,Were they excited? Were they confused?,Were they surprised? Um, what are some emotions?,Let's get some emotion in this work.,I think people who do science understand that it really is pretty exciting, or sometimes very confusing.,Um What made the scientists ask these questions?,Sometimes there's a really interesting back story.,um that can help help help the public understand why this, uh, research is important and interesting.,So in the interview, not only do you want to ask questions that help you understand the science ,and then help you write accurately about the science, but also ask questions that get at the significance in the emotion.,OK, so what does this all mean in terms of an actual interview?,The 1st question I always ask is something something really big picture.,Like, can you describe the key finding that helps the scientists take a step back and begin thinking kind of big picture.,What is it that was important in this piece of research?,Um, it also puts some context on the science.,You might read the paper before going into an interview and think, you know what's important, but you're not the one who did the work. And so if you don't ask this question 1st, your the questions you ask the scientists might take you off in a different direction.,So you really want to understand what the scientists think is truly important about the work.,OK? So after they describe the key, finding why is this important?,So that gives you some context, helps you think about how you're going to kind of frame the story for the reader.,How does that work? These are the kinds of detail questions that you need to ask just to make sure you actually understand the science well enough to write about it accurately.,UM And then finally, is there anything you want to add?,Um this is maybe the most important question in their interview,, because this is where this the person you're interviewing takes a minute to think about interesting or important, or kind of sigh comments about the research that maybe didn't fit in the paper, or, um, ,maybe it's perspectives on the research that, UM, that you wouldn't have thought of, um, but they had.,You often get really, really interesting answers.,And I like to ask that question before I really think the interview is all the way over, because you will often have follow up questions from this.,So, so overall, it's pretty straightforward.,Get the get the big picture, get some some context on emotion, get the details, and then get the magic with your last question.,OK, so um, when you so you get your interview.,Now it's time to write the story.,So how do you use quotes in a story?,So the rule of thumb is that you always use a quote exactly as it was said, because when you quote someone, those quote marks indicate that someone really truly did say that um.,And And that's, in my mind, a pretty hard and fast rule, except that you want to,, you want to be nice to the person, so if they say, um, if they add filler words in the middle of this sentence,, so here we have A-A made up sentence, um, be polite in the sense that you should um, tidy up, you know, the quote.,What that person really said was, be polite, t tidy up the quote. So you are, you can erase words or tidy up words or,add punctuation if it's going to make the quote make more,sense, um, and and mean exactly what the person meant it to mean.,And the Pointer Institute, UM, has some rules of thumb on this.,UH, so the way you out of the quote should be truthful.,UH? You're not gonna edit the quote in a way that makes it seem different than what it was.,Adding language is more dangerous than taking stuff out, because you can distort the meeting.,So you can remove the word um or, you know, or like, but you don't want to add words because that could change the meaning.,Be careful with slang um. Do not try to use slang or dialect unless your ear is really good.,If that's the way someone speaks, that's fine, but don't try to edit them to include dialect.,Um And I think this one is great.,UM The American language is a great treasure.,I would say any language is a great treasure.,UM But you should, if you edit a quote to have it to get rid of arms or likes, that's fine, ,but don't edit the quote to get rid of um, if there's a part of the country that uses A-A an expression slightly differently than the way you would, um, ,leave it the way it is, and then, as we said, be polite.,So we're gonna talk about a couple different, um, kinds of stories.,One is A-Q-N-A, um, which is not exactly one long quote.,So A-Q and a. So that question, an answer is a really good option.,Um, if you have a scientist who speaks really well, or if that person is the story or the point of the stories, to get that person's opinion.,UM Or if you don't have a lot of time, the QNA format is definitely faster than the struggle of trying to write your own news story.,UM Or if you want to help your your readers understand a process.,UM, the q and A format can work really well.,UM And in terms of A-Q and A, it's essentially, uh, the same rules of them apply as editing a quote.,So if you ask someone a question and they give you an answer, you do not need to use the entire answer as it was said.,You can edit it lightly, but at the end of the day, whatever gets listed as the person's answer should accurately reflect what that person intended to say. Yeah, okay, but it's not a literal transcript of the entire answer, because really, most people are not that interesting for several long paragraphs.,So the point here is that, um, in order to be interesting for a couple paragraphs, you often need to edit out repeated, repeated ideas, repeated sentences, repeated quotes.,Um, to make it a little tighter.,Yes, here they are clapping happily for the person in the QNA.,And that is because you the writer, have made their answers more succinct and a more engaging version of what the person actually said.,And then there's some slight differences when you're going to interview for A-Q and a, um, we had an outline for what a typical interview would look like for a new story.,With A-Q and A, the questions should tell a bit of a story, ,so you should write the questions out in advance and have a sense of what your story arc is going to be, and that will allow you to to end up with A-Q-A that that tells a bit of a story.,Um, I often have more questions prepared than I eventually use, because sometimes the answers to a question I am very interested in turns out to not be interesting.,So I need to be prepared to dump some questions that were not as interesting as I thought, and still have enough questions remaining to produce an interesting QNA.,So I find five to be kind of a good minimum number, um in a in a final Q-A.,So I would normally go in with, like, seven questions and just prepare it, be prepared to dump some if, uh, if they're not sufficiently interesting.,And the other thing with the QNA,is you really need to listen and make sure that that the person answers the full question, because in A-Q and A, you can't go back,and just add contexts that you know, or add details of the science that you happen to know, the way you would with a newster story.,They need to actually say the whole thing.,This is a This is an actual quote that I had um in A-Q-A.,And the way they actually said it was so the that problem was waiting to be solved,, and was solved because there were two people in different fields who decided to work together, and they got money in the form of the seat grant. And actually the students also had fellowships to really launch the project, which is a bit long,

对于接下来的两个模块，我很高兴有一位演讲嘉宾。艾米·亚当斯是斯坦福大学的科学传播总监。她将和你谈谈采访科学家和使用社交媒体。我是艾米·亚当斯，我要谈论如何为非专业读者写关于科学的文章。在为非专业读者写作时，第一步是就你要写的任何话题采访科学家。而且，进行面试所面临的挑战不仅仅是理解科学。它还试图让科学家以公众能理解的方式说话。让他们以有趣和引人入胜的方式谈论他们的工作。并帮助人们和非专业公众了解那些科学家对什么感到兴奋。所以我认为，这部动画片说明了问题所在。在第一个小组中，有一位科学家说，我通过观察相邻频段之间的能量比来过滤掉地震。然后心想，我很擅长解释事情。公众所听到的是等等，等等，等等，地震，等等，等等。他们认为自己很聪明，永远不要相信科学家。还有另一位来自不同学科的科学家听见，等等，等等，等等，地震，等等，等等。他们心想，太糟糕了，我永远不会用那么多的行话。但是，当然，我们所知道的是，在最后一个小组讨论中，这位优秀的科学家确实会用很多行话。将@@科学家从这个术语中分解出来是作者工作的一部分。为此，首先，让我们来谈谈为什么科学家不能放开行话。部分原因就是他们整天都是这样说话的。于是他们转向你，他们整天都在和你说话。但是他们也不想变得不精确，这些行话确实有意义。而且科学家们不想说一些可能被公众错误解释的话，这是有道理的。他们也真的只是不明白人们在做什么和不知道什么。在他们的工作中，其中一些词语和概念对他们来说是如此重要，以至于很难记住那个被说是经济学专业的人。而且从高中起就没看过生物学、物理学或化学，可能不记得这些词了。如果他们认识他们的话而且，我认为很多科学家并不在乎公众是否了解他们的工作。有些人确实如此，但许多人没有，这就是为什么我们需要作家来帮助解释它们。那么，当你要写新闻报道时，为什么需要科学家放下行话连贯地说话？我的意思是，如果你是一位优秀的作家，而且你要写一篇关于这门科学的故事。为什么你不能自己解释科学，让那些科学家保留他们的行话？原因有很多，其中之一是你想在写的故事中引用科学家的话。新闻报道是帮助科学家活下来的好方法。帮助可能对科学家持怀疑态度或可能被科学吓倒的公众。这是一种帮助公众的方式，将这些科学家视为真实的人物和可信的人。那些对自己的工作感到兴奋，也很高兴每天去实验室学习新东西的人。而且，你可以通过在你的故事中引用科学家的话，来帮助传达那种兴奋感，以及真实的人在做重要工作的感觉。它还能让你的故事变得更加有趣。你经常需要他们的类比和描述。尽管有人抱怨科学家们使用了很多行话。他们经常花很多时间思考如何描述自己的作品或真正有效的类比。而且你想从他们那里得到这些信息，因为它可以帮助你讲一个更好的故事。你想让科学家看起来像真实的人，他们应该看起来可信，易于理解。因此，这里的挑战是科学家们互相使用行话。他们彼此之间不使用外行语言。他们可能与家人、朋友、他们认为不是科学家的人一起使用外行语言。因此，当你和科学家交谈并想获得一个好的面试时，你的工作就是让自己看起来不是一个科学家，这很难。你需要在门口检查自己的自我，然后进去。而且感觉你可以问一些愚蠢的问题，让科学家们感觉他们可以用更小的词语来对待你。好吧，如果你读了关于科学的新闻报道。正如我们一直在谈论的那样，你会看到，它们通常包括科学家的名言。那么，如果你在阅读新闻报道时看这些名言，想想什么样的问题会引起好评？你想让科学家简单地重复他们的发现吗？我们发现蛋白质A与蛋白B相互作用。这不是那种能真正传达他们的兴奋或将他们表现为真实人物的名言。你想让科学家谈论的是，大局是什么？蛋白质A与蛋白质B相互作用的意义是什么，或者他们发现的任何东西。为什么这对人们很重要，他们为什么对此感到兴奋？谁会从这项工作中受益，当他们得到结果时他们是怎么想的？他们兴奋吗，他们感到困惑吗，他们感到惊讶吗？有哪些情绪，让我们在这部作品中获得一些情感。我想从事科学工作的人都明白，这确实非常令人兴奋，或者有时非常令人困惑。是什么让科学家问这些问题，有时候有一个非常有趣的背景故事。这可以帮助公众理解为什么这项研究既重要又有趣。因此，在面试中，你不仅想问一些能帮助你理解科学的问题。然后，帮助您准确地撰写有关科学的文章。但也要问一些能说明情感重要性的问题。好吧，那么就实际面试而言，这一切意味着什么？我经常问的第一个问题是一个非常大的问题，比如你能描述一下关键发现吗？这有助于科学家退后一步，开始思考大局。在这项研究中，重要的是什么？它还为科学提供了一些背景信息。你可能会在接受采访之前阅读报纸，并认为自己知道什么是重要的。但是你不是做这件事的人。因此，如果你不先问这个问题，你问科学家的问题可能会让你朝着不同的方向前进。因此，你真的很想了解科学家认为这项工作中真正重要的是什么。好吧，那么在他们描述了关键发现之后，为什么这很重要？因此，这可以为你提供一些背景信息，帮助你思考如何为读者构思故事。这是如何运作的？这些是你需要问的详细问题。只是为了确保你真正对科学有足够的了解，可以准确地写出关于它的文章。然后，最后，还有什么要补充的吗？这可能是他们面试中最重要的问题。因为这是你面试的人花一分钟时间思考可能不适合论文的关于研究的有趣、重要或某种附带评论的地方。或者，也许是你本来不会想到的对研究的看法，但他们确实想到了。你经常会得到非常有趣的答案。在@@我真正认为面试结束之前，我想问这个问题。因为你经常会有后续的问题。所以总的来说，它非常简单。了解大局，联系一些关于情感的联系，获取细节，然后，用最后一个问题获得魔力。好吧，那么你接受采访了，现在是写故事的时候了，那么你如何在故事中使用名言呢？因此，经验法则是，您始终使用与所说的完全相同的报价。因为当你引用某人的话时，这些引号表明有人确实这么说过。在我看来，这是一条非常严格的规则，唯一的不同是你想对这个人友善。如果他们在句子中间添加填充词，那么，在这里，我们有一个虚构的句子。要有礼貌，从某种意义上说，你应该，整理一下这句话，那个人真正说的是，要有礼貌，整理报价。如果要使引用更有意义，你可以删除单词、整理单词或添加标点符号。而且我的意思与那个人的意思完全相同。波因特研究所对此有一些经验法则。因此，您编辑报价的方式应该是真实的。你不会以一种看起来与以前不同的方式来编辑报价。添加语言比把东西拿出来更危险，因为你可能会扭曲意思。因此，你可以删除单词、你知道的或点赞的单词，但你不想添加单词，因为这可能会改变意思。小心俚语，除非你的耳朵非常好，否则不要尝试使用俚语或方言。如果有人是这样说话的，那没关系，但不要试图编辑它们以包含方言。而且我认为这个很棒，美语是一个很棒的宝藏。我想说任何语言都是宝藏。如果你编辑报价来去掉um或点赞，那没关系。但是，不要为了删除而编辑引文，如果该国有部分地区使用的表达方式与你略有不同，那就保持原样。然后，正如我们所说，要有礼貌。因此，我们将讨论几种不同的故事。一个是问答，它不完全是一句长话。因此，问答，问答，是一个非常好的选择。如果你有一位科学家说得非常好，或者那个人就是故事，或者故事的重点是听取那个人的意见。或者，如果你没有太多时间，问答形式肯定比尝试自己写新闻报道的努力要快。或者，如果你想帮助读者理解一个过程，问答形式可以很好地发挥作用。就问答而言，从本质上讲，其经验法则与编辑报价相同。因此，如果你问别人一个问题，他们会给你一个答案。正如所说，你不需要使用整个答案，你可以轻易地对其进行编辑。但归根结底，无论被列为该人的答案，都应该准确地反映出该人打算说的话。是的，好吧，但这不是整个答案的字面记录。因为实际上，大多数人对几段很长的段落来说都没那么有趣。因此，这里的重点是为了让几段话变得有趣。你经常需要编辑重复的想法、重复的句子、重复的引号，以使其更紧凑一点。是的，他们在这里愉快地为问答中的人鼓掌。那是因为，你这个作家，让他们的回答更加简洁。还有一个更引人入胜的版本，讲述了那个人实际说的话。还有一些细微的区别，当你要接受采访进行问答时。我们概述了新闻报道的典型采访会是什么样子。通过问答，问题应该讲述一个故事。因此，你应该提前写出问题，并了解你的故事情节将是什么样子。这样你就可以得到一个讲述一些故事的问答环节。我准备的问题往往比我最终使用的要多。因为有时候，我非常感兴趣的问题的答案被证明并不有趣。所以我需要做好准备，抛开一些问题，这些问题没有我想象的那么有趣。而且还剩下足够的问题，可以做一个有趣的问答。所以在最后的问答中，我找到了五个问题，这是一个不错的最低数字。所以我通常会带着七个问题进去，如果它们不够有趣，就准备好抛弃一些问题。问答的另一件事是，你真的需要倾听以确保对方回答了完整的问题。因为在问答中，你不能回过头来添加你所知道的上下文。或者添加你碰巧知道的科学细节，就像你写新闻报道一样。他们需要把整件事说出来。这是我在问答中得到的一句真实的名言。他们实际上是这样说的，所以这个问题有待解决并得到解决。因为有两个来自不同领域的人决定一起工作。他们以种子补助金的形式获得了钱。实际上，学生们还有一个奖学金可以真正启动这个项目，这个项目有点长。因此，如果我把它改成，这个问题就解决了，因为有两个来自不同领域的人决定一起工作。而且他们有钱启动这个项目。