

BOOKS AND IDEAS PODCAST

With Ginger Campbell, MD

Episode #37

Interview with Dr. Massimo Pigliucci, Author of *Nonsense on Stilts: How to Tell Science from Bunk*, and Co-Host of the *Rationally Speaking* Podcast

Aired August 10, 2010

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INTRODUCTION

Welcome to Episode 37 of *Books and Ideas*. I'm your host, Dr. Ginger Campbell. Today I have an interview with scientist turned philosopher, [Massimo Pigliucci](#), who I had the privilege to meet at [The Amazing Meeting 8](#), which was held in Las Vegas, Nevada in July, 2010.

This is my first experience using a portable recorder, and I will apologize in advance for the sound quality. I advise against trying to listen to this interview in a noisy environment, but I hope you will enjoy it.

As always, you can find complete show notes, links, and episode transcripts at my website, [booksandideas.com](#). You can send me email at docartemis@gmail.com, or leave a voice mail at 205-202-0663.

I will be back after the interview to tell you a little bit more about The Amazing Meeting and upcoming episodes of [Books and Ideas](#).

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INTERVIEW

Dr. Campbell: Massimo, first I want to tell you how much I enjoy your podcast, *Skeptically Speaking* (Correction: [Rationally Speaking](#)), and I'm in the middle of reading [Nonsense on Stilts](#), so I will definitely link to that on my website and encourage my listeners to check both of those out.

Dr. Pigliucci: Thank you.

Dr. Campbell: I know you started out in [evolutionary biology](#), and then you went on to become a philosopher. And so, I thought maybe you'd tell us how that happened.

Dr. Pigliucci: It was the result of my midlife crisis, I suppose. Instead of buying a sports car, I decided to get a second degree in [philosophy of science](#). And then eventually that led to switching my career altogether.

The way this happened was because I always had an interest in conceptual issues in science, and theoretical science in general. When I was an evolutionary biologist I was running a wet lab, so we were doing field work and experimental research. But as time passed I realized that my heart was really in conceptual analysis of aspects of evolutionary biology from a theoretical point of view.

And so, at some point a few years ago when I was a faculty at the [University of Tennessee](#) I had the opportunity to meet a really bright young philosopher of science, [Jonathan Kaplan](#), with whom I later co-authored, [Making Sense of Evolution](#), for The University of Chicago Press. Almost as a joke it came out that I should enroll in the philosophy graduate program and work with him. And it actually worked out, and it was a lot of fun.

And when I moved to New York I had an opportunity with [City University](#) to apply for a position in philosophy, and I decided to make the jump full-time.

Now, of course, it's not as big of a jump as it sounds, because I'm doing philosophy of science, and so it really has continuity with what I was doing before. But it's really refreshing because it's a different crowd; it's a different way of writing and thinking. So, it's interesting.

Dr. Campbell: I got interested in neuroscience, as a sort of sideline, indirectly, through exploring Western philosophy and the history of philosophy, and then I realized philosophy of mind was really hot because it's right at the border. And that fascinates me, how there's that shifting border between science and philosophy over time.

Dr. Pigliucci: That's right. And that's a model, actually, that a lot of philosophers are very conscious of. The core philosophical issues will presumably remain philosophical—if you do metaphysics, if you do ethics, or if you do epistemology. But a lot of the “philosophies of” (there's philosophy of science, there's philosophy of psychology, there's philosophy of mind, as you pointed out) those are all interesting fields because philosophers, themselves, see those as temporary—as evolving toward a science.

So, what they see as the contribution of philosophers there is to help, early on especially, to clarify the conceptual issues: what is it we're talking about and how are things related to each other. And then eventually the science takes over and it becomes neurobiology, or cognitive science, or something.

The philosophy of mind conferences are really interesting at this point, because it is one of the few cases where you can see an almost equal number of philosophers and neurobiologists or evolutionary biologists coming in and contributing to each other's work. It's one of the best examples of bridging the difference between the two cultures, I think, that you can find today.

Dr. Campbell: So, what is philosophy of science?

Dr. Pigliucci: I'll tell you first what it's not. Several years ago, [Steven Weinberg](#), a Nobel physicist and an incredibly smart guy, wrote an essay which had a peculiar title—[Against Philosophy](#)—in which he went on for several pages attacking philosophy, and in particular, philosophy of science, for not making contributions to science and not solving scientific questions.

It was a really interesting read, but it's based on, of course, the wrong assumption. Philosophy of science is not in the business of answering scientific questions; we've got science for that. Philosophy of science is not about taking over the job of scientists. So, what is it that philosophy of science does? I think it does largely three things.

On the one hand it is an independent field of scholarship which asks questions, like: we have science, it works very well, how does it work? How is it conceptually that scientific methods work? What is it epistemologically? What kind of assumptions go into science? How does the whole process work out so remarkably well? So, it is a discipline that looks at science, as its object of study, from the outside.

A second area in philosophy of science is, on the other hand, much more continuous with science—and that is actually the kind of philosophy of science that I tend to do. These are areas where there is significant overlap in the interests of philosophers on the one hand and theoretical scientists on the other hand.

These are areas where the technical literature is actually impossible to distinguish. If you read a paper, for instance, in the philosophy of quantum mechanics, you can't tell whether it's written by a philosopher or by a theoretical physicist unless you actually look up the affiliation of the person.

Dr. Campbell: And you're talking about people doing real philosophy of quantum mechanics, not pseudoscience.

Dr. Pigliucci: Right. Absolutely. The interesting examples there are philosophy of quantum mechanics; philosophy of mathematics is another big one, where both mathematicians and philosophers contribute to the field; and philosophy of biology, particularly when it comes to questions about, for instance, the nature of species, or the structure of evolutionary theory—which is what I'm interested in.

All of those areas present people with multiple challenges, some of which are strictly theoretical science that can be approached mathematically or computationally, and others that tend to be more conceptual in nature—and those are the areas where philosophers and scientists actually work.

Dr. Campbell: Do you think philosophy of mind still fits into that, or is it moving away from that?

Dr. Pigliucci: I think it's moving away from it. It is probably already past the half-way mark, at least.

And then there's a third area of philosophy of science, which I refer to as “science criticism”—although the term, unfortunately, has got a negative connotation because of a lot of postmodern nonsense that went on in the 1990's. But I do think that there is a good reason to reclaim that term. What I mean by “science criticism” is this: science is too important an activity to be left only to the scientists.

The scientists know how to do the science, but they don't necessarily know (or certainly, they shouldn't be the only ones to determine) the priorities in terms of funding, the public understanding of science—all those things are too important to be left only to the inner group. We need a broader number of people to

understand how science works, why it is important to fund certain kinds of science or other, what are the consequences of scientific findings for society or for individuals.

That work, I think, can be facilitated by philosophers—philosophers of science, in particular—for two reasons. First of all, because they're not antagonistic to science. And second, because they have a background in science. You cannot do philosophy of science unless you have a background in science. Obviously, it's not as much of a technical background as the scientist, but there's a good reason for that, because the role of the philosopher is not to do science, it's to evaluate the science. It's to help create this interface between science and the public.

So, I think those are the three general areas of philosophy of science that make it both intellectually important and important from the point of view of the general public.

Dr. Campbell: From the point of view of the general public we have this big problem now with so many people not really understanding what science is or how it works. So, you would be arguing that a community responsibility of a philosopher who's doing philosophy of science would be to care about that.

Dr. Pigliucci: Absolutely. And I'll give you an example of this. One of my favorite examples is the [Dover vs. Kitzmiller](#) decision a few years ago—I think it was 2005—in Pennsylvania. This was a famous trial about the teaching of intelligent design in public schools.

Now, if you read the final decision that was handed out by the judge, it's really interesting, because it's about 50 pages or so, and some of it, as you would expect, deals with the legalities of it—how the teaching of religion doesn't agree with the Constitution, and so on and so forth, and what, historically, the Constitutional tests have been that have been put up front by the Supreme Court.

But the remaining part of it is really a quick overview of—a quick course in—philosophy of science. The judge goes into the definition of science, the definition of pseudoscience, the difference between the two, and how you tell that difference. It talks about [Popper](#) and the [demarcation problem](#).

It is very well-informed by philosophy of science. And it's not by chance, because two of the major witnesses at the trial were [Barbara Forrest](#) and [Robert Pennock](#), who are both philosophers of science. And they clearly made the convincing argument for the judge, because the judge relied heavily on their testimony to write his decision.

That's a really interesting example where philosophers can mediate—in this case between the experts (the scientists, themselves) and a judge—and make a tangible difference. I think philosophers need to look at more areas where they can do that. In some areas this interfacing between science and the public is already well developed—for instance, in ethics; particularly in ethics of scientific research and ethics of medical research. A lot of philosophers, these days, actually find employment as ethicists.

Again, that is interesting because, for instance, somebody who specializes in medical ethics is somebody who has to have a good degree of familiarity with medical practice and medical research, but, of course, he is not a doctor. His expertise is in ethics. These are people who actually are resident in hospitals, and they regularly talk to doctors about whatever ethical issues come about—which, as you might imagine, is pretty often, in a hospital setting.

So, I do see a broader role of philosophers. Now, I don't want to overdo it. I don't want to present philosophy as a universal field where philosophers get to pretty much do everything and interact with everybody. But it is true that philosophy as a type of discipline trains you broadly in critical thinking, in conceptual analysis, and of course, also in writing in a certain cogent way.

Well, those are portable skills. One of the reasons that philosophers have such broad applications of what they do is because those are portable skills—those are things that you can apply to a bunch of individual issues, or a bunch of individual sub fields, and that you get through your philosophical training.

So, philosophy, I think, is broadly underestimated at this point in American society. But hopefully things are changing gradually.

Dr. Campbell: Well, I think it probably helps that there are people like you, and even [Daniel Dennett](#), writing books that show that philosophy is useful. I have to admit that as a young person in the 70's I was totally turned off by philosophy.

Dr. Pigliucci: Your experience was definitely not unusual. But things have changed. And you're right, Dan is a great example. I'm personally very grateful to him, because he was one of the people who graciously wrote a letter of recommendation for me for my new job. If he thought I was good enough to be a philosopher, then I'm pretty happy. But, yes, he has been instrumental. And there have been several others.

Again, in the last few years—let's say over the last 10 years or so—we have seen the appearance of magazines of philosophy dedicated to the general public. There is [Philosophy Now](#), for which I occasionally write. There is [The Philosopher](#) magazine; there is [Think](#). There are three or four of these out there.

That is interesting. It is still many fewer than, say, science-related magazines for the general public, but there is a good choice out there. And it's interesting that these magazines now have been around for several years, and they seem to be doing well.

Philosophy has had, historically, a PR problem. If you think of philosophy, you think of an old stuffy bearded white man who talks about boring things and just reads monotonically.

Dr. Campbell: With the emphasis on reading the original guys like Plato and Aristotle, it seems so opposite from science, where I'm not reading Newton; or even Einstein, I have to admit. It's more of a building. And then in philosophy—at least the way it's been traditionally taught—students are expected to read the really old stuff first. How many students does that stop from ever getting to philosophy?

Dr. Pigliucci: Probably a lot; which is why that is changing. For instance, I teach an introductory course in philosophy called “The Problems of Philosophy.” The way I do it is we do some of the original readings, but they are scattered throughout. The way the course is organized is not historically. You don't start with the pre-Socratics and go all the way to Descartes, and so on. What you do is you start by questions.

One of the textbooks that I use often is called, [*Twenty Questions*](#). That is structured around these 20 questions which are of broad interest—like is there a God, what's the difference between right and wrong, what is beauty, what is justice, and so on and so forth. You set up the question, which immediately engages the students. I mean who is not interested in the existence of God, or justice, or democracy, and so on?

And once you do that, then you say, well, let's take a look at what philosophers have been writing about this particular topic—the most recent first. So, we start with the most recent philosophers—the contemporary ones—and then we go back and say, “Actually, this topic was introduced by Aristotle,” or, “Here's what Kant had to say about this thing.” And it becomes much more dynamic; much more interesting.

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Dr. Pigliucci: You were right, however, in picking up a fundamental difference between science and philosophy. But I want to make clear where the difference, I think, comes from. You're right; most scientists don't read Newton. In fact, pretty much no scientist reads Newton—or even Darwin, frankly. I know very few colleagues in evolutionary biology who have actually read Darwin.

For good reasons. First of all, it will actually slow you down. It's not the kind of reading that provides you with current fresh ideas about what to do in your lab or what to write your grant proposal on. So, there is a good reason for it—although sometimes I wish scientists were a little more aware of the history of their own field. I think that would be, in fact, useful.

In philosophy, as you point out, in contrast, we really take a look at the entire 2500 year tradition within Western philosophy—and even further, if you're talking about a more comprehensive look at philosophy, including the Eastern variety. But there is a reason for that.

And the reason for that is because philosophy makes progress, but in a different way from science. Science, obviously, is about empirical findings: something

either works this way or it doesn't work this way; we're going to find out, and then we'll move on. In that sense science makes progress.

Philosophy makes progress in a different way. It makes progress by clarifying ideas and by exploring the connections between ideas; which means that if you want to talk about ethics, for instance, you cannot ignore Aristotle, because Aristotle was the first one that actually put down all the basic hallmarks of what it means to talk about ethics.

But the reason you also want to know about Aristotle is because, if you are a modern ethical philosopher, you don't want to make the mistake of making the same argument Aristotle made; because plenty of people have criticized him, and we have explored that conceptual space, and now we know why certain notions were wrong and are no longer defensible.

So, the job of the modern philosopher is really complicated, because it is to be aware of the tradition, not for its own sake, but so that you can actually build on what came later. And building on ideas, as opposed to building on empirical data, does require a comprehensive knowledge of the original way in which those ideas were presented. In that sense you really can't do philosophy without doing history of philosophy.

But, I agree with you that a much better way—especially to present to the general public—is to go in that other fashion I was talking about earlier. Over the last several years there have been a large number of new books about philosophy for the general public which are very different from what they used to be. It used to be if you picked up a book about philosophy for the general public, you would start from Plato and go on.

Dr. Campbell: And that went back to Bertrand Russell's example.

Dr. Pigliucci: Exactly. Russell's, [*A History of Western Philosophy*](#), is exactly written like that. A lot of those books were written like that. Russell's is actually very interesting and captivating because of his writing style. But, yes, you start from the Old Masters and you work your way up.

The modern way of introducing philosophy to the public, on the other hand, builds on popular culture. So, there are several publishing houses that have asked professional philosophers to write books or edit books about popular culture. I contributed to a couple of those.

For instance, a couple of years ago I contributed a chapter to a book on the philosophy of *The Daily Show*. Well, is John Stewart a philosopher? No, he's not a philosopher. But there are many conceptual issues—many interesting issues—that come up when you actually watch *The Daily Show* in a more serious tone. Yes, there are the jokes; but there is a lot of serious stuff going on there.

And a lot of my colleagues and I have used either individual episodes of *The Daily Show*, or general themes, such as John Stewart's "Moment of Zen" at the end of each show, to introduce the public to certain aspects of ethics, or philosophical discourse in general. One of my favorite books in this area is the philosophy of *The Simpsons*, because you can pick any episode of *The Simpsons* and explore all sorts of interesting ethical issues.

Dr. Campbell: I think I have [*Buffy The Vampire Slayer and Philosophy*](#). I don't know that I've actually read it, but I think I have it.

Dr. Pigliucci: I have not read that one. I have just contributed to a new one that is coming out next year, and that's the philosophy of Sherlock Holmes. It focuses, as you might imagine, on epistemology and logic—how do we know things. But now nobody would pick up a book on logic and epistemology. But a book on Sherlock Holmes that introduces you to those topics in logic and

epistemology by taking advantage of the popularity of the fictional detective—that works.

Dr. Campbell: Yes, that makes sense.

We've got five minutes, and I don't want to start a complicated subject and have to cut you off. Let's just go back to history for a minute. You've talked about how important a concept of the history of philosophy is in being able to be a practicing philosopher. Do you think that could be part of what you do in your communicating with the public?

Because we have this really big problem: Americans don't seem to appreciate why we have—or used to have—separation of church and state. If we actually knew any of our history, or even some history of Europe, we would appreciate why that's valuable and worth saving. Would that be part of history of philosophy? Could that fit into the job of the public philosopher?

Dr. Pigliucci: Yes. I think it's generally an issue of the history of ideas. And, of course, a lot of the ideas that underlie, for instance, the Constitution of the United States, are philosophical ideas that we inherited straight from The Enlightenment.

So, yes, it would be very helpful if people had a better understanding of where these things are coming from—not only in terms of appreciating them and respecting where the Founding Fathers were coming from, but also to appreciate where they went wrong.

There is a tendency in some quarters in the United States to sort of treat the Founding Fathers as demigods—that they got everything right the first time. Well, they didn't. They were holding slaves, for instance. Women were not allowed to vote. There were a lot of things in the original version of the United States of America that definitely were not working particularly well.

But understanding the history of ideas does exactly that: it puts them in a perspective that allows you to understand, first of all, why we're having certain debates today which are framed in a certain way. Framing a debate is almost as important as carrying the actual debate out—as, of course, savvy politicians know.

All you have to do is to call somebody “pro-life” or “pro-death,” or “anti-this” or “anti-that” and you will immediately change the way in which people perceive the entire debate. Politicians are very good at doing that sort of thing, and they usually, unfortunately, use it in a sort of manipulative way. It's important for the public to understand where the framing of an issue comes from, both historically and in terms of where your current discussion is going.

Again, I do think that philosophers have a role there. I was very heartened to see just in the last few weeks *The New York Times* started a philosophy blog—which kind of stunned me, actually. It's called, *The Stone*, as in the [philosopher's stone](#). There are several contributors. It's a number of philosophers who write essays once a week for *The New York Times* on issues ranging from esthetics, to ethics, to environmental issues, and so on and so forth.

It's so refreshing because, as with every one of these kinds of efforts, some of the essays are better than others, some are more convincing than others. Sure. But they're out there. These are professional philosophers, several of whom are actually very well known in the field.

I'm thinking, for instance, of [Peter Singer](#), who was one of the contributors. [Arthur Danto](#) on esthetics was another one. These are very high-profile philosophers who actually bother to write 1500 words for the general public at a level that is understandable to the average intelligent reader of *The New York Times*.

And that brings philosophy into the conversation. And to my surprise, not only is *The Times* doing it, but if you look at the comments that are left on those threads, they are very interesting. Yes, you get plenty of people who disagree with the whole idea of having a philosophical discussion, and yet they're engaging.

Dr. Campbell: They're having one.

Dr. Pigliucci: They're having one, while disagreeing. And I think that's a great example of how things have slowly been changing in a good direction for philosophy; which I think benefits society at large. It's not the solution to all problems, of course. But it is yet another, I think, potentially very important piece of the conversation that we need to keep going.

Dr. Campbell: Do you consider [Rationally Speaking](#) to be a philosophy podcast?

Dr. Pigliucci: That's a good question. It originated as a skeptic blog, and then also as a podcast. After all, it is produced by [New York City Skeptics](#). But because of the way we set it up, my co-host, [Julia Galef](#), has a background in science. She is a science journalist. I, of course, have a background in science, but I bring the philosophy to it.

So, to some extent it is certainly not a dedicated podcast for philosophy. But it is a podcast about science and societal issues that does bring in a pretty heavy philosophical sort of background—heavy, hopefully, not in the sense of unintelligible, but in the sense of an actual presence in the conversation.

In fact, one of the nice things about the podcast is that the interaction between Julia and myself, I think, works very well—not only because we have a difference in age. We know from our demographics that we actually appeal to different age groups. So, she takes care of the younger crowd, I take care of the older crowd, and that way we cover a pretty good range.

But the thing that makes it work is that she has a healthy dose of skepticism about the contributions of philosophy. She is much more science-oriented. I can see where she is coming from, having been a practicing scientist; but, also, I bring the other perspective in. And I think the give and take that results from it is certainly enjoyable for us, and seems to be working for people.

Dr. Campbell: It has definitely gone to the top of my list.

Dr. Pigliucci: Thank you.

Dr. Campbell: Well, thank you, so much, Massimo.

Dr. Pigliucci: It was a pleasure.

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First, I want to thank Massimo Pigliucci for taking the time to talk with me. I wish we could have talked longer. Since the interview I have finished reading his new book, *Nonsense on Stilts*, and I highly recommend it.

I also want to remind you to check out his podcast, [Rationally Speaking](#). At the time of this recording the most recent episode was an [interview](#) with one of my favorite authors, [Jennifer Michael Hecht](#).

Before I tell you about what's coming up next for *Books and Ideas*, I do want to tell you a little bit about [The Amazing Meeting](#), which is sponsored by the [James Randi Educational Fund](#). First, I want to congratulate [D.J. Grothe](#), the JREF's new president, for a successful event. There were over 1300 attendees from all walks of life, and I think everyone had a great time.

I was on a couple of panels, and I got to meet lots of fans of both [Books and Ideas](#) and the [Brain Science Podcast](#). I really appreciate everyone who took the time to come up and say hi.

I also got to meet [Bruce Hood](#) and [Jennifer Michael Hecht](#), two people who have been guests on *Books and Ideas*. This was a special treat because I do most of my interviews via Skype, and I rarely get to meet my guests in person.

If you are interested in learning more about The Amazing Meeting, I will have links in the show notes at [booksandideas.com](#). If you live near London or are in Australia, you will want to check out the events that are coming your way.

Finally, I want to remind you that I depend on you, my listeners, to share this podcast with others. If you listen on iTunes, please consider leaving a review. And don't forget that if you are using the *Books and Ideas* iPhone app, I really need you to post a review. Also, if you're on Facebook, please join the [Books and Ideas Fan Page](#).

The next *Books and Ideas* podcast will be recorded live at [Dragon*Con](#) in Atlanta, Georgia. It is tentatively scheduled for Sunday, September 5th, at 8:30 p.m. in the Podcasting track. I will be interviewing authors [Skyler White](#) and [Christiana Ellis](#). If you are attending Dragon*Con this year, please put this on your to-do list.

I will also be doing a live interview in the Skeptic track with [Dr. Scott Lilienfeld](#). We will be talking about myths of popular psychology. When I find out the time I will post it at [Books and Ideas](#) and on the [Brain Science Podcast](#) website, as well as on all of my Facebook Fan Pages.¹

¹ Dr. Lilienfeld's interview is scheduled for Friday September 3 at 11:30 AM in room 205-7 of the Atlanta Hilton.

When you join the [Books and Ideas Facebook Fan Page](#), don't forget to post something on the Wall.

Right now my plan is to post the interview with Dr. Lilienfeld in the *Brain Science Podcast* feed sometime in September, and the interview with Skyler and Christiana in the *Books and Ideas* feed sometime after that—probably in October. But I hope that if you are at Dragon*Con you will come to the live shows so that you can be part of the questions and answers at the end, and also so that we can meet in person.

Before I close I want to thank everyone who has been sending me emails this summer encouraging me to continue my podcasts. Remember, you can send me email at docartemis@gmail.com, or leave voice mail at 205-202-0663.

Thanks again for listening. I look forward to talking with you again soon.

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