

Science AMA Series: We are authors of a recent paper exploring the connection between the feeling of being an expert and being closed-minded. AMA!

Open-Minded *Experts*¹ and *Science AMAs*¹

¹Affiliation not available

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Abstract

Hi Reddit, A paper of ours has received a lot of interest from reddit, and we would like to answer any question you might have about it. Here is a direct link to the paper entitled When self-perceptions of expertise increase closed-minded cognition: The earned dogmatism effect I'm Erika Price, a PhD in Social Psychology from Loyola University Chicago, completing a Post-Doctoral Associateship studying Intellectual Humility at Loyola under a grant from the John Templeton Foundation. My research involves the trait- and state-based sources of variation in Open-Mindedness, Intellectual Humility, and Political Tolerance. My collaborator Chase Wilson, MA is a graduate student at Loyola studying social psychology. He has been following the thread and all of the press this article in particular has been getting, and is happy to answer questions as well. Ask us anything about our study!

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Science AMA Series: We are authors of a recent paper exploring the connection between the feeling of being an expert and being closed-minded. AMA!

OPEN-MINDED_EXPERTS [R/SCIENCE](#)

ABSTRACT

Hi Reddit,

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Here is a direct link to the paper entitled [When self-perceptions of expertise increase closed-minded cognition: The earned dogmatism effect](#)

I'm Erika Price, a PhD in Social Psychology from Loyola University Chicago, completing a Post-Doctoral Associateship studying Intellectual Humility at Loyola under a grant from the John Templeton Foundation. My research involves the trait- and state-based sources of variation in Open-Mindedness, Intellectual Humility, and Political Tolerance.

My collaborator Chase Wilson, MA is a graduate student at Loyola studying social psychology. He has been following the thread and all of the press this article in particular has been getting, and is happy to answer questions as well.

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Thanks for doing this AMA.

I enjoyed the study and I really like the idea. What struck me reading it though was that all of your studies look at values assigned to closed-mindedness and not direct measures of it.

Why did you decide to measure appraisals of closed-mindedness instead of the behaviour itself?

Have you tried any studies where you manipulate perception of expertise and then directly test whether the participant uses more biased cognition as a result?

It's interesting in itself that the norm changes but I feel like showing an actual change in behaviour would be a more compelling case for the model.

[ImNotJesus](#)

Thanks! We assessed Open-Mindedness using the (Price, Ottati, Wilson, and Kim, 2015) Open-Minded Cognition Scale, which we also developed. This measure is useful (not just because we made it ;) because it is very quick and efficient as a predictor of open-minded thinking. In previous research (again Price et al 2015) it has been shown to predict related outcomes such as affective empathy and warmth towards minority groups (racial and religious), and we've seen in other research (under review) that it is susceptible to small short-term situational manipulations, so we went with that rather than measuring, for example, how willing someone is to actually, behaviorally seek out alternate info.

We have tried to find a good measure of behavioral open-mindedness that works in large-N, online

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research, but it's much harder to pull off. We've considered content coding people's attitudes (using a freewriting exercise) or looking at their news article consumption but it's hard to get valid data. But important to figure out how to do nonetheless!! -- Erika Price

When I talk about things in which I am a (self-ascribed) expert, I often get exhausted with "correcting" people, or giving the complete, complex answers that are often required but rarely supplied. Sometimes, I don't have the energy, and think people should just listen to and trust to me because I have "x" degree. Could this fatigue associated with close-mindedness? As in, I'm close-minded and won't consider your position because I've been down this road before and I don't have the energy to (potentially) deal with an argument?

[sarpoeton](#)

In my opinion, absolutely that can be a source of closed-mindedness! (I should add, in our research, we don't construe closed-mindedness as uniformly a "bad thing" in all situations). I think this onion article speaks well to the open-mindedness fatigue some may feel: [Open-Minded Man Grimly Realizes How Much Life He's Wasted Listening to Bullshit](#)

-- Chase

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[sarpoeton](#)

Yes! Part of the reason that experts may have "earned" their dogmatism (in terms of social norms) is that they have been through every possible counter-argument before. We think that people give experts more license to be close-minded because of this, in part, as well as the fact that they truly are more likely to be factually correct than the average person and therefore might not need to listen to counter-arguments.

Are there significant differences in how this works for the different genders?

[chinchillahorned](#)

We did not find significant gender differences in this series of studies, but moderating effects by gender are absolutely worth looking into and previous research would absolutely expect it.

Thanks for doing this AMA- really interesting work! My question relates to the impact of this work. How do perceptions of experts as justifiably closed minded impact role-specific social norms? Does your research suggest that dogmatic opinions based on true or perceived expertise have a negative social impact? I wonder if there are social conditions in which this isn't the case (an environment where experts are specifically rewarded for open-mindedness for example) and if the benefits are measurable?

[p1percub](#)

I think our research is agnostic on the social impact of the 'earned dogmatism' norm. Our results suggest that dogmatic experts are given a lot of leeway, whereas dogmatic novices are seen as assholes/inappropriate...but there are reasons why this norm would make sense, and we don't have the results to suggest it's a bad thing, per se.

I think if you change the norm (in a subculture or field) you could attenuate the effect. Hard to think of a field where there isn't a lot of status and confidence to be got from being an expert, though. If you have any ideas let us know because that's super interesting! -- Erika Price

I'm curious if you have any suggestions for mitigating this. In my own experience interdisciplinary research and panels have been fruitful in getting people to accept alternate perspectives. While experts in a field may accept they don't know everything about a field totally unrelated like medieval literature, they can lay claim to overlapping disciplines of knowledge.

However, when faced with someone who is an expert in a different discipline but a related topic it can provoke surprise and interest when introduced to new ideas, methods, findings, lenses of analysis, etc. In other words, encountering experts with additional layers or levels of understanding can remind them there are limits to anyone's expertise boundaries.

Of course they sometimes reject those alternatives and end up reinforcing their attitudes. And there may be some sample bias in my own experience as well as the type of people engaging in interdisciplinary studies are already more open towards that. But I'd love to hear your thoughts on how these issues could be lessened

Apologies if you've covered this in your paper discussion but I haven't yet had the chance to read anything aside from the media coverage.

[firedrops](#)

The "earned dogmatism" effect could be reframed as the "humbled ignorance" affect or something like that. In other words: reminding people of gaps and limitations in their knowledge can promote open-mindedness. So I think you're right in your recommendations -- seek out other viewpoints from experts in other fields, remind yourself of what you do not know, challenge yourself, and be aware that a feeling of expertise can lead to close-minded thinking. If you continue to humble yourself or be humbled by facing the limitations of your knowledge, you can stay open-minded. Maybe! -- Erika Price

Does your research have any implications on science outreach? like for example in trying to explain GMOs or vaccines to people who feel they have studied it and have come up with an "expert" opinion on the topic?

[Doomhammer458](#)

Oh, good thought! I think I'd recommend, based on this research, to find a way to make a person's knowledge limitations salient. We did this with difficult quizzes, but maybe even a "Did You Know?"-type presentation of information or just a reminder of how wide and varied and involved a field of study is could help to make a person more aware that they don't know everything.

BUT a caveat: you probably want this little nudge to be subtle and inoffensive. If you threaten a person's self-image too badly they might get defensive and not listen. -- Erika

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[Doomhammer458](#)

Incidentally, there is a lot of social psychological and other research going on right now about peoples' vaccine attitudes, and how to persuade people of vaccine safety/efficacy. You might be interested in [this abstract](#) (just saw it on reddit earlier today!). - Chase

Being introspective, I realize that part of my resistance to new information is from an egotistical point, and done deliberately. I set my mind to prove someone wrong before even considering their point. At the same time, if the information is coming from someone of higher status or knowledge in the field, my ego is not affected because I realize I'm supposed to know less. I may be wrong, but it seems like your study focuses on the subconscious decisions people make. Is your study incapable of tapping into this phenomenon, if such a thing plausibly exists?

[dgcaste](#)

Oh! What you're talking about is how you "elaborate" (what social psychs call it) on counter-attitudinal information. By working to find flaws with attitude-dischordant info, you're engaged in what we would call "biased elaboration". In other words, complex, rational, conscious thinking, but with a biased outcome or lens of focus. To "elaborate" is to think a lot about information-- this thinking can be either biased or (relatively) unbiased.

Past research suggests that the decision to engage in biased versus unbiased thinking is sometimes a conscious one, and sometimes not. In the sense that in some studies, people report that they've been "objective" when really they have only been critical of evidence that goes against their views, but given a lot more latitude to evidence that confirms their views. But as your comment makes clear, a person can be aware of the decision to be biased or not, too!

--Erika Price

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[dgcaste](#)

Thanks for sharing your thoughts! What you bring up, levels of "ego-defensiveness" towards relative experts vs novices, is definitely another plausible mechanism for how expertise can relate to open-mindedness. We are hoping to do some follow up studies (c'mon, funding!) to look at all the different potential connections. We're guessing the relationship is complex! - Chase

Do you have any advice on how to counter someone who claims something in an argument which is obviously false, but is too caught up in their own closed-mindedness and superiority to realize?

I mean, besides the obvious "walking away", is there any good way to handle a closed-minded person in a discussion or heated debate?

[Belboz99](#)

Our firsthand research doesn't speak to this, but the literature suggests short-term attitude change is pretty freaking difficult. Overcoming emotionality or narcissism on top of that...might need to ask a clinical psychologist instead! -- Erika

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[Belboz99](#)

We have some preliminary research that suggests people follow a norm of reciprocity with open-mindedness: "I'll be open-minded to you if you're open-minded to me!" So being open-minded and thoughtfully listening toward someone may increase the chances that they will reciprocate and listen to you. However, there's always the chance that some people will just "abuse" your open-mindedness and won't reciprocate. We don't have any data to speak to the problem of ultra/chronically-closed minded people. -- Chase

Do you consider yourselves experts on the subject and if so how do you approach the idea that you may be close minded as well?

[rockpoo](#)

Well, Ottati (first author) initially didn't believe that this "earned dogmatism effect" existed... ..even when the results of study 1 came out in favor of it, he thought it was a fluke. He kept saying he didn't believe in it. Study 2, Study 3, he kept saying it might not hold up. But even being skeptical of it, he encouraged us to keep examining it. And then, four or five studies in, he started to accept the evidence and believe in the evidence of the phenomenon a bit more. So there you go! Scientific skepticism and open-mindedness in real life! --Erika

This might be why the smartest people like Einstein said: "The more they learned, the less they know".

I don't think I'm expressed it with the right words, but I hope you understood what I meant.

[PmMeJokes](#)

Yes - and at the same time there's the quote, "The more you know, the more you know you don't know"! It's complicated. - Chase

Science AMAs are posted early to give readers a chance to ask questions and vote on the questions of others before the AMA starts.

Guests of [/r/science](#) have volunteered to answer questions; please treat them with due respect. Comment rules will be strictly enforced, and uncivil or rude behavior will result in a loss of privileges in [/r/science](#).

If you have scientific expertise, please verify this with our moderators by getting your account flaired with the appropriate title. Instructions for obtaining flair are here: [reddit Science Flair Instructions](#) (Flair is automatically synced with [/r/EverythingScience](#) as well.)

[Doomhammer458](#)

Awesome!! Thank you!

Did undertaking this study affect your own self-perception, or the way you approach new concepts/information?

[burf](#)

Well, I always joke that I study Tolerance & Open-Mindedness, but that I have neither of those things ...but definitely having Open-Mindedness on the brain all the time gives me a little pressure to be a better version of myself. --Erika Price

Did undertaking this study affect your own self-perception, or the way you approach new concepts/information?

[burf](#)

I think researching open-mindedness in general has sensitized me a lot to my own biases in what I'm willing to listen to/ read/ believe. But the other hand, there's research showing that simple awareness of one's own biases is often not enough to overcome them. Even reading and thinking about this stuff day in and day out, I'm sure I'm still closed-minded in ways I don't even realize. Humbling! -- Chase

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we will humbly and open-mindedly accept your viewpoint and retract this paper --erika

Would I be considered closed minded if I just didn't want to talk about an opinion that I didn't think was reasonable? For example, with the debate of evolution vs creationism, if someone were to strike up a conversation about it, I would immediately ignore the side coming from the creationist argument, because it's not worth the trouble. I've already thought about that in the past and have no need to do it again.

Would that label me as closed minded?

[re3al](#)

Under our framework, yes. Many of our questions regarding open-mindedness involve whether the participant "tunes out" or dismisses viewpoints they disagree with. But, we definitely acknowledge that close-minded thinking that is dismissive or disinterested (like the example you provided) is psychologically distinct from, say, hate-reading a bunch of creationist material and looking for flaws in it to bolster your view.

NOTE: We do not assign a normative value to open- or close-mindedness. I think we'd all (on this research team) agree that there are situations where close-mindedness is reasonable and warranted, even virtuous. We actually have another paper on the situations where dogmatism is virtuous (in press). For example, hearing a speech in favor of ethnic cleansing. Being close-minded to that is a good thing. The same is true of being close-minded to something patently false on a factual level (so

many intelligent design arguments). --erika

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[re3al](#)

I wouldn't label you as closed-minded, but I would describe your reaction in that one specific situation as closed-minded (and again, that is not an insult/ bad thing!). That's exactly the kind of thing we had in mind when we developed a "situation-specific open-minded cognition scale." It's totally normal for people to be more open-minded to some stuff than others. In fact we have some research (not yet published!) to back that up. Two main categories of things we find people to be closed-minded to are: things that are considered offensive (e.g. Neo-Nazi speech), and things that violate consensual reality (e.g. earth orbits the moon). -- Chase

How many studies do you think will show the opposite of what is written by you guys ?

Like every studies you know, there is one idea and 3 opposite studies...

[Terminator2a](#)

If someone else finds the opposite pattern of results, then it's time for all of us to get together and figure out what the moderating variables are! -- erika

How many studies do you think will show the opposite of what is written by you guys ?

Like every studies you know, there is one idea and 3 opposite studies...

[Terminator2a](#)

Bring it on! I would love to see studies that show opposite patterns or offer competing explanations. Social psych marches onward! -- Chase

I have a question. Why does this tend to happen so often in the engineering field? As somebody who has worked with engineers, I often have one kind of engineer explain a very well accepted and easily proven idea (which is completely clear to anybody who is listening to them), while engineers from other fields will refuse to even acknowledge its existence.

For instance, mechanical engineers refusing to acknowledge aerodynamic forces while working on aerospace projects. Like completely leaving out all external non-mechanical forces, acting as if anything outside their own field is basically a fairy tail in their opinion (And having repeated failures to show for it).

What did your research conclude about experts in one field claiming to be experts in others?

[PM_me_Venn_diagrams](#)

Well, can't speak to engineering specifically, BUT our research does show that perceiving yourself to be an expert in say, politics or general trivia does bleed into being more close-minded outside of that domain. So it does look like perceiving oneself as having expertise in one field engenders more dogmatism even in other fields. Even when that makes no sense. I think normatively this is true, too. People trust that I know what I'm talking about a lot more often now that I'm a "doctor". Even when it's outside the area that my dissertation was actually in. -- Erika

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[PM me Venn diagrams](#)

I can't speak specifically to engineers, but I like your question about self-perceived expertise effects across field. Like, can this self-assessment of high expertise in one area "bleed" into other areas? When does it, when doesn't it? Definitely something that could be empirically studied. I wonder if, in your example, there is some role of *perceived legitimacy* across disciplines? Like, if I am an expert in a field I believe to be legitimate, I'll continue to claim expertise in a different but related field if I view it as less legitimate than my own? Just kind of reiterating/elaborating on your comment - but anyway - thanks! - Chase

Does self doubt prevent people becoming experts, or promoting themselves as experts? Would this affect the average behaviour of the expert group?

[stoopiduk](#)

It's a good question, but since we experimentally manipulated how much expertise people *felt* they had rather than looking correlationally at actual experts or novices, our data can't really speak to it. --Erika

What was your method of testing close-mindedness as a variable?

Some years ago I was considering the way in which children are so open-minded, which leads them to be easy to manipulate if someone felt so inclined. This came from just thinking about how the brain is able to learn language easier when someone is an infant or a child. My brother lived his first few years in Italy and was actually able to carry on conversations in Italian even though he was being raised by parents who spoke American English.

Anyway what I was curious was if there's a correlation between "open mindedness" and the ability to learn language. I was curious if those two mental processes, which are characteristic of children, are at some level related. I wasn't sure how you could actually test for open mindedness, though. It's so abstract. I thought some sort of method of introducing ideas and figure out a method to detect whether the individual being tested believed the ideas as true or not. But I felt like the testees could become aware of what was going on, making it difficult to get accurate data.

[Roomy](#)

We measured open and closed mindedness mostly using a self-report open-mindedness scale (Price, Ottati, Wilson & Kim, 2015) - see Erika's reply to the top comment for more info about that. I think it's very plausible that open-mindedness could relate to language learning ability. Somewhat related, one of our labmates did some thesis research on how open-mindedness relates to creativity. She found the open-mindedness scale correlated positively with a lot of measures of creativity, including the "remote associates test" (in which you figure out which word relates to three other words; e.g. Question: falling, actor, dust; Answer: star). So we have some evidence that open-mindedness related to the ability "draw connections" in a language task. Very preliminary link, but anyway, I think your suggestion linking language and open-mindedness has some potential. -- Chase

Have you read the research on experts in various fields and whether or not their opinions are any better than the general public?

[irerereddit](#)

I guess that would depend on how you define or measure "better"?

Given that you're on ask science, I'll assume that you consider yourselves experts. Do you therefore think that you might be too close minded to properly address questions? Jest aside, would you expect this effect to be reduced in individuals who are familiar with this bias?

[3y3_0](#)

To your first question: I do not consider myself an expert at anything (maybe at Dr. Mario), so I think I'm ok.

Second question: The best I can say is I don't know. It's an interesting, and testable, question. Due to the [bias blind spot](#), it may be easier to identify this phenomenon in others than to notice it, and correct for it, in one's self. -- Chase

Do you ever worry that being an expert on the tendency of experts to be closed-minded will make you closed-minded about experts?

[dysph0ria](#)

All the time -- Chase