Episode 163: La Bella Vita

Ryan: Dududooooo!

Kelly: You're really good at that, like, off the cuff transition.

Jacob: Yeah.

Ryan: What do you mean?

Kelly: You know, I've been trying to do transitions in my show, every once in the while and I just find that I stumble like crazy. But you just, it just flows from your mouth, just beautifully as though you had written it out ahead of time but I imagine that you have not.

Ryan: Nope.

Kelly: Nope. I'm feeling a little jealous right now. I'll be honest.

Ryan: I don't know how I do it. My brain, I just, and I go on autopilot because I'm not even thinking you know?

Kelly: You've got mad skills homey.

Jacob: Yup. For real. It's like, people that stood in front of the mirror and did magic tricks to learn how to do slight of hand...

Ryan: Right.

Jacob: Ryan did that except he just talked to the mirror.

Laughter.

Kelly: Well, it paid off.

Announcer: From Sciencesortof.com, you're listening to Science... sort of.

Music

Ryan: Hello, welcome to Science... sort of, this is episode 163. Our theme this week is La Bella Vita which means the good life in Italian. And ah, joining me to discuss things that are science things that are sort of science things that wish they were science, which are all things that make this life good to live, are my paleo pal podcasting partners in crime, Kelly.

Kelly: Hello!

Ryan: And Jacob.

Jacob: What's up paleo punks!

Ryan: I'm Ryan if I forgot to say that. That's who I am. But we're also joined this week by a very special guest. We interviewed Massimo Pigliucci, the author of the new book, *Answers for Aristotle* and we have a very nice two part interview with him and that is coming up right now.

Intro Music

1:48

Ryan: Hey Paleo Pals, Ryan here, before we get started with the interview, I just wanted to point out one thing, there was a bit of an issue with the connection quality so we had some awesome help from John Heath to clean up the audio. He helps out with the Titanium Physicists podcast from time to time as well. So, first and foremost, thank you to him, but also just wanted to let you know that we worked really hard and made the audio quality as good as we could and the interview is totally listenable to. We just wanted to let you know that up front and make sure we thanked John for all of his help with editing this week. That's all I got. Enjoy the interview!

Ryan: Well, we are once again joined by Massimo Pigliucci who is the chair of the Department of Philosophy at City College of New York and he is also a avid blogger and podcaster with the Rationally Speaking blog and podcast and he's here today to talk to us today about his new book, *Answers for Aristotle*. Thank you so much for joining us Massimo.

Massimo: It's a pleasure.

Ryan: So, I guess, we've had you on before to give more of a basic overview of science philosophy, mostly stemming from your book *Nonsense on Stilts* as well as the stuff you talk about on the podcast. So I guess let's dive right in by asking, why you wanted to follow it up with *Answers for Aristotle* and what that book is really about in relation to the previous book *Nonsense on Stilts*.

Massimo: So, *Nonsense on Stilts* was really about the difference between science and pseudoscience. Ah, which is, and it was, of course, aimed at the general public. Ah, you know, it's not a technical book and the reason I wrote *Nonsense on Stilts* is because, I think, it would help the public develop a better understanding of the nature of science and therefore how to distinguish you know, science from pseudoscience. Particularly because pseudoscience has all sorts of negative effects. You know, just think about vaccines and vaccination deniers and think about HIV connection deniers, and so on and so forth. Not to mention, of course, climate change. And um, so that done, I guess, I turned to something else.

Ryan: Job done, science, philosophy now...

Massimo: That checked out of my list of to-do things. I turned to something that is actually broader than that. Um, here's the question that I tried to address with *Answers for Aristotle* which is also aimed at the general public. It seems to me that anybody who thinks and sort of reflects, at least occasionally about his life or her life and what the whole thing is about, faces a certain number of basic questions. Questions about morality, questions about relationships, questions about, you know, political system, justice, democracy, you know, that sort of stuff. And the issue that I raised was, well, where do you turn when you are faced with that sort of question which at least, as I said, occasionally in, at least occasionally in life we all pretty much are. Well, the classic answer is that there are, you turn to religion, which I think is a bad idea for a variety of reasons that we may or may not get into. But I don't think we get any sensible answers there, from religion. Or you can turn to, you know, your friends and sort of general common sense. Which is fine because common sense is um, it's actually a very obvious way of approaching things, in a lot of cases. But some of these questions really are getting complicated, especially in a modern society where there's all sorts of really interesting complications as far as morality, justice, relationships and so on concerning... so, I figure, well, the only two other traditions in human thought that have been able to give us some interesting insights into how the world works are science and philosophy. Science when it comes to factual things. You know, if you want to know the best available answers about how the world is actually put together, you know, how it works, you ask the engineer. No, I'm sorry, you ask the scientist. Um, now...

5:23

Ryan: Yeah, Jacob.

Jacob: Ouch.

Laughter.

Massimo: Ah, yeah, sorry. And if you want to sort of reflect critically on these things, you know, put them in a broader context, then I think the philosophical traditions, I think, is where to go. The point about *Answers for Aristotle* is to combine science and philosophy in what I call the SciPhi approach. People pronounce it sci-fi but it's got nothing to do with science fiction, it's science and philosophy. And so, to explore where these, where that kind of approach might possibly lead. Basically, one way to think about the book is that this is a self help book for people who really don't like self help books.

Ryan: Yeah, I could definitely see that. And so, is the idea to combine science and philosophy based on just your own personal path of self discovery because you went from a position of being a scientist to now being a philosopher or is it something you came at from a more, from a more...

Massimo: That's a good question. Yeah, I'm a sure a lot of it, or the basic idea came out of my own personal experience. I mean, a lot of times when you write books, books are about what you do and what you think. Even *Nonsense on Stilts* came out of the fact that back in the mid-90s I moved to Knoxville, TN and I was there for several years and all of the sudden I was confronted with things like creationism, you know, and intelligent design and all that sort of stuff. And that's how I got interested in pseudoscience to begin with. So, yeah, you're right it, I was, ah, a practicing evolutionary biologist for, you know, almost 25 years then sort of, you know, my midlife crisis hit and instead of buying a red sports car I went back and got a PhD in philosophy and then I moved completely, professionally, to philosophy. So, yes, that kind of move was very good for me. Ah, I feel that I have a more rounded view of both science and how it fits generally with people's lives. So, that certainly was an important component of why I decided to write a book.

Kelly: So, I was reading the section on love and it made me think of a lot of conversations that I've had with my friends who really like thinking about love from a philosophical standpoint. But when you start talking about the science and talk about the hormonal mechanisms that underpin things like love, they feel like it takes some of the magic out of it. So...

Massimo: Yeah.

Kelly: So, in an instance when you're like, talking about love, how do you think putting science and philosophy together gives you a more meaningful understanding that doesn't loose its magic? Or is magic just not important?

Massimo: No, no. I think magic is important. Ah, you're talking to an Italian, I'm sort of, romance is in my DNA. But no, it is important. I think that that's a good question. A lot of people react that way. In fact, on either side of the divide, if you're talking to somebody who is very scientifically inclined that person often, not always, but often, will have very little patience for sort of philosophical speculation let alone for the magic. And then if you talk to somebody who is interested in the philosophy then they will actually react very negatively about bringing up the science. But I think actually, in this, I'm certainly not the first one and hopefully not the last one to think this way, Carl Sagan famously said that just because you realize that the moon, for instance, is a planet with craters that are created over millions and millions of years, by asteroids impact, that doesn't mean that you cannot enjoy the full moon at night and you cannot enjoy the aesthetic experience of it. It's a fallacy, I think, to think that a scientific understanding of something somehow detracts from the aesthetic or from the, or even in this case, from the philosophical understanding of something. I think that the two are complimentary not, they're not at all opposites, they are not at odds. Now, the question is, what do you get from combining the two perspectives. So, let's say, in the case of love for instance which is of course a major dimension of most people's lives, I would hope, of everybody. There, which I think happens is that if you bring in the science you demystify something that too often gets really elevated almost to the level of, almost, magic. And, as you know, I don't believe in magic so, I think that's a bad idea. So, it's important I think, to realize that love, as complex as it is, and as, you know, multidimensional as it is, especially in modern human societies, it really, it does have very strong roots in basic biology. You know, you fall in love with people because there is a strong instinct in you to have babies. Whether you do eventually end up having babies or not is a different matter. It's much more complicated but that's where it comes from. Which means, that for instance, in the book as you've seen, I go through the neurobiology of the studies of people falling in love and out of love and so on and so forth. And it turns out that there is quite a predictable sequence. Ah, even at the level of different hormones that are active at different stages of falling in or out of love. And that, once that you know that all of the sudden, you have a perfectly good explanation, perfectly reasonable explanation for these torrent of emotions that you think you are the only person in the world that has ever gone through and its all these, so incomprehensible and all that.

10:14

Now, it's not incomprehensible. Here it is, it comes in these two or three different phases, these are several hormones that act on your brain when you are one phase or another and thats how,

biologically, you feel that way. But that's of course, only the beginning of the story. The full story is much more complicated because it does deal with what you value, how you relate to other people, you know, how you interact with people that's in a way good for you and for them, you know, it improves your life and all that. That's where, that's the level where the science really sort of ends up in a dead end in a sense, it stops contributing and that's where you want not just the facts but the philosophical reflections. Okay, well, what does it mean to love somebody. How many different ways are there to sort of conceptualize or think about what it is that you are actually doing. Why is it important, why is it not important? One of the things that, for instance, I get into, from the philosophical aspect of love is why is it acceptable or not acceptable to trade up? Right? So, trading up is this idea that, let's say that you're currently in love with somebody and things are all very very good and everything is going fine. But then I ask you, so why are you in love with this person. And most people, typically, will start sort of giving me a list of things. Oh, she's very attractive, she's smart, she's funny, how we have some interests in common, blah, blah, blah. That sort of stuff. But then that's all there is to it, philosophically, then the interesting question comes up, well, why not trade up if you have the opportunity? What if you find another woman who is equally or more attractive, equally or more smart, equally or more funny, and so on and so forth, why shouldn't you trade up if that's all it is, then it's like, you know, there shouldn't be any problem there getting, in some sense, getting rid of the old car model and getting the new one. But most of us think there is a problem there.

Jacob: I would hope so.

Massimo: And that's where it gets really interesting into the philosophy, you know, why exactly is that a problem, you know, what sort of thing is going on there other than this laundry list of traits that we all have. By the way, this has practical consequences because I don't know if you guys have had the experience, my guess is probably so, but this is very relevant to the phenomena of online dating. Because if you do online dating the basic thing that you do in the beginning is, in fact, go through a checklist, right? So you filter out people based on the way they look, based on their interest, based on their political world view and so on and so forth. But of course, again, that cannot be the only thing. Because if that were the case then nothing would stop you, once you start a relationship with somebody, you know, in the evening you go back home and you check your online account and see if there is somebody better out there. Most of us would think that you are not exactly acting ethically if you do that.

Ryan: That's like the ah, the romantic equivalent of the trolley car dilemma.

Massimo: Exactly.

Ryan: If you're willing to sort people based on ah, criteria, when it's digital and you're just hitting a button. But if you had to do it to their face and shove them off the bridge, to mix the metaphor, it wouldn't work.

Massimo: That's right. But then the question is, why? So there's got to be something else other than the laundry list or the check list of things that are interesting. So, that's where the philosophy, so, even the ethics of having a relationship comes in.

Ryan: And that's one of the themes you go back to in the book is you reiterate over and over again that science tells us what is but it can't tell us what ought to be and that's where you have to bring in philosophy and a value system and the value system is, in and of itself, not very cut and dry. Are you so in tune with that dichotomy that you are able to write without worrying about it or do you have to actually think, okay, I need to make sure that when I'm writing about the science that I say what is and not what ought to be. Versus with the philosophy where I have to approach it with a value system in mind and how do you keep those two worlds separate or is that not an issue for you.

Massimo: I'll tell you a secret. If you write as a philosopher you always worry about everything. Because you know that somebody is going to read it and say but wait, what about this or what about that. So, one of the good things actually, about philosophical training, is precisely that you develop this habit of mind, trying to anticipate people's objections to your positions and then come up with counters to those objections. You're right that I do make a big deal about the is/ought distinction which of course has a long history in philosophy, most importantly which goes back to David Hume, ah, during the enlightenment, also however, we should disclose that since the middle of the 20th Century, particularly since the works of a very influential philosopher named Quinne, philosophers have been a little more careful about drawing very sharp distinctions between facts and values, for instance. Because a fact is not something out there in the world that is independent of your way of constructing your interests into the world. I mean something becomes a fact because you have certain interests about certain things otherwise, you know, - infinite number, right. Everything is a fact. It becomes - only once you give it a certain theoretical conceptual background which means however that the distinction between facts and values is exactly that sharp. That said, just because there is no sharp distinction between two things doesn't mean that there is no distinction at all. - build most of the book, that is that I don't think that science and philosophy are completely separate as you might think if you think that well one - the other one deals with just values.

15:20

Right, I think that there is quite a bit at the borderline going on there. Science itself has its own values by the way, it's own non empirical values. Scientists value, for instance, truth okay. Or they value accuracy or they value simplicity and so on and so forth. Those are all extra empirical criteria, these are values, they are not facts. Ah at the same time - facts. Ah, you know, you can't do philosophy of anything these days and certainly not philosophy of mind, certainly not ethics ... and even more you can't do metaphysics without paying attention to what the scientists actually come up with in the mean time and try to incorporate the whole thing. So, the distinction is there but it's not absolute, it's definitely not sharp.

Ryan: And so I guess before we get any further we should probably take a step backwards and go back to the beginning of the book where you talk about the end goal of eudaimonia, maybe tell people what eudaimonia is and why it's something worth striving towards with the SciPhy approach.

Massimo: Yeah, that, by the way, also explains the title of the book actually. Which, incidentally, I should immediately add, it wasn't my idea. The original title of the book was *The Intelligent Person's Guide to the Meaning of Life* and...

Kelly: And the editor said no?

Massimo: And the editor said no. Marketing analysis, they asked people at Barnes and Noble and all that stuff and they came up with *Answers for Aristotle*. My first reaction was who in the hell am I to give answers to Aristotle. But, the book actually does have a logic. Aristotle was the first thinker, at least strictly in the Western tradition, to take the SciPhy approach. He is, of course, very well known today as a philosopher, you know, he was one of the first people to think really carefully about logic and about ethics and about metaphysics. But he is also a scientist, or what we will today call a scientist. He came up with an entire system of physics, ah, which of course turned out to be wrong but so what. You know, most scientific theories, at some point or another, turn out to be wrong. You know, Newton was wrong, I mean, Einstein will probably turn out to be wrong. That's not the point, the point is Aristotle was conscious of the fact that he needed also to pay attention to facts, the way the world really is. He actually did biology field work, believe it or not because he was interested in shells, in the shape of shells which explains, incidentally, the cover, the picture on the cover of the book. And he did that work on the Island of Lesbo because there is a large, you know, it is very easy to collect shells there. So, Aristotle was the first one to actually approach things from a sort of comprehensive perspective of both science and philosophy. Now, let's go back to the eudaimonia or eudaimonia depending on how you want to pronounce it. Eudaimonia is a concept that the ancient Greeks were very familiar with. Ah, it literally meant, means flourishing. It's translated as human flourishing in general as a good life. Ah, sometimes it's translated as happiness

but the word happiness, especially in English, has very specific connotations that really don't, that deal a lot with sort of having oh, I'm in la la land, I'm happy kind of thing. That's not what we're talking about.

Ryan: Well, isn't the prefix Eu significant of truth? Like, true happiness or a true fulfillment.

Massimo: Or full, so full life or full fullfillment, full happiness. Ah, technically, actually, the literal translation of the term eudaimonia means having a good devil, a good demon, ah, next to you. That's sort of a metaphor. Ah, the good demon is telling you secretly, or guiding you in through the good life.

Ryan: It's little guys on the shoulders where they tell you which, they argue back and forth on telling you what to do.

Massimo: Excatly. And, ah, the eudaimonic life, the idea of the ancient Greeks was that the most important question that philosophy can ask, in fact, the most important question that moral philosophy can ask is what kind of life should I live. Ah, you know, how should I behave throughout my life. What kind of conduct in my life is good. And the idea is to achieve or to pursue eudaimonia. Eudaimonia is the kind of life that you get at the end of it, you look back and you say, you know, that was good. That was a good thing. I did the right thing most of the time, I strove for improvement. You know, I was a good member of my society, I was good to my kids, whatever. The whole, the sum of all the good things you've done, if that sum is pretty high, then you've lived a eudaimonic life. So the question that Aristotle and other ancient Greeks posed, is how do you live a eudaimonic life and the answer that, somewhat pretentiously, we can give to Aristotle these days is that, look, 2500 years later, 2400 years later, we actually have a lot more philosophical thinking, that has, of course, developed in the meantime and we have a lot more science that has developed in the meantime. So, in the 21st century we are in a much better situation in order to be able to answer the question of how to live the eudaimonic life.

20:09

Jacob: Well, to totally change subjects on you Massimo, sorry. I've had a question that's been burning in the back of my mind throughout, ever since you came on here, I feel that you're probably the foremost authority on the philosophy of science that I'll ever get to talk to and I'll never have the chance to ask anyone else this, but, as we told you earlier I'm an engineer and engineers are notoriously known for thinking they know a lot about science but not really having the hard core understanding of the philosophy of science that somebody that's actually working in the scientific field would have. And so, I end up, I end up getting into arguments at work with co-workers about

global warming and evolution and things like this. We even had an episode of the podcast where we talked about how to argue with a scientist and a lot of the fallacies, I see, at the same time at work. So, do you see a way to teach people about the philosophy of science and how to actually carry out good science to people like engineers that already seem to have, seem to think that they know what science is because they are technically in a scientific field but they didn't learn about the philosophy of science. Does that make sense.

Massimo: Yeah, it makes perfect sense and by the way, ah, it's not just engineers, actually, it's scientists themselves who typically know very little about the philosophy of science. Which is not surprising if you think about it for a couple of reasons. First of all, just because you do something it doesn't mean you're critically reflecting on what you do, right? I mean, scientists and engineers are very good at what they do which is, you know, theoretical, basic science, applied science. That doesn't mean that they necessarily that they have spent a lot of time reflecting on the structure of what they do on the underlying assumptions of what they do because they don't need that for everyday work, right. It's like, imagine someone is learning to drive a car... and you know, that person doesn't need much knowledge of what's going on inside the guts of the car. A little bit, you know, you want to know that if the fuel gauge is going down you need gas, that much you need to know. Or, you need to know enough in order to maintain the car and all that. But you certainly don't need to be a car mechanic or a car engineer in order to drive a car... do need something major being done to the car you go to the mechanic, you go to the engineer. So, it's not surprising and not even necessarily a bad thing that engineers and scientists don't are not really well schooled in philosophy of science. It becomes a problem when they don't realize that and they pretend that they know.

Jacob: Right. Right. I've found that one of the most common rebuttals to talking about global warming with my co-workers is the simple argument of well you know these are natural cycles. If they had looked at the sun they would know that the sun at a peak right now or something to that affect which I find is kind of insulting to the scientists because of course they've considered those possibilities. But without understanding how to research, without understanding, you know, that, your understanding of theory doesn't necessarily line up with empirical fact. It really detracts from being able to have a logical argument.

Massimo: Yeah. No, that is true, now, in that particular case the problem is even simpler than not understanding science. I think the problem there is just a matter of not respecting expertise and its a very widespread problem in, particularly in American society. This was actually, to some extent, the topic of *Nonsense on Stilts*. American society is well known for being characterized throughout its history by a number of, by, you know, a strong streak of anti-intellectualism. Which is unfortunate, it does have, this has been well documented by sociologists. It does have its historical root in a couple characteristics of American society. One is, of course, the prevalence of strong religiosity,

particularly fundamentalist religiosity. The other one is, also, especially in the beginning, the feature that the American society that has had a sort of frontier society. In a frontier society things tend to matter only if they actually are practical, if they have a practical or immediate application. Ah, and even then a little too you know, - it gets discounted because it doesn't actually improve people's lives on the day to day basis. So the problem that American society has today is in fact, that in terms of things like global warming and vaccines and that sort of stuff is actually a problem of anti-intellectualism more than an issue of philosophy of science. Before you get to the philosophy of science you have to at least respect the fact that you are talking to experts. And you have to admit that oh, gee, why didn't I think about the cycles of the sun, you know.

Jacob: Seriously, is that true...

Massimo: You know, when you have a problem with your car and say, oh, by the way, the first thing you should check is if, you know, is if the fuel is in the car, in the tank.

25:03

Well, yes, of course. But that's not exactly an insight into things. Yes, car checked out but that's but that's probably not the problem, otherwise the solution would be very simple. So, now, that said, I do think that better understanding of the way science works which means a better understanding of the philosophy of science, would definitely be a good thing. I remember when I was an undergraduate at the University of Rome in Italy, I just happened to, ah, there was book called *What is This Thing Called Science* by a philosopher named Alan Chalmers and actually it's still out, the third edition came out a few years ago and it's still being updated. And it's a wonderful introductory book to the way science works and its marvelous and it's a page turner. Which, by the way, for philosophy books is not exactly easy feat to accomplish.

Ryan: I've had that book sitting on my shelf for years now. I should probably pick it out and actually read it.

Massimo: Do that and maybe we can have a conversation about it. It was a major influence on my life because I was just about to begin a, my career in science and that sort of shaped immediately the way I was thinking about the big picture of my job. You know, it didn't help me in the lab, you know, it didn't help me day to day solving problems in the lab. It didn't help me writing grant proposals later when I got my own lab. That's not what it was supposed to do anyway. But it did give me these sort of broad perspective, this way of situating what I was doing in the big picture which made me feel like, you know, part of a broader enterprise, part of a broader way in which human beings actually try to understand the way the world works. So, yes, philosophy of science

ought to be appreciated better, the best way to do that is probably to get, to pick-up something like that book or there is another one called *A Very Short Introduction to the Philosophy of Science*. That's also very nicely written. Or, you know, *Nonsense on Stilts* for that matter.

Ryan: Definitely well, we obviously endorse *Nonsense on Stilts*, we had you on the show to talk about it.

Massimo: Of course that's not a book only bout the philosophy of science but there's obviously quite a bit of philosophy of science that goes into there.

Music

Ryan: So, that was part one of our interview with Massimo Pigliucci. He's got a lot more to say and we're going to get back to that in just a bit. But I think first I think we need to take a moment and try to find our own eudaimonia, our own good demon and for a lot of people that exists in a delicious beverage of their choosing and we're going to tell everyone what we chose in our next segment, "What are we drinking?"

Music

Ryan: Well, as we were having a nice little symposium with Massimo, it wouldn't be a symposium unless we had a drink to go with it and that's what we usually do on this show and we usually tell everyone what it is in a segment we call "What are we drinking?" And I'm going to let Jacob and Kelly duke it out to see who goes first.

Kelly: Oh, I'm going first.

Ryan: Good job Kelly. Way to duke... you zigged when Jacob zagged.

Jacob: And then it knocked me right off the platform

Kelly: I got the quick moves.

Ryan: Worked out well for you. Go for it.

Kelly: Pow!!!

Ryan: That's not the segment! Wrong segment, wrong segment!

Kelly: Ooops, oops, okay. So, ah, tonight I am enjoying a Cabernet Sauvignon, it's Lewis and Martini from Sonoma County and it's delicious. I love me some red wine.

Ryan: Cab Sauv.

Kelly: Indeed.

Ryan: Yeah. Excellent. Well, that sounds tasty and delightful.

Kelly: It was. Now, Jacob...

Ryan: It's a very, is it cold enough down there, cab sauv is like a nice, warm red wine for you or is it just, nah, you're just doing it because you want it.

Kelly: I'm just doing it because I want it. It's been kind of warm around here lately which scares me because it usually means tornadoes are coming.

Ryan: Yeah. I looked at the weather and it's going to be like 70° in Nashville tomorrow and it's a high, in Laramie, the high is 7°.

Kelly: Wow.

Ryan: An order of magnitude off of what Nashville is.

Kelly: Big difference.

Jacob: Yeah, we were in the high 70's today.

Ryan: Yeah.

Jacob: It got pretty warm.

30:00

Ryan: The high tomorrow is 7°. Single digit high. Ah, so I am having a drink and each part of the drink, I promise it won't take as long as it's probably sounding like it's going to, but each part of the drink is significant and wonderful and I want to give a brief mention to each of those. So, one of the earliest drinks I had on the show was the beloved and classic gin and tonic and we had the long discussion on whether or not the gin and tonic is the deadliest drink in the world because who, what manner of foul creature could possibly survive in a concoction of gin, citric acid and quinine with carbonated, carbonic acid thrown in just to give it a nice bubbliness. And, you know, I left the gin and tonic out on top of my fridge for a couple months and sure enough something did take, I don't know what it was, I didn't, but it didn't dissuade me from still enjoying a gin and tonic every once in a while. And so, this week I'm having a gin and tonic using tonic water from ah, Julie got me a, one of those Soda Streams, self carbonated, carbonating water things which is super cool. So, I got one of those. And she also got me this Jack Rudy Coctail Company small batch tonic. So, it's tonic syrup that you put in the carbonated water to make our own tonic water. Super delicious.

Kelly: She's a good catch.

Ryan: Yeah. And then I got, while I was in West Virginia for the holidays, I got a small bottle of a Smooth Ambler which is a West Virginia distillery, this is from their Still House Collection, and it's barrel-aged gin so it's gin that was aged three months in an oak cask. So, I made a barrel-aged gin and tonic with my own tonic water. So, the only thing I didn't make for this drink was the lime. I made the ice too.

Laughter.

Kelly: That's pretty awesome.

Jacob: Why didn't you grow the lime? Is it too cold up there or something?

Ryan: The high tomorrow, Jacob, is 7°. You can fly me a lime from your wonderful...

Jacob: I'll ship you a lime. Apparently we're going to start growing limes soon.

Ryan: The sunshine state. I used to live in a house that had a lemon tree. It was glorious and we would make gin and tonics with our own lemons. But I no longer have that luxury. But it is, this is a very luxurious gin and tonic and the barrel-aged, because it's a kind of light brown gin, it looks kind of like a lighter scotch, and so it makes it a better cold weather drink because it's got a little more oakiness to it. I like it. I'm diggin' it.

Kelly: Nice.

Ryan: Jacob, what about you, what are you having?

Jacob: Well, I am drinking a Hofbräu Dunkel.

Ryan: You've been into the European beer lately.

Jacob: Well, I got a, I stocked up before Christmas. And I've been saving them for every show I'm on. So, ah, this is a Munich Dunkel Lager. The last one I had I think was a Dunkel Weisse and I think between drinking the two I prefer the Dunkel Weisse better and I don't know what it is but, um, it's just that the smell is a little bit offensive to me in this Hofbräu Dunkel. But, after I started drinking it I literally couldn't smell it anymore. It was like when I poured it the smell was just a little bit, eeeehhhhh, didn't, it kinda reminded me of a stink beer. But...

Ryan: A skunk beer. I mean, that's the hard thing I found with a lot of beers from Europe or a lot of beers that are harder to come by is you don't know how long it's been sitting on that shelf before you bought it, you know?

Jacob: Yeah. And that could very well be it.

Ryan: Yeah, and that's, I always feel bad. Because I like had a beer, I had a beer the other day that was not good. But a part of me was, like it's entirely possible that the reason this isn't good is just the way it was stored after brewing. So I always feel bad saying anything negative the first time I have one. I want to have it at least twice before I'm ready to say anything negative. If I like it, I just like it but...

Jacob: That makes sense.

Ryan: ...if it's negative you get a second chance.

Like serving in tennis.

Kelly: That's kind of you.

Jacob: Yeah. Well, it's certainly drinkable. I mean, it's very drinkable and, like I said, after I took the first sip I couldn't smell it anymore so.

Ryan: Cool.

Jacob: It's kinda like stinky tofu. You guys ever heard of stinky tofu.

Ryan: Yeah, yeah, it's like fermented tofu.

Jacob: Yeah, they sell it on the streets in Hong Kong. Apparently, like, the smell is so bad that you can be 20 feet away from it and you just want to throw up. But, apparently as soon as you put it in your mouth you can't smell it anymore.

Ryan: I think the smell would be so bad, it's a bit of a cultural bias on your part Jacob.

Jacob: No. No, no, it's a, the people that were there, that we talked to, they said the same thing. They were like no, we know it smells awful, just put it in your mouth. I was like, no thank you.

Ryan: But, I mean, to be fair and you know, to be fair to the multi-cultural listeners I know we have, there are some cheeses that have pretty significant stench...

Jacob: Oh yeah.

Ryan: That some Europeans enjoy so it's not, you know, just saying Jacob, quit being so insensitive with your nose.

Jacob: I just have a sensitive nose is all.

Ryan: Yeah, yeah. Well you need to eat...

Kelly: Just delicate.

Ryan: You need to eat stinky cheese with tofu in it, is what you need. And then you would just render...

Jacob: Yeah. I would double down...

Ryan: Obliviate your, your nostrils I guess. Because they would be rendered unto oblivion. Hey, that would be a great name for a post-apoplyctic movie. What if they did a trailer of that movie and we talked about it in our next segment which is what we're going to do!! I pulled a fast one.

Kelly: This is what I was talking about.

Ryan: It wasn't that fast. But we're going to talk about *Oblivion* next on trailer trash talk.

35:03

Music

Announcer: Hey Ya'll, it's trailer trash talk.

Jacob: So, before we start trailer trash talk today I'd just like to say to everybody that we're going to try to do things a little bit differently for this new year. We're going to try to focus on movies that at least have some science to talk about and with that being said we're going to start the new year good with a good science fiction movie. It's called *Oblivion* and it stars Tom Cruise and a bunch of people I don't know and Morgan Freeman and Nikolaj Coster-Waldau from *Game of Thrones*, he plays Jaime Lannister so I'm really excited to see him.

Ryan: Oooh, I like him.

Jacob: Yeah, he's really cool. It's scheduled for a release date of April 19th, 2013 so we, April 12th I guess, so we've got quite a while, a ways out before we see it but they've released a pretty extensive preview and, ah, it shows Tom Cruise as a, in the future, a drone repairman stationed on Earth after most of Earth has been evacuated after some war with something that came from outer space. Right? And we don't really know what it is but he thinks that there's no other humans left on Earth and...

Ryan: That's what he's been told.

Jacob: Right, that's what he's been told and it looks like from the preview that he finds some other humans or they find him, more accurately. And it's a very futuristic looking, cool technology. Ah, the special effects definitely reminded me of *Minority Report* in terms of, like, the clean styling contrasted with the dirty and destroyed Earth. Ah, so I don't know...

Ryan: A also got a little bit of the, ah, remember the live action *Lost in Space*?

Jacob: Yeah. I only saw it once though. So, it's been a long time.

Ryan: Just some of the ways the ships are designed, like, with kind of the, you know, it's a ship that is really built to fly around in three dimensions. And *Lost in Space* had a lot of that with their fighters, they were kind of like, you know, it was, it was a frame built around a bubble so the pilot had three dimensional, 360° view of everything happening and could really, was pretty maneuverable in that sense it kind of reminded me of the craft that Tom Cruise is flying around in a lot of the trailer.

Jacob: That's cool. Well, it looks like, it looks like the Earth has been destroyed in some sort of nuclear... Tom Cruise's character and his people are kind of living up in the skies. Somehow, maybe there's a flying city up in the skies.

Ryan: *Jetson* style.

Jacob: *Jetson* style. Exactly. And so I guess that keeps them away from the radiation or something like that and then he has to go on expeditions back down to the Earth to repair drones. And I guess it's not really clear what the drones are doing in the, from the preview. But um, presumably they're, you know, either looking for life or...

Ryan: Wall-E style.

Jacob: Wall-E style. Or they're trying to recover certain things or maybe they're just trying to destroy the remnants of the resistance of the others.

Ryan: Yeah, that's the thing, the movie gets very conspiratorial, right. So, you look...

Jacob: Right.

Ryan: You think like you're getting kind of this standard post-apocalyptic, Tom Cruise is a guy who's one of the few people who's still works actively on Earth and he's, it's kind of like, ah, we keep comparing his other movies but it's hard not to because you know, in *Moon* ah, which is an excellent movie I think we all...

Jacob: An amazing movie. If you have not seen *Moon* you need to go see it.

Ryan: We should put that on the short list for, well, that wouldn't be a good one for Science... sort of theater because it's good.

Laughter.

Jacob: And they got really good science advisors to help them with the planning of the movie and the only thing that they didn't do in *Moon* was try to modify gravity because they said it was just too difficult for people to watch on TV.

Ryan: Yeah, that makes sense. That works for me. But um, in *Moon*, you know, the main character has two weeks left on his shift on the dark side of the moon and Tom Cruise's character has two weeks left in his shift on Earth and it's a, that same kind of thing where, you know, it's a classic trope. Like the cop's almost ready to retire, I'm getting too old, you know, and everything goes wrong right before he's ready to quit and that's what happens to Tom Cruise's character. His whole world gets flipped upside down when things go just a little bit wrong. It opens up a world for him where things go a lot more wrong it seems.

40:04

Jacob: Yep. So, what did you guys think?

Kelly: Yawn.

Laughter.

Jacob: Awww. I have a feeling Kelly is going to be in disagreement with us.

Kelly: Ah, I'm sorry.

Ryan: No, I think I'm kind of, I'm somewhere in the middle. Like Jacob, you pointed out, I thought the aesthetics of the movie were very nice to look at. Um, the scene, um, Kelly, as sour as you are, where Morgan Freeman is sitting in the darkness and lights a match and is wearing the goggles. Come on.

Kelly: No, I thought that was hokey.

Ryan: What!!!!!

Kelly: I know, and I love Morgan Freeman. But I watched that scene and I was like, ah, that's too bad Morgan Freeman was in a scene that hokey.

Ryan: Too bad!! You mean too glorious!

Laughter.

Kelly: Nope. Too bad, so sad.

Ryan: I don't, yeah, I don't understand you.

Kelly: I'm sorry.

Ryan: It's okay. It's not, this is not your fault.

Kelly: Diversity is more interesting.

Ryan: UUUhhhhhhhhhhhhhhhhhh!!!

Kelly: If we agreed it would be boring.

Ryan: Anyway, I liked the aesthetics. I thought it had a cool look to it. I didn't get a great sense of the plot and it looked like, a lot happened in just this trailer so I'm worried that the plot itself might get kind of convoluted. But you never know how much of the plot you're actually getting in a trailer even if it seems extensive. So I'm ...

Jacob: Sometimes they give you kind of a fake plot...

Ryan: Yeah.

Jacob: ...in the trailer. Because it's easier to understand in two minutes than the real plot is to understand in two hours.

Ryan: Tough I think this entire movie hangs on the quality of its, whatever its big reveal is. And I think even if the big reveal doesn't get spoiled for me I think the weekend the movie comes out it will be pretty clear based on it's rotten tomatoes score whether the big reveal is good or not.

Jacob: Yeah.

Ryan: So, it's hard to have an opinion before, which I know I have to because that's the point of the segment but that's kind of where I'm landing right now. It's like, I'm curious as to what the reveal is

but so many movies like this that seem to be big budget action movies, the reveal is, what, in the plot itself is kind of what suffers.

Jacob: Now, let me ask you this. Did you end up going to see *Prometheus*?

Ryan: I still have not seen *Prometheus*. I've been told, ah, I was told jut this week that I really need to go see it because, the reason I was holding off on it was, everybody says that the scientists in *Prometheus* are the worst characterizations of scientists they've ever seen, just...

Jacob: Oh, 100% accurate. Yes, that's true.

Kelly: Hmmm.

Ryan: A friend of mine, who is a writer, pointed out, that he said, well, if you watch the movie with the idea that what the scientific community did was hey, what if we took all our worst scientists and put them in a spaceship.

Laughter.

Kelly: And shipped them off.

Ryan: Right. But I'm like, okay, if I watch it with that in mind I think I could get on board with it. So, I'm going to try to watch it with that in mind. But no, I've not seen it yet. I've heard that it's the most beautiful movie that's been put to film, as far as sci-fi goes, so I'm excited for that aspect.

Jacob: It does have some amazing aesthetics. But, I'm, just like this movie it hinged totally on the reveal and I think the reveal totally flopped in *Prometheus*. And I was really excited based on the preview for *Prometheus*, I thought it was going to be awesome. But, the reveal kind of ruined it for me so, I think you're right to be skeptical of this trailer.

Ryan: So, what are you feeling Jacob?

Jacob: I feel a little bit optimistic about it. Maybe I haven't been burned quite enough yet to be as skeptical as you, I don't now. But, I think ah, I think based on the actors that are in it, Tom Cruise and Morgan Freeman, I feel like they wouldn't, I feel like they wouldn't be on it if they weren't good in an action and plot sense but then again, I mean, Tom Cruise has done some bad movies in the past I guess.

Kelly: He's done some real turds.

Ryan: But people give Tom Cruise such a bad rap. But, the dude's always working so I mean, you know, when you put that much product... And people, also, somebody told me that like, oh, Tom Cruise is always type cast and I don't think I agree with that either. I mean, he's certainly got ...

Kelly: What?! This is clearly Mission Impossible in space but like space is Earth.

Jacob: I don't know about that.

Ryan: He does get typecast in certain types of roles but that doesn't mean that he always get's typecast. Like, if you go see *Collateral* or *Tropic Thunder*...

Jacob: Right.... *Tropic Thunder*

Ryan: Dude. Ah, you know, for whatever problems I have with his personal philosophy. He is one of the best action stars out there. I mean, he's, he still, to this day, does all his own stunts. Um, I've seen him, like, driving cars, just without, you know, without a stunt driver or anything. He's a really good driver. Like, the dude, he can fly planes, he can ride motorcycles, like, he can legitimately do all the cool stuff he does in a lot of the movies that we see him doing. So, in that sense, when it comes to a Tom Cruise action movie I give it a slightly higher grade that other action movie actors.

Jacob: Yeah, there's actually a small scene in the trailer where he falls down on the floor and smacks his head on the floor...

Ryan: Yeah.

Jacob: And it's definitely Tom Cruise smacking his head straight on the floor. It looks pretty real.

Kelly: And then, like, I swear that I saw a scene in *Mission Impossible 2* where, like, the lights come on and you see that he's got just a little cut across the bridge of his nose and he's tied up to a chair and it's like aw, I've scene Tom Cruise in this scene like a million times.

45:04

Jacob: There might be some homages to other Tom Cruise movies. He's definitely like, he's on a little, a wire being pulled up, and like laying horizontal and then that wire get's cut.

Ryan: Yeah. There's also um, somebody, somebody online pointed out that the new, the new way to do a poster for a movie is to have a lone guy standing there with destruction all around him or in the background. So, like the new *Star Trek* poster, that, it's Kirk standing on a pile of rubble, ah, you know, the *Inception* poster looks was almost exactly like this, with like the crumbling buildings in the background. *Oblivion* has Tom Cruise staring up at wrecked buildings, like, it just keeps getting used over and over again. It's the new hot way to design a trailer. *Dark Knight Rises* was buildings crumbling down into Gotham, so...

Jacob: Alright, well I've got one more piece of information that might change your mind a little bit. The writer, the head writer for this movie was also the writer of *Little Miss Sunshine* and *Toy Story 3* and those were the first two movies that he wrote. The first two screen plays that he wrote.

Ryan: So, you're saying that the hook, the big reveal could be good.

Jacob: It could be. Based on the prior experience of this writer. Ah, he, let's see, he did *Little Miss Sunshine*, *Toy Story 3* and *Brave* and this is his next movie.

Ryan: Alright. Alright.

Jacob: So, there could be potential there.

Ryan: Well, I think, ah, I think it's time to do the thing

Jacob. Tell people what's coming next.

Jacob: Okay. So, the reason that we do all this is that, after we review the trailer we give it a thumbs up or a thumbs down and based on the thumbs up or thumbs down we by fake stocks on the Hollywood Stock Exchange. And you can compete on the Hollywood Stock Exchange with us if you just go to hsx.com and look for the Science... sort of league. You'll join in with, I believe we're still the largest league on hsx.com aren't we?

Ryan: One of...

Jacob: One of? One of the largest leagues. Okay, so, definitely go do that and ah, more than likely because we are always in disagreement you're going to do better than we do.

Ryan: We are a horse built by committee.

Jacob: Yes.

Ryan: We are a delicious, delicious camel.

Jacob: So, I would say that I'm going to go ahead and give this movie a thumbs up but it, but it's a slight thumbs up.

Ryan: Yeah, I think I, I think I feel exactly the same way as you. If Justin was still on the show I'd give it maybe like a 5/8th thumbs up is kind of how I'm feeling. Maybe a little better than that.

Jacob: So, is anything less than .5 thumbs down?

Ryan: Maybe a 6/8th, maybe I'm going 3/4 on this. I think a 3/4 thumbs up.

Kelly: Well, I'm going full thumbs down. Ah, I don't know, this movie, it's like Hugh Jackman. It's visually appealing, it looks very pretty, but I feel like once you scratch the surface you're going to wish you hadn't.

Ryan: What are you even talking about, now you're...

Jacob: Seriously. Hugh Jackman is awesome.

Ryan: Is this like, do you have an Alabama accent now and I just can't understand the words you're saying because they're not making any sense.

Kelly: No, I once watched an interview with Hugh Jackman and I was a huge Hugh Jackman fan because I really liked the Wolverine, how he played Wolverine. But I watched the interview and he just laughed at things that didn't make sense to laugh at and he just said stuff...

Ryan: You've read your husband's comic right?

Kelly: ...says all kinds of stupid shit, what?

Ryan: You read your husband's comic, right?

Kelly: Yeah. Alright, I'll give you that.

Ryan: Because I heard that Hugh Jackman loves Saturday Morning Breakfast cereal.

Kelly: Yeah, I wish. I wish. He just says all sorts of stupid stuff and I was, uh, if you don't write for this guy then he's disappointing. If you write for him he's fine, but just never let him speak his own words. But anyway, so, I feel like he's very pretty but he doesn't have a lot of personal depth. And I feel like this movie probably doesn't have a lot of depth.

Ryan: He's under...

Kelly: Well, you've got me, geologically this movie has depth but...

Jacob: Alright.

Kelly: Intellectually I'm not sure.

Ryan: So what does that, so what, so, Jacob, where are you on the fractional, how weak is your thumbs up...

Jacob: So, do you want me to give it a fraction...

Ryan: Is it 2/3, 6/8, whattya got?

Jacob: From zero to one, I'm probably, I'm probably like, .85.

Ryan: You're a .85, we got to figure... Alright, Patrick, so it's up to you to figure out how much to actually, because Patrick is the on that does all the purchasing and all that. So, Patrick, figure out what we want and do it.

Kelly: Good luck.

Ryan: Thanks. Thanks Patrick. And you know, a big part of our talk with Massimo so far has been figuring out what you want from life and that's what we're going to get back into with our second half of our interview with Massimo and that's coming up next.

Music

50:51

Jacob: Now, for those, for these people that maybe they don't even know what philosophy of science is, kind of going back to what you said about believing in experts, how do we, at least get the first foot on the ground and separate legitimate experts from pseudoexperts. Like, for instance, in the vaccine controversy, we have Andrew Wakefield that purports to be an expert but really is in total disagreement with all the other experts and I don't think it's, I don't think it's really fair to expect everybody to go and look at the entire body of evidence because not everybody knows how to do that or knows that it's necessary. You know, everybody just kind of says well, if this person says it and their credentials look good, again, I guess it's an appeal to authority fallacy in this case, but what's a good strategy to separate the good experts from the fake experts.

Massimo: That's an excellent question and you're right, one needs to be careful about appealing to, about committing the fallacy of appealing to authority. But at the same time, we have to acknowledge that a lot of what we think we know, in fact we only know because we trust some experts. You know, when most people are, presumably, convinced, for instance, that there are such things as atoms. But, try to ask somebody, well, how do you know that there are atoms? You know, what is, what is the empirical evidence there? Most people would probably say, you know, being incapable of saying anything or explaining why they believe in atoms, they heard that there's this thing and there are experts out there - that there are atoms. The same goes for DNA, the same goes for, you know, galaxies at the end of the Universe and so on and so forth. All sorts of stuff, we don't have, either the time or the expertise to verify directly. So, we trust experts all the time. Now, yes, of course experts cannot be trusted unconditionally. Granted, that would be a bad idea. Um, but the fact of the matter is, you know, let's just use some common sense for instance in his case. Let's say that you do have, let's say a medical problem. A toothache, for instance. What do you do? I gather you're not going to go to the astrologer, you're not going to, you know, your friend the engineer, ah, you're not going to a lawyer. You're going to a dentist, right? Those are the experts of that domain. Now, how the hell do you find an expert in that domain and can you trust him? Well, the usual way. Ah, you look at the credentials of the expert, you know does this guy, you know, if you're going into a dentists office you'll see that there are diplomas all over the place and you know, those diplomas are supposed to tell you that yes, this guy actually knows what he's talking about, what he's doing. Before he opens your mouth he knows, actually, where to do, to go, and what to do. Now, it may still be, of course, and if you want to, if you really want more information you can actually check. Alright, you can call the universities from which the guy got the degrees, you can call the professional association of dentists, whatever that is, ah, to see if the person is accredited. Ah, you can call the Better Business Bureau to check if there are any complaints that have been lodged against that person and so on and so forth. Now, suppose you go to the expert and the guy says, well, you know what, it's not just a toothache. We've got to get rid of the whole thing and redo it from scratch. You might want to pause. Now, at that point, however, what do you do? Say that you mistrust what that expert is telling you right? You probably don't just walk out and say whatever. Ah,

its his opinion and I have a different opinion. You probably go to another dentist, you get a second opinion. And if you're not satisfied with that one you go to a third opinion and so on and so forth. But you still go to dentists, you don't go to the lawyer and say hey, by the way, my dentist told me this, what do you think? - should be done with things like, say, climate change. Now, grant the possibility that it is strictly, that it is possible in theory that the scientific community at one point gets it completely wrong.

55:00

It certainly, it has happened in the past, you know. At some point or another scientists have reached consensus on something, let's say, Newtonian Mechanics and then it turns out that, you know, they're only partially right. You know, that there were some major things that were not working. Okay, but the point is that at that time, nobody had a better idea. It's not only that you say well I don't trust Newton, let me go to the alchemist, he's going to do better. No, the alchemist isn't going to do better. The best science you have is whatever it is that the scientific community is telling you at that moment. So, in the case of climate change, it really does have to say, well, what does the relevant community of experts say? Now, you will find some people with PhDs that disbelieve the - in scientific fields, that these believe climate change. But when you start looking a the actual numbers it turns out that first of all most of those people are not climate scientists. You know, you can a PhD in degree in molecular biology, well a PhD in molecular biology tells you precisely nothing about climate science. That would be like asking, you know, a neurosurgeon to fix your tooth. Why would you do that? So what, he's a doctor. But he specializes in brains not teeth.

Ryan: My brain is near my teeth. It's adjacent, it's tooth adjacent.

Massimo: So, you have to focus on the relevant community of experts, not just people with PhDs in the sciences. Of course, even within that community you will find dissenters. There's going to be a number of people who are going to say no, I interpret the data differently, I don't think so, I don't believe that. But that's why you - broad consensus and right now and for a number of years the consensus, very broad consensus, within the community of relevant experts which are, in this case, the climate scientists, it's definitely happening. Climate change is real and that, a large part of it is anthropogenic, it's caused by human beings. That's the best answer we've got. You want 100% truth, I'm sorry, that's not of this world. We're not going to have 100% truth about anything. Um, so, set aside that nice little thought and just move on and get on with your life.

Jacob: So, we just need to get people to dig in and research these, those topics, those politically sensitive topics as much as they dig in and research their doctors, the things that affect them personally one-on-one.

Massimo: Absolutely. Now, the other thing that people, that may be helpful to point out to people is that there are some interesting distinctions to be made. For instance, it's an empirical fact that most of the people that are opposed to climate change are either politically conservative or libertarians. And especially the libertarians are an interesting case because often the reason a libertarian is, ah, a climate change denier, is because that person thinks at one level or another, that if climate change is real that's the kind of problem that only requires big government intervention and since they are ideologically opposed to big government intervention, then, of course they are more inclined to sort of pick-up on the skeptical side of the debate. But what is helpful there is to point out very important distinction between the science of climate change and the economics and politics of climate change. I mean, we can agree that there is such a thing as anthropogenic climate change and then have an interesting discussion about what are the best ways to deal with the problem. Those are two distinct issues. One is, I got a toothache, that's a fact and it's undeniable. The other is well, what am I going to do about it now. Am I going to take the tooth out. Am I going to allow somebody to go in there and do some modification or what. How much does it cost to have it out, how much does it cost to go for the longer but perhaps you know, less impactful cure and so on and so forth. You see that distinction there, between is there - and okay now what are we going to do about it and by the way if we have more than one course of action which one is the best in terms, not just the health aspects but also the economic aspects. Because I might not be able to afford one of the methods to pay for a long cure for my tooth. It might be that, you know, I'm in a position where I just have to get rid of it. It still solves the the problem. Less optimally but it balances out the solution of the problem with the economics of the situation. So, I think that the libertarians would do well, the rest of us would do -service to point out that there is no necessary logical connection between accepting - on the one hand and therefore being committed to a particular kind of solution. The solution is still out there, we stilll have to talk about it.

59:57

Kelly: So, I'm going to steer the conversation now back a little bit more towards the book. So, one of the things that you discuss in the book are three different systems through which you can make moral decision including virtue ethics, the ontology, and consequentialism, which is a mouthful. And you suggest that you as an individual can pick from those three which parts you find the most satisfying and choose to live your life that way and I like that idea but I wonder how that idea goes over in a philosophy department. Because I feel like lots of times in academia things are black and white. And so, to say, pick the parts that you feel that are the most satisfying could cause a lot of

arguments. Additionally it suggests that there's no absolute best moral, there's no absolute moral, or morality and I guess that makes sense but, ah, but anyway, what are your thoughts on that? What, how do philosophy departments handle that statement? Does that question not make sense?

Massimo: That's interesting and it makes perfect sense and it's an excellent question. It will bring us to discuss two things. First of all, the issue of how, what would a professional philosopher react to. And second, you know, why are there different frameworks, does that mean there is no moral truth out there? So, the first - that the reaction of a professional philosopher, especially a professional moral philosopher, - here are three different ways of thinking about morality, you can sort of combine aspects of these and come up with a better system. The first reaction of a professional philosopher will be absolutely no, you're not going to do that but I can actually show you, and to some extent in the book I do, that professional philosophers do that. For instance, two of the frameworks that you mentioned are the ontology and consequentialism. So, consequentialism deals with, as the name implies, with the consequences of actions right? So, an action is morally good if the consequences are positive, let's say for instance, it increases people's happiness and it decreases pain and an action is morally bad if it has the opposite affect. The ontologist, on the other hand, the second major framework, bases his judgement on rules. The ontology means rule-based ethic. The most - ontological ethics, of course is the Ten Commandments, that sort of stuff. That's the ontology, but professional philosophers don't rely on religious - so the most important non-religious system of the ontology is ah Emmanuel Kant and Kant - these ideas that is referred to as the categorical imperative. They categorical imperative says basically that if you ask whether an action is right or wrong, ask yourself whether it will be acceptable to turn that action into a universal rule. So, for instance if you ask yourself, is stealing alright, is it a good thing? Well, Emmanuel Kant said yeah if everybody - not just, but everybody. Clearly that wouldn't be a particularly nice place to live so the idea is therefore you can conclude, based on the categorical imperative, that no, stealing is not a good thing. Now, discussions have been going on for a long time between the ontologists and consequentialist philosophers. And it turns out that of course each side comes up with various - objections to the way the other school works. And the Italians are very consequentialist in particular - for the purpose, for this discussion are going to be basically the same thing so I might - the term. The Italians have - very good over the last several decades at coming up with modifications to the original idea that they - account - addictions that haunted them. I think, an important moment -progress. You know, you come up with an initial idea then people say what about this then you modify that idea to some extent to account for objections then there there's another objection that comes in and you go on in this process by modifying and improving ideas. - kind of been doing this for awhile - some versions of utilitarianism are now beginning to look a lot like the ontological system that is a version of the Italian - called rule-based utilitarianism which is essentially - system, so - even though professional moral philosopher absolutely you're not going to mix different systems, in reality it's what they do, ah, in their professional life.

1:04:48

The second question, - for everybody that is not a professional philosopher and that is, okay, so let's say that there are three major ways of thinking about morality. The three that you mentioned, so, the ontology, consequentialism, and virtue ethics - . Virtue ethics is about - it's about developing a good way of navigating your life, the eudaimonic life. So, if there are three of them, um, now does that mean that there is no truth of the matter out there? And the answer is, yes and no. Depends on what you mean by truth of the matter. If you're looking for absolute truth, meaning, something that is in the sky, like, you know, this is always absolutely true or this is always absolutely wrong, then you are in the wrong area of - that's not what moral philosophy is about. There are no universal moral truths. Because morality applies to certain kinds of situations only. It applies, for instance, social beings that are capable of reflecting on what they are doing and why they are doing it. It doesn't have to do with, say, lions. Lions do what they do and it doesn't make any sense to say well, is that a moral lion or is that an immoral lion. You cannot apply morality to beings that don't think and reflect about what they are. So, in that sense, there are no universal answers. But - the three major ways of thinking about. - as frameworks. - The way they are giving you ways of thinking about morality. So, moral philosophy ethics, it's not a question of finding out the answers, its a question of giving you the tools to think about moral dilemmas, right. And here's what I mean, I mean, let me give you a particular example. Let's say we're talking about abortion. I don't think it makes any sense at all to say that abortion is right or abortion is wrong. There's no meaningful sense, there's no fact of matter to back up abortion being... What ethics does, what moral philosophy does is it says first of all, let's understand what we're talking about. What kind of procedure are we talking about? What kind of relevant information do we have about that procedure. For instance, when is it that a fetus develops enough to feel pain, okay, that's a factual question, that's something that science is going to tell me. Now suppose that the science tells you, well, the fetus develops the ability to feel pain after three months, okay? Well at that point you can say, ah, well I think it's immoral to do anything that causes pain. Therefore abortion is permissible before three months but not after three months. And somebody could say, well, what about, you know, if the life of the mother is in danger? Well if- utilitarian - say, well, good point, now I have to balance the pain and suffering and the happiness of the mother and the fetus, so the issue becomes more complicated and you go from there. In other words what ethics is doing, is it forces you to pull out your assumptions. Your hidden assumptions. When somebody says, this is wrong, the first question should be, why? Give me a reason. What is your reasoning, because you probably say that that is wrong because of certain assumptions that you make and you may not be aware of those assumptions and once we start talking about it in logical way, you know, within a framework of rationality, so, using philosophy, that it may turn out, actually, that we may agree or if- disagreeing, now we know why we disagree. Ah, for instance, you may disagree with my take on abortion because - it's all about the sanctity of life and life - might say, begins at conception let's say. Okay,

fine, but now we know that we're using different actions we're starting from different perspectives and now we can have a conversation about, does it really make sense to say that life begins at conception, what do you mean by that, what do you mean by life, how is it sacred and so on and so forth. - way of thinking more carefully about moral issues. It doesn't give you the answers but it brings up the assumptions and the reasoning that you use -to come up with the answers.

Jacob: Okay. Yeah.

Ryan: Yeah. That makes sense. That's often what I do when I get into debates with people. I guess I don't have the philosophical background to know the proper terms for it but I often do try to find what's the kernel point at which our beliefs or opinions on this topic diverge. Because often if you don't figure that out its very hard to have a conversation moving forward.

1:09:59

Massimo: Right, actually, because you know there are two or three chapters in the book that deal with the science as well as the philosophy of moral decision making and it, what happens what we found out, empirically, is that often when people say that something is wrong, you know, the first time that you ask them a question, put them in front of a situation, and they - completely wrong. Let me give you an example again because it works best with examples. Let's say that I were to ask you well do you think that sex between brother and sister is wrong. Most people would say yes and a biologist would actually say yeah that's probably not a good idea because it's going to be, that sort of mating is likely going to have genetic defects and so on so forth. So, there are actually objective reasons why, ah, that might be wrong. But now okay but what if they decided not to have children. They can't have children. Now what happens? Well, a lot of people will still say no, it's still wrong but now it becomes a little more difficult to actually rationally defend, why is it wrong. Now, a reasonable answer could be, well, it's probably going to affect their psychological development and its probably going to be some type of power play by one of the two and so on. Ah, at which point you could say, well, okay, let's assume this is an ideal case, these are both very well adjusted individuals, adults that can make their own decisions, they've gone through psychological tests and they are perfectly fine, reasonable human beings, that know exactly what they are doing. Now do you still object to it? Well, at that point it becomes really difficult to come up with any reasonable objection that point, and if you still object I suspect that at that point that it comes out of an emotional reaction that has been ingrained into us that that sort of sexual act is a bad thing and so our first reaction is one of repulsion. But repulsion is not a good basis for moral reasoning. And so that's one case where you can so okay, no that's why under normal circumstances it is actually

wrong. You can make a good case that it is. But you can also say that there may be special circumstances in which it is fine and you've made progress.

Ryan: Yeah, that's ah, you've created quite a sticky situation. So I guess, one of my questions to start wrapping things up, is were there any chapters of the book where you went into a topic thinking oh man, this is going to be really easy to integrate science and philosophy or were there any chapters vice versa where you thought aw man, this is going to be really hard, and if so did any of them surprise you with how easy or hard they ended up being.

Massimo: That's a good question. I thought the most difficult section of the book, for me at least, was the one that deals with sort of subconscious decision making by human beings. There's a chapter about the zombie inside of you. Um, and that's what's got to do with research in cognitive psychology and cognitive science that deals with the fact that a lot of our apparently conscious decisions or reasoning is actually the result of unconscious - . That was difficult because to go into the literature in psychology and cognitive science is a little far from my field even as a scientist. But secondly because of course if it turned out that most or all of what we think of as conscious reasoning and rational decision making, all that comes out to be the result of, you know, subconscious decisions that we have no control over, then so much for philosophy right? I mean, philosophy is supposed to be this, reflect, conscious reflection about things. If it turns out that your consciousness doesn't exist, that it is all an illusion, ah, then philosophy goes in the trash. So, fortunately it turns out that's not true. Um, so, ah, but that was interesting because I had to learn a lot about that research and I had to figure out, well, what is square the cognitive science with the insights of philosophy. Um, let me give you one example of how that thing works. And that is, um, it turns out that contrary to what I was feeling initially when I said, when I wrote that section of the book, it turns out that actually, philosophy comes out to be even more important than ... let me tell you why. So, there's a lot of, especially in the skeptic community that I know in the last few years this, there's this very fashionable tendency to say that this is an illusion, that's an illusion, free will is an illusion, consciousness is an illusion, reality is an illusion, it's all illusion. And one of the bigger sources of evidence for this is the very good, very extensive research on cognitive biases. It turns out that human beings a naturally very bad at reasoning, okay? We come up with all sorts of ways to rationalize what we think as opposed to...

Ryan: Yeah, didn't you and Julia on the show recently call us the rationalizing animal not the rational animal?

1:15:04

Massimo: Exactly. And there's some really good research in that area. Now, a superficial conclusion you might take out of that sort of research is - so much for philosophy and studying critical thinking, the hell with all that, we're not rational, we're rationalizing, so, too bad. But the conclusion that I take is exactly- the conclusion is exactly the opposite and it is precisely because it doesn't come natural for us to think rationally and critically then that's why people need to be trained. My analogy there is with probability. It turns out we're also very bad at estimating probabilities, okay? Which is why, of course, the gambling industry thrives. Because people just have really awful at estimating the probability of events.

Ryan: Not me, I've got a system.

Massimo: That's right. Exactly. Now, heard of that used as an argument for shutting down departments of statistics and let's not even teach probability theory. On the contrary, what you want to do is to teach people probability theory so that they know what they are up against as they are walking towards the casino, okay? The same goes for critical thinking and cognitive biases. Yes, psychological research has shown that we have all sorts of cognitive biases that distort our reasoning and that make it more difficult for us to come up with rational decision making. That's why we need to teach people critical thinking. Because to cancel out that sort of natural tendency to sort of rationalize that human beings have.

Ryan: That makes sense. And so that was the, so you're saying that the chapter about the zombies inside you was one of the harder chapters to write just because it required so much research. Was there any chapter that just fell into place perfectly and you barely had to do any work, not barely any work but you had to do proportionally less work than you were expecting?

Massimo: The last one is on gods, the relationship between gods and morality and it's based on the Euthyphro which is a Platonic dialog so it was written 24 centuries ago. And the Euthyphro is this beautiful dialog I absolutely suggest that people download it from the web, it's available for free in a number of places. It's a short dialog by Plato, it's very easy to read, it's really enjoyable. It's really a conversation between Socrates and this guy Euthyphro and it is about the sources of morality. And without giving you the whole story at some point in the discussion Socrates asks Euthyphro this crucial question which is has ever since been known as the Euthyphro dilemma. And the question is this, so do you think that something is good because the gods say that it is good or do you think that the gods say that something is good because it is good. And Euthyphro thinks about it for a second and says well, clearly the first one. Something is good because the gods say it is. Which is, by the way, is the kind of answers you probably get from a lot, let's say, Christians today, particularly fundamentalist Christians. You know, whatever god says goes. But Socrates merely points out that if that's the case that means that essentially morality is a matter of might makes right. That, you

know, the gods could change their mind then they could suddenly decide that rape and genocide and pillaging is all good and then you are supposed to agree just because they are very powerful. So, Euthyphro thinks about it for a second and says yeah you're right Socrates, that can't be the answer so he's going to go for the second horn of the dilema.

Ryan: No, It's a trap!

Massimo: It's a trap. So, the second horn is a well, okay, then the gods have knowledge that something is good because it really is good in which case, Socrates says, okay, well then you don't need the gods. You can think about it, you can reason through the problem yourself and figure it out. You don't need the middle god or the middle man, the middle god as you will. So, the point of the dialog is that whether the gods exist or not, it's irrelevant to moral decision making. We still have to make up our minds based on reasoning and thinking and talking about what is right and what is wrong. It's a really powerful conclusion. It's so powerful that every theologian has been upset about it ever since. And in the chapter I go through several of the arguments that theologians still, to this day, try to diffuse or to respond to Euthyphro's dilemma and none of them works. None of them comes even close to working which is a testament to the genius of Plato. I mean, 2400 years ago, this guy figured out something about morality and gods that nobody, and I say, nobody, could do better in the last 24 centuries. That's quite an accomplishment.

Jacob: Definitely. Definitely.

Ryan: Well, as far as your own endeavors and accomplishments, you are still actively, when you're not writing books and teaching at university, you're still actively working on your blog and podcast. Why don't you give us a little bit on how that's going.

1:20:06

Massimo: It's going very well, thank you. Ah, the rationally speaking blog and podcasts are really an enjoyable part of what I do. Ah, the blog now has more than a thousand posts, believe it or not and we do long form blogging so each one of our posts, I say our not because I refer to myself as the king or the pope.

Laughter.

Ryan: The royal Massimo.

Massimo: I have enough writers that help me out and so we do long form blogging so each one of our posts is usually about 1,500 to 2,000 words which is about the typical op-ed piece in the newspaper. And so we've done more than a thousand of them, we have a good amount of traffic. - new pieces per week. The podcasts are going very, very well. Both Julia and I are very happy about it. We've been doing it now for two and a half years, every other. And we recently passed the 1 million total downloads on iTunes which was pretty nice.

Ryan: Congrats! That's amazing.

Massimo: I was surprised, I was pretty stunned, I said wow. So, people actually listen to it. So, you know, they're very enjoyable, we get to meet a lot of people on the podcast. We invite, just like you guys are doing, we invite authors or people we find interesting and it's been a really good ride so far.

Ryan: That's excellent. Ah, so, what's coming up for you in the future? I assume, I mean, you're obviously having fun with the blog and the podcast, so you'll keep doing those. Are you working on another book for public release, public consumption?

Massimo: Ah, yes, so there are actually 2 things that are coming out. One is a book that is already finished and it's going to come out by the University of Chicago Press in the summer, probably in July. I didn't write the whole thing. I only wrote a chapter and then I co-edited with a colleague of mine, the rest of the book. Ah, it's called *The Philosophy of Pseudoscience*. So, it's a, basically, on *Nonsense on Stilts* . This one is aimed at a little more sophisticated, sort of audience. You know, this is for philosophers or students of philosophy or, I should add, you know, sophisticated skeptics. So, if you guys consider yourselves sophisticated skeptics we might need to do this again in a few months and talk about that book. It's really about what philosophers call the demarcation problem, the difference between science and pseudoscience. Right, I got a new contract just last week as a matter of fact, also with the University of Chicago Press. This one is for a book on whether and how philosophy makes progress.

Ryan: Ah, that's something you guys get accused of a lot, is not making progress.

Massimo: Ah, without giving too much of a spoiler, I would say the answer is, of course it makes progress but in a very interesting way that is different from the way in which science makes progress. I'm writing the book now, it - the end of 2014.

Ryan: That's great. Well, ah, we, well, I think it would be a lot of fun to have you back on to discuss the *The Philosophy of Pseudoscience*. As far as whether we are advanced, high order skeptics, I would say that we are average skeptics but we all happen to be scientists which I've seen you give

talks where you point out the distinctions between the two camps and that they are not completely overlapping - in that sense. So, it could be, it could be a very interesting discussion.

Massimo: I'll have to send you a copy of the book when it comes out and then you guys can decide whether it's worth a podcast.

Ryan: Great! Well, thank you so much for joining us this evening and giving us some of your time to talk about *Answers for Aristotle* as well as some of the other topics we've veered off into but those are always lots of fun to have divergent discussions. Ah, but we really appreciated your time and we really enjoyed the book. I wrote a review for it on our blog the Paleo Cave at Science... sort of and we will post links to your blog and podcast in the show notes for this episode and we thank you very much for giving us some of your time.

Massimo: Thank you, it was a pleasure.

Ryan: So, that was the rest of our interview with Massimo Pigliucci, author of *Answers for Aristotle*. You can find links to his blog, his podcast and links to the book and my review of the book all in the show notes for this episode at Sciencesortof.com. Thanks again to Massimo for giving us his time. Hopefully you enjoyed everything he had to say and will be going to check out his podcast yourself because, you know, the world, everybody needs another podcast to listen to. There's not, there's only so many hours in the day and you should fill them with knowledge shoved into your brain, straight in the ear holes. And that's a good thing. But even if you don't go listen to Massimo's podcast we know you're listening to this podcast and one of the ways we know you're listening to the the podcast is because you get in touch with us and tell us all about the different aspects of the show that you like, dislike, or just have comments on in general and we dedicate our last segment of the show just to those kind of communiques in a segment we call The Paleo Pals.

Music

1:25:42

Ryan: As I just mentioned, this is Paleo Pals, the segment of the show when we deal with listener feedback. It's pretty straight forward. We each bring one to the table, go through it and then the show is over and you can all go home. I don't know why you weren't listening to this at home in the first place. That's your own issue, we're not going to get into that. I want to start this week off with Kelly.

Kelly:Alright, so, I have an iTunes review and it's entitled: "This is great guns!" and it's by TwoZeros. TwoZeros says this show is a broad spectrum shot to the earbuds. Every episode covers multiple topics intelligently and coherently. The hosts are even funny... sort of. It's a very entertaining show with a lot to offer anyone with an interest in science and science news. After listening to a few shows go listen to the Titanium Physicists podcast so you can get the reference in the title of this review. The Titanium Physicists are actually very funny and a joy to listen to too. I would start with the "No Bear Theorem" episode. Both of these shows are a part of the Brachiolope Media Network along with the Weekly Weinersmith podcast. I haven't listened to that one yet. Alright TwoZeros, it's time for you to go listen to the Weekly Weinersmith.

Ryan: First off TwoZeros, I accept that maybe we are not very funny but to say that we are not funny and that Titanium Physicists somehow is, no.

Laughter.

Kelly: That is insulting.

Ryan: No. That is all I have to say to that.

Laughter.

Ryan: We are so much funnier than Titanium Physicists, I will go to the mat on that one. That is not okay.

Kelly: Everybody should go over and check out the Titanium Physicists because it's awesome and so is the Weekly Weinersmith and thank you TwoZeros.

Ryan: And this is why the Brachiolope Media Network is a good thing even though the listeners try to pit us against each other and it works. I was going to say, it's not going to work but it clearly just did because I'm mad at Ben for some reason.

Kelly: Clearly.

Ryan: I don't know how TwoZeros did that, it's his iTunes wizardry but it worked. Well, one of the best ways, one of the best forms of feedback we get on a semi regular basis, a regular basis for some, a semi regular for others, is the donation where people decide, hey, this show is pretty cool and in order to support them being able to do it I'm going to send a little bit of cash there way and that is what CameronL did. He sent us a very generous donation that we will put directly back

towards trying to make the show as good as possible. A couple of us just got new mics over the holiday season to make 2013 sound even better and ah, there's all kinds of plans in the works for how to improve, not just Science... sort of, but the entire Brachiolope Media Network in 2013. And donations to start off the year right really help us out in that so thank you so much Cameron, it's amazing, it's wonderful, we really, really appreciate it. Anyone else who's interested in donating can go to sciencesortof.com and there is a donate button on the right hand side of the page and right underneath that is a recurring gift button where if you want to just give a little bit each month you can do that. Either way it is super helpful to us and if you don't feel like giving us money directly you can also use the Amazon affiliate page or buy some Science... sort of gear so you get something for the money that eventually winds up in our coffers. And those are great too and we really appreciate that as well and these are all excellent ways to support the show and we just can't thank people enough who do that. So, thanks Cameron.

Kelly: Wooo, thanks Carmeron!

Jacob: Thank you Cameron.

Ryan: Alright Jacob. What are you bringing to the table?

Jacob: Today I've got a comment that came to us via Facebook. James was commenting, based on something that was said in episode 160, um, Thank Harder.

Ryan: "Giving thanks III thank harder".

Jacob: Giving thanks III thank harder, yeah. James says, James was referencing a conversation we had about the morality of life without parole in a society that maybe has attained immortality. And Charlie said it sounds like a Kurt Vonnegut novel and I said, it does but I don't think he's written a novel like that because I've read it, read all of them. But James reminds us that in a collection of short stories called *Welcome to the Monkey House* Kurt Vonnegut writes about the effects of the cure for death in the story *Tomorrow, tomorrow, and tomorrow* and he's totally right. I did forget about that story. However, I think I was thinking more about, in terms of the morality of life without parole in terms of a Kurt Vonnegut story. This story was about people, the cure, or, the secret to immortality turned out to be dandelions and dirt. You just mash them up and eat them and then you lived forever. So, because it was so cheap and so readily available everybody had them. It wasn't, everybody had the cure, it wasn't just rich people and Kurt Vonnegut sort of explored the consequences of that and it was pretty fun and interesting.

Ryan: So, you were wrong.

Jacob: So, thank you for correcting me. I'm going to say to James that I was wrong. But I'm going to say to you, Ryan, that I was right.

Ryan: Listen, I, as, acting as Science... sort of, I commented on James' post saying, so, the point being, that James was wrong, and James you liked that comment.

Jacob: Jacob was wrong.

Ryan: Yeah, yeah, James is right, Jacob is wrong. But James liked that comment. He clicked like on Facebook, he said I like that comment, he interacted with us in a way that is relevant and important and then Jacob, not wanting to be publicly shamed, deleted it so I have revoked his privileges for the Facebook account. And no one needs to worry about Jacob deleting their likes any more. You're safe people. You're welcome.

Kelly: Thank you Ryan.

Ryan: Something had to be done to stop this monster.

Laughter.

Jacob: Absolute power corrupts absolutely.

Ryan: Ironically, your absolute power could be revoked with a simple click.

Laughter.

Jacob: I guess it wasn't absolute to begin with.

Ryan: No, it was not. That's what you get. Take your licks and maybe if you're good and prove yourself worthy you can get your privileges slowly returned to you. Only if James, you know what James, you write in and tell us if it's okay to give Jacob privileges back after deleting a comment you liked. It's up to James now Jacob. He's the one...

Kelly: Don't do it James.

Jacob: Just go back and re-listen to the podcast and see if what I claimed was actually wrong or if maybe I just misunderstood.

Ryan: It's up to James.

Kelly: Don't bother doing that James. Just shut him down. Don't waste your time.

Ryan: James actually drew the image that I use as my iPhone background. It's the Science... sort of naked mole rat image that's on our, it's in our art sort of gallery on the website.

Jacob: Cool.

Kelly: Rockin'. Go James.

Ryan: Yeah. I love that image. I wear it proudly on my phone. So, that was episode 162. Are we living a better life now that we've done an episode and talked to Massimo? And found our eudaimonia?

Kelly: Indeed.

Jacob: I think so.

Kelly: Better living through Sci-fi.

Laughter

Ryan: SciPhy (pronouncing it differently).

Kelly: SciPhy.

Ryan: Because Sci-fi is a different, Sci-fi is *Oblivion* and you claimed you would not have better living if you had to see *Oblivion*.

Kelly: Affects.

Ryan: SciPhy. Well, thanks again to Massimo, I hope people go and check out the book and my review of the book. Links will be at sciencesortof.com at episode 162's show notes. If you would

like to be featured in an upcoming PaleoPal as we have an embarrassment of riches, make sure you make it good and send it in to our email at paleopal@sciencesortof.com or go to Facebook, know that it is safe from Jacob, at facebook.com/sciencesortof or twitter.com/sciencesortof we also have a voicemail line at 312-725-3672, that's 312paleopals. We know that's too many letters to correspond to the correct number of numbers but if you punch them all in the voicemail, it just sounds better. I don't know why, I can't explain it and I won't try to. Make sure you're listening to all these shows on the Brachiolope Media Network and leave some spots open in your life for some of the new stuff we're hoping to put out this year. Thank you so much for listening, we really appreciate it and hopefully you will join us next week for episode 163 where we will bring you a whole lot more science... sort of.

Jacob: I like that Kelly and I can sing it together.

Ryan: Yeah.

Kelly: Yeah!

Announcer: Visit sciencesortof.com for show notes and links to all the stories we talked about and ways to interact with the hosts, guests and other listeners. Science... sort of is member of the Brachiolope Media Network of podcasts. That's all for this week, see you next time on Science... sort of.

Ryan: When we did the Thanksgiving show where we talked about, and Charlie said some comment that it sounded like a Vonnegut short story...

Jacob: Oh, if we were immortal.

Ryan: And you said, oh, no I would know if it was a Vonnegut one because I've read everything he's ever done...

Jacob: Yeah. Well, that didn't...

Ryan: You were wrong.

Jacob: But he didn't say anything about parole or anybody going to jail or...

Ryan: No, you can clarify then, is he still your paleo pal? Deal with it.

Jacob: Don't you accuse me of not knowing Vonnegut.

Ryan: Well, okay, then you can defend yourself and be the defensive prick who can't take...

Jacob: Didn't...

Ryan: No, it's okay. Be that guy, have fun with it.

Jacob: I'm just going to delete your comment is all I'm going to do.

Ryan: Okay.

Jacob: On Facebook. It's done.

Ryan: It's already got a like on it. You can't delete the comment.

Jacob: I did.

Ryan: You bastard.

Laughter.

Ryan: I can't believe you just did that. That's not okay. I'm going to revoke your...

Jacob: It doesn't matter, it's done.

Ryan: I've got this.

Jacob: You're not going to revoke my privileges because I'm going to revoke your privileges an his permissions.

Ryan: Too late, I win.

Jacob: Dammit.

Laughter.

Jacob: Crap. I can remove myself from admin now but I can't remove anyone else.

Ryan: Take that. Sorry Kelly, we're being silly boys.

Kelly: It's okay.

Ryan: You're used to it.

Kelly: I'm used to it.

Ryan: Been down this road before.

Kelly: Many times.