Episode 15: Dr. Geoff Pullum

# KL: Katie Linder GP: Geoff Pullum KL: You’re listening to *Research in Action*: episode fifteen.

# [intro music]

# Segment 1:

# KL: Welcome to *Research in Action*, a weekly podcast where you can hear about topics and issues related to research in higher education from experts across a range of disciplines. I’m your host, Dr. Katie Linder, director of research at Oregon State University Ecampus.

On today’s episode, I’m joined by Dr. Geoff Pullum, Professor of General Linguistics at the University of Edinburgh where he has been since 2007. Previously, Dr. Pullum was a faculty member at University College London and at the University of California, Santa Cruz. He has been a fellow at the Center for Advanced Study in the Behavioral Sciences at Stanford University and a fellow of the Radcliffe Institute for Advanced Study at Harvard University. Dr. Pullum has previously served as Dean of Graduate Studies and Research, as Distinguished Professor of Humanities, and as Head of Linguistics and English Language. Dr. Pullum was elected a Fellow of the American Academy of Arts and Sciences in 2003, a Fellow of the Linguistic Society of America in 2007, and a Fellow of the British Academy in 2009. He is the winner (with Mark Liberman) of the Linguistics, Language, and the Public Award from the Linguistic Society of America in 2009 for work on the group linguistic science blog *Language Log*. He is also the co-author (with Rodney Huddleston) of *The Cambridge Grammar of the English Language* (2002), which won the Leonard Bloomfield Book Award from the Linguistic Society of America in 2004. Dr. Pullum also blogs at Lingua Franca for the *Chronicle of Higher Education*.

Thanks for joining me on the show today Geoff.

**GP**: Nice to be here.

**KL:** So I wanted to start by talking a little bit about an area of research that is kind of fundamental to your work which is theoretical research, and for listeners who may not know, what counts as theoretical research? What does that mean?

**GP:** I happen to hear on BBC radio just today, Lawrence Krauss the theoretical physicists talking about this and I agreed with what he said. That in a sense, theoretical work is easier but you pay for it by being wrong most of the time. You don’t have to observe the disciplines of keeping a team together and observing all of the rigorous procedures for conducting experiments and so on. There’s a lot of tough stuff that experimental scientists go through that theoreticians can sort of side step as they think stuff up but the punishment is you’re wrong a lot of the time. In linguistics all you can really do is conjecture what might be an interesting theoretical principle that holds universally and look around for ways in which it might be tested and at least review some of them. So I once spent quite a bit of time working on a paper that analyzed all of the material I could find on languages that were claimed to have object first in their typical word order. Object verb subject languages where the way you would say that, the dog chase the cat would be the cat chased the dog with the subject at the end. And I decided that all of the published descriptions of languages alleged to be that way were mistaken. You could tell that if you engaged in closer analysis of the texts and available evidence and argumentation and convince myself that there weren’t going to be any human languages of that sort. What this did to me was really just to heighten my sensitivity to the fact that I could be wrong about it. I now knew that if evidence came along that was overwhelming, I’d be very interested, and as it happened, and this is kind of amazing. The very next fall I had a PhD student at the university of London assigned to me for supervision who told me that he’d been working with an Amazonian language that he was pretty sure had object, verb, subject as its normal word order. Instead of just saying, “Well so what?” like anybody who hadn’t consider this, I had considered it intensely and was theoretically committed to the principle that there wouldn’t be any. So I said “I bet it isn’t but let’s have a close look at what you think is the evidence because I think it’s going to be a subject, object, verb language kind of like Japanese in which the subject is sometimes kicked to the end of the clause. And so we had a look and I found to my amazement that in a hundred percent of the first hundred clauses we looked at, it was always object, verb, subject. We’d actually discovered that there was an object, verb, subject language in the world. For him it was a surprise because he didn’t realize this was a biggie. As far as he knew it’s was just what he happened to find but he didn’t know it was remarkable. For me it was a surprise because I had convinced myself that we needed linguistic theory to exclude such possibilities. You put the two of us together, him with the evidence, and me with the theoretical commitment and you had a clash and it turned out it was me that was wrong. But I don’t think that the whole business that then followed from that, the paper in the international journal of American Linguistics that we completed that ultimately found evidence for ten or a dozen different object initial languages would have emerged at all if I hadn’t convince myself that it should be a theoretical principle that excluded them, right? So theory is a matter, to a large extent in science, of working out precise ideas that seem nice enough and plausible enough, you want to encourage them to be true but clear enough that they could be shown to be false if the right kind of evidence came along. And then science proceeds by falsifying beautiful theories over and over again. And the theorists who survived are the ones who don’t get so discouraged by this process that they give up on it. They enjoy the process of continuing to be repeatedly wrong and thereby give the people who have access to evidence, interesting things to contribute and the people who do experiments, interesting things to do experiments on.

**KL:** Well I think that’s so fascinating because such a large part of what your describing is the idea of being open to being incorrect and taking a question far enough that you can come up with a hypotheses and have a theory of what’s going on but then also understanding that any time it could be proven wrong and that’s just part of the process.

**GP:** Yes open to being corrected, that’s just what you don’t find in a field like politics. A political argument, the people who are really in the business, you know the politicians themselves. They’ve got to be right all the time about everything and that pretty much evacuates the debate of any interests intellectually a lot of the times. It’s what makes science so much more satisfying to me than political debate.

**KL:** So one of the things that you’re pointing to in your example is a good one in terms of this, is the role that collaboration plays in theoretical research and you just described kind of two things coming together that allowed for an answer to a question that you may not have been able to find on your own. Can you talk a little more about that, how collaboration can benefit theoretical research?

**GP:** Yeah well one way is what I just mentioned, collaboration between someone who is theoretically convinced of something with somebody who has evidence that could bear on that and they bring it together. It is possible also for two people who think they might be able to work out something theoretical to collaborate on that in pure theoretical research and very odd things can happen in the dynamic there. I remember in particular, one amazing day in my collaboration with Gerald Gazdar, the main developer of generalized face structure grammar in the 1980s, in the early 1980s in a discussion at Stanford among nine or ten researchers working on a project. And as the discussion proceeded, I pointed out something about how you could phrase structure rules without any reference to the linear order of the right hand side and it doesn’t really matter about these details. But Gerald looked up and said “that’s very interesting” and made a note. And Later he came to me and said “I’ve thought some more about that suggestion you made” and I almost forgotten the suggestion because it hadn’t really made a ripple in the general conversation, we went on to other things. But Gerald had seen something in it that I hadn’t and he explained that to me. He explained to me what might be the import of the suggestion I made in pure theoretical terms. Then I saw it and then we started working on a paper and what eventually emerged was a first paper on what came to be known as ID/LP format. And again it doesn’t matter exactly what that is, the curious fact about it is that it wouldn’t be easy to say who came up with the theoretical idea because it came out of my mouth but only Gazdar could see the implication. And without collaborating with him, I never could have worked out in full detail what we then made of it. Once we had, I went off to a linguistic society of America meeting and presented the first public paper presentation on it because I was completely in touched with it. It was definitely mine but the paper said Gazdar and Pullum on it because it was also completely Gerald’s. That would never have come about at all without the two of us and it was just a beautiful thing that we were able to work together like that. So there is a sense in which theoretical research can be very highly social and this is something that Laurence Krauss mentioned in the radio program I was talking about earlier. He pointed out that theoreticians usually have many colleagues, and socialize a lot, and talk to each other about what they are doing. Albert Einstein wasn’t an isolated genius, he had colleagues he talked to about physics. He knew other physicists and discussed things with them. Theoreticians actually talk to each other a lot and if they didn’t there’s a whole lot of breakthroughs that would never happened at all.

**KL:** These are great stories that you’re telling, I love these examples. We’re going to take a brief break. When we come back we’re going to hear a little bit more from Geoff about explaining theoretical research to the public, back at a moment.

# Segment 2:

**KL:** Geoff one of the things that I know you feel strongly about is being able to explain theoretical research to the public and I can imagine that in some of the things that even you’ve described in segment one, there may be areas that are difficult to explain to the public why they are important. Particularly if they are highly disciplinary and difficult for the general public to understand but I’m wondering if you can talk a little bit about some of the challenges of explaining theoretical research to the public, whether it’s the disciplinary nature of it or other kinds of challenges that you’ve come across.

**GP:** Well with fairly abstruse and difficult disciplines of which obviously theoretical physics be one and theoretical linguistics, it turns out to be another, not that I’m comparing the two. They are in entirely different levels because the achievements of physics in real science that supports in engineering are so enormous but linguistics can seem quite arcane and has a lot of specialized terminology and works rather abstractly. It’s a bit like mathematics in some ways and it is a very hard thing to explain to the public. It isn’t too hard to explain to the public that you found something like, over indulgence and alcohol leads to an increase chance of breast cancer, everyone can understand that. Though usually when it’s explained in the press by journalists they get something hopelessly wrong about the statistics, and the affect size, and things like that. But to explain to them what the differences between context rephrase structure grammar and context sensitive phrase structure grammar; very difficult indeed. So difficult that you need to decide whether the thing to do is a careful quarter and error of tutorial from the basics to get them to the point where they almost see it. Or whether you need to sidestep that and take a shortcut. Although it can be explained and I enjoy explaining that stuff to audiences and students. Usually it’s only graduate students in theoretical linguistics that would be the slightest but interested. So you have to know when not to explain something to the general public. Somethings while you don’t want to conceal them from them, it’s just not important for them to know and I’ve devoted quite a lot of time to thinking about what really does matter in linguistics that is worth explaining to the general public plus how to keep the general public reasonably entertained by the way you explain it. A lot of this stuff that I’ve done in blogs particularly on language blog, I’ve tried to be quite entertaining in the way I write it almost to the point of doing comedy. Even outrageous humor because that appeals to some people enough that they read language log more hoping for more of that. And the hope there is that if they read language log every day and are entertained and continue to be interested by the occasional pieces of outrageous humor from me, they will also read these deep analysis of statistical and psychological matters by Mark Liberman, which will do them enormous amounts of good. So I have written seriously on blogs about particular things, sometimes quite simply explaining a linguistic point or opening up the idea of a subfield of linguistics, writing them as clearly as I can. But I also do outrageous jokey stuff about language just because I want to make sure people are having fun when they read language log or Lingua Franca, the other blog that I write for.

**KL:** Well we will definitely link to both of those blogs in the show notes so that listeners can read a little bit more about what you’re talking about with this use of humor. I’m wondering, you know you mentioned humor as like a possible mechanism or strategy to explain research to a large cross section of the public and you also mentioned kind of the challenge of thinking about, what do you explain? What do you not explain? Can you talk a little bit about how you make that decision of what you think needs to be shared with the public and what do you think maybe is not so relevant for them to know?

**GP:** It’s very difficult judgement calls every time but I think the primary thing you have to do is discipline yourself not to just go off on a flight of abstruse exposition of something that particularly fascinates you but to stick close to where you’re trying to get to. In other words it’s about having some idea of the audience you’re talking to, or writing for, and what their interests might be, never forgetting what their state of mind might be. In effect it comes down to what psychologists call theory of mind. Instead of just blathering on about what appeals to you, think about how this is going to sound to them and what they might be hoping to get out of it and whether you can encourage them by showing them that they can get something out of it. It’s difficult because of course typically with a blog, I mean language log is getting millions of page views a month, so we’ve got a very large audience and they will be very different types. You can’t type cast them and many different kinds of people out there; some of them will know far more than I do about theoretical topics and others will barely know any linguistics at all.

**KL:** One of the things that you seem to be implying is that there’s a relationship that gets built between you and the public. You know, you as the researcher and the public as a consumer of that research but also that you’re trying to build a relationship between the public, and the topic itself, and linguistics, and helping them to have a better understanding. Can you speak a little bit about that?

**GP:** Yeah the whole idea of language log when Mark Liberman and I started at discussions about setting it up in 2003, was really that we wanted to increase the visibility of and understanding of linguistics to a general public. They know quite a bit about psychology and they certainly know that the field exists and the same is true of economics and everybody knows there are physicists and cosmologists out there. But quite a lot of people, when you say that what you’re a professor of is linguistics, actually say what is that? So it isn’t the case that the general public can be counted on to know that there is such a thing as the scientific study of language as a phenomenon in general and how it relates to matters of human cognition and possibly computation. That isn’t necessary to the case and we wanted it to be a bit closer to being the case. We wanted to make it more widely known that there is such a thing as linguistics and it rapidly became apparent that we were going to have to convince the public about a few things more basic than that, like that it was possible to use evidence about the way language was. You didn’t have to just give off the top of the head opinions because to a large extent it seemed that what we were reading in newspapers and magazines about language was literally plucked out of nowhere and supported by nothing. People would just say they felt this, that, or the other. They would sometimes even tell blatant lies about it because they hadn’t checked for even one minute. People imagine that on language there and expert, they can give an opinion and it’s their opinion so it’s very true. Whereas they never think of doing that about properties of medals or something. If you’re going to claim that the boiling part of chromium is fairly low, you should look that up because you’re not a mythologists and in fact that’s false. Everybody knows it’s false with mythology and if they wanted to say something about it, they check their facts. With language they don’t check their facts and on language log we have probably published hundreds, possibly even more than a thousand posts mainly devoted to the idea of reminding journalists and ordinary people saying things about language that these can be tested these claims and its worth doing that because quite often the truth is the exact reverse of what you thought it was or at least very different from what you thought it was. And language is interesting enough that we need to know this. We should be able to find out and publicize what’s true about languages and what isn’t.

**KL:** Thank you so much for sharing a little bit more about explaining theoretical research to the public. We’re going to take another brief break. When we come back we’ll hear a little bit more about Geoff’s experience with co-authorship, back in a moment.

# Segment 3:

**KL:** Geoff you have been a very prolific writer particularly in collaboration. You’ve co-authored more than one hundred works. I’m wondering if you can talk a little bit about what draws you to those collaborations.

**GP:** Yes I found myself wondering about that recently when I realized that the number of co-authored publications on my vita had gone beyond a hundred. Plenty of linguists do work entirely on their own, like field work and description, or individual theoretical contributions. And I have found myself doing more collaborations than is probably the norm and I think it might be because I enjoy the interactive process of working out which way to go. And one other thing that I think might be quite important here is that I have an enjoyment of the writing process that is unusual. So sometimes when I run into someone who’s got a good idea nearly worked out, what I enjoy is not just helping them work it out but helping them write it up or even writing it up entirely myself. There have been some papers where I did all of writing and I’m not at all grieved that they came out as joint work because I enjoy the writing and I wouldn’t have written that if I hadn’t been in touched with that person in discussing a topic with them. For the people who love having the ideas and hate the writing up process, I’m just a dream because I’ll listen to the ideas, I’ll contribute a bit, I’ll understand, I’ll see ways of presenting, and then I’ll enjoy the process of writing the whole paper. That is just one of mind twerks that I enjoy writing enormously. It’s one of my hobbies as well as a primary part of my every day work. But if you take a specific example of a series of collaborations, it might be instructive. It was way back in, I think 1972 that having read an article on a principle called *The Principle of Phonology Free Syntax* by Arnold Zwicky, I wrote to Wicky and told him how much I appreciated that article and shared an idea or two. And the idea came to us that we might do some collaborative work on that topic. There after though, he lived in the states and at the time I lived in Britain. We met because he visited London and sooner or later we did get started on some joint papers and we’ve now done about twenty papers among which I think are some of the most important and interesting I ever done and we just kept on pushing on this question. The issue was, is it ever the case that grammatical property of sentences in some human language are directly sensitive to the way those sentences have to be pronounced. Or is it always the other way around that from the grammatical structure you can predict aspects of how to pronounce them but the pronunciation never directly has an effect on what’s allowed to be grammatical. Our belief is the latter, nothing about pronunciation directly affects grammaticality and all of the people and many people who have tried to show the opposite have done a misanalysis in one respect through another. So the way we worked on that topic was just to find people who have written things that would imply they disagree with us and examine more closely the crucial evidence that they had been working on and show that there was a different analysis that worked better and respected the principle of phenology free syntax. We might be wrong ultimately but twenty very satisfying pieces of linguistics came out of our joint attempts to work on that puzzle. Some of them where almost entirely directed by Wicky and written up by him, and some of them almost entirely mine. And we generally put both names on, although we didn’t the Linen and McCartney thing, maybe we should of. Linen and McCartney just decided, right at the beginning that they would always have both names on all of their songs and in that order. Wicky and I decided that we would try to identify who was mainly doing this one, it was either both Wicky and Pullum for many of them or Pullum and Wicky for others. And that’s a decision that if you’re going to do collaborative work you ought to make right at the start. There should be early discussions; do we have the names in alphabetical order that enables you to say things like, your name begins with z, you’ll always be last if the answer is yes, would you like it to be otherwise. Arnold I’m sure doesn’t enjoy it always being at the end, so it was an easy call to say, let’s try and identify in each cases the main author and who’s the other one. Some people don’t ever want to be the number two and put names in reverse alphabetical order does imply that the person might be less important, almost like a research assistant. I was once advised by a fellow student, when I was either a graduate student or a very junior academic against doing a co-authored paper that I was planning with Paul Postal who is a very famous linguists, always has been, was back then ages ago, late 70’s, still is. I was advised against it on the grounds that it might make me look like I was nothing more than a research assistant. All the more so because if we had alphabetical order, Postal comes before Pullum and I rejected the advice completely almost without thinking about it because I thought “yeah but I want to do this, it looks like it would be fun”. Postal’s is an interesting character, apparently very prickly but in fact a very nice person to get along with when it’s one on one. And we had closely aligned ideas and a very definite polemic lane for the paper we wanted to do together and sure enough it was tremendous fun working with him. I enjoyed it so much and the papers were, we did about four or five papers together and they were reasonably important papers. And I did other stuff too so nobody ever really came to think of me as a nothing but Paul Postal’s research assistant. I did enough other stuff that, that isn’t a very plausible description of who I am. And I certainly didn’t take the advice to stay away from it because I wanted my work to be fun and this looked like it would be fun. So I don’t think people should be afraid of co-authoring even with the famous if they get a chance. On the other hand I don’t think they should be shoved into it, a point that I made in a blog post that I wrote about this. I’ve also heard some people who have had a very nasty experience of writing a paper and submitting it to a professor while they are in graduate school and then seeing the professor publish the paper virtually unchanged under the professor’s name and they don’t know what to do. It’s shocking it turns from collaborative work into straight plagiarism and they don’t know how to address this because of course to complain vigorously to the professor would be to end your career as a graduate student. But at least you can try to decide what the rules are around here upfront. You can ask questions about how joint work will be treated and who has the rights to what and so on. And I don’t think anybody should be bullied into pretending that a work is joint when it isn’t but nor should they be afraid of doing joint work in case they get overshadowed. If you’re good, you won’t be overshadowed, not even as the number two author to someone as famous as this Paul Postal, you’ll survive it.

**KL:** You’ve offered some excellent advice here Geoff. I want to point out to our listeners in case they are interested, we do have an episode on research collaboration episode 6 with Kirsten Behling were we actually reference one of Geoff’s chronicle blog post about co-authorship and also an episode five with Jim Kroll from the national science foundation. We talked extensively about research misconduct and how it can arise from collaboration. So, if you’re interested please feel free to look up those episodes. Geoff I want to thank you so much for your time. This has been wonderful talking with you and hearing some about your previous work, and your collaborations, and your theoretical research, so thank you.

**GP:** Katie it’s been fun talking with you and I do like fun. Thanks, bye, bye.

**KL:** …And thanks to the listeners joining us for this week’s episode of *Research in Action.* I’m Katie Linder and we’ll be back next week with a new episode.

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# Bonus Clip:

**KL**: Geoff one of the things that really impresses me about your work is that you’ve been blogging as an academic for over ten years on a couple of different blogs with a language log and also Lingua Franca with the chronicles of higher education and maybe other places as well. Can you talk a little bit about how that blogging experience has impacted your academic work?

**GP**: Yes, the first thing to say is that when Mark Liberman suggested to me that we do a collaborative group science blog about linguistic science, I didn’t know there were such things. I thought blogging software, which I had vaguely heard of was for people who wanted to keep their diaries online so their friends could read them and so on. I had no idea that people were using the same software to distribute scientific ideas more broadly. But I saw immediately it was a cool idea and somehow the culture that would go along with it became immediately apparent to me. It became clear straight away as if instinctive that you could do little short pieces and maybe little tiny little observations that would be nothing more than a tweet today, or lengthy pieces and you could vary your styles and do all kinds of things.

And we started and I found that contrary to what you might expect, devoting some energy to blogging wasn’t sucking that energy away from writing serious papers. I continued to do serious stuff as some of it very heavy serious material that took a lot of time, most of my time. The blogging for me was as stimulation rather than a way of exhausting my energies so that I didn’t have the energy left for serious work. Early on language log just happened to have the habit of always having comments switched off on every post. And I came to think that was exactly how it should be because my conception of it, I realize than I was, that we were making a little magazine about linguistics to be read. And in a magazine you don’t have a letters column of arbitrary lengths in which every letter is accepted.

Today it’s much more the case that blogs are expected to have open comments area. Lingua Franca on the chronical of higher education site always has, nearly always has comments open. And I have come to realize that the commenters are not at cross section of your readership. The commenters as I put it quite often seem to have hearts of stone, ears of clothes, and brains of pork. They are nasty, they are stupid, and it’s important to realize they are not representative, otherwise you would really give up on writing. It may be the case that the difficulty of getting women to write for group science blogs and language log has had a lot of difficulty with that, has to do with the tendency for comments to be hostile and the tendency for women quite rightly not to like that. I have sort of hardened my outer skin to be a kind of counter-face and I pay no attention to the nasty, nitpicky, stupid, things that are said in the comments area. I just know that the average level of the readership out there is much kinder and much more intelligent and I imagine them out there and write for them. If I measured my success by whether anyone said anything nasty about what I’d just put out there, well I’d be a disappointed man. Mark Liberman once kindly explained to a dissatisfied commenter on language log after we had started allowing comments and I had switch comments off on some of my posts and people were grumbling about that. And Mark said “look Geoff is prepared to give you free music but doesn’t want to supervise a mosh pit okay?” And that’s a lovely way to put it, that’s what I felt.

**KL**: I love that, that’s wonderful. Well thank you so much for sharing your experience with blogging and we will definitely link to those blogs so people can read more.

**GP**: I’m happy to do it Katie.

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