

The September Collection: New Technology Can Be Scary, Why to Stop Worrying and Love the Eco-Apocalypse, and Much More

September 22, 2022



What determines how we feel about new technologies? Can an existential approach help us deal with apocalyptic fears about the climate crisis? And does having brothers or sisters influence our personality? New research in APS journals explores these questions and much more, including what makes a joke funny and how social support can prevent depression in breast-cancer survivors. In this episode of *Under the Cortex*, cognitive psychologist Ludmila Nunes and her colleague Amy Drew, APS's Director of Publications, discuss five of the most interesting new articles from the APS journals.

APS members get advance notice of all new research through our *This Week in Psychological Science* newsletter and may access the complete archive of APS journal articles.

Unedited transcript:

[00:00:12.990] – Ludmila Nunes

Why do concerns about new and unfamiliar technologies cyclically repeat themselves? Can the acceptance of death help us prepare for an ecosystem? What makes a joke funny? And does growing up with a sister rather than a brother affect our personality? New research published in the Journal of APS explores these questions and much more. This is under the cortex. I am Ludmila Nunes with the Association for Psychological Science. To speak about five articles recently published in the journals of APS. I have with me Amy Drew, the director of publications at APS. Hi, Amy. Thanks for joining me today.

[00:01:01.030] – Amy Drew

Thanks for having me, Ludmila. It's lovely to be here.

[00:01:04.210] – Ludmila Nunes

So before we start today, I think it's great if we have a quick introduction about your work, Amy. In this podcast, we discuss some of the most recent research published in the scientific journals of APS. We have six journals, and the articles published are peer reviewed. They go through a very rigorous process. Would you like to explain our listeners what this is and what you do specifically?

[00:01:30.370] – Amy Drew

Sure, I'd be happy to. So, as you mentioned, APS publishes six journals, which all differ somewhat in their scope and mission. Our journals publish empirical and theoretical work, and some publish unique article formats, like provocative opinion or philosophical Pieces and Perspectives on Psychological Science or PSPI Reports, which are state of the science articles solicited from top experts on a particular subject targeted to a public, policy focused audience. We have some journals like Clinical Psychological Science and Amps that are a bit more specialized but quite unique in their focus on integrative and interdisciplinary science. And Current Directions in Psychological Science gives readers highly accessible summaries of the latest findings on a particular topic or in a particular lab.

[00:02:13.870] – Ludmila Nunes

You mentioned Amps that's advances in methods and practices in psychological science, right, which is actually open access. So any of our listeners have access to those articles that are very focused on methods and how to do things in research, right?

[00:02:31.210] – Amy Drew

Yes, and there's a lot of great tutorials in Amps. And again, like you said, those are freely accessible to anybody. So those are a lot of great content in there about metascience and research design and things that can really help people improve their own research. And then, of course, we have our flagship journal of Psychological Science, which publishes the most innovative and game changing research in the field. So, although our journals vary in terms of content and format, they are all published with a really broad audience in mind, and they all have extremely high standards for acceptance. So we want to ensure that high quality and scientific rigor are a given for any article that we publish. And the way we achieve that is through peer review, which is a process in which experts on a particular subject critically assess and vet an article on that subject that has been submitted to one of our journals. So these experts

are solicited by the journal's editors to provide their input and constructive feedback to the authors. And the editor then combines that reviewer input with their own impressions of the article to render a decision about whether to accept the article for publication in the journal.

[00:03:33.690] – Amy Drew

Reject it on the grounds that it didn't meet the journal's criteria for acceptance. Or perhaps give the authors an opportunity to revise the paper and submit kind of a new and improved version that will start the review process. Again, it might have the same and or new expert reviewers weighing in.

[00:03:50.050] – Ludmila Nunes

That's great. I think that gives a lot of information, useful information about how we get these articles out and why they're accepted, how they're edited all of that. So what we're going to be doing today is talking a little bit about five of these recent published articles. I believe we are talking mostly about articles from Psychological Science, but we also have one from perspectives. So now that we know more about how this research gets out, let's talk about the research itself. So I would like to start with this article published in Psychological Science. The authors are Adam Smiley and Matthew Fisher. The article is titled The Golden Age is Behind US how the Status Quo Impacts the Evaluation of Technology. What the authors here found was that independently of the actual risks posed by technology, people tend to have more positive attitudes toward technologies that were invented before their earliest memories. So Smiley and Fisher manipulated the reported age of an unfamiliar technology. They used Aerogel, which is a real technology. It's a synthetic, porous ultralight material derived from a gel in which the liquid component for the gel has been replaced with the gas without significant collapse of the gel structure.

[00:05:25.150] – Ludmila Nunes

But although this is a real technology, it's something that most people don't know. So they used this and manipulated the date of discovery of this technology. So they reported the age of technology and changed that for different participants. And what they found was that people evaluated this technology more favorably when it was described as originating before their birth. In another study, they actually used ten very well known technologies the cell phone, the electric car, laptop computer, Bluetooth, WiFi, email, drones, self driving cars, and blockchain, which an example of blockchain is Bitcoin and video games. And what they found here was that the participants age at the time of the invention predicted their attitudes towards these technologies. So if the technologies had been invented before they were born or they were really young, they showed more positive attitudes towards these inventions and they were not afraid of them. Now, if they are older, if they remember these technologies being invented, they showed more negative attitudes. The authors also found that a preference for states of the world remaining consistent. This is a status quo. Bias also had an effect on the evaluations of technology. So people who preferred for the state of the world to remain consistent tended to be more afraid of technology.

[00:07:17.890] – Ludmila Nunes

And these results can help understand why cycles of concern over new technologies continually repeat.

[00:07:28.030] – Amy Drew

Yeah, that's really interesting, because that is something that seems like it happens every time there's a new technology. Right. Like, I know even in the 1940s, parents were freaking out because they thought their kids were addicted to radio crime dramas. So this has been going on forever, and it is an interesting phenomenon that continues to persist. So insights like these into it are really sort of helpful to understand why it keeps happening.

[00:07:51.570] – Ludmila Nunes

History always repeats itself, right? So you have another one for us?

[00:07:56.830] – Amy Drew

Yeah. So I imagine the topic of this next article will really resonate with a lot of people, and that's eco anxiety or the chronic fear of environmental doom. And, you know, about 50% of American children fear that the world will be uninhabitable by the time they grow up, and almost the same percentage of Americans overall endorse the idea that humanity is doomed. So eco anxiety is certainly a widespread phenomenon. And the question that the author Devin Guthrie tries to answer in this Perspective on Psychological Science article is how exactly are we supposed to cope when faced with seemingly inevitable ecological and societal collapse? And perhaps fittingly, he turns to existential psychology to address these existential anxieties. So Guthrie makes a connection between eco anxiety and death anxiety, which is exactly what it sounds like. So it turns out we have a whole arsenal of psychological weapons that we deploy to deal or really not deal with the knowledge of our inevitable demise and to ward off reminders of it, even to our own detriment. So we generally try very hard not to think about our own deaths. And researchers have found that when prompted to do so, we hold more tightly to our world views and our in groups, and we even, paradoxically, are more eager to engage in dangerous behaviors that could increase the chance of dying, like driving fast or Skydiving.

[00:09:16.390] – Amy Drew

And we'll do whatever we can to distract and soothe ourselves from this reality, be it substances, consumerism petty concerns, anything to avoid facing the terrifying truth that at some point, our life must end. So Guthrie explains that we tend to use these exact same tactics when faced with the prospect of the death of our entire species and possibly the planet. So he explains that these tactics are incredibly counterproductive, no matter when or why we use them. Basically, we expend so much energy keeping negative thoughts and feelings away that we end up suffering more in what is called the ironic process effect. And the classic example of that is me telling you not to think about a white bear, which makes it virtually impossible for you to think about anything except a white bear. So Guthrie suggests an approach based largely on acceptance and Commitment Therapy, or act. And as the name suggests, act starts with acceptance, both cognitive and emotional. So we have to both look realistically at our situation and understand what we can and cannot change at the same time provide space to process the painful negative emotions that that kind of reality check can bring about.

[00:10:23.250] – Amy Drew

So in the case of the climate crisis, this means understanding and accepting the painful truth that we are

hurtling towards a future in which the Earth will be uninhabitable for most or all of humanity. So Gathering also points out that our current predicament does not in any way change the immutable fact that we as individuals are going to die. That has been and always will be true. And when we engage with the idea of death, either a person or a planet, in kind of an abstract and superficial way, our terror management defenses kind of take over. So we deny, deny, deny. We certainly don't talk about it. And this denial renders us unable to process our grief, which robs us up the opportunity to integrate and make meaning from that grief, which is a really crucial part of the grieving process. So on a personal level, this denial inhibits the productive post traumatic growth that can actually come out of grief, while the refusal to face our climate reality hinders what some have termed pretraumatic growth. But we also know from previous research that when faced with death in a deeper and more tangible sense, like receiving a diagnosis of a terminal illness, people actually tend to feel more grateful to be alive.

[00:11:29.810] – Amy Drew

They prioritize intrinsic goals over external ones. They have more appreciation for the value of life because they are acutely aware of how scarce and fleeting it is. In fact, a lot of act workbooks actually start with a prompt to imagine your own funeral and to kind of consider your own death in this sustained and tangible way. So think of it this way end of life care is a natural place to look for strategies for coping with eco anxiety. Now, a lot of people might think of hospice care as kind of constantly looming with the specter of death and very depressing and sad. But the goal of hospice is really to give up the quest to live as long as possible so that you might live as meaningfully as possible with the time you have left. And as a result, people recognize and put more energy into the things that truly matter to them. And they also really enjoy and savor the current moment regardless of what may be coming. So we could all learn a lesson from palliative care. And Guthrie encourages readers to embrace those same values in their daily lives. He envisions a kind of hospice for humanity in which we as a society can all look at the climate crisis in the face and accept it.

[00:12:34.010] – Amy Drew

And our lives can be all the more meaningful for that and I think that's about as positive a note as an article about coping with impending climate collapse can end on no.

[00:12:44.210] – Ludmila Nunes

It is actually a very positive message because it teaches us that keep denying things and worrying and worrying but not doing anything meaningful about them. It's not going to change them and it's just adding more to our own anxiety. And when we have to face these things, we get more scared and more depressed and that's less functional, right?

[00:13:09.940] – Amy Drew

Exactly.

[00:13:11.110] – Ludmila Nunes

Yeah. Okay, my next one is also not very uplifting, but somewhat uplifting because it shows that psychosocial resources, meaning social support, can help a lot with psychosocial resilience. So this

article was published in Psychological Science by Andrew Manigolt and colleagues and it's about psychosocial resilience to inflammation associated depression, a prospective study of breast cancer survivors. So many golden colleagues did a study with women with breast cancer and measured cancer related stress and psychosocial resources which included social support, optimism, positive effect mastery, self esteem, and mindfulness. And then two years starting after this diagnosis, they also measured depressive symptoms and inflammation. And we know that stress is very associated with inflammation and depressive symptoms. What the authors found here was that women who reported having more social support reported fewer associations between stress and depressive symptoms and between stress and inflammation related depressive symptoms. So they felt better than women who reported having fewer as these psychosocial resources or social support. So what these results show is that it is really important to have social support when one is trying to manage stress and inflammation associated depressive symptoms. So for any health outcomes, it is very positive to have a wide social support, a wide network and also feel optimistic about these symptoms.

[00:15:22.510] – Amy Drew

Yeah, I know that that's something I've known people who have gone through cancer diagnosis and cancer treatment and yeah, for them it's certainly been a huge thing having social support and having that sort of network that can kind of lift you up and it's interesting to see sort of the mechanisms of how that actually leads to better outcomes.

[00:15:41.870] – Ludmila Nunes

And we've seen several articles that link stress and the lack of resources with poor health outcomes and this one is actually positive because it also shows the opposite. It's not just that bad social support or a lack of will have a negative impact, but by providing more social support we can actually improve health outcomes.

[00:16:05.810] – Amy Drew

Yeah, that is nice to have some good news on that front. All right, well, I think for my next article we could get a little lighter here and I really love research that tries to make sense of something that's just so subjective like humor. And here is an article that tries to get at a really fundamental question of humor, which is what makes a joke funny? It's like the content of the joke itself, the audience or perceiver of the joke, or is it the match between the joke and the audience. So in this Psychological Science article, which was titled The Relative Importance of Joke and Audience Characteristics and Eliciting Amusement, Rosenbush, Evans and Zealoberg used a variance decomposition approach to test how predictive each of these three factors are in determining amusement level. So recent literature would suggest that the content of a joke is actually the least predictive factor with the thinking that people are just so varied in their tastes and senses of humor. Like, think of the jokes that you find funny versus the ones that your parents share on Facebook. And audience characteristics are thought to be more predictive than joke material, which I'm sure is something that resonates with touring stand up comedians who tell the same joke and might get wildly different reactions in different parts of the country or maybe even between different audiences in the same town.

[00:17:19.240] – Amy Drew

But the most predictive factor is thought to be the most nuanced, and that's the interaction between joke and audience. So the authors did four studies where they had MTurk workers and university students rate the funniness of a variety of humor stimuli. They had words, memes, videos, kind of all kinds of formats. And they also looked at visitors to a joke rating website, which I admit I did not know was a thing that exists, but apparently it does. And they found that the rater or audience differences were between 1.4 and 4.8 times more important than stimuli or joke differences. And so to assess the interaction between joke and perceiver, they needed to have multiple funniness ratings from participants. So they ran another study where they had participants recruited on the online research platform Prolific rate the funniness of humorous materials and then had them repeat those ratings three weeks later. So they found that material accounted for about 13% of funniness variance, perceiver accounted for about 20%, and the interaction between material and perceiver accounted for 35% of variance. So it was the most important factor by far. The authors explained that these results align with a lot of the latest research in this area.

[00:18:32.610] – Amy Drew

There have historically been a lot of theories about what characteristics make for a quote unquote good joke. An example is what's called the Benign Violation Theory, which says that a joke is viewed as funny if it violates the perceiver's expectations in a benign way. So of course, what qualifies as benign and as a violation of expectations is going to vary a great deal from person to person. So it's really the interplay between the two that counts the most. So this study conforms with a lot of the current literature, and the authors hope that their results can be used to kind of further refine theories about how we experience humor. So that was just kind of a fun one.

[00:19:07.370] – Ludmila Nunes

Yeah, this is a really fun one. And I have personal experience with this. Sometimes if I'm watching a funny show with American friends, sometimes it's not that I don't get the joke. I get it, I understand it. I just don't find it as funny as everybody else. And I believe it has a lot to do with cultural differences, even though there aren't that many that makes a difference. So, yeah, definitely, I would have predicted those results.

[00:19:35.370] – Amy Drew

Yes. You've noticed the perceiver end of it? Yeah.

[00:19:39.970] – Ludmila Nunes

Yeah.

[00:19:40.470] – Amy Drew

Okay.

[00:19:40.780] – Ludmila Nunes

So I'm going to also end with a study that I find somewhat funny, but maybe other people want.

Depends on the audience here. This study was also published in Psychological Science by Thomas Dudek and colleagues, and it shows that siblings gender does not appear to affect personality in several countries. So the idea that maybe growing up with a brother rather than a sister might affect our personality is a very ingrained idea. Like that siblings tend to behave according to the gender of their older or younger siblings.

[00:20:26.050] – Amy Drew

Right. How many times do you hear people say, well, I grew up with brothers, so that's why I'm like this?

[00:20:29.740] – Ludmila Nunes

Yeah, exactly. So it seems that that might not be the case. So the authors here analyzed how siblings genders affect adult personalities. They used data from more than 850 people in twelve large representative surveys covering nine countries, including the United States, the United Kingdom, the Netherlands, Germany, Switzerland, Australia, Mexico, China, and Indonesia. And across all of these countries with all these people, they surveyed the personality traits of risk tolerance, trust, patience, locus of control, which is if you tend to blame external factors or internal factors for the result of your actions, where is the control of your actions? And also the big five personality traits, which are openness, conscientiousness, extroversion, agreeableness, and neuroticism. And they found no differences depending on whether the next younger or older sibling was a boy or a girl. So the sibling's gender had no effect at all on personality. It's kind of sad when we see these articles that show, oh, there's no effect, but this one is a funny one because it really goes against this perception that people usually have that, oh, I'll be having a certain way because I was raised with sisters, or I behave in a certain way because I was raised with brothers.

[00:22:11.890] – Amy Drew

Yeah, that is really interesting how we can easily tell those stories. This is why I'm the way I am. It's because of the environment I grew up. And then when the evidence says, oh, that's probably not it, it's kind of a reality check. And I believe the authors also mentioned in their article that it might be that there might be tiny kind of effects that over a large sample, kind of cancel each other out, or all the different kind of environmental factors that are also in play might make it so that there's no effect seen here. So there are potential other explanations, but the most sort of persimmonist one is that there's just no relation between the gender of your siblings and how you turn out as an adult.

[00:22:58.150] – Ludmila Nunes

And it's also true that they looked at adult personality traits, not how children behave. And they looked specifically at the gender of the next younger or older sibling. So maybe if you're a boy and grew up with four sisters, maybe that will have an effect. Or if you're a girl and grew up super protected because of gender roles by four brothers, that might have an effect, right?

[00:23:23.980] – Amy Drew

Yeah. Important caveats.

[00:23:25.390] – Ludmila Nunes

Yes. I think this was our selection for this week and it was great chatting with you, Amy. I hope you come back and talk to us.

[00:23:35.770] – Amy Drew

Yes, thank you for having me. This is great.

[00:23:38.860] – Ludmila Nunes

This is Ludmila Nunes with APS, and I've been speaking to Amy Drew, the director of publications at the Association for Psychological Science. If anyone is interested in reading the studies we talked about or learning more about APS and this research, please visit our website psychologicalscience.org. Thank you for listening.