

Rationally Speaking #202: Bryan Caplan on “The Case Against Education”

Julia Galef: Welcome to Rationally Speaking, the podcast where we explore the borderlands between reason and nonsense. I'm your host, Julia Galef, and I'm here with today's guest, Bryan Caplan.

Bryan is a professor of economics at George Mason University and the author of several books including most recently, *The Case Against Education: Why the Education System is a Waste of Time and Money*. That's the case we're going to be talking about today on the show. Bryan, welcome back to Rationally Speaking.

Bryan Caplan: So much fun to return.

Julia Galef: So your Case Against Education lays out a model of what education's doing, what the value of the education system is to people and to society, that is different from the norm. Could you lay out that case in brief?

Bryan Caplan: Sure. So the big thing that I'm doing differently from almost everybody else is I'm taking the idea of signaling very seriously.

Just to back up... So, there's a standard story that almost everyone tells about why education pays in the labor market, and it just says: you go to school, they pour some skills into you, you're better at your job, and so you get paid more. What's the problem?

And I'm happy to say, well sure, that's part of the story.

But I say there's also a much bigger part of the story that rarely gets discussed. And that is that when you do well in school, you impress others. You get certification. You get stamped with a sign of approval saying "Grade-A Worker". And my story is that the majority -- in fact, a large majority -- of the payoff from education actually comes from this.

Selfishly speaking, that doesn't matter so much. But from a social point of view, it matters tremendously. Because if the reason why people get paid more for school is because they learn more skills, then basically it's a way that taxpayers invest in our productive capacities and then we produce the very wealth that we are being paid for.

But on the other hand, in the signaling story, the main thing that's going on is that you're getting paid because you've impressed employers. And if everyone has a bunch of stickers on their head, this doesn't mean everyone gets good jobs or gets paid a lot. It just means that you need a lot of stickers in order to get a job. So the biggest sign of this, I would say, is what's called a credential inflation, which is you just now need more education to get a job that your dad or grandfather could've gotten with one or two fewer degrees.

Julia Galef: And what kind of signal are you mostly pointing at: Is it the signal that someone was good enough to be accepted into a college, or the signal that someone was good enough to graduate with the grades that they did?

Bryan Caplan: Yeah, so the graduation seems like it's a lot more important. Because if it were the first story, if it were just you get a great signal by being accepted, then people would take their admission letters and shop them around employers saying, "I got into Harvard and Stanford, so what are you going to offer me, Goldman Sachs?" And in practice, that doesn't seem to work very well, right?

So I think if you're wondering why, I would say that there's something very odd about a person who tries to do that. They seem like they're trying to skip out on this sacred institution of our society. So, yeah, employers are understandably nervous about someone so weird that they would get into Harvard and then try to weasel out of it.

So in terms of what is it people are signaling, I'd say it's really a big package of different traits. So, intelligence, obviously, but it's not just that. That's too easy to measure by itself. So it's also work ethic. And then finally, sheer conformity, which again, is very important on the job. Someone could be really smart and really hard working, but if they're defiant, if they don't play as part of the team, then they're almost useless to you. And I say really to understand a lot of what's going on with education, we have to focus on this conformity signaling.

And again, what's really interesting about conformity signaling is if someone comes along with a brand new, incredibly creative, unheard-of way of signaling conformity -- who are the first people that are going to want to try that signal? It's gonna be the non-conformists. So there's a Catch-22 of conformity signaling, which is that once something becomes a standard way to signal conformity, there's a lot of lock-in, and it's hard to break out of it. And I think that's a big part of the problem with our education system, is we are pretty locked in to this bad equilibrium.

Julia Galef: I have a bit of experience trying to communicate relatively complex ideas. And one thing that I now do instinctively is I ask myself, "What are the top three, or five ways that people are going to misunderstand what I'm saying?" And I have a feeling that the signaling model of education is often misunderstood. Am I right?

Bryan Caplan: Oh yes. Very much.

Julia Galef: So what are the main ways people misunderstand it, what are the things you're *not* saying that people might *think* you're saying?

Bryan Caplan: The big thing I'm not saying is that *all* education is signaling. And I can't tell you how many, even smart people, you go and say, "80 percent of education

is signaling" -- you may even say that exact sentence, and then people hear you're saying it's all signaling.

I didn't say all. I said 80 percent.

So that is an enormous problem. And it's the way that people will say, "What about literacy? What about numeracy?" ...Ah, I never thought about that before. Oh, thank you for pointing out what a stupid view I have because I just wasn't aware that that was going on in school.

So I think that's probably the biggest one. Probably the second biggest is this idea that it's just impossible that this could be true, despite all appearances. Because if it were true, people would figure out some better way of selecting the good workers.

And for that I say two things. I mean, first of all, there's about a trillion dollars of money in favor of the status quo. So it's gonna be pretty hard to compete with that. You know, step one. And then step two, again, is there's this lock in effect which is that if one of the main things you're signaling is conformity, then someone who does something different looks non-conformist and sends a bad signal. Right?

And ... let's see. Oh yeah, and then a third thing is that the whole idea of signaling is that if you come up with a really cheap way of signaling, the result isn't that you get your signal across at a low cost, but rather that you just have to do more of it. So basically, key idea in the signaling model is if you've found a way of cutting the cost of signaling in half, the result wouldn't be that we do half as much signaling. The result would be that we signal for twice as long.

Julia Galef: Can you say a little bit more about that? Like what is a thing that people think should be possible, that your model says it not possible, or likely?

Bryan Caplan: Right, I mean, well, yeah, "possible" is too strong, but likely. My favorite example of this is suppose that someone comes up with a new way of making synthetic diamonds at ten percent of the current cost. And my question is, how long would it take before people either stopped giving diamond engagement rings, or they started giving rings that were enormous, right?

And the key point is that since what you're signaling with that ring is that you're willing to go and put in a lot of money into something to indicate your devotion... If the cost per carat of diamond were to fall, it's not that we would just keep giving the same diamonds that we're currently giving. Instead, people would say, "Well that doesn't really convince people very much anymore. It doesn't say much anymore. I better go and either get an even bigger diamond or I'll give something that can't be synthesized."

And a lot of it is really the same for education. Where if you were to go and have, say, free college for all, the result wouldn't be that everybody with a college degree can get the kind of jobs that people get with it now. Instead there'd be an army of extra people going, and then you might need a Master's degree or another advanced degree to be considered worthy of an interview.

Julia Galef: My impression is that other academics agree that there's some signaling value to higher education, they would just put it at a lower percentage than 80 percent.

So, two part question: A, do you have a sense of what the consensus view is among other researchers about what percent of education value is signaling?

And two, how could you tell the difference between a model in which signaling is 80 percent of the value, versus a model in which signaling is 30 percent or something like that? Because you can always point to some evidence of signaling and some evidence of actual value being added by education.

How do you distinguish those two models?

Bryan Caplan: Okay, so two great questions, and I'll start with your first question and then try to remember what your second question was, or you can refresh my memory.

Julia Galef: Oh, sorry!

Bryan Caplan: Okay, yeah, so the first question... Here I think there's a big gap between just your run of the mill economist, who, I think a lot of them would say, you know, "a third," something like that. On the other hand, I actually did do a survey of economist bloggers where I think a pretty common answer was like 50 percent. So not that far from what I'm saying.

But there's huge gap between what most economists think and what actual specialists think. People who specialize in either education or labor economics. I don't know of any actual survey of them, but I have spent decades around them, and reading what they're saying. And I don't think I could get most of them up to more than 10 or 15 percent.

So again, it's the kind of thing where if the average or the median is that low, then the average is probably going to be a bit higher. But again, I think 20 percent is an upper bound. There's a lot of economists who just say, "Look, as far as we can tell it doesn't exist, or it's just not an issue." You know, one of the main literature reviews in the, I believe it's the Handbook of the Economics of Education comes away saying, "We don't see any sign that signaling is of any importance." So yes.

Julia Galef: Huh. Okay, in that case I wanna change my second question...

Bryan Caplan: Okay.

Julia Galef: ... and ask, what is your impression of the main crux of disagreement between you and the other specialists? And by "crux of disagreement," I mean what is the thing that they are seeing, or the thing that they assume is true about the world, that is causing them to have a very different picture than you?

Bryan Caplan: Right. So my basic story is that there's a lot of evidence in other fields that they just don't pay any attention to. Again, most obviously, just taking a look at the curriculum and seeing what it is that students actually learn in school -- then compare that to what they might ever do on the job, right?

And again, most specialists in both education and labor economics, they're only looking at income. And so they're looking at the effects of education, and then there is this really circular effort to say, "Well, since there's a big effect on the income of the person, they must've learned something useful," and you say, "Yes, but the signaling model predicts the very same thing." So that's a big issue.

And again, there is sort of an idea of, "Well of course we all know that the people are learning tons of useful stuff." And then when you really say, "Well actually they're learning a ton of stuff they're never gonna use" ...And when we're caught in this, we'll often retreat to, "Oh, well they're learning *how* to learn, learning critical thinking, it doesn't really matter what the subject is."

And then I'll say there's something they really don't know about, which is: in educational psychology, they've been studying this very issue for a hundred years. They want to find evidence of learning how to learn. They want to find evidence that critical thinking is being successfully taught. And yet, after a hundred years, they're really pretty shell-shocked and say, "Look, we're just not finding much sign of this broad, general invocation of thinking skills that educators love to believe is actually happening." So I'd say that's the stuff that most economists are just totally unaware of.

So looking at the curriculum, then looking at the educational psychologists who go and study the rebuttals to that... And then there's some other areas also, outside of economics -- there's this work on credential inflation that I'd been mentioning. It's more done by sociologists than by economists, so it's more sociologists that actually go and try to get details on, What is actually required to do a job, versus how much education you need to get a job? And noting that that's been going up.

And then I think there is a tendency to set up tests where it really is heads, human capital wins, and tails, it breaks even. And so --

Julia Galef: And when you say, "Heads, human capital wins," you're referring to this alternate, non-signaling model, where the value of education is, people gain the skills and knowledge that make them more productive workers.

Bryan Caplan:

Yeah, precisely. So when signaling models first came around in the '70s, people immediately said, "Well, why don't we see whether there's a special return for graduation, as opposed to mere years of education?" And they had some idea in the background of, well, when you graduate then you get this diploma and that's a convincing signal. Whereas if you just have a few years, that doesn't really sell very much. And again, probably some kind of conformity signal lurking in the back of their minds.

So anyway, so there's about 10, 15 years of research where they got crummy data and people are at least convinced not one way or another. Then finally, better data sets come along which show overwhelmingly that not only is there a big payoff for graduation as opposed to mere years of education, but in fact that is *most* of the payoff. Now, at this point, you might think that there would be a general admission, "Wow, signaling has crushed this one. This is amazing."

Instead, it takes about five minutes before people start coming up with alternate theories about how there could be a big diploma effect even though signaling is not important. And it's logically possible to do it, right? So given the article I was mentioning in the Handbook of the Economics of Education by Fabian Lange and Robert Topel, they produce a model saying, "Look, it's conceivable." Right?

But it's like, well look, if it had come out the other way, you would've said signaling is wrong. But when it comes out the wrong way, namely, in favor of signaling, then you say it doesn't prove anything.

And similarly, there's also a moderate or pretty big literature on this contrast, the effect of national education on national income, versus personal education on personal income. And again, this is research where what people *want* to find is that the effect of a year of national education on national income is as big or bigger than the effect of a year of personal education on personal income. Nobody finds that.

So there's a paper that I cite where they go over all eight known data sets at the time. Every single one of them finds a much smaller effect of national education on national income than of personal education on personal income. Which again, totally fits with signaling.

Julia Galef:

Why?

Bryan Caplan:

Well because, you know, the idea of, like, if one individual gets more skilled, they become better, they produce more -- so if everyone in the country gets more skilled, the whole country can produce more. But on the other hand in the signaling model, one person gets more stickers on his forehead, they get paid more money because they've impressed people... But if you just hand out a bunch of degrees to everybody and a bunch of stickers to everybody, that doesn't - if it didn't raise productivity, it's not going to enrich the nation.

Julia Galef: Sorry, so the return to national income is lower than the return to personal income?

Bryan Caplan: Yeah, exactly. So in the book, I say that a pretty common estimate is that if an individual raises education by a year, he'll make ten percent more money. Whereas ... an average of all these data sets is if a country increases its average education of its workforce by a full year, then the country is gonna get richer by maybe two percent.

So you get five times the benefit for an individual as for a country, which coincidentally fits that 80 percent signaling share that I was pushing.

Julia Galef: Interesting. Is that the main reason that you estimated at 80 percent?

Bryan Caplan: No --

Julia Galef: I mean, yeah, a different way to ask my earlier question about cruxes of disagreement would be how can you tell that it's 80 percent and not 30 percent?

Bryan Caplan: Yeah, sure. So really what I try to do is assemble a bunch of different bodies of evidence and then just be honest about which ones are more or less convincing.

Again, that macroeconomics I was mentioning -- it cuts strongly in my favor, but reading it I gotta say, "Well, the data's not that great." So it's a point in my favor, but I wouldn't want to go and rest my case on it. Because I mean honestly, if it had come out the other way I'd sort of say, "Well, it's not that convincing." I will say that result for the effect of national education on national income, that's one thing that I use.

I also go and just look at those sheepskin effects or diploma effects: how much of the payoff from education comes from crossing finish lines? And I use that, actually, just to set a lower bound on the signaling share. And I say that means that it's gotta be over 50 percent.

Again, just on the idea, it doesn't make sense that the payoff, that you're teaching lots of extra skills in senior year. If anything, senior year is goof-off year. But on the other hand, saying that's giving you some idea of signaling, I think that makes sense.

Probably to me what is most convincing is just looking at the curriculum, and just seeing what percentage of people's time do they spend on subjects that they're actually likely to use on the job, ever.

And again, there getting at something like 80 percent signaling seems very reasonable. For that, you do have to supplement it with this other stuff on how countries who do a lot of wishful thinking, people don't seem to be

learning a lot of general skills or general thinking skills. It's not teaching critical reasoning to any real degree. So yes-

Julia Galef:

So the hesitation that I'm having is... I'm not doubting those specific studies. I haven't really looked into them. I'll just assume they're correct. But the hesitation is that the way that we measure general thinking skills in those studies, it feel like just sort of an easy thing to measure in the lab. It doesn't really feel like the thing that I would optimistically expect school to be doing for people.

What I would expect -- just looking at four years of college, all of the hundreds of papers that you have to write, and problem sets you have to turn in -- what would I expect that to be doing for people? Well, it's some amorphous thing that's, like "ability to solve hard problems."

And that includes things like grit, like ability to really just stick it out, even though things are hard, and not give up even though you can't immediately see how to solve the thing. But it also includes more concrete problem-solving strategies, like: break the big thing down into smaller pieces, or try one thing even if you don't think it'll work, and then just trust that you'll come up with more ideas as you go. That kind of thing. And those will vary from person to person.

And those things are very hard to measure, especially in a one-afternoon study, where you're testing volunteers.

And I'm very sympathetic to the argument that, look, if you're going to claim your intervention, i.e. education, does all these valuable things for people, but the valuable things just happen to be too vague to really measure, to capture in a study -- well, that's kind of suspicious. I'm sympathetic to that too.

But I still just ... I'm still just not all that convinced by the things that we have tested, as evidence of whether school has these general benefits.

Bryan Caplan:

I guess for that I would just say: since almost everyone is terrible at tackling large challenges, there can't be much effective education on it.

Julia Galef:

I mean, surely people are *differentially* terrible.

Bryan Caplan:

I would just say: most people, if you just give them any large thing and say, "Tackle it on your own," 95 percent of people will go nowhere. They'll just sit there going, "Where do I start? Tell me what to do." Like, "That's part of what I'm testing." "Uh oh. Because I can't do that at all."

That may seem extreme, but I think that is my honest reaction to that.

I mean, I do cite studies on the effect of education on easier tasks which people can do to some degree. Many of these are open ended, so it's kind of

in the spirit of what you're talking about, but they're just easy enough that people might be able to do them.

So yeah, I cite this study of informal reasoning done by Perkins and some other people at Harvard a while back. And what they did there is they talked to people either at the beginning or the end of high school or college, or I think even graduate school if I remember correctly. And they gave them problems that you were not likely to have been taught to analyze in school, but which are still subject to critical thinking. So you know, a classic one is, "What would the effect of a five cent mandatory deposit on amount of litter be?"

And then they actually recorded their audio answers and then they had judges go and just give them credit for number of arguments, clarity of arguments. They're deliberately open ended, so there wasn't one definite answer they were looking for.

And what they found was that while people with more education were better at doing problems like this, there wasn't a gain within the academic program. So it really looked like it was just selection.

And again this is something where you say, "Well, hm, yeah so I guess a deposit gives an incentive for recycling, but it's only a nickel, so would people really do it for a nickel?" And then, "Well, but if you got a lot of the bottles, then maybe it would be worth your time."

Julia Galef: I see, so you're saying they're capturing something more like general reasoning skill than just a logic puzzle would, yeah.

Bryan Caplan: Exactly.

Julia Galef: Yeah, I guess I buy that.

Bryan Caplan: But again, these are small puzzles, small issues, and they really listen to people's reasoning in real time, to use the buzzword. And they're just categorizing the number of arguments for people to come up with. Again, this is something where you're not really taught to do it in school, but it does seem very much like something that someone who is good at thinking would be good at doing. It's not quite what you were looking for, because these are small questions, but...

Julia Galef: Well, it would be the kind of thing that, a priori, I would've predicted school would help with. So it is relevant. It's not getting at the sort of "grit" aspect of what I was predicting schools would teach, but it is getting at the general thinking skill thing that I would predict they would teach.

And I just wanted to highlight -- you touched on, but then breezed past, a thing that I think is important and interesting. Which is that people got better at these reasoning tasks with increasing years of education, but the

gains were when you jump from one level of education like high school to college, or grad school -- not within, you know, over your four years of college, or over your four years of high school, right?

Bryan Caplan: Right, exactly.

Julia Galef: That is really interesting.

Bryan Caplan: And again, it's not that they're following the same people for that many years. Instead they start with one sample of high school kids and see whether they improved over time. And they barely improved.

Then get a different sample of college kids and see if they improved over time, and again, almost nothing. So yeah, it's again, it's not saying that when you finish then suddenly you get better. Rather it's saying that the kind of people who go further in school were probably better all along, is almost the only way you could read that study.

And by the way, just let me say that there's no study I know of that sees whether listening to your podcast improves general thinking skills, so, it's a prompt, I mean, I'd like to see the experiment on it.

Julia Galef: Well I'm not charging people \$30,000 a year in tuition, so I don't feel quite as bad about that.

Bryan Caplan: Well, no, even better -- I think that maybe people who listen a bunch would actually get better at it, although, again, of course a lot of it would just be that the better reasoners are listening in the first place, but ... like, you're so focused on it that I think maybe you're actually doing it. It's not that anyone's shown it's not possible, just that it's barely happening in the real world.

Julia Galef: Yeah. Interesting. Okay, so I wanna jump on one other piece of your argument that I have more hesitation around. Which is: I feel like a fair amount of your model rests on the idea that firms or companies hiring workers care a lot about conformity. Because if they didn't, then job applicants could take IQ tests, they could do something to demonstrate that they have conscientiousness, that they're hard workers. For example, they could take online courses.

Bryan Caplan: Yep, they could wash the boss's car.

Julia Galef: Yeah, or, okay. There's a lot of stuff they could do to show that they're hard workers and smart.

Bryan Caplan: Yeah. Shine your shoes, sure.

Julia Galef: And your explanation of why we don't see people doing that and saving themselves the four years and \$100,000 on college, and also why we don't

see firms looking for people using those alternate metrics, and not just using college as the signal, is: anything that really deviates from the standard way to signal these good traits would be non-conformist. And firms want conformist workers.

And it's just not obvious to me that conformity is a good thing or would be valuable, desirable to firms -- as long as you already have conscientiousness. Where conscientiousness, for those listeners that aren't familiar with it, is basically being reliable, and hard working, and following through on plans, and things like that. Which you can imagine would be very important to companies hiring workers.

And so I think in a lot of cases non-conformity, just in general, would make people worry, "Oh, this person's not gonna do the work that we want them to do." But --

Bryan Caplan: Yeah, well that's the key thing. So the fact that someone is hard working doesn't mean they're going to work hard at what you want them to do, right? So we all know people who kill themselves at their hobbies but they slack in their job. And they might say, "I'm not lazy, I work all the time." But you don't work on what you're supposed to. You don't work on what the employer wants you to do, and that's a problem for an employer, to have someone with that attitude.

Julia Galef: Right, but doesn't conscientiousness ... like, hard working is part of conscientiousness but isn't another part of it following through on the things you said you would do?

Bryan Caplan: Well, so again, you could go and just collapse conformity into conscientiousness. I think I, more often, at least, I just say 'work ethic' just to peel off that one part of it. Yeah, like in terms of personality psychology, I think probably conformity would generally load on the conscientiousness trait, but I still think that it's worth separating it just because ... especially, I know so many people who are really hard working but they're still non-conformist.

Especially among programmers, I know people who will work for 100 hours in a week, say, like working on a program they wanna do. But if they're an employee, they're terrible, because they're so defiant and just back talking, bad attitude. So-

Julia Galef: Yeah, but I mean if-

Bryan Caplan: So - yeah?

Julia Galef: Well, okay. So my intuition was coming from the fact that it seems like colleges, and often jobs, are looking for people who have done something to stand out. Like, they have come up with some innovative idea, or they have taken on some leadership role, on their own initiative.

Which is not conformist, but it's non-conformist in a very conscientiousness way. In a very disciplined and hard working way.

Bryan Caplan: Hm. I guess I would say, to start, that most people don't stand out at all. Right? Right, so. Yeah-

Julia Galef: But is standing out good? That's-

Bryan Caplan: Yeah. Yeah, yeah. So certainly-

Julia Galef: If it's conscientious. Is standing out good if it's conscientious?

Bryan Caplan: Yeah. But also, think about this. So the kid who gives the valedictorian speech. This kid is standing out, but he's doing something that is approved by all the authorities, by teachers and parents, he's not standing out in some way where he's being defiant or he's really saying, "Look, I have put all my effort into doing what other people want me to do."

And you know, I think that's a lot of what conformity is about -- being willing to push yourself to your limits in the service of a goal that isn't really your own. And that's a lot of what education is about, is weeding out people who will work hard for something if they care about it, but otherwise say "This is stupid, I don't feel like it."

Julia Galef: Okay. Well, I was thinking about other ways to test the signaling model, and I was thinking ... it seems to me that your theory predicts that signaling would be less relevant under a few conditions:

One, in jobs where conformity is less important. So you could, like, survey employers in different industries, about... you don't necessarily ask them directly, like, "How much do you care about conformity?" But you ask about various other things that matter to them, that would correlate with conformity.

Two, it would matter less, I think, in cases where it's easy for employers to detect people's skill and likely productivity just by looking at their work, for example. So they would have to rely less on signals.

And then third, I would predict signaling would matter less in industries or companies where it's easier to just fire people. Where you can take someone on, and then if they aren't productive, just easily fire them.

So those were the three conditions I came up with: Low conformity jobs, jobs where it's easy to detect skill, and jobs where it's easy to fire people.

First, do you agree that those are predictions that the signaling model makes? And if so, have you looked at any of those things?

Bryan Caplan: Right, right. So those are all reasonable points. The third one, that signaling matters less when people are willing to fire, is an argument that I specifically make -- although I make it in the context of in fact there are very few jobs where people actually readily fire people. So, you know, a lot of economists say, "Well, how can signaling matter very much? You hire someone, give them a chance, if you don't like them, you flush them."

And so I tracked down a lot of papers in sociology saying there's almost no businesses that work this way. Instead, the normal thing in business is you hire someone, you get to know them, and by the time you know how good they are, you're already emotionally attached to them. And people don't like firing them at this point. And so there's a lot of evidence of what I call 'firing aversion' where people that you might think would've been gotten rid of long ago linger.

Whenever I go and poll my students and say, "How many of you have a job at George Mason?" Most students do. "How many people are at a job where there's one worker that everyone knows is incompetent?" And every hand goes up.

Julia Galef: Yeah.

Bryan Caplan: Right? So like, why haven't they been fired yet? "Well, I mean, we're doing okay." You know, like, "Say, if the next recession comes, then we'll get rid of them."

And then even worse is that when you do go out and want to get rid of someone, one of the standard practices in the modern world is what employment termination specialists call 'de-hiring' -- where instead of firing them, you say, "You know, this isn't a good match. We encourage you to seek employment opportunities elsewhere. You got three months, guy."

And then you essentially collude with this person to help them, to foist them on another unwitting employer. And then the cycle of deceit and disappointment can begin again.

So yeah, that one makes perfect sense. But just important to remember that there's not really many jobs where firing comes easy.

And then, let's see, your other ones-

Julia Galef: I mean, sorry to interrupt, but you could look at jobs with unions versus non-unions. Surely firing them would be even harder if there's a union.

Bryan Caplan: Yeah, yeah, right.

Julia Galef: Like, even setting aside the emotional attachment problem.

Bryan Caplan: Right, right, of course. I mean, I think there's probably other differences with unions. So unions are well known for having this egalitarian ethos... But yeah, maybe that would work.

So then I think you also mentioned jobs where skill's easy to detect. Again, I say if it's super easy to detect, then definitely. If it's the kind of thing where, again, if it takes a few months and then you know how skillful they are, then again it may be that people get sufficiently emotionally attached to people that it's still a problem.

And then the other side of it is that you suppose, like, suppose it's Hollywood. Once you successfully star in one Hollywood movie, everyone knows how good you are. But there's still the problem of the diamond in the rough, someone who's never had a starring role -- and then how do you convince people that you're any good?

So in Hollywood, there's of course a huge problem, and there's all these people who probably could do a starring role, but they've never gotten the chance. And then in education, there's probably a lot of people who, like, "No one will even try me out or just give me a chance to show my skill, because it's too costly just to hire hundred of people for a position and then sort them through." So there's that.

And then I can't remember what your first one was.

Julia Galef: It was jobs where conformity is relatively less important.

Bryan Caplan: Oh yeah. Right. Right, so-

Julia Galef: Because we think that education is a signal of conformity, and that's especially hard to find other signals of.

Bryan Caplan: Yeah, again that makes perfect sense. I mean, I'd just be a little bit nervous about two things. One is, in almost every job, conformity's pretty important, so you may not get that much variation.

And the other one is, there's probably more variation in how much people will *admit* they care about conformity than how much they really do. I know in Silicon Valley it's popular to say, "Oh, yeah, we're totally outside the box here." At least, you tell me. But when you actually go there, you think, Oh, this is kinda like a regular job where people are bossed around and you may have to pretend like everyone's being creative, but it's still a chain of command, it's still the same basic deal.

But yeah, like in principle you could do that, that would be great.

Early in the book I go over bunch of other signs of how important signaling is. And just things like how students seem so focused on getting easy A's. If you were in school to acquire skills, this is pretty perverse. But if you're in

school to impress employers, then it's pretty easy to understand why you want an easy A, because the employer doesn't know that it was an easy A. If you find the easiest teacher of real analysis in the country, get an A plus in exchange for doing some arithmetic, people look at that and say, "Wow, he's got an A plus in real analysis. Wow, look at that guy." So that makes sense.

Julia Galef: Yeah, you mentioned a case in which a teacher cancels class and the students are all happy about that and say like, "Geez, if it was really about gaining skills that they expect to increase their productivity and value to future employers, then why would they be happy?" You know, they already paid for tuition, and now they're just getting less for their money.

Which is... I do think that's a suggestive and striking fact about the world.

But I felt like you didn't quite give enough space to the alternate explanation of that -- which is just like, people buy gym memberships because they want to lose weight or get fit, and then they find excuses not to go to the gym, or they're happy when there's a holiday and the gym is closed, so they don't have to go to the gym. It just feels like there's this common phenomenon of tension, or struggle between your present self's interests and your future self's interests, and this leads to a lot of behavior that otherwise looks irrational.

Bryan Caplan: Yeah, so I think I did have a couple sentences on that point, but you're right, I could've talked more about it.

Julia Galef: Ah, my apologies.

Bryan Caplan: No, no, no. But the main thing I say is that this myopia can explain why students don't show up on a regular day. And yeah, typical college class in the middle of the semester, barely half the students are showing up. And that, I think you might say, "Well, it's just myopia," because they're going and putting this money in, and they're gonna get worse grades, and their life is going to be worse as a result.

But of course, there's all the students who do show up, and why is it that those students are also happy when you cancel class? And that one seems to be that well, then I get to have this holiday without having to worry about the material that I failed to learn and that is going to lead me to get lower grades.

So yeah, I think in terms of just low attendance, you can explain with myopia. But why people see a big difference between skipping class when everyone else is doing it, and skipping class when only half of the people are doing it, or when only you're doing it -- that's when I think that you can detect the signaling element. It's like, "I don't mind missing it if everyone else misses it, but if I'm the only one missing it, then I'm dead, so no. I'll go."

Julia Galef: I want to run one more alternate model by you and see what you think. This is an alternate to signaling, also an alternate to human capital. I'm gonna call it the 'in-group model'.

And the story is: the people at companies who are doing the hiring of new employees are not totally optimizing for the company's bottom line. They also want to hire people who are similar to them, culturally. The people that they would feel comfortable working with, and like more. And they're college grads, so they want to hire other college grads, because there's a big cultural difference between people who graduated college and people who didn't.

You could argue maybe they, on some level, think that the cultural signifiers of college grads are a predictor of success at a company. But really I predict in this model it would be more just about liking. And that makes the companies less rational, because there's just a principal-agent problem, and the people making the choices aren't 100 percent aligned with the interest of the company.

Does that sound plausible, and has anyone looked at that?

Bryan Caplan: Yeah, so it's very hard to actually test that story, but it's an interesting story. I mean, my view is that there might be some small fact in that direction. But just the extra earnings that college graduates get are so enormous that if you could get equally qualified people for a lot less money without those degrees, the profit opportunity would be overwhelming.

I mean, again, especially when you realize -- why not go and set up a firm where the human resources people are also not college graduates, and then they'll wanna hire other people like them? Just with the instructions, "You have to hire the best people out of that group, and by the way our firm offers wages that are way below that of all our competitors, because we're going and hiring people that no one else will look at."

So there is huge literature on the economics of discrimination in general. When you put in a decent number of obvious control variables, it's hard to find more than a very modest residual. Which again, might just be something you haven't measured, or it could be not what you're really talking about, it's hard to say. But I'm gonna say that if college graduates earn five percent more than high school graduates controlling for everything else, then your story, I think, would be in the running. But when we see that they're earning 45 percent more, controlling for everything else, then you really are thinking about people's leaving massive piles of money on the sidewalk.

Julia Galef: But-

Bryan Caplan: And it's not that hard to - you know, your strategy seems pretty easy to explain to people, it's not a really complicated thing. It's just fire your human resources snobs, replace them with people that aren't snobs, and then just

“Go and hire the best people who don't have credentials, and we don't pay a lot of money here compared to the competition.”

Julia Galef: So I definitely agree that in this story there'd be a lot of money being left on the table. I just don't find that all that surprising, a priori.

And in fact, the story that you were just telling a few minutes ago about companies not firing low performing workers because it's awkward, or they're emotionally attached -- that also seems like a case in which there's a lot of money being left on the table, due to these kind of innate human biases.

Bryan Caplan: Right, so I'd say that's gonna be a lot less money. Because there you're only leaving money on the table for the small cases where you really made a bad hiring decision. So most of the time, the system works, and the people that you hire are about what you expect. So you're not losing that much money if the bottom five percent of performers don't get fired immediately. Whereas if you're overpaying your whole work force, that's a lot of money. Right?

And again, also, I say there is this big literature on economics of discrimination where they do try to go and measure these effects that you're talking about. You know, whether it's for race discrimination or gender discrimination, it's usually pretty easy to make a large majority of the superficial earning stats go away once you control for some pretty obvious stuff.

So I mean, this is one where I would just say it's hard to believe that the people could be leaving so much money on the table when it's so obvious. I mean, and again, if you said, "Look, here's a great way people could make money," and then you have a plan that's really complicated that hardly anyone's thought of before, that's when we'll say, "I don't know, maybe." But if it's something as dumb as firing all your male workers and replace them with female workers and no one's doing it, that's where I'll say, "Come on, any dummy could figure that out, could do that, if it would work."

Julia Galef: Yeah. So I guess ... well, okay. I just want to zoom out for a moment to note that I've been honing in on the parts of your argument that I find relatively less convincing -- but I actually do find your argument overall pretty convincing. And I'm certainly closer to your picture of the signaling / human capital breakdown than I am to the ... if you're correct about the standard being closer to 10 percent signaling, I'm closer to 80 percent than 10 percent.

But yeah, I don't know, I've just been thinking during our conversation about cruxes of disagreement between you and me. And I think probably one of them is I just expect that companies are less rational than you expect they are. And so I would just be less surprised if they were leaving large amounts of money on the table. Or less surprised if societal inertia or irrational biases

were doing a lot of the work here. Which just changes the whole way you make sense of what's happening.

Bryan Caplan: I mean, what's funny is for an economist, I'd say I'm very open minded about this stuff, and I am willing to ... there are a bunch of cases where I'll say, "Yeah, looks like firms are actually not maximizing profits," or, "They're leaving money on the table." But again, I think the cases that are well documented are ones where it's more marginal.

And again, there is actually a big body of literature on how firms that don't maximize profits and have low productivity per worker have much higher attrition rates than other firms. And on the other end, the firms that have usually high productivity are just more likely to not only survive, but also to expand. So again, it's another thing to say, your firms are leaving money on the table for five years, but to say that it's gone on for decades, again, this seems to go against most of what we know about a selective attrition in growth of firms.

Julia Galef: Okay. Well, that's a way bigger crux of disagreement than we can resolve in two minutes, so I'll leave it at that. I just thought it was interesting to point out.

Bryan Caplan: Yeah, totally.

Julia Galef: And I wanna make sure that I don't forget to tell you about an ironic thing that I've noticed, that's very relevant to your case, which is: Philosophy departments, on their, like, 'Why you should be a philosophy major' page on their departmental website... They always cite statistics about how there's a high return to a philosophy major, in terms of the starting salaries you get offered.

And they say, "See, this is proof that philosophy majors teach you critical thinking skills."

Bryan Caplan: Yeah, that's terrible.

Julia Galef: Which is especially ironic, because they're confusing correlation and causation, which is an example of poor thinking skills. In their very argument! That just struck me as a very Bryan-flavored observation.

Bryan Caplan: Yeah. Plus it's not even true that a philosophy major is well paid.

Julia Galef: Oh?

Bryan Caplan: It's not at the bottom of the distribution by any means, but ... actually, now that I think about it, normally the numbers that I look at actually correct for test scores. So it might be that, yeah, the philosophers do come in with very high test scores... so it might be that if you just look at raw means, what you're saying is true.

Julia Galef: Right, yeah.

Bryan Caplan: But if you go and look at how people who had the same test scores but who majored in something else do, then I think philosophy does pretty poorly. Especially if you're not looking at people who go on to get a law degree or something like that. Those people are probably pulling up the average a lot.

Julia Galef: Right. All right, well, we're about over time so I'm gonna wrap up this section of the podcast. But before I let you go, Bryan, I wanted to invite you to nominate the Rationally Speaking pick of the episode.

And for you, my prompt is gonna be: I'm looking for a pick, like a book or paper or blog or something else, that you don't agree with, but that you think is either really well reasoned or interesting enough that it's worth consideration. Even though you disagree on the substance. Can you nominate a pick like that?

Bryan Caplan: Yeah. So I'm just gonna nominate a whole body of work: next week I'm debating Stanford education economist Eric Hanushek. And I do talk about his work a bit in the book, because it is some of the most challenging material.

So what he shows is that if you take a look at standardized international test scores, basically your literacy and numeracy tests, that are administered to hopefully representative samples all over the world... He says that not only do those predict national economic prosperity, but there's a much bigger effect of these test scores on a nation than for an individual. So the opposite of what I was telling you for education, for years of education.

And furthermore, he claims that these high test scores actually don't just make you richer, they increase the rate of growth of the economy permanently.

So when I'm looking at this stuff, it's ... again, it's not so much incompatible with what I'm saying as just kind of surprising. And I can see how someone might say this is devastating; I don't really think that it is. Again, what's striking is Hanushek is well known also for doing work saying that input based measures of education are crummy. Like, you shouldn't just go and look at how much you're spending, how many years people are staying in school, or textbooks, or desks, or whatever. Instead, you should look at output, like these test scores.

And so a lot of what he's saying is that -- at least my twist of what he's saying, or my version of what he's saying, he'll get his chance to correct me next week -- is that, "Bryan may be right about actually existing education, but if we just were to go and reorient schools to focus on building basic intellectual skills, then there'd be enormous payoffs." Right?

Julia Galef: And you're less optimistic?

Bryan Caplan: Yeah, yeah. Me, so, I mean, I would definitely say that I would rather put him in charge of the school system than almost any other researcher, because his mind's in the right place. He really is focusing on outputs rather than inputs, and trying to cut through a lot of empty rhetoric, and that's all great stuff.

Ultimately, I do just find it very hard to believe that just boosting national math and science scores, which are what he really focuses on, could have these incredible benefits. You know, just because most jobs use little math and almost no science. So I just say it just doesn't make sense.

So I think that what he's really picking up is the effect of a much more generally important and less malleable cognitive skill, which is just general intelligence. And this is one that he generally steers clear of, so I'm curious as to what he'll actually say when I get a chance to talk to him directly.

But you know, sort of the whole way that he reasons through it, it really is interesting and again, it's the kind of thing where you can either read it as being a big challenge to me, or you can read it as being very compatible with what I'm saying.

And again, what I think that I will tell him is the most that he's really showing is that the existing education system is well described by me, but a well designed education system might be what is described by him.

Julia Galef: So I'm gonna reach out to you after the taping's over to get a link or two links to post that are good representations of his body of work. But what should our listeners who aren't on the podcast website Google to find an example of these arguments?

Bryan Caplan: Yeah, so I think I would just do 'Hanushek', H-a-n-u-s-h-e-k. And Pisa, P-i-s-a, which is the name of the main international test scores that he works with, and you'll get a ton of stuff.

Julia Galef: Okay.

Bryan Caplan: And you can also do his name with the phrase 'input based education policies' and see what he has to say about those.

Julia Galef: Great. Okay. Excellent. Well, we'll link to that on the podcast site, as well as to your book, *The Case Against Education* and to your blog.

Bryan Caplan: Alright, awesome. Now only 20 bucks on Amazon, so everybody, listener, is clearly gonna wanna buy it, I think. Yeah.

Julia Galef: Awesome.

Bryan Caplan: Yeah.

Julia Galef: Bryan, thanks so much, it's been great having you back on the show.

Bryan Caplan: Yeah, yeah. It's always great talking to you, great pleasure.

Julia Galef: This concludes another episode of Rationally Speaking. Join us next time for more explorations on the border lands between reason and nonsense.