

I'm David Chalmers, philosopher interested in consciousness, technology, and many other things. AMA.

davidchalmers¹ and r/Science AMAs¹

¹Affiliation not available

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Abstract

I'm a philosopher at New York University and the Australian National University. I'm interested in consciousness: e.g. the hard problem (see also this TED talk, the science of consciousness, zombies, and panpsychism. Lately I've been thinking a lot about the philosophy of technology: e.g. the extended mind (another TED talk), the singularity, and especially the universe as a simulation and virtual reality. I have a sideline in metaphilosophy: e.g. philosophical progress, verbal disputes, and philosophers' beliefs. I help run PhilPapers and other online resources. Here's my website (it was cutting edge in 1995; new version coming soon). Recent Links: "What It's Like to be a Philosopher" - (my life story) Consciousness and the Universe - (a wide-ranging interview) Reverse Debate on Consciousness - (channeling the other side) The Mind Bleeds into the World: A Conversation with David Chalmers - (issues about VR, AI, and philosophy that I've been thinking about recently) OUP Books Oxford University has made some books available at a 30% discount by using promocode AAFLYG6** on the oup.com site. Those titles are: The Conscious Mind: In Search of a Fundamental Theory Panpsychism: Contemporary Perspectives The Character of Consciousness Constructing the World AMA Winding up now! Maybe I'll peek back in to answer some more questions if I get a chance. Thanks for some great discussion!

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I'm David Chalmers, philosopher interested in consciousness, technology, and many other things. AMA.

DAVIDCHALMERS [R/SCIENCE](#)

I'm a philosopher at New York University and the Australian National University. I'm interested in consciousness: e.g. the [hard problem](#) (see also this [TED talk](#), the [science of consciousness](#), [zombies](#), and [panpsychism](#)). Lately I've been thinking a lot about the philosophy of technology: e.g. the [extended mind](#) (another [TED talk](#)), the [singularity](#), and especially the [universe as a simulation](#) and [virtual reality](#). I have a sideline in metaphilosophy: e.g. [philosophical progress](#), [verbal disputes](#), and [philosophers' beliefs](#). I help run [PhilPapers](#) and other online resources. Here's my [website](#) (it was cutting edge in 1995; new version coming soon).

Recent Links:

["What It's Like to be a Philosopher"](#) - (my life story)

[Consciousness and the Universe](#) - (a wide-ranging interview)

[Reverse Debate on Consciousness](#) - (channeling the other side)

[The Mind Bleeds into the World: A Conversation with David Chalmers](#) - (issues about VR, AI, and philosophy that I've been thinking about recently)

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Oxford University has made some books available at a 30% discount by using promocode AAFLYG6** on the oup.com site. Those titles are:

[The Conscious Mind: In Search of a Fundamental Theory](#)

[Panpsychism: Contemporary Perspectives](#)

[The Character of Consciousness](#)

[Constructing the World](#)

AMA

Winding up now! Maybe I'll peek back in to answer some more questions if I get a chance. Thanks for some great discussion!

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What do you think about Eric Schwitzgebel's paper *If Materialism Is True, the United States Is Probably Conscious*? Do you think there's something to the idea of large scale structures of the flow of consciousness that correspond to different things? I've talked to him before where he talked about how there would be a highly large amount of these (if even a particular number) according to his paper, corresponding even to things like social structures, collective ideas in things like church groups, etc. He said that you could view it almost that there is a neo animistic slant to his theory in the sense that church groups aren't even wrong when they say that they are tapping in to a large scale mind that represents the flow of their ideas. Since the collective intentionality of their church group *does* have a mental structure. Which sounds very Jungian.

Would it change anything if panpsychism were true, and (if it) implied that all mental structure might be to some degree continuous? (rather than being something like discrete bits that just happen to be everywhere). Because then you wouldn't have to ask whether the aspects of mind that correspond to something like a church group were properly connected. You'd just be viewing the continuous mental structure of the world from further away, looking at large trends rather than the more obvious structures

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that center around brains.

[bunker_man](#)

i like eric's paper -- it's a great challenge for many views. i had some correspondence with him -- see this [discussion on his blog](#) -- where i suggested a sort of anti-nesting principle, saying that complexity at the level of the whole only counts toward consciousness when it isn't mainly explained by similar complexity the level of the parts. but yes, an alternative is to embrace a broad panpsychist view where there is consciousness at all levels of nature. that sort of view is well worth exploring.

Hi Dave,

It's great to have you here, thanks for joining us!

Two questions related to your work with PhilPapers:

- Any plans to run another survey, maybe in 2019 or so?
- How can people help out efforts like PhilPapers apart from financial support (including trying to get your university to support it)?

Thanks again for joining us!

[ADefiniteDescription](#)

yes, we plan to run a 10-years-on survey in december 2019, perhaps with an expanded list of questions and questions for subareas as well.

philpapers is now doing well financially, ever since we had the idea of asking universities to pay. the majority of big universities have been happy to do that. as for individuals helping -- make sure all your work is there, and consider editing one or more categories. we have more than 600 volunteer editors who have really helped build up the system.

Hi David,

Have you studied any esoteric philosophy? For example, in gnostic and hermetic circles (among others), the nature of consciousness can not only be known to some degree (rather than speculated about), it can be **tested** and verified through mental activities which amount to what some would call 'magical thinking' -- i.e. you use certain practices or techniques to set an intention for a certain object or circumstance to manifest in your life, and lo-and-behold, it does -- seemingly in defiance of the laws of probability.

The central premise of such philosophies is that consciousness is the fundamental ground-substance of the cosmos, that all phenomena in the cosmos are made of this mind-substance vibrating at various frequencies, and that human consciousness does not arise from the material brain, but instead can be said to exist a priori as a mediator between the absolute, undifferentiated mind-substance (high-frequency, cosmic awareness) and the material body (low-frequency, physical awareness).

This elegantly avoids the mental trap of explaining how consciousness might arise from matter by simply inverting the causation: matter arises from mind (and in fact is not distinct from it, but is simply a range of phenomena at the low end of a vibratory spectrum).

Have you investigated the metaphysics of such schools of thought and if so, to what extent? It seems to me, as a connoisseur of both ancient and modern philosophies, that the "hard problem" has already been solved in a sense for thousands of years, but this solution has remained largely hidden (that is,

"occulted") due to a combination of intersecting influences which preclude even the most brilliant minds from seeing it clearly. The chief of these influences is scientific materialism.

Going one step further.... if consciousness is the 'absolute' nature AND creator of the universe, then it stands to reason that its full nature is unknowable (although, as detailed above, we can come to learn certain properties of it, such as the laws by which it operates). Therefore the pursuit of an answer to the question "what is consciousness?" is absurd, as 1) everything is consciousness vibrating at a certain frequency, and 2) the ultimate nature of consciousness is beyond conception, as its potential for creation exceeds the scope of its own self-observation. In that sense, one might say that the universe is asking the question of itself, "who am I?" at all times, and the various phenomena which we see in the manifest world are its answers to its own question.

If it is possible that the question "what is consciousness" is unanswerable in an ultimate sense, doesn't that mean that we should focus more on questions that are answerable? In other words, is it possible that the law of diminishing returns applies to philosophy, and at this point in mankind's understanding of the cosmos, greater returns might come from experimentation with laws (such as the ones mentioned above) rather than abstract speculation?

I have seen first hand that these premises are true. That the human mind, when applied in specific ways, can cause the manifestation of specific circumstances which most people might consider impossible. Doesn't the fact that this kind of practice and knowledge exists readily on the internet -- even here on reddit -- indicate that the 'hard problem' might not be the most important question to focus on, with regard to consciousness? After all, if it is true that the mind can affect the 'material' world, that would have huge implications. I.E. it would corroborate and provide a context for exploring the many claims of people healing themselves of cancer all around the world.

Each tree bears fruit of its own nature. Each question bears answers similarly.

So, what is the nature of the question "what is consciousness?" and how is that nature reflected in the answers which have so far been generated?

Likewise, what is the nature of the question "is the universe conscious?" and how might the answers generated by asking that question differ?

[somethingclassy](#)

i haven't studied much esoteric philosophy, although my mother has more expertise here. i'm a little skeptical of the vibrational theory of consciousness but it would be good to see a clear and rigorous statement of such a theory. i'm definitely interested in the idea that the universe is conscious -- in recent analytic philosophy that view has been called "cosmopsychism" (a sort of relative of panpsychism). i don't think we're in a position now to say that the question "what is consciousness?" is unanswerable, so my view is that we should keep trying for an answer. even if we don't end up answering that question we may well answer many other important connected questions in the attempt.

What would you say are the most important skills one needs to be successful in academic philosophy?

[IFeastOnIdeology](#)

the capacity to have interesting and original philosophical ideas, and then to develop them by clear thinking and clear writing. passion for the field helps!

Thank you very much for doing this AMA!

I would really like to know what kind of philosophy you want to see more in the future.

A second question would be what you changed your belief about during your career.

[paschep](#)

i don't want to be too prescriptive here -- i'd love to be surprised by new developments. but as i say in the interview linked up top, i'd love to see more socially relevant philosophy and more broadly accessible philosophy. of course i'd also love to see more on topics i'm especially interested in. and at the same time, more philosophy that goes deep down previously unexplored pathways.

i've changed my mind about plenty of things -- maybe the most salient being a change from being very sympathetic with cartesian skeptical arguments to thinking they go wrong, as documented in my paper ["the matrix as metaphysics"](#).

Hi David,

First of all, thank you for doing this AMA.

I'd like to ask you about how you view interdisciplinary collaboration. I'm a psychologist, and it's my broad impression that philosophers interested in cognitive science are slightly "out of the loop" compared to researchers from other fields - psychologists and neuroscientists and computer scientists are more likely to work with each other than with philosophers, philosophers are less likely to present their work at cog sci conferences, etc., etc.

I'm curious if you'd agree with that sentiment, and if so, whether you'd consider it to be a problem for the part of philosophy that would like to engage with cognitive science? Could it just be the case that philosophers are more likely to be interested in researching specific phenomena that other fields would prefer to avoid?

[Burnage](#)

i think interdisciplinary collaboration is important -- i did my own ph.d. in an AI lab and spend a lot of time talking with psychologists and neuroscientists as well as physicists and computer scientists. and philosophy of mind as its practiced these days is very much interdisciplinary, especially with connections to psychology and neuroscience. that said i don't think good work absolutely needs to be interdisciplinary, and there is plenty of good work that is not. it's probably also true that the interdisciplinary connections tend to be limited to certain key areas and there are vast areas where better connections could be made. some areas where there has been a good deal of interaction include (i) the philosophy and science of consciousness, (ii) experimental philosophy meets social psychology, (iii) the philosophy and psychology of perception, (iv) issues about theory of mind. i'd love to see more. but at the same time philosophers and psychologists have their own questions that drive them.

Hello professor, reading some of your publications with Clark on the extended mind was some of the most interesting classes I took in university. I was wondering, where do you stand on the extended mind today? I'm also thinking of another writer (I think his name started with an 'S' - Spiegel? - Sterling?), who had similar theories regarding the extended mind, who used an interesting thought experiment of an ant navigating its surroundings as an example of something like the extended mind. His argument was essentially that the data 'stored' in the environment can be considered an extension of the ant's mind, in the sense that, with an intellect and brain so physically tiny, the causal force that motivates the ant extends 'beyond skin and skull' and is rooted in the environment as much as it is in the ant's bodily mind/brain. Which obviously isn't that controversial a thing to say, but like the extended mind theory itself, if you really take it seriously, you get to some interesting conclusions.

I was also wondering if you ever looked at any Eastern philosophy regarding extended mind? Somehow I ended up with an MA in philosophy of mind and another MA in Chinese philosophy. My chief area of interest is with philosophical (as opposed to religious) Daoism, which is essentially a kind of political philosophy with some weird metaphysics thrown in. Daoism is specifically interested in a more 'spontaneous' 'natural' way of living (and ruling), and is full of examples from nature that suggests that living totally in harmony with our surroundings will open up new intellectual avenues and solutions (to societal as well as personal problems) that might not have been obvious before. That's a terrible summation of a complicated theory, but my point is that these thinkers would have been quite receptive to the extended mind, and indeed their writings may even be of use to western thinkers today such as yourself as a kind of springboard of thought.

[CleganeForHighSepton](#)

i'm still very sympathetic with extended mind ideas. i wrote a foreword to andy clark's 2008 book "supersizing the mind" saying more about what i think. i've followed a lot of the literature, and i think it's fair to say that most objections to the thesis that have been developed are not all that strong, so that's made me somewhat more confident. more sociologically, my colleague ned block likes to say that although the thesis was false when andy and i wrote the paper in the mid-1990s, it has since become true, because of all the use of smartphones, search engines, and so on. i certainly think that's helped a lot of people become sympathetic with the thesis. i haven't really thought about connections to eastern philosophy but this seems very much worth thinking about.

Professor Chalmers, thank you for taking the time to do this AMA. I have a few related questions for you.

Firstly, what do you think of the fact that the SEP doesn't have an article on Carnap, as I know you've expressed some interest in him?

Secondly, in relation to Carnap, what do you think of the type of structural realism espoused by James Ladyman? I ask for a few reasons, first that [Carus](#) (PhD under Stein, does almost entirely Carnap related work), says he sees Ladyman's project as Carnapian in spirit, as opposed to yours, and Ladyman is sympathetic to the views of Max Tegmark whose events you've attended.

My final question is then concerning Tegmark's Fundamental Questions Institute. Have you felt the discussions taking place between physicists and philosophers there have been productive? We hear quite a lot of disdain from some notable physicists, it would be nice to know if more productive engagements are happening systematically and it would be nice if they were better publicized.

[atnorman](#)

(1) i didn't realize they still don't have an entry on carnap. i know one has been in the works for a long time. i'll ask them about it!

(2) i'm very sympathetic with structural realism, especially the sort inspired by carnap, though i don't know about ladyman's view specifically. i think ladyman is motivated especially by considerations about getting rid of objects and individuals that don't move me as much. i'm interested in tegmark's structuralism which is much like carnap's in many ways, though i think he takes it too far in inferring a mathematical universe. i wrote a little about structural realist views in chapter 8 of "constructing the world", and i'm especially interesting in applying them to questions about skepticism (i do a bit of that there and in "the matrix as metaphysics", much more in forthcoming work).

(3) i've been on the board of FQXi since the beginning, and was at a meeting recently in banff. i've seen plenty of useful interactions between physicists and philosophers. of course physicists are highly variable, and some are more interested in philosophy than others, and likewise philosophers are highly

variable. but there's been a trend toward philosophers of physics knowing the physics really well (some of the leading figures in the field have two phds) and at least in foundational areas (most obviously, the foundations of quantum mechanics) there is a lot of productive back and forth. for something a little less serious, see my "reverse debate" with carlo roveli linked up top.

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this is really interesting, and i've heard others make the same claim. i recall that a few months ago there was an article by a facebook executive (i think) saying that he has the same syndrome. i'd say that if your self-description is correct, you're not really a philosophical zombie. it sounds to me that you have reasonably normal visual experience from ordinary vision of the external world, that you experience pain, and so on. a philosophical zombie wouldn't have those! for you, it's rather that certain internal and imaginative components of experience that are missing. i know there is literature on this that you could read -- it's not coming to mind now but email me afterwards and i will see what i can find. i know that from what i've read by other people who have this syndrome, it shouldn't get in the way of your having a rich and full life.

Hello Professor Chalmers

I was wondering what you think of Colin McGinn's stance on the issue of physicalism. It seems that he assumes that we have no coherent notion of the physical world, because once certain phenomenon is discovered, that particular phenomenon will ultimately be referred to as physical, and hence the concept of dualism is inherently incoherent.

[armin199](#)

it seems to me that they're using "physical" the way i'd use "natural". i agree that in that sense physicalism is an extremely weak thesis. i prefer to use "physical" in a more constrained way that ties it specifically to physics, and specifically to structure and dynamics. then it's pretty easy to see how non-physicalist views could turn out to be true.

Professor Chalmers, I have found Terrence Deacon's book "Incomplete Nature" to be the most compelling book I have read on philosophy of mind (if a bit of a dense read)! In particular I felt that an approach that takes the evolutionary history of life (including emergence of life in the first place) allowed him to tackle the problem from a new perspective. Specifically I refer to his thought experiment on how "pre-biological" physical processes might generate, in the right circumstances, a set of reciprocally linked processes capable of evolving (i.e. life), but which he also equates with the idea of a primitive self. He goes on to argue that simple "autogens" (as he calls them) can evolve more complex forms of self-organising and interdependent processes that support their already existing reciprocal organisation, and hence, in effect, have a meaning or purpose with respect to the autogen itself (which is therefore a teleogen, as he calls it).

Deacon ultimately uses many of the same concepts that are commonplace in modern philosophy of mind, such as emergence, self-organization, and information theory to develop his ideas about consciousness. However he approaches this T=0 as it were - the origin of life and selfhood - rather than trying to directly tie highly evolved neural systems to consciousness in a way that bypasses a serious treatment of its own evolutionary history. In doing so he creates a plausible theory of how systems that have a new kind of causal organization could emerge from, and remain supervenient upon, more basic physical processes. I expect you are more familiar with these ideas than I am so I

hope I have done them justice in the above summary.

My question is, do you think this approach – tackling first our fundamental understanding of what life and self might be – is necessary for understanding consciousness? If not, do you think it is at least useful, and if so why? I would also be interested more generally in your opinions of Deacon's work, if you have them.

Thanks!

[stingray85](#)

i got to know terry deacon a bit when we were at a conference in kaliningrad together a few years ago. i've looked at deacon's book but haven't read it carefully. my impression is that his ideas about incompleteness are interesting but don't have all that much directly to say about the problem of consciousness as i understand it. it's more a general approach to life and then to cognition, with a few thoughts about consciousness added at the end. i'm certainly interested in views that build an understanding of consciousness out of an understanding of life and self, but i suspect that a more head-on attack on the problem of consciousness will ultimately be needed.

I've heard about the psychological and financial toll of attending graduate school, so I was curious if there's anything I should be doing beforehand to prepare myself.

[Thatoneliberalguy](#)

good question. most good graduate schools in philosophy should give you reasonable financial support through teaching assistantships and fellowships. as for the psychological toll, that's greatly variable between individuals and also between graduate schools. departments (including mine) are gradually beginning to take those issues more seriously. i'd certainly recommend talking in depth to graduate students at any school you're interested in before making a commitment.

Hi! Very glad you're doing this AMA. I am not sure if this is a relevant question, but are you familiar with Mingyur Rinponche (Joy of Living), and what do you think about the Buddhist take on consciousness?

[sarawara](#)

i don't know mingyur rinponche's work. i've been to a few conferences connecting western and buddhist approaches to consciousness and find the whole area very interesting, though i lack real expertise. obviously the buddhists were way ahead in thinking about consciousness for millennia, and i think there are still plenty of insights to be had from studying their work. my NYU abu dhabi colleague jonardon ganeri has been doing great work here, as have a number of others.

Hello Professor, thank you for taking your time to do this AMA, I'm a big fan of your work.

I have two questions to ask you:

- 1) In *The Conscious Mind*, you start outlining a method for a theory of consciousness, since 1996 how much progress has been made do you think?
- 2) Recently I read a paper responding to your work called "Zombies vs materialists: The battle for conceivability" and I couldn't find a response on your website. How would you reply to it?

Thanks!

[Lord Retro](#)

(1) some progress here and there. in philosophy there has been a huge amount of attention to the development of panpsychist view and related russellian ideas, and although we don't yet have anything like a consensus solution to the problem, i think we have a much better understanding of the issues. on the materialist side there has been progress on developing phenomenal-concept and illusion-based approaches, among others. in the science, i think tononi's integrated information theory is the best-developed example of a scientific theory that takes the form that i recommended. of course it's early days and that specific theory will most likely turn out to be wrong, but it's nice to see views of this sort being developed.

(2) this paper by peter marton is actually something of an under-rated classic. it's the origin of a certain very popular reply to the argument, which roughly says that it's conceivable that consciousness is physical (and zombies are impossible), so if conceivability entails possibility it's possible that zombies are impossible, so (given certain modal principles) zombies are impossible. a lot of others have developed replies along those lines in recent years. i've replied in my paper "the two-dimensional argument against materialism" (found in the book "the character of consciousness" and also on my website), in a section on "the conceivability of materialism".

Some would argue that in order for the universe to be simulated, it would have to be computed or, basically, be mathematical. Is there a way to prove this by searching for concrete evidence of computation in nature? If so, how?

[I am Orlando](#)

i'd say that to be simulated it would have to be computed, almost by definition. if it's a perfect simulation, it may be impossible to get concrete evidence, since the evidence one gets in a perfect simulation will be the same as in the non-simulated universe that it's a simulation of. if it's an imperfect simulation there may be all sorts of potential evidence: everything from red pills or finding the source code to subtle evidence of imperfect approximations. zohreh davoudi and colleagues at MIT have a nice paper on certain ways in which approximations can show up empirically, which they use to suggest at least a potential source of evidence that we are living in an approximating simulation. there also are various ways that we could get evidence that the physics of our world is digital, which is an idea that is at least connected to the idea of a simulation (though physics could be digital without being simulated, and could be simulated without being digital).

The "Superintelligence" crowd is obsessed with the idea that an artificially intelligent machine would have the capacity to design a more intelligent artificial intelligence, and if the resources were available this series of increasingly intelligent machines would eventually lead to a superintelligent entity that would be beyond human comprehension. If we are told that a [hypothetically] superintelligent machine would be 1000 times as intelligent as any human, on what terms would we be making such a comparison? Does intelligence have a unit measure, so that this entity over here can be said to be twice as intelligent - or 1000 times as intelligent - as that entity over there?

[Nwabudike J Morgan](#)

i discuss this sort of thing a lot in my [paper on the singularity](#). in that paper i tried to develop a formulation of the argument for an intelligence explosion that doesn't rest on having any particular measure of intelligence (see the section, "the intelligence explosion without intelligence"). see what you think!

What are your thoughts on Eric Dietrich's work?

[commissarbizarro](#)

i've been good friends with eric since graduate school days. i'm not sure which work of his you have in mind -- he's done a lot over the years. as well as a lot of work on issues in AI, has interesting work developing a mysterian view on consciousness, some nice work on representation, and some pessimistic work about philosophical progress. he's always interesting. he's also produced many students over the years who have started at binghamton and gone on to great things.

Would you be willing to use a teleporter? Why or why not?

[Mylon](#)

i'd be reluctant to, because i'm too uncertain about whether teleportation would preserve identity. if the alternative was instant death, i'd certainly do it. if the alternative was a one-hour walk, i wouldn't. i'm not unsympathetic with the view that teleportation preserves identity (at least given certain constraints), but i'm certainly not confident enough in that view to bet my life on it! i talk about this sort of thing in the paper on the mind uploading that i link to somewhere else on this page.

Hi David, I have always looked up to you, and a big part of my undergraduate thesis was based on your work.

1. Do you think we can have *synthetic a priori* knowledge? Or, what do you think of philosophers who think we have a faculty of "rational intuition" or "pure reason" or "rational insight" into the world?
2. In your paper on the *extended mind thesis*, do you think mental states like "intention" can also be external? Or, what are some other mental states you think can be external, apart from plain old beliefs (memories)?
3. Silly questions: Apart from yourself, who's the smartest person you feel you've met? It's always fun to know. And what are your musical preferences like?

Thank you!

[LeeHyori](#)

(1) i think so. i'm inclined to think that much mathematical knowledge is synthetic a priori, for example. (2) i think conscious states are internal, but that most dispositional and nonconscious states can be external. certainly otto can have a (dispositional) intention to go to 53rd st in virtue of that being written in his notebook, for example. (3) i know it's natural to do so, but i don't much like ranking people by smartness! i think it can be unhealthy, and it can often privilege superficial things like quickness over things that really matter. i listen to less new music than i used to. i'm somewhat eclectic, but my tastes lean toward acoustic and singer-songwriter-ish stuff. there's a list of favorite albums in the life story linked up top.

Another one, if you have time. You have expressed skepticism about the statistical doomsday argument, but the only argument I've heard you offer against it relies on an assumption of an infinite universe. Do you think there are any persuasive arguments against the doomsday argument that don't rely on infinite universe assumptions? Also, even if the universe is infinite (in time/space), humans will probably eventually go extinct (e.g. entropic heat death within accessible universe, etc), in which case the doomsday arg still goes through even in the infinite universe case (but my bigger concern is just

that we don't have much reason to think the universe is infinite in time/space).

[alphagruue](#)

i find the doomsday argument to be very interesting, and i don't have strong views about it. i'm far from certain about the sort of self-sampling assumption that gets the argument going -- roughly that we should treat ourselves as a random sample from the space of conscious beings. a very similar argument can be used to argue that ants and most non-human animals are not conscious (because it would be extremely unlikely that we'd be among the tiny intelligent human population if they were). but i'm not sure about this. as for the infinite case, maybe human life will be finite, but it's unclear why humans should be the relevant reference class, if there's an infinite number of conscious beings (both just like us and unlike us) elsewhere in the universe.

Hello!

Do you watch Westworld? It's an amazing TV show that covers topics like AI and consciousness. If yes, what do you think about it?

[Nayru-chan00](#)

i love westworld. it's really well-done. i do think its reliance on julian jaynes' long-discarded theory of consciousness (that it involves realizing the voices in your head are your own) is disappointing, though perhaps it's somewhat cinematic. in general i think although the show presents itself as a meditation on consciousness in AIs and others, i think it's much more of an exploration of free will. it seems to me that the AIs in the show are pretty obviously conscious, but there are real questions of what sort of free will they might have, given the way their actions are grounded in routines. and the "journey" of the AIs seems more like a journey toward free will and perhaps toward greater self-consciousness than toward consciousness per se. of course there are also very rich materials in the show for thinking about the ethics of AI.

Do you think any substantial progress on the hard problem of consciousness will be made in time for the debate on AI rights? If by that time we still haven't made any progress on the hard problem of consciousness, how should humanity value the life of an "apparently sentient" AI, especially relative to a human life?

[Twiwqwiw](#)

i hope so, but there are no guarantees. on the other hand, we can have an informed discussion about the distribution of consciousness even without solving the hard problem. we're doing that currently in the case of consciousness in non-human animals, where most people (including me) agree that there is strong evidence of consciousness in many species. i think it's conceivable we could get into a situation like that with AI, though there would no doubt be many hard cases. i do think that when an AI is "apparently sentient" based on behavior, we should adopt a principle of assuming it is conscious, unless there's some very good reason not to. and if it's conscious in the way that we are, i think prima facie its life should have value comparable to ours (though perhaps there will also be all sorts of differences that make a moral difference).

Hello Dr. Chalmers!

I'm currently studying Cognitive Science right now and so your work on consciousness is of particular interest to me.

I was wondering what your thoughts on recent alternative theories of consciousness like Integrated Information Theory and the Interface Theory of Perception are. Do you think that they make any progress towards discovering how and where consciousness arises?

Thanks so much for conducting this AMA!

[Piconeeks](#)

i have a few thoughts on those two theories elsewhere on this page -- search for "tononi" and "hoffman" respectively. i have more sympathy with IIT, which is very much in the spirit of the sort of information-based approach i advocated in my 1996 book, while being more mathematically rigorous. it's almost certainly false but i think there's a lot to be learned by developing and analyzing theories like this.

Do you think sustained consciousness will be worth it without the pleasures of the body?

[rickmuscles](#)

i hope we don't have to choose!

A consequence of accepting your Zombie argument seems to be epiphenomenalism, but yet you stress in your book that it is not epiphenomenalism. How is it not?

[CamrennnZ](#)

i have a discussion of that in section 1 of my reply to john perry here <http://consc.net/papers/perry.html>

Through your research over the years, what would you say is one "must read" attempt of mapping the unconscious mind and understanding/exploring it? For someone who has very little experience in consciousness research past a few psych classes or Jung books.

[PM-me-ur-trains](#)

i'm not an expert on the unconscious mind as explored by freud, jung, and others (though my partner is much more of an expert in that area). i've kept up more with recent work on unconscious processing in psychology and neuroscience, where the unconscious mind generally seems a little more constrained and disciplined, shall we say. there must be a good book that connects all this but it's not going to mind right now.

Hello, and thank you for your time! I was wondering what you think, regarding the hard problem, about a bridge answer between material and non-material. The material/physical only side being the parts and the non-material/untouchable side being the creation from the parts. We all have the same (or similar) chemistry but have varied responses and personalities. If you gave 100 people the same room full of supplies and same inputs at intervals you would still come out with 100 completely unique end products. And because the brain is so deeply complex each person -starting with the same tools and supplies and having the same or similar inputs- builds a completely unique personality that cannot be replicated. Thanks!

[cupduckstapler](#)

i think this issue of individuality is interesting but is distinct from the hard problem. even if all humans

were physically exactly alike, there would still be a hard problem -- why do they have conscious experience? and in a world of unconscious zombies, they could all have different brains in a way that would raise the issue of individuality. so probably separate solutions are needed for each.

A second question, if you have time: You've expressed sympathy for panprotopsychnism, but isn't that view ruled out by an analogous zombie argument to the one you've used to argue against physicalism? In particular, can't you conceive of a zombie that shares all of your physical properties and also your protophenomenal properties, but has no consciousness. Since protophenomenal properties (like physical properties) have no subjective component, we aren't going to be able to combine them in some complicated way that metaphysically necessitates subjective experience. Of course, it's possible that protophenomenal properties could provide a causal basis for consciousness, e.g. maybe the right combination of protophenomenal properties *causes* phenomenal experience, but that contingent connection wouldn't be enough to rule out protophenomenal zombies. One confusing issue is that the panprotopsychnism terminology seems to be used inconsistently, i.e. sometimes it includes panpsychnism as a sub-view and sometimes not (I'm using the latter, narrower definition).

[alphagruue](#)

yes, i've discussed this issue here and there, including in my two papers on panpsychnism. in short i think it's much less obviously conceivable that there be protophenomenal zombies (unconscious beings with the same protophenomenal properties as us) than that there be physical zombies (unconscious beings with the same physical properties as us) -- roughly because we don't know the nature of the protophenomenal properties, while we know the physical properties are limited to structure and dynamics. some people (like galen strawson and maybe you) think they have a strong intuition that one could never get something experiential from something nonexperiential, but i don't have that one. at least the anti-physicalist arguments i give all turn on the gap between structure/dynamics and experience, not the gap between nonexperience and experience.

Hi, Professor

What if any metaethical theories are you inclined to accept? I'm specifically interested if you have any sympathies with non-naturalism (or robust) moral realism and the Supervenience claims they make.

Thank you.

[carryingbricks](#)

i think i'm most strongly inclined toward moral anti-realism, but not in a developed or thought out way. i quite like expressivist versions of anti-realism that end up looking like non-naturalism in some respects, but i'm on deflationist enough to go all the way with that move. i'm certainly interested in non-naturalist moral realism, and in the many analogies and disanalogies with the mind-body case.

Hello Prof. Chalmers,

I hope I'm not late to the AMA. I have the following question regarding some form of the conceivability thesis in answer to Roy Sorensen's critique of it.

Roy Sorensen defends the following. If the conceivability thesis is true (that is, if P is conceivable, then P is possible) then the 'meta-conceivability thesis' should also be true (this is, if P is meta-conceivable, then P is also possible). This is because, he argues, if P being conceivable entails that P is possible, then conceiving that P is conceivable should entail that it's possible for P to be possible which should

lead to P being possible. The problem arises when he says that even if you can't conceive an impossibility, you can meta-conceive it. But, due to meta-conceiving something entails conceiving it, meta-conceiving an impossibility should lead us to conceive that specific impossibility. Now, because of the conceivability thesis, we would be asserting that that specific impossibility is possible, which is non-sense, so the meta-conceivability thesis should be false if we accept that we can meta-conceive impossibilities. And because the conceivability thesis entails the meta-conceivability thesis, if we reject the latter we have also to reject the former.

So, what I want to ask is the following:

Would you consider that Sorensen is right on arguing that we can meta-conceive impossibilities?

If i were to talk not about a meta-conception, but of conceiver that conceives a conceiver that conceives... (and so on, lets say, a hundred or more times) (maybe we are talking about an ideal conceiver in this case), wouldn't there be too much of a gap for me to then assert that because of me being able to conceive of those conceivers conceiving P, that P is indeed possible?

Should all meta-conceivability cases collapse into conceivability ones? (why or why not?)

Finally, what's your opinion on this kind of arguments (or counter arguments) as a defense (or attack) on the conceivability thesis.

Thanks a lot and I hope you can answer my questions.

[jym990](#)

in my [paper on conceivability](#) i distinguish prima facie from ideal conceivability, and positive from negative conceivability, and i think those distinctions are useful here. i'd say that we can prima facie negatively conceive that P is conceivable (in various senses), when P is in fact impossible. but it's somewhat less obvious to me that we can prima facie positively conceive this. and it's much less obvious that this is ideally positively or negatively conceivable -- i'm inclined to think it's not. that's to say any prima facie conceiving of this wil rest on certain cognitive limitations that defeat the conceiving on idealized reflection. so i'd deny the metaconceivability thesis where ideal metaconceivability is concerned. and probably the same for metametameta...conceivability.

Hello Dr. Chalmers, thank you for taking the time to do this. If you could only read one book for the rest of your life, what would it be?

[bejonesin](#)

tough one! it had better be something long and meaty, to keep me occupied. i've always wanted to read and understand kant's critique of pure reason, and maybe with the rest of my lifetime i could make a start on that. an alternative would be some really great physics book that would allow me to get right up to speed on physics today.

How would the philosophy of mind fit in to aid the discussion of ethics of AI?

[rexyuan](#)

there are various connections. one obvious role is that to do the ethics of treating AI well, we have to figure out which AIs are conscious, since that is plausibly a precondition of moral status. philosophy of mind has obviously thought a lot about that. for issues about AI control, especially in the context of superintelligence, i think meta-ethics is especially relevant to thinking about the issues about the connection between values and intelligence that emerge. and obviously the ethics of uploading is going

to be a huge issue where philosophy has a lot to say.

Hi David,

I am quite familiar with your panpsychist view in regards to the "hard" problem of consciousness. **I was wondering what is your view (if any?) on chaos theory/non-linear systems theory and how it relates to the usefulness in using reductionist tools to explain complex human phenomenon.**

Basically, if it is the case that consciousness follows principles of linearity and additivity of component parts -- i.e. where there is a one-to-one correspondences between component parts and the complex system-- then it should follow that the "small" problem of consciousness must explain the "hard" problem of consciousness. On the other hand, if it is the case that the "small" problems of consciousness are sensitive to initial conditions, that variability remains constant independent of reduction level and that predictions of future iterations of the system are impossible to create (basically show signs of a chaotic system, à la Lorenz), then it would suggest that "hard" problem of consciousness is not reducible to its component parts.

How would such a theory play in with the Panpsychism view, are they compatible?

Thanks a lot, as a neuroscience grad student with a love of philosophy, I really enjoy your work!

[SaxManSteve](#)

i'm skeptical about whether nonlinear dynamics helps with giving a materialist/reductionist solution to the hard problem -- see e.g. section 5 of my original paper on the hard problem, linked up top. but it's interesting to think about how it might make a difference in the context of panpsychism. certainly it seems exploring panpsychist views where small phenomenal differences at the micro level get amplified into large differences at the macro level via nonlinear effects. i don't think that will by itself solve the combination problem (the hardest problem for panpsychism), but maybe it could play a role in a theory.

What do you think about Michael Graziano's theory of consciousness?

[bulldawg91](#)

i think i mentioned him briefly somewhere else on this page. i'm very interested in his general strategy of explaining our intuitions about consciousness as the result of an illusory self-model. that said i think he needs to do much more to spell out the details of the model. i haven't seen nearly enough specifics to explain the things that need to be explained. he also has interesting things to say about attention but i think those are somewhat independent of his views about explaining consciousness.

Do you have any thoughts on Mark Bishop's arguments against computationalism? Specifically, the idea that one can map any computation onto a series of states, the "dancing pixies" argument.

[summerstay](#)

i think bishop's arguments are important ones to think about. i give a partial response here:

<http://consc.net/responses.html#bishop>

Hi David,

Just came across this AMA and noticed you also mentioned simulated universe and virtual reality. This is a great interest and passion of mine, caused by my pursuit of finding a "Theory of everything", which had led to what I would describe as the next paradigm for humanity; that the best model for our reality is actually that it is a simulation, and virtual reality. There are many things both in physics and other areas that points to this..

My question is, have you read or seen anything by Tom Campbell? He is the author of the book "My Big TOE" which is also a theory and model for reality, in other words a TOE, but one that is overarching for both physics, philosophy and metaphysics. He is a physicist, and an explorer of consciousness that has created this model which is based on logic and scientific thinking, and it's definitely worth looking into if 'reality as a simulation/virtual reality' is an interest. He also has presentations available on Youtube in a more digestible manner.

His model has two basic assumptions, and the logically derives the rest (consciousness, time, space):

1. There exists the potential for consciousness, in other words a primordial consciousness.
2. There is a Fundamental process of Evolution.

His model 'solves' the hard problem of consciousness, as it is consciousness itself that is fundamental to reality, meaning that consciousness itself is fundamentally a digital information system (a real system, subject to entropy [information sense], which also computes the virtual reality. It is a natural complex system that must evolve towards lower entropy, or die to randomness in its digital basis (maximum entropy).

Anyway, these are quite exciting time! It is probable that we will see a paradigm change in our lifetimes.

[Specialis Sapientia](#)

i don't really know the work of tom campbell, but a few people have mentioned it to me. i'll try to check it out. i'm increasingly interested in universe-as-simulation ideas.

Hi Dr. Chalmers,

Thank you for your incredibly in depth responses. Also, thank you for so many of the papers you have written that have had a considerable impact on my life, despite philosophy not even being my field. I don't have any questions; I just want you to know your work is appreciated and has even had a life-changing impact on this nobody who minored in philosophy. Thank you!

[Arkanin](#)

thanks! i'm glad to know that my work has made a difference in your life.

Do you really think that there is some meaningful sense in which things that do not appear to be animate might be conscious? How could we even know if that was the case?

Are all thermostats conscious or is it just the one in your house?

[embracebecoming](#)

i have a nest thermostat now. it's definitely conscious. it's connected to the internet and i think it may soon take over the world.

Dr. Chalmers, what is a misconception about consciousness that you see widespread in the public and

why do you think such a misconception persists?

[lazythinker](#)

tough one. maybe, since westworld has been on, the idea that consciousness is all about voices in our heads!

You have suggested that zombies would claim to be conscious, but you have also suggested that you think interactionist dualism might be true. But on the latter view, isn't it quite likely that a perfect physical duplicate would not claim to be conscious because the causal influence of the mental is what is making you claim to be conscious. So if that causal influence was removed in a zombie twin, you wouldn't make consciousness claims. Of course, we could make a physical simulator for your mental subcomponents, which would make a purely physical zombie talk about being conscious, but that zombie wouldn't be a physical copy of *you* (i.e. it would have this extra physical module for faking the influence of consciousness). I suppose one loophole is that we could imagine making a simulator for your mental components in some way that is neither physical nor mental (so we can technically claim that it is *physically* identical to you), but are we sure adding such a non-physical, non-mental component w/o making physical changes is even coherent, or is that even what you have in mind when you talk about physically identical zombies being possible?

[alphagrue](#)

i talked about this a bit in the reply to perry linked elsewhere on this page. in short i think that even if interactionism is true, there can still be zombies as long as they have causal gaps in their processing -- and there's nothing inconceivable or metaphysically impossible about that. one could also add a non-physical, non-mental replacement component as you say, but i don't think that's necessary.

Hi Professor Chalmers,

Thank you for taking the time to do this AMA.

As you are aware, there are thinkers in various academic fields that claim consciousness is an illusion. To many, both philosophers and non-philosophers alike, this claim seems false because one's subjective consciousness appears to be the most obvious, real, and undeniable aspect of existence. In light of this, could you explain how it could be the case that consciousness is an illusion?

[Cherubim45](#)

this illusionism is certainly hard to make sense of, but as i've said elsewhere on this page, i'm interested in the view. i think the best way to understand the "illusion" claim is that beings could make reports and judgments that they are having experiences, when they aren't having any. a relevant example is the so-called "grand illusion" where people think they have detailed visual experience all the way out to the edges of their visual field, when a lot of evidence suggests that in fact they don't. in that case people are making a false judgment that they are having rich and detailed experience. now take that view and extend it to all of experience. that's the illusionist view. of course it's hard to believe - but the view itself predicts that it will be hard to believe!

Hi Mr Chalmers, thanks for doing an AMA!!

Here's my problem with qualia. I have come across almost zero compelling reasons to believe in the existence of a metaphysical self, neither as a cartesian soul or gland in the brain, nor as an object which persists through time and change, nor as an agent with free will that can be held ultimately

responsible for its actions. Yet it seems that the defining feature of qualia is that it is owned or possessed by a self (a see-er, hear-er, touch-er etc).

The only seemingly viable evidence I have in support of the self is the appearance of qualia, which still doesn't prove a whole lot; that there are thoughts, sensations, and experiences is really just evidence of the fact that there are thoughts, sensations, and experiences: 'thinking, therefore, thinking, seeing, therefore seeing etc.' (which are useless tautologies) not 'I think therefore I am'. Thinking may prove that something fundamentally exists, but this fact alone tells me nothing about what it's like (for example, whether or not I am an individual self with irreducibly subjective qualia).

Perhaps the task of cognitive science and philosophy of mind is to help us understand why it seems like there's qualia and a self, even though there's not, rather than provide an account of what qualia or the self actually are (which you could never possibly do since they don't, technically speaking, exist). As Dennett points out, to understand a magic trick is to understand the ways in which it's not magic despite how it may seem; it isn't to explain the ways in which it's actually magic (which is by definition impossible, perhaps in much the same way that solving the problem of other minds is impossible). Perhaps to really understand all of the Easy Problems (which would be an enormous body of information) would be to understand the ways in which the Hard Problem isn't really a problem at all (Eliminative Materialism).

Thoughts?

[ApatheticCardigan](#)

i don't think qualia have to be so closely tied to the self. some people like to explicitly separate the qualitative character of experience from the subjective character of experience. and philosophers from the buddhists to hume to metzinger have been skeptical about the self without this leading to skepticism about qualia. personally i'm much more confident in qualia than i am in the self! i agree that in both cases it's very much worth exploring views that try to explain why we think they exist, rather than why they actually exist. see my various comments on "illusionism" elsewhere on the page for thoughts about this in the qualia/consciousness case.

Does an Extended mind have internal representations?

[PrivateFrank](#)

yes, plenty. even on extended mind theory, the extended part of the mind is just part of the mind, and relies on all sorts of internal mechanisms, including (as i see things) internal representations.

Hello professor, what's your favorite philosophical book ? What about your favorite book outside philosophy ?

Thanks !

[Lord_Retro](#)

philosophy: tie between parfit's "reasons and persons" and carnap's "the logical structure of the world".
outside philosophy: fiction: calvino's "invisible cities". nonfiction: hofstadter's "godel escher bach" (if that counts as outside philosophy).

Would you be interested in taking part in a video podcast called BrainShake? We have only just started but are planning to have lot's of interesting discussions around consciousness, artificial intelligence,

possible applications of nano and bio-tech, etc. The basis of it is to "shake brains" and maybe make people see the world a bit differently. If you are interested just send me your email address and I will be in touch.

Regardless of all that, what are your views on social-engineering? I had a sociology professor who seemed to think the government/powerful used it as a tool to get people to behave as they desire them to. I know it's used by corporations to influence consumers and workers, but I think the extent it's used by governments varies by nation and is probably less "villainous" than my sociology prof. suggested. Do you have any thoughts on this?

[Axiomanimus](#)

feel free to email me. i end up saying no to a lot of requests like this for lack of time, but i say yes sometimes too!

i'm not sure exactly what you mean by social engineering. at some level we're all doing some sort social engineering all the time, whenever we're relating to other people and trying to affect their actions, beliefs, and attitudes. maybe social engineering has to be larger scale -- i'm not sure whether doing an AMA counts! anyway, i'd say that like pretty much everything in the world, it can be used in good ways and bad ways. to a first approximation, i'm in favor of the good ways and against the bad ways!

As a young person interested in philosophy I've often thought why does philosophy matter ? If everything ends up happening regardless what is the point in trying to understand it ? I know this sounds rather cynical, but it's a question I often ask my self when thinking about philosophy.

[Umpalumpa117](#)

i think that philosophical thinking and understanding is intrinsically valuable. that is, it doesn't have to be justified by its usefulness for some other purpose. as with many questions in science, mathematics, and elsewhere, there's some basic value in coming to understand these issues. that said, i do think it can be useful for many purposes -- for getting clear on issues in one's life and in the world, and for helping to make a difference to the world. look at the difference that someone like peter singer has made through his work on animal liberation, for example. of course sometimes this works better than other times, and there are cases where philosophy has been harmful as well. but while it's true that everything that will happen will happen, it's not true that everything that will happen will happen regardless of what you do. you're part of the world and what you do will make a difference to what happens. as a special case of that: at least sometimes, doing philosophy will make a difference to what happens.

Hi David, thanks a lot for this IAmA!

Do you have any hope that the Hard Problem of consciousness could ever be dissolved? And on the other end of things, would there be any solid indication that it likely never would in effect be solvable, such as by living in a P=NP universe?

[neuralzen](#)

"dissolved" suggests a deflationary solution. i doubt it will ever turn out to be a simple verbal issue, though maybe it could fragment into multiple problems. i do think illusionist models are worth exploring. other than those i don't see great prospects for a dissolution right now, but of course there's always the possibility of something completely new and surprising. i also don't see great prospects for proving that the problem is unsolvable, though maybe we could prove that it is unsolvable by certain means, so that

a solution would have to take a constrained form. i'm not sure how $P=NP$ would tend to render the problem unsolvable, but feel free to say more.

Do you see a shift in mainstream science to acknowledge and study more the subjective/transrational/intuitive side of our being?

[gibmelson](#)

maybe gradually. certainly neuroscience and psychology have begin to take subjective elements of consciousness more seriously over the last 20-30 years. as for intuitive/transrational aspects of our thinking, dual-systems psychology (as e.g. explored in kahneman's book "thinking fast and slow") has made this a huge research area in recent years -- though perhaps this isn't exactly what you meant.

Hi. Thank you for doing this. I have recently read Terrence Deacons "Incomplete Nature", and wondered to myself if his theory of consciousness as a negative/constraint might be more compatible with panpsychism than he seems to think it is. It seems to be the kind of emergent phenomenon that is ontologically feasible. Any thoughts on Deacons book yourself, and on this in particular?

[evoeyg](#)

someone asked about deacon's book somewhere else on this page. i gave a few thoughts there.

Hi, I'm wondering what you make of Jean Baudrillard's coded simulations?

I would guess prior to the first order of the simulacrum, which reshapes things (reality) into an order of the sign, there could be no such thing as "consciousness." So that is where the actual root of the problem first comes to light, within the first order (sometime prior to Descartes philosophy). Hence, why I ask about your take on simulated reality, of which the first order is but a noisy digitized image faithfully lying (because the first order is a good copy -- counterfeit) behind the code!

[mercurialsemiosphere](#)

embarrassingly, for someone very interested in simulated worlds, i've never read baudrillard! i really ought to at least try.

Two big questions of our time:

Where does personhood begin? Can a Corporation be a person?

I imagine you do not yet have the answers. Where do we start to look?

[Hecateus](#)

to give an annoying philosophers' answer: it depends on what you mean by "personhood". but really, it does. if you mean something like consciousness: then i don't know when it begins, and i don't know if corporations can have it (but the panpsychist part of me has some sympathy with liberal answers to these questions). if you mean something like agency, i don't have a well-developed views about infants (though i'm inclined to think newborns can act and are agents), and i think corporations are agents at least in a broad sense -- though there may be various more demanding criteria that are lacking. re where to look: i don't think we're really lacking empirical knowledge about corporations, so it's probably more a matter of careful philosophical thinking. on group agency you might try looking at the book by

christian list and philip pettit.

Prof. Chalmers:

I've enjoyed your work since reading *The Conscious Mind* c. 2000. I wrote my thesis arguing that your anti-materialist argument (roughly, "conceivability entails possibility > conceivability of consciousness-less zombies entails that consciousness is not material") is either circular or tautological. (I am familiar with your more technical work on this question, and still think it's a tough question.)

Would love if you answered any of the following questions:

1 - are you still convinced that conceivability (in some definite sense) entails possibility? 2 - Do you believe recent work in neuroscience (as summarized by, e.g., Jesse Prinz) has brought us closer to a complete theory of consciousness? And if so, does that undermine the Zombi Argument? 3 - Have you addressed the "intensional" argument anywhere? Roughly, the argument that mind has certain intensional properties (i.e., that it is about or directed at something) that the body does not, so mind \neq body).

Cheers!

[we-are-super-serial](#)

1. yes, i still endorse the core theses in my paper "does conceivability entail possibility?". 2. it's certainly led to significant progress in the science of consciousness, but not to a great deal of added insight on the hard problem, and i haven't seen anything from neuroscience that does much to undermine the zombie argument. (3) i don't think i've really addressed this argument. i think computational systems can have intensional properties in this sense, so i don't think this is a strong argument against materialism broadly construed.

I didn't know Hofstadter was your advisor! What do you think about his ideas involving strange loops and consciousness? Have they influenced you at all?

[blackberrydoughnuts](#)

i've been influenced hugely by doug hofstadter in many ways. both by reading his books when i was a teenager, and by working with him as a graduate students. that said his ideas specifically about consciousness have probably had less influence on me than his other ideas (as he has bemoaned occasionally, including in his book "i am a strange loop"). but his ideas about AI and about cognition generally still strongly permeate how i think about the field.

Do you feel that consciousness is foundational to the fabric of reality? Could it be considered that consciousness is a fifth fundamental force of nature?

[itswac](#)

(1) yes, i'm sympathetic with the idea that consciousness is a fundamental component of reality. (2) "fundamental force" doesn't sound quite right to me. it would be more akin to a fundamental property (such as mass, say) than a fundamental force (such as gravitation, say). of course it could turn out there is a fundamental force or causal power associated with it, but that would be making a much stronger and (even) more speculative claim.

So excited to see you on here! Thanks for doing this.

I didn't see any questions related to pansychism. Do you think that it's a plausible route to explain consciousness?

Bonus: what do you think about Deepak Chopra who seems to think that the hard problem of consciousness is a great place to insert his favorite woo. :p

[markocheese](#)

yes, i have a good deal of sympathy for panpsychism though it also has big problems to overcome -- if you look harder you'll find some discussion here.

i've talked with deepak chopra a few times at consciousness conferences and so on. he has thought a fair amount about philosophy, especially eastern philosophy, and has some interesting ideas growing out of that tradition in an idealist vein. of course he doesn't develop them rigorously in the style of an academic philosopher or scientist, and he makes a fair number of big leaps and dubious claims that i'm skeptical about.

Very simple question: is there any way at all that we can more rigorously define consciousness?

[Mr_Anomalous](#)

definitions are hard, especially for really fundamental concepts. try e.g. defining time or matter. but maybe there could be ways to measure or quantify consciousness much better than we currently do, or to build a better theory of it. e.g. one might see tononi's IIT as giving as sort of empirical/mathematical "definition" of consciousness in terms of integrated information. that sort of thing might not be exactly what a philosopher means by a "definition", but nevertheless it's an instance of the sort of formal analysis of consciousness that i think is well worth working toward.

Hi, I'm reading various papers on the transparency argument for representationalism at the moment. Have you ever concerned yourself with this topic? And if you did, do you know some contributions of philosophers, which you found convincing?

And what do you think of representationalism over all?

Thank you very much for this AMA.

[izckl](#)

yes -- in fact i have a [paper on representationalism](#) and a more recent [paper discussing transparency](#). i'm very sympathetic to representationalism, just not the reductive variety.

Wow! I am currently enrolled in a college Philosophy focused on Science Fiction where we are studying your work! Actually just finished reading one of your pieces in "Science Fiction and Philosophy from Time Travel to Superintelligence"

My question to you is: why does this study matter? Even if I was a Brain in a Vat or in the Matrix or in the Experience Machine - what effect would studying these ideas have on me, if any? I suppose, what is the end goal of your studies?

(To clarify, I am in total appreciation and awe of your work and studies, so this question is not meant to disrespect what you do)

[TranscendMaxExposure](#)

if you're a brain in a vat, my paper on the matrix will tell you why your predicament is not as bad as many people think. if you're not a brain in vat, the same considerations will help explain how we can have knowledge of the world. i think these considerations about the value of our life, the knowledge we can have, and our place in the universe are of intrinsic value to us, and there is value in getting clear on them. it's also not out of the question that thinking about these issues will be useful for other purposes. for example, reflection on how and whether one might have knowledge in the matrix might yield some insights into how and whether one can have knowledge in an era of "fake news".

Hi, several years ago I read "The feeling of what happens" by Antonio Damasio and was very taken with his idea that consciousness arose from the brain experiencing changes in itself.

Could you tell me what the current thinking in this area is and whether there is any support for this idea?

Thanks.

[KingSix_o_Things](#)

as it happens damasio and i had an on-stage discussion in new york a few months ago. you can find the video here: <http://www.92y.org/Event/The-Mystery-of-Consciousness> my sense is that damasio's earlier work was especially directed at questions about self-consciousness, but he is now moving in the direction of focusing on consciousness (what he used to call "primordial feeling") per se.

How do you feel if you see media that directly references your work? There's this game called devil survivor 2 record breaker where time got reset by a week a few times, so one scientist got bummed out by this and the fact that they'd have had experiences they have no knowledge of, and started trying to make a machine that could store and let you re-experience conscious experience to store somewhere that isn't reset. And when asked why they don't just make notes or take a picture, they start talking about how a picture isn't the same as getting to directly tap into the experience, which leads to them explaining qualia, the hard problem of consciousness, neutral monism, and substance dualism, all of which they call by name. They eventually give up saying that not enough is known about mind at the time to make something like that viable.

[mcbatman69lewd](#)

i'm tickled by this sort of thing. i'll have to check out this game! a few people have told me about the game "the swapper" which has characters named after dan dennett and me (with distantly related philosophical views), but i haven't played it yet.

Are you more on liberal side of the debate or the conservative as it comes to the use of technology to enhance the human body. And are you afraid of a sort of brave new world existence as the world becomes more and more accepting on the use of technology to enhance the human body. What are your views on the belief that if we can achieve a state of immortality should we allow people to achieve this state or should we be thankful for our own mortality?

[big_tuna_14](#)

liberal! not just enhancing the human body, but also enhancing the human mind. see my [TED talk](#) about this. i'm all in favor of technological immortality if it's possible, though i suspect it's not quite going to happen in my lifetime.

When did you first start to get into philosophy? I have just started to doing it at school, and I have fell in love with the subject.

[TuataraLlama](#)

i studied mathematics as an undergraduate and just did one class in philsoophy as a first-year student. i did badly (got a B) but it planted a seed. i gradually grew obsessed by the subject but i didn't formally switch to studying it until about six years later when i moved from doing a graduate degree in math at oxford to a program in philosophy and cognitive science at indiana. see the life story linked above for more.

Hello David. I really enjoy reading philosophy, I work in the arts and these days I have been developing mobile games. I have been thinking about the universe as a simulation and I'm trying to talk about that and other philosophical topics in my work. My question is, what books have you been reading lately?
xoxo

[heyacne](#)

looking around my study: thaler's "misbehaving", tegmark's "our mathematical universe", desan's "montaigne: a life", o'neil's "weapons of math destruction", aaronson's "quantum computing since democritus", lloyd's "programming the universe", lukoff's "from dits to bits", dennett's "from bacteria to bach and back", harari's "homo deus", hoffman's "why did europe conquer the world?", turkle's "alone together", feynman's lectures on computation. hmm, i don't seem to have been reading many novels.

Hey David! Thanks so much for doing this AMA! I'm a huge fan of your work, and the way you approach philosophy in general has been a great inspiration to me! I hope I'm not too late to the party to ask a question!

My question is about the account of phenomenal concepts that you provide in *The Character of Consciousness*. I find the distinctions you draw there between the different sorts of phenomenal concepts very helpful, especially between the demonstrative phenomenal concept and the pure phenomenal concept. What I'm wondering about is about the implications your view has with regard to atomism or holism about phenomenal concepts and the acquisition of them.

As I understand your view, we can, upon having a phenomenally red experience, attend to that experience, demonstratively pick out the phenomenal quality instanced by it, and form the demonstrative phenomenal concept of *that* quality, whatever it is that we demonstratively picked out. Having picked out the quality, we can also think about its intrinsic phenomenal character, thereby forming a *pure* phenomenal concept, substantively grasping the intrinsic character of phenomenal redness.

It seems that, on your account, it is in principle possible that someone could form the concept of phenomenal redness in the way I've just described without ever forming any other color concepts that compare and contrast with this concept. For instance, on your account, it seems that Mary be could given a red piece of paper to look at in her black and white room, and form the concept of phenomenal redness in this way without forming any other phenomenal color concepts. It's an empirical question whether that could actually happen, but it seems at least conceptually possible, given your account. However, I have trouble making sense of it.

The reason is that, if you ask me to articulate what phenomenal redness is, almost everything that I can say (that doesn't link it up to the property of external redness) is going to articulate what it is in

relation to other phenomenal color qualities. For instance, I can say that an experience's being phenomenally red excludes its being phenomenally green, I can say that phenomenal redness is between phenomenal orangeness and purpleness, and so on. It seems to me that, without understanding this phenomenal quality as being in a structured space of other qualities of the same kind, I can't make sense of my grasp of it at all.

I'm tempted to say that, while, on the face of it, the story about Mary acquiring only the concept of phenomenal redness *seems* intelligible, it actually requires that we import our robust set of color concepts in order to make sense of what she is supposed to grasp.

Is the intelligibility of the sort of atomistic acquisition story that I've just described a consequence of your view of phenomenal concepts? If so, would you say that you *can* grasp phenomenal redness apart from its relation to other phenomenal concepts? If so, I guess I just have trouble making sense of that thought.

Thanks again for taking the time to come on here and answer questions!

[simism66](#)

interesting question. i don't think my view entails this sort of atomism about phenomenal concepts. there may well be cognitive preconditions for attending to phenomenal qualities and forming concepts of them. it's consistent with my view that those preconditions for certain color concepts involve having certain other color concepts or perhaps the concept of color -- or maybe something weaker such as acquaintance with other colors. that said, the atomism you discuss doesn't seem as bad to me as it does to you.

Yo, D.C., what's crackin', son? It's yo boy.

- Who is your favorite analytic philosopher?
- What are your thoughts on Jordan Peterson?
- How do you feel about scientists like NdGT and their disparaging remarks toward philosophy?

[sasha_krasnaya](#)

i'd say rudolf carnap. i also have a soft spot for bertrand russell.

Yo, D.C., what's crackin', son? It's yo boy.

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[sasha_krasnaya](#)

i see two questions got added. i have no thoughts about jordan peterson. i've done a couple of events with neil degrasse tyson and had an extended conversation with him about philosophy. his views are actually more nuanced, limited, and informed than those of various other scientists to have disparaged philosophy. i think in many of those cases involve an outdated view of the sort of work philosophers do -- it's typically physicists ignorant of the best work in philosophy of physics. to be fair i can remember saying the same sort of thing about philosophers years ago before i started doing philosophy. it's easy to work with a model of what they're doing that has little resemblance to the truth. of course there can also be fair and informed criticism of philosophy -- philosophers are no strangers to making those criticisms themselves!

It seems fairly obvious to me that anyone interested in the mind and the nature of existence would at least be curious about using psychedelic "consciousness modifiers" to explore these subjects. Do you know of any great philosophers, besides the late Terence McKenna, who talk about psychedelic drugs? What do you think about psychedelics as it relates to philosophy?

One philosophic insight I discovered, after using powerful psychedelics, was that "I" am a complex neurobiological firing/chemical pattern that has a tendency to remain remarkably consistent despite relentless aging and the chaotic influence of the environment on neurobiology. Knowledge expands the pattern without fundamentally destroying it. Consciousness is my experience of the pattern. If this insight is philosophically useful, it came directly from psychedelic use.

[ScrumTumescent](#)

[david pearce](#) once took me to task for not saying enough about psychedelics in my first book. his view was that since our data about consciousness are so limited, we have a responsibility to expand the range of first-person data as much as we can. that's a reasonable view. i can't say that my own limited experience with psychedelics has given me lasting transformative insights about the problem of consciousness, but it's certainly provoked interesting thoughts here and there. i'm mostly drawing a blank right now on philosophers who have written about psychedelic experience, but there have been a few -- benny shanon is one who comes to mind. and there's been a lot of interesting work in recent years by neuroscientists and others empirically investigating effects of psychedelics on the brain -- e.g. the work of robin carhart-harris and others on effects on the default systems in the brain, which may be at least consistent with the view you set out above.