

G: All right, hello, and welcome to Episode 5 of the “Writing Across Cottey” video project. If you are new to the series, the idea behind this project is that we will speak to a member of the Cottey faculty about their attitudes toward writing, their experiences with writing, and what advice they would have for someone aspiring to improve their writing within their particular discipline. And this is all in an effort to demonstrate how writing truly is done across the curriculum as we say. So, we’re so glad to have you with us today. My name is Dr. Jon Green. I’m director of the Writing Center here at Cottey, and I am joined today by Dr. Peter Hyland, Associate Professor of Physics and Astronomy here at Cottey. We are very excited to have the opportunity to speak with another faculty member in the sciences after a very illuminating episode with Dr. Brenda Ross in Chemistry last semester, so looking forward to what comments Dr. Hyland has for us today. Thank you for being here today, Dr. Hyland.

H: Thank you for having me. It’s a lot of fun to talk about whatever I do in whatever aspect that is.

G: All right, well, we will just get right into it. First question, what kind of writing is done in your discipline?

H: So, in physics, which is my Ph.D. field, the majority of the writing would be academic, I think is the broad umbrella term. This is peer-reviewed publications, it’s formal. So if you go to high school, usually, they say, “Do not use the passive voice.” That’s actually not true anymore. When you get to some of the academic writing, peer reviewed, often there’s a passive voice that desires to have the experiment and the process be one which is very general. And so the passive voice removes the actor from what’s going on, like, “Mistakes were made.” Who made mistakes? We don’t know, they just—they were made. Right, we don’t need to lay blame. Right? And so the same kind of thing goes on in physics anyway, for this academic writing for peer reviewed journal articles is that this was done or this without removing the actor from there. It’s not uncommon. You can also I think find publications where it’s like, “We did this.” They’re using the first person, or first person plural, in what they’re doing. So there’s a bit of a give and take. I’ve also, for say, theses, it uses the royal “we.” So, even though I’m the only one doing anything in what I’m describing in, say, my Ph.D. thesis, I would—I believe I have written, is like, “We did this.” You know, and so it was actually really interesting for me as a graduate student, kind of experiencing all these different (unintelligible) forms of communication that I kind of was aware of, like I’d heard the royal “we,” but I hadn’t really run into it until I was reading, you know, theses from collaborators, is like, you know, “Ted, what’s going on here?” Ted, who was a professor we were collaborating with, was like, “Yeah, it’s the royal ‘we.’” It’s like, “Oh.” (laughs) Sort of like, I guess that’s a thing that people who are other than royalty use here. So—

G: And here I get weird looks for using the royal “we” when I talk. (laughs) Interesting, though. So, what do you think—or why do you think it’s important to be able to write well in your discipline?

H: I would say it’s actually the same reason it’s important to be able to write well in any discipline, whether it be science or humanities or, you know, fine arts, is that you are only writing if you have something to say and that you have something to need to communicate to somebody else. So, you don’t do this unless it’s something important and it matters to you that somebody else that is not you understand what you are saying, the point you have to make, whether that be the process that you went through to get the end result, or the end result itself, or both. Good writing, whatever that looks like, is a vehicle to make yourself understood. And, you know, my students who are coming through my classes, some of which—many of which are going into STEM fields like biology or chemistry or pre-med, some of which are coming through into, say, engineering, where they’re like, you know, some of them, you know, say, like, “I am here because I do not like to write. I don’t want to write.” (laughs) Like, I get that. I understand that. Like, it wasn’t my jam in high school to be like, “I want to be able to write this essay.” But I think the important thing to remember is that, especially for those students, that the

obstacle is the path. Like, it's—don't—it is not a thing to find something which is difficult for you, that an obstacle for your way forward and then to do everything you can to avoid that obstacle and make your way forward easy. That is a short-term gain for a long-term loss. Because if you're an engineer, then you are going to need to communicate what you're doing, unless you want to be is sort of a maintenance engineer who's going to be stuck at the lowest levels of what you're doing and don't really have a progression career trajectory (unintelligible) flat line of, like, "Hi, this is my level, this will always be my level, I'm comfortable here, don't want to move." If that's what you're shooting for, then you'll I guess probably be fine. Because the only way to progress is for others to understand your value and your work, and while you do need to have the chops for it, the mathematical chops, the engineering chops, the biology, the chemistry, the physics chops, you also have to be able to communicate to those around you who are at a higher level than you, like, why you are so important, how you are so valuable. And if you can't write, then you can't do that. And you're going to get overlooked for promotion. People are going to get promoted past you. You may even get let go even though you're valuable because no one can tell.

G: Right. Good point. So, what specific writing skills would you say are important for writing in your discipline?

H: So, in physics, and I'm thinking specifically about these sort of academic papers, sort of, you're going into physics, into grad school, or into academia and publishing and all that, I think the—I guess two things. One skill is, like, you gotta revise (laughs). Like, and I don't think students think of that as a skill, but it really is a skill. And I would say—in my undergraduate degree, we had two semesters of lab. Just standalone lab. It wasn't a lab associated with a course. It was junior lab and senior lab. And for those, I had to just, like, write a lab report. You had a week to run an experiment, collect the data, and write the lab report. And in that process is when I learned how to write well, I guess, because I kept doing the same thing over and over again. Really, what—we didn't have time to do revision on what we were doing because you had to finish the lab and write it up, so it was pretty go-go-go kind of timewise for that. However, every week, I was turning in a lab report and actually getting comments back on that lab report: what was done well, what was not done well. And so every week, I was effectively writing iteration of a lab report and learning what I was doing poorly and what I was doing well. And that process is one which is deeply engrained in grant writing, which is another of this very formal sort of kind of academic-type writing as well as peer-reviewed articles. I mean, you are writing it, you are revising this, you're sending it out to the rest of your collaboration, because often you're working with a big collaboration. They're giving you feedback, you're revising it, there's one last round, then you submit it, then you get comments back from reviewers, and then you revise it, and then you resubmit it, and then it goes out, and you might even get people like, contact you after it's been published. You know, for grant writing, it is—the process we think of it as the layperson as, I sit down, I write a big grant, I send it in, I get a green light or red light, and I'm done. But the real process is, you identify who's going to be judging your grant, you email them, you call them up, you talk with them, "What are you looking for? Like, what is the—what are the things which are important?" You write a draft of it, you may even send it to them. It feels like cheating, but it's not (laughs). Is to be like, "Here's this thing, like, can I have some feedback on this?" Or feedback on your ideas on what you want to say, and then they give you feedback and you submit and then you don't get it, and then they give you even more detailed feedback, and you revise it next year; you submit it again. Like, there's some stats that I forget from when I was in graduate school or an early professor, and it was like, ten percent of first-time applications or something like that, to like, the NSF, the National Science Foundation, are accepted and awarded. It's a fairly low number. Like, you just expect you're not going to get it. But if you revise it and resubmit it, the odds of acceptance go up like multiple times. Like, you're at twenty or thirty percent now. If you do it again, like, you know, you're now in, like, above fifty percent chance of getting accepted. And so this revision is like, looking at what you are doing and maybe walking away from it, maybe not, have somebody else look at

it and coming back and not trying to do it all in one shot but write it, come back to it, read it, restructure it, think about what it is you want to say and why that's important. This kind of thing which is—I think we, as students, we lose it because we're like, "I need to write a paper. That's it" (laughs). Right, you're not thinking about what is the purpose of the paper, like, "Did I write—did I address the prompt? Yes, but why the prompt?" You know, "What is, you know, Dr. Green looking for in this paper? Like, what is it that he's interested in?" You should—I'm sure, Jon, you grade people on not just what you're interested in. But it really helps if, like, they're touching on something that you talked about in class because it's interesting, you know. This sort of trying to see this broader perspective, which you're not going to get that first time. Right? You never do. None of us do. And so that—come back and let me revise it, let me revise it, let me revise it. Right? And that process and seeing that not as, "Oh God, all this extra work" but like, no, it's just the work. You know, it's like, you're going to revise it three times, and that is—that's normal. I'm not going to get peeved about this. I'm not going to be, you know, whining about how I have to do it again, just like, no, that's the expectation. You're gonna—I'm gonna do this three times, and it's going to be really good at the end of the day because that's what's going to separate a lot of the people who are frustrated and feeling burned out. Sometimes, it's just expectation management. You know, do you expect to just coast in and crush it without working? If so, things are not going to go well (laughs). Because, like, we all get to a point very quickly in our careers where you can't just coast in. Like, there's a lot of work involved.

G: I think you hit on a couple of really important points there. One, no one gets it right the first time, right? Or it's very rare. It's very rare to write something really, really effective the first time through, even for experts, even for people who have been doing it for a very long time. You mentioned the acceptance rates for journal articles. Yeah, that's a perfect example, you know, here you've got people who are extremely qualified and extremely knowledgeable and probably pretty good writers, too, but even they, you know, have to contend with the reality of revision. I think that helps to look at it as part of the process rather than this extra work or being told you have to start over, you have to go back and do this extra work.

H: Right, right, yeah, I think—I think I always—in high school, thought of it as, like, the draft, like, the done, you know, five pages, whatever it is, like, that's the end of the process. And really, that should be like, the midpoint of the process. And now you need to take what you have and like, adjust it and change it, and sort of fiddle with it, you know.

G: Well, and you've also hit on the importance of seeking out feedback, right? Knowing where to look for it but also just being willing to look for it. I think that that is a big hurdle, and again a hurdle even for relative experts in the field. It can be hard for us to get out there and seek that feedback. It is pretty hard to be criticized for your writing, and it's very easy to take it personally. I've certainly felt that way, too. So, you can be a little bit reluctant to go out there and seek that feedback, but that is such an important part of knowing what you need to revise so you're not just flying blind.

H: Yeah, one of the things which sometimes I end up mentioning a lot but not recently is like, to students, is like, "Your professors—we are people just like you." If I'm—if I go to a party and don't know anybody, I don't want to talk to anybody because I don't know them. It makes me anxious, you know, about talking to a bunch of strangers and how they're going to think of me in just the same way everybody does. And, you know, when I was in my Ph.D. program and I had to select a committee to review my thesis, you know, I was talking to my advisor, who's also named Peter, he's like, "Why—what about Dan?" who worked in the—he ran the lab across the hall from us, and he was a sweet guy but also like, I had watched him kind of unintentionally crush people in like, the weekly or monthly departmental invited speakers at UW Madison, where he would—he looks like he's asleep in the front row, and then at the end, he opened his eyes like, "What about this?" And you would just watch this

poor speaker just be like, “Um, oh.” Right? (laughs) Like, completely unprepared, they don’t have a good answer for it. I was like, I do not want that to be my thesis defense. I don’t want to be in there and be like, have this question from Dan and me be like, “Um, I don’t know.” This is not a good look for getting your Ph.D. But my advisor, Peter, he was like, “Yeah, Dan’s going to ask you really hard questions. And those are the—he’s going to ask you that while he’s reviewing your thesis while you’re writing. You want those questions before your defense.” You know, and so while it is kind of stressful and anxiety-inducing to be like, “Hey, tell me what I’ve done wrong here,” which is what it feels like, you really need that before you turn it in (laughs). You want to be like, you put that grant proposal in, you put that paper in for publication, you want someone who can find the flaws that you didn’t find. Because it’s not—the thing to remember is that, especially as you go in farther, you feel like you’re at the bottom of this heap. Everybody’s finding these flaws, everybody’s better than you. But you’re at the top of the mountain. (laughs) You feel like, “Oh, these people are above me.” Yeah, but you’re not looking down at all these people that can’t do what you’re doing, but you’re just not aware of it. The other thing is, like, not every—like, they’re all at your level. They just found—everyone found a different thing that you missed. And when they submit a paper, the same thing’s going on for them, like, each of us can catch or do like, two or three things well. There’s like, two dozen things, right? And so of course there’s going to be so many more things that you’re not doing well, and it’s hard to remember that when what you’re getting the feedback on are the things that need to get fixed and not all the things that are awesome, because we don’t have time. You do so many things awesome we don’t have time to tell you all the awesome things.

G: Absolutely. That’s a good way of looking at it. Well, what has been the most important thing you’ve learned about writing in your discipline?

H: Practice makes perfect, I think, really. It’s like, the—I just keep coming back to the lab course, and you know, I graduated high school with—I mean, we didn’t have plus/minus grading, but I was one of like, twenty people tied for first for GPA (laughs), which means we got all A’s or A minuses. And so I did really well in English, right? I was like, “I got this. English? (unintelligible) write a paper the night before, A quality.” Like, no sweat (laughs). Right? And then I went to college, and I got a C in freshman composition. And I didn’t understand why. Like, I just could not understand how I was doing so poorly in the class. And I mean, a C isn’t—it’s fine, it’s not the hugest deal ever, right? But I’d gotten A’s in high school, and this was like, a big blow to me. And it wasn’t until that lab course really where I did it over and over and over again and kept getting feedback and feedback and feedback on it. And it was—it was then that I learned how to set up my arguments. How to support them with evidence. I mean, and this, ostensibly, was something I’d been taught in high school and in freshman composition, but like, it hadn’t sunk in or, like, I hadn’t seen it, like, I hadn’t figured it out yet. And so doing it on a weekly basis and being like, having someone say, “You make this claim here, but you don’t actually connect the evidence—you don’t explain why these numbers support this conclusion.” And having to think it through again and again and again (laughs), you know, that sort of a thing is that you just gotta do it and do it and do it. And that’s an easy thing to say, but you know, what does that look like? That means when you have a chance to, say, give a presentation, give it. Right? If you have—if you don’t know if you can do it, if you’re good enough, do it. Just do it. (laughs) You know? Like, you have—take those opportunities, make those opportunities. Like, try writing a paper. Read a bunch of papers as well, you know, there’s often like a weekly journal club where everyone brings a journal article to sort of read and take apart. Yeah, skim through three of them, pick one to present, listen to everybody (unintelligible). Try to understand the shape and structure of what’s there. Try to write it, you know. Go out on a limb. That’s the other thing that, like, we want to be safe. You know, we want to be—to not do it until we can do it right. But the fastest, best way to learn it is to do it and to fail. And then revise it and fail, right? It’s that—especially in science, it might take five years, say, to get to a point to publish the paper. And then you publish that paper and, you know, oh, this is—you’ve made it, you’re

successful. But what you're not seeing is five years of failure, right? If you could do it right the first time, that would have taken one week, right? But it took five years. So, you know, don't be afraid of that failure, like, you are in good company.

G: That idea of practice has cropped up in every episode that we've done of this show, so I think it's safe to say that's kind of a universal thing. And a lot of people, you know, they still don't really see writing as something that can be practiced. It's very common for people to kind of associate writing with natural talent. You either have it or you don't, and if you don't have it, you can't get it. And so it's nice to hear everyone agree that no, it is something that you can improve at. You can practice it. You can get better at it.

H: Yeah, take it from me, who got a C in freshman composition and, you know, came—bounced back slowly over time to the point where, you know, I can get a paper published, you know, I can write grant proposals, I can write job applications that will get me hired as a college professor. So it's—it is not a thing that is inborn to you. Some people are better, yeah, that is true. You know, I'm assuming, Jon, that you had a bit of knack, so like, you probably did—would have done better in my English classes than I did at the college level (laughs).

G: Well, it's funny you say that because I have my own humbling story. The very first paper I ever wrote for grad school. You know, I was able to kind of fake my way through up until grad school just using big words and big, long sentences and just sounding as fancy as I could. So I tried to do that in my first paper for grad school, and the professor wrote back on it, "Is this even English?" And I had a little moment there, speaking of seeking out the tough feedback, you know, it was very crushing in the moment, but now I look back on that and I'm actually kind of grateful that I got that feedback because he was right. I was dressing up my language, but I was not substantiating my claims. It was all hat and no cattle, so to speak, and it really kind of changed the way that I approached my writing from then on out for the better, I think, so in the moment, it was not what I wanted to hear, but again, that—sometimes the best feedback is the slightly painful feedback.

H: That's true, that's true. Yeah, so students, (unintelligible) painful feedback, that's good. (laughs)

G: Right, right. Well, I feel like you kind of anticipated my last question here. It's just, what advice would you have for a student looking to improve her writing in your discipline? So, any other words of wisdom or tips that you would give somebody looking to improve their writing?

H: Hmm, we did practice and revision. One of the things I mentioned but I think is worth mentioning again is to read. Read examples of the kind of writing it is that you need to produce yourself, so if it's lab reports, you're like, "I'm not sure what a lab report is," go talk to your suitemates. Be like, "Can I see your lab reports? I need to write one. I don't even know what this is." Right? You know, read those academic papers if that's what you—if you want to get into there. So, read the type of writing that you need to produce. I might also suggest read other types of writing that doesn't feel like the writing that you need to produce. One of the things which I think is true is that at heart, a lab report and, say, a position paper, are the same thing. They don't look like it, and a student might be much more comfortable writing about—I don't know, what do we write about in position papers these days? Like, I think it was like, death penalty and gun law back in the day. So, if you have to write something, say, like—make a stance and defend that stance, you know. That kind of convincing sort of thing. That's what a lab report is. It's—it is in a different form, right? You are using—your evidence is the data that you took. You still have to analyze it and explain what that data means. You have to draw a conclusion. You have to sort of connect these dots for your reader and not assume that they're just going to understand like, the conclusions that you've drawn or that the—everything operates the way that you think it's

supposed to. (laughs) You know, because your professor—if you're writing a lab report, you would be like, "Here's the data. You know, we see that this reaction works in this way." Well, your professor knows what's going on, so if that data doesn't support that, if your data is like, a little wonky, a little realistic as opposed to ideal, then you may get some comments back on there like, "Your data does not support your conclusion" or "You have not drawn that connection very good." So, much of what we think of as stuff that we're comfortable with or we're uncomfortable with at the heart is this convincing. It's making a case and explaining it to your reader in a way that they can understand. And it takes many different forms, but if I'm thinking of it in this sort of very broad, kind of general sense, then it makes all these different types of writing much more familiar to me. And I'm less intimidated by them.

G: And that's why I often say that all writing is persuasive in purpose. Even those genres that don't on the surface seem that way. Some are more obvious than others, but even something like a lab report is still persuasive in the sense that you are trying to persuade the audience to see things the way you see them, right?

H: Right.

G: Same with something like a news article, you know, any of these genres that we kind of think of as being neutral, objective, purely informative. Well, maybe on the surface, but if you really read between the lines, you can see that there is a persuasive goal underlying them.

H: Absolutely. The data never speaks for itself. Ever. It does not matter what field you're in, even in, I would venture, though not my field, mathematics. Like, you have to convince, you have to explain why it's important, why it works the way it does. And I would say that even in a narrative is persuasive in nature, not in the overall kind of thrust of it necessarily, but you have to convince me to care about your characters. You have this sort of like, behind-the-scenes convincing that you have to do to tell me that they're interesting, they're engaging, they're worth caring about. You know, and so you still have to worry about that, you know, persuasive aspect of it. Because if you can't persuade me that your characters are interesting or that I can—should identify with them, like, I'm out. I can't be bothered to read your story now because it's just—it's boring and uninteresting and unengaging, right? That engagement is a persuasive aspect, or I think you could argue that.

G: You gotta persuade the reader to keep reading, right?

H: Right. Talk to Dickens. He'll tell you how to do that.

G: Yeah, that's a great example, yeah. Well, I found this extremely elucidating, so thank you very much, Dr. Hyland. Hopefully, you all enjoyed this as well. Of course, we will have this episode and its transcription posted to the Writing Center website shortly. In the meantime, stay tuned for more episodes of "Writing Across Cottey," and don't forget that the Cottey College Writing Center is an available resource for you. We are open Monday through Thursday, six to nine pm in the lower level of the Ross Memorial Library. You do not need to make an appointment; just come walk right on in, weather permitting, and one of our tutors will be able to meet with you at any stage of the writing process, whether that's, you know, putting the finishing touches on or you haven't even gotten started. So, feel free to come on in and meet with one of our wonderful writing tutors. So, Dr. Hyland, thank you once again for a very wonderful episode, and we will be in touch for future episodes of the "Writing Across Cottey" project.

H: Thanks for having me. And I will say, for any students in my one hundred classes, go to the Writing Center. You have a paper to write? They will help you write it. And you should be so lucky that you don't need to make an appointment. So, use them until they're like, "I can't handle it anymore." (laughs)

G: All right, thank you for that shout, Dr. Hyland. Bye-bye.