

ISSUE #16

THE OFFSPRING MAGAZINE



A PUBLICATION OF THE **MAX PLANCK PHDNET**



CHANGE IN ACADEMIA

Greetings to our fellow scholars, dreamers, and change-makers! With great enthusiasm, we present the latest issue of The Offspring Magazine, focusing on a theme that is significant for us all: "Change in Academia".

In the dynamic world of academia, where ideas take flight and knowledge is born, we, the Doctoral Researchers, stand as torchbearers of improvement. Within these pages, you'll find narratives that explore the perspectives of students on changes in their academic pursuits. The articles cover topics such as the pressure on publication frequency over quality and the importance of mental health in academia. They highlight the perspectives of those who see change as not only necessary but fundamental to the nature of academia.

Alongside these narratives, our contributors share personal experiences, from navigating life in different countries seeking diverse research opportunities to recommending light reading for those moments when the weight of research feels overwhelming. This year, we continue to explore scientific subjects, delving into topics such as black holes and everyday chemicals that could be dangerous to us.

As you dive into the pages of this magazine, we invite you to embrace the winds of change sweeping through the halls of academia. Let this issue serve as a testament to our collective yearning for a better academic experience for future generations.

A heartfelt thank you to our contributors, the dedicated editorial team, PhDnet, and, most importantly, to all of you Doctoral Researchers—the driving force behind the desire for change.

Here's to a future filled with transformative possibilities!

Cemre Coskun on behalf of the Offspring Magazine Team

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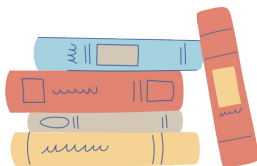
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Publish or Perish:

How the pressure to publish can hurt science

By Constanze Reinken

The term “publish or perish” describes the pressure for researchers to frequently and numerously produce publications in order to stay afloat in academia. While it is not entirely clear when the term was coined, one of its earliest known uses was by Logan Wilson, an American historian and educator, during the 1940s. Since then, it has become an ubiquitous and well-known term among academics. Author-level metrics have become increasingly important for funding agencies and institutions to evaluate a researcher’s work while the competition for funding and scarce permanent research positions has strongly increased with more and more people striving for an academic career. In an international survey by Dalen and Henkens from 2012, between 52 and 74% of participating researchers agreed that the publication pressure in science is “too high”, with the US and other Anglo-Saxon countries having the highest percentages.

Perish can mean different things in different stages of a researcher’s career. For new PIs it can mean not getting tenure; for graduate students, it can mean having to leave academia altogether due to an inability to find a job where they feel secure. A report on young scientists in Germany, which was conducted by the Institute for Innovation and Technology in Berlin in 2021, shows that

In 2022, a globally open survey by the Wellcome Trust (UK) with 4267 responding researchers showed that 70% of respondents felt stressed on an average working day. 34% had actively sought professional help for depression or anxiety during their scientific career.

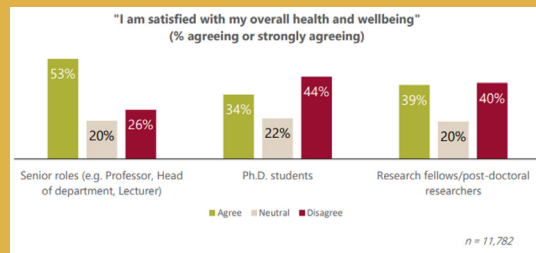
In an interview with the Guardian in 2013, British physicist Peter Higgs, claimed that he would not have gotten a research position in today’s academic climate because he would not have been considered productive enough. Arguably, Higgs belongs to the most influential scientists of our time. He gave his name to several important findings and theories in physics, including the Higgs boson, which he predicted in 1964 in one of his few published papers. With his research he contributed one of the most important theories of particle physics. He won a Nobel prize for his achievements in 2013. According to him, he probably would not have been able to “have the peace and quiet” to make this breakthrough under the current pressure to produce scientific papers.

many researchers in Germany leave academia during their Post-Doc, with only 22% remaining in academia within ten years after their PhD.

The strong focus on quantity of publications amps up the pressure for scientists and often leads to bad working conditions, which can create a feeding ground for mental illnesses and burnout. The Max Planck PhDnet survey found that in 2021, the “vast majority of doctoral students work many more hours than they are required to”, with 80% of them taking less than 25 days of holiday, even though they have 30 by contract. 36.2% of these participants stated that they did so because of high workload or pressure from their supervisors. The stressful work environment leads many smart and talented researchers to leave for more secure, comfortable and high-paying jobs in industry and the private sector.

Not only the humans behind science suffer from the increased publishing pressure, but it also has negative impacts on science itself.

Especially early career scientists are struggling with their mental health, presumably because they are most affected by the publication pressure.



CACTUS Mental Health Survey Report 2020

It can incentivize academics to prioritize the quantity of their output over thorough research. Already in 1986, Ingrid Moss found in an interview study at an Australian university that many researchers felt inclined to lower their standards in order to publish more articles in a shorter period of time and were tempted to publish insignificant data.

Besides the willingness to sacrifice research quality, the pressure to publish might in some cases even increase the use of unethical practices in science, such as faking results or hiring so-called paper mills to write and publish fake papers under your own name; a practice that will likely skyrocket with recent developments in AI.

With more scientists feeling driven to produce as many articles as possible, the pool of publications is becoming increasingly huge and harder to navigate. According to Imad A. Moosa in his book "Publish or Perish: Perceived Benefits versus Unintended Consequences", the global number of publications in engineering and science has grown by 150% from 1990 to 2013,

The terms "least publishable unit" and "salami slicing" have become established in regards to academic publications. "Salami slicing" refers to the practice of dividing research into multiple smaller publications to maximize the number of publications, instead of presenting it as a comprehensive study. The term "least publishable unit" refers to the smallest fragment of research or data that is considered sufficient for a standalone scientific article.

an increase that is "disproportional to the advancement of human knowledge".

There are several metrics created to rank scientists based on the number of their publications and citations. One of the most well-known ones is the so-called "h-index", named after its creator, physicist Jorge E. Hirsch. It represents the maximum number h that can be found for an author so that at least h papers have been cited at least h times. In addition to the number of publications, the so-called impact factor of journals is often taken into account as well, adding another aspect to the pressure. Distinguished journals

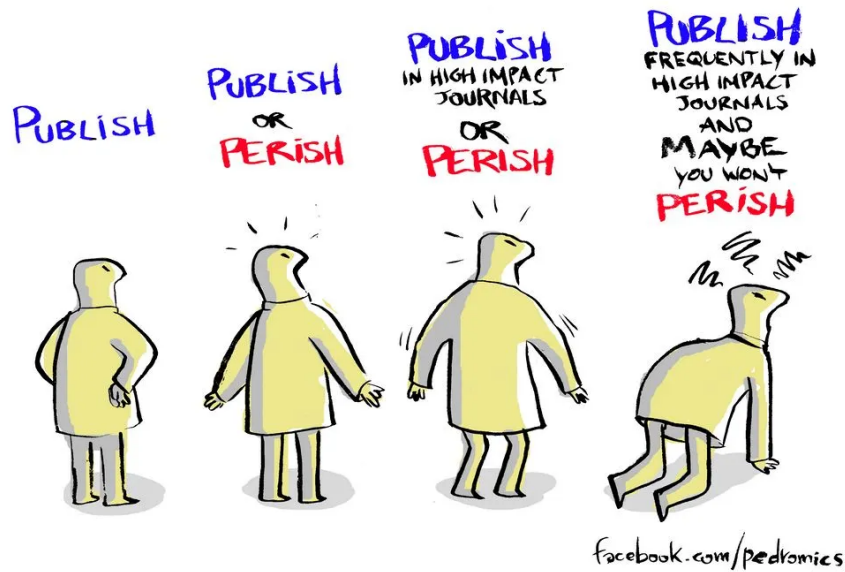
Researchers' views on metrics

| | Disagree | Agree |
|---|----------|-------|
| I think current metrics have had a positive impact on research culture | 58% | 14% |
| My institution/workplace places more value on meeting metrics, than it does on research quality | 33% | 43% |
| I feel pressured to meet Key Performance Indicators/metrics, e.g. REF, grant funding | 22% | 54% |

Survey, n = 3917-4175 – research community, UK and international, excluding unemployed and retired.

Wellcome Trust Survey, 2020 [1]

THE EVOLUTION OF ACADEMIA



like Nature will commonly have high rejection rates. Nature itself states that only about 8% of the submitted manuscripts are being published. Many researchers might be more willing to adjust their articles to align with the scope of these ‘high-impact’ journals and focus on topics that offer a greater chance of being selected, rather than pursuing subjects they are passionate about or those they know will advance science.

Due to these effects, “publish or perish” also contributes to the so-called “reproducibility crisis”. Reproducibility is a fundamental principle of the scientific method. It should be possible to replicate the published results of other scientists, but in recent decades studies have increasingly struggled to be reproduced successfully. One reason for this might be flawed methods due to rushed execution in order to be able to publish quickly. Ideally, science should “self-correct” with new studies finding possible flaws in older ones, but the focus on novelty of many journals and the importance of publishing in them in order to climb up the scientific career ladder often makes it infeasible for scientists to spend their time replicating previous studies.

Of course, publications are an important cornerstone of science. They are the main

outlet for researchers to share their science with other scientists making it possible to build on each other’s findings, which is the core mechanism that moves science forward. Many also argue that a certain degree of competition is important to motivate researchers and that the evaluation based on publication metrics helps to reward scientists based on merit as opposed to connections and favoritism. But with increasing negative side effects, we need to ask the question whether the focus we put on them is really beneficial. Is the number of publications really the right way to judge a researcher’s success and can the quality of research even be measured with such quantifiable metrics?

The subject of “publish or perish” is already being discussed a lot, both in science and in the general media, and several studies have been conducted that highlight the negative side effects. But how can there be long-lasting change in the academic landscape?

One solution would be for institutions and funding agencies to make a conscious effort to deprioritize the quantity of publications in their selection processes. In a Nature article from 2016, Mark W.J. Ferguson explains that during his time as dean of biological sciences at the University of Manchester, he

and the rest of the committee decided to ask applicants for promotions or appointments to submit three publications that they considered to be their most important, instead of focusing on the conventional assessment measures. Not only does this selection tell a lot about the applicant, it also increases chances of the committee members to actually read these papers instead of barely skimming through a lengthy list of articles.

In 2012 a group of editors and publishers of journals crafted the “San Francisco Declaration on Research Assessment” (DORA), which encompasses several recommendations to all parties in the research and publishing process to improve the assessment of scientific work. This includes considering other research outputs (like datasets and software) besides papers when picking candidates for funding.

Futhermore, the increased emergence of subject-specific preprint servers, like bioRxiv, allows many researchers to share their science with the community without having to go through the highly competitive process of submitting an article to a high-impact journal. Of course, these servers come with new issues regarding quality control, but they could still contribute towards reducing the pressure in academia.

Whether we will see actual change in academic working conditions soon is unclear, but looking at the public conversation surrounding the issue and at efforts such as DORA, it becomes clear that there is at least an increased awareness about the negative side effects of the “publish or perish” phenomenon.

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Feeling low when rising high

The Impostor Syndrome in academia

By Juliane van Scherpenberg

In the turbulent and eventful last few years one significant and positive shift has been the heightened focus on mental well-being in academia. While this encompasses a variety of phenomena, one that has lately received a lot of attention is the “Impostor Syndrome”.



What is the impostor syndrome?

It was first described in a paper by Clance and Imes in 1978 [1] titled “The impostor phenomenon in high achieving women: dynamics and therapeutic intervention”. The authors were astonished when they were confronted with many successful women at various stages of their academic careers who had an internalized feeling of “intellectual phoniness”, being convinced that they had achieved their success not because of their abilities but due to serendipitous external factors like luck, errors in judgment of committees or professors or administrative mistakes in the admittance process. There have since been more studies showing that the impostor phenomenon is not limited to women and is also prevalent among men, all age groups and in ethnic minorities. However, there still is no clear evidence for the causes and no commonly agreed on diagnosis or treatment [2].

The two circumstances in which the impostor phenomenon originates that Clance and Imes identified in their study still seem plausible today when they are generalized to some extent. People experiencing impostor syndrome might have come up in a personal or societal environment in which they are not expected to

be exceptionally intelligent, skilled and do well in their career at whatever stage, be it in school or university. In comparison to others they are being told - explicitly or implicitly - that they are simply not as smart. On the one hand they feel the constant need to prove to themselves and their families or society that in fact they are as skilled as others in their respective careers. On the other hand, a part of them believes what they are being told. Even when they achieve exceptional grades and recognition, their surroundings do not acknowledge them as such. They continue striving for validation of their intellectual competence while secretly starting to doubt if they have achieved their acclaim not because of their skills, but by “tricking” teachers or professors. Hence, they start feeling like impostors.

It is conceivable that people belonging to minorities may have this experience. They grow in a society in which the career they are choosing is historically dominated by the other gender or a different ethnic group for example. This leads them to internalize the belief that they lack the predisposition to perform as well as the majority. According to a 2017 study by Bernard et al. with African American college students, levels of feeling like an impostor are further enhanced if the subjects experienced racial discrimination [3].

Another possibility is an environment in which individuals are attributed exceptional intelligence from the start, being told that they can do anything with ease. However, once confronted with reality, they can experience situations in which they do actually struggle. They begin to distrust what society told them and even worse, begin to distrust themselves. Even though they perform exceptionally well, they do have to work for their achievements, contradicting the idea that being intelligent means being able to do everything with ease. In reverse they start to believe that in fact they are not “a genius” or specially talented, feeling like an impostor in their professional surroundings.

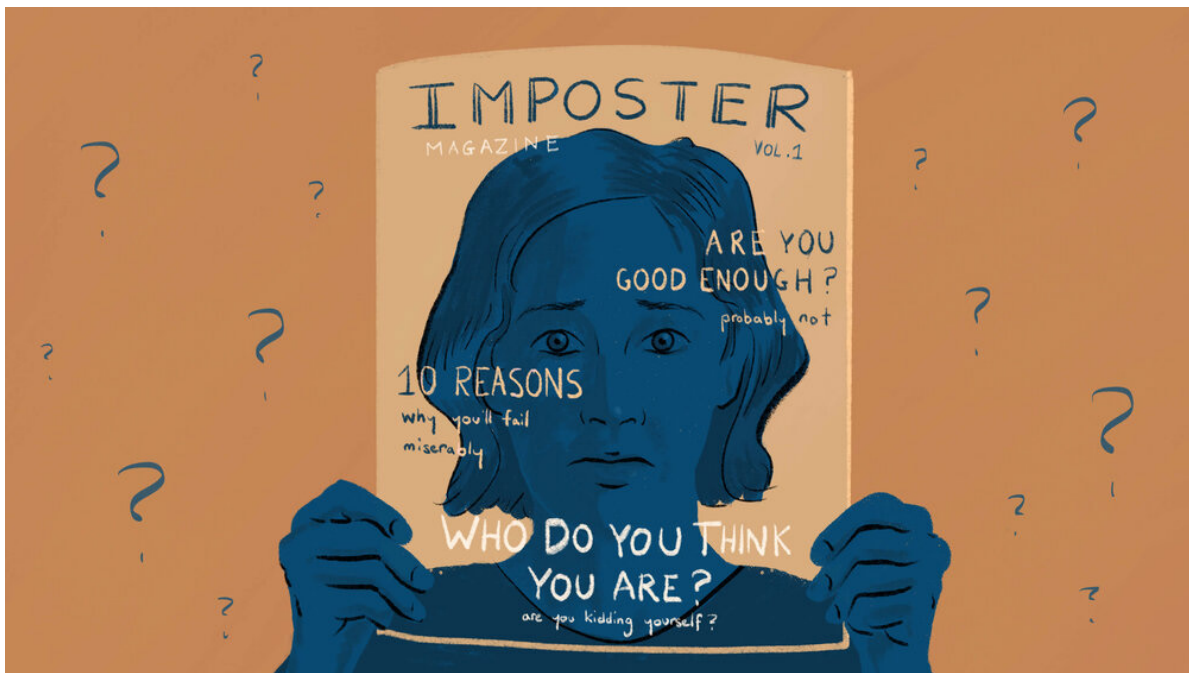


Image Source: <https://www.nextlevelscoaching.com/blog/2020/8/19/why-do-i-feel-like-an-intellectual-fake>

This second scenario explains why also members of non-marginalized groups suffer from impostor syndrome. It also matches the general conception of the impostor syndrome being more prevalent amongst women compared to men when considering the fact that - as shown for example in a 2020 study by Shastry et al [4]. - generally women interpret their failures as their own lack of skills while men often attribute it to bad luck. On the other hand men also attribute positive feedback more to their own abilities whereas women rather attribute it to luck. This is further supported by a study on Austrian doctoral researchers that not only suggested that female DRs suffer more from impostor syndrome than men, but also that they had higher fear of success, fear of failure and lower self-esteem than men [5].

It is important to understand that the impostor syndrome goes beyond the common sensation of feeling intimidated - especially in academia - by others around you who have a deeper knowledge and more experience in your field. In fact it is that exact feeling combined with the conviction that you will never be able to catch up with your peers. You are not as smart as your colleagues and you do not belong there since you only got to your current position by mistake or by tricking others.

Impostor Syndrome in Academia

The impostor phenomenon can appear everywhere in society and in all professions but it is clear that academia fosters an environment where it can flourish easily.

The entry requirements and career advancement process within academia contribute to the underrepresentation of first-generation academics, individuals with a migration background, and women. At the same time there exists an immense pressure of having one's research and scientific achievement recognized and validated. Given the situation it is not surprising that impostor syndrome has become a major talking point among academics while discussing working conditions and mental health.

And that's a good thing! Impostor syndrome has always existed. In the book "The Sky is for Everyone", a collection of essays by female astronomers, Jocelyn Bell writes when describing her acceptance to do a PhD in radio astronomy at Cambridge in 1965 "Clearly Cambridge had made a mistake admitting me; they would discover their mistake and throw me out". Clearly she was experiencing impostor syndrome - more than 10 years before the original paper describing the phenomenon

was published. And she can't have been the only one - especially the only woman in a male dominated field with this experience at that time. Today we not only have a name for it, we talk about it regularly. Understanding the prevalence of the problem, performing scientific studies on it and discussing it in society means we can learn how to fight it.

Harvey and Katz defined the impostor phenomenon in their book "If I'm So Successful Why Do I Feel Like a Fake" to consist of three aspects:

- the belief that you have fooled others
- the fear of someone finding you out
- not being able to attribute your successes to your own talents [6].

What needs to change?

So how do we fight impostor syndrome?

We need to improve the recognition of the achievements of members of marginalized groups. Especially if they are being assured as early as possible in their life or academic career that they are doing well they might be less prone to doubting the recognition they receive later on.

In addition, giving more visibility to these people will reduce the feeling of "not belonging" among young people from the same societal group from the beginning.

Academia needs to become more diverse and needs to show it to society!

On the other hand we need to show publicly that everyone struggles sometimes. The equation of "being smart" and "doing everything with ease" needs to be disestablished. Having to work hard for achievements, making mistakes and experiencing failures and setbacks does not reflect on the intelligence of a person. We need to get rid of the image of successful scientists being "born geniuses" - none of them got to where they are effortlessly.

The struggle, in fact, **IS** real!

If you are experiencing the impostor phenomenon here are a few tips on how to handle it.

Fight it with logic:

If everyone around you is smarter than you, they should have already figured out that you are not smart enough and don't belong in your group. Therefore, they would have found you out already and thrown you out. You are still here, so you are not an impostor.

Prove the opposite to yourself:

So you're not smart, huh? Take the time to read a difficult paper, or pick a topic you have until now only partly understood and take the time to dive in and really grasp it. Write a summary, prepare a presentation (even if just for yourself) or explain it to someone else. You'll be surprised to see how much you can learn in a short amount of time when you put your mind to it. That's how smart you are!

Improve your self-awareness:

Write down your achievements as negligible as they might seem to you. Take note of all the positive feedback that you have gotten. Did you come up with reasons why this feedback was undeserved? Reflect on these reasons - they are illogical and unfounded.

Talk to others:

You are not alone. You are really not. Chances are the person sitting next to you, that you think is so smart, is feeling the same way you do. Share your experiences and realize how ridiculous they sound when other people tell them about themselves. It is not true for them and it is not true for you.

Be the change you want to see:

Systemic changes are difficult but maybe you can improve the situation locally at your institute or in your lab. There might be ways of improving the feedback culture and giving more recognition to those who deserve it.

Side note: “Syndrome” vs “Phenomenon”

In the medical or clinical sense, a syndrome is a distinguishable set of symptoms and physical observation that suggests a particular disorder for which the direct cause is not always clear.

In the psychological sense, a syndrome is an assembly of symptoms and signs commonly arising from a single or several connected causes, together suggesting a distinct physical or mental disorder.

The impostor “syndrome” does not belong to either of those descriptions. Therefore calling it a syndrome is technically not correct and misleading. The more appropriate way is to describe it as a “phenomenon” or “experience”.

In spite of this, I have chosen to use the terms “syndrome” and “phenomenon” synonymously in this text as these are the most commonly used expressions.



Image Source: <https://asana.com/resources/impostor-syndrome>

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Black Holes and Revelations

By Juliane van Scherpenberg

Whenever I meet new people and mention that I am an astrophysicist, most of the time I am immediately bombarded with questions about the universe. You can bet that one of the first questions is going to be about black holes. “What happens if you fall into a black hole?” “Will the Earth be swallowed by a black hole and when?” “What is inside a black hole?”

It is interesting that even those who have no real knowledge of astronomy, somehow have at least a vague idea of what a black hole is. They are indeed impressive objects and I can understand why they evoke a sense of wonder, curiosity, and perhaps even fear in people. Also for us astrophysicists, black holes are extremely interesting and fascinating objects. They are great laboratories to test our current theories because they offer the most extreme environments in the Universe - far beyond anything we could ever dream to recreate here on Earth.

To understand the true nature of black holes, it helps to have a clearer understanding of gravity. Gravity was first described by Isaac Newton in the 17th century as an attractive force between objects that have a mass. The heavier an object, the stronger its gravitational pull which decreases with distance from the object. And for most applications in our daily life this description of gravity is enough. In 1915, however, Albert Einstein changed the game when he came up with his theory of General Relativity. In this theory, gravity naturally arises as a geometrical property of spacetime in its interaction with matter.

Massive objects distort the space and time around them and with this, alter the path of all entities traveling through space and time in their vicinity.

Depending on their velocity and proximity to the heavier object, these entities may be

forced to spiral into the heavier object, end up in a stable orbit around it, or if they are fast enough, pass by the object but be diverted from their original trajectory.

Once trapped within the gravitational potential well of an object, a certain speed is required to break out from it. The closer you are to the object, the faster you need to be to escape its pull. Whenever we want to send space probes from the surface of the Earth to other planets or to the Sun, they need to exceed a velocity of more than 11 kilometers per second.

Black Holes are a theoretical prediction in general relativity when the underlying conditions - the Einstein field equations - are applied to the specific case of a static massive sphere.

They are objects so massive and compact that spacetime is distorted so strongly, not even the speed of light suffices to escape their gravitational pull, once you reach a certain proximity. This border, from beyond which no information can come out of the black hole, is called the Event Horizon. It is impossible for us to know what exactly is going on inside a black hole, especially at its very center - the point of infinite density - our understanding of physics breaks down. It is the subject of active research in theoretical physics to correctly describe the physical conditions at this point in space and time.

It is important to understand that black holes in the end are no more than massive objects that interact with spacetime like any other mass. They are just so extreme that the effects of general relativity, which play a less important role for lighter objects, become extremely relevant in their immediate surroundings. From large distances, however, they are simply massive bodies in space, creating gravitational potentials around them forcing other objects to orbit around them or

alter their trajectories. They are not - contrary to what is often believed among lay people - gigantic cosmic vacuum cleaners flying through space and actively sucking up their surroundings. In fact, if we were to replace our Sun with a black hole of exactly the same mass, nothing would change in the way the Earth and all the other planets orbit around it. Humanity would have a problem because it would get very dark and very cold, but not because the Earth would suddenly fall into the black hole at the center of our solar system. Neither the fate of the Earth nor the Sun nor even the other stars in our Galaxy is to fall into a black hole.

Black Holes were only predicted in theory for decades before there was the first observational evidence of their existence. Einstein himself never believed in their existence, even though black holes are a natural consequence of his theory. But numerous theoretical physicists, including Karl Schwarzschild, Arthur Eddington, Roy Kerr, Roger Penrose and Stephen Hawking, to name but a few, spent decades studying their nature within the framework of general relativity. However, black holes have proved

to be difficult to observe, as they can only be identified by studying their effects on their surroundings. The first object to be identified as a black hole was Cygnus X-1 in the 1970s.

Since then, technological advances in astronomy facilitated more and more observations of black holes. We now know that numerous black holes of various masses exist.

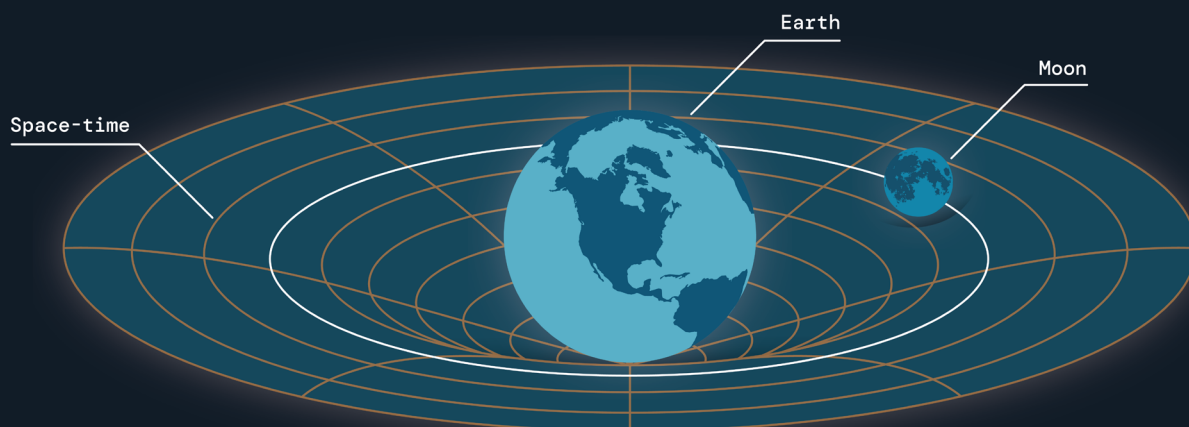
We distinguish between stellar mass black holes and supermassive black holes.

Stellar mass black holes are the end product of the violent death of very massive stars and have, as their name suggests, a mass similar to the mass of stars ranging from a few to hundreds of times the mass of our Sun. Estimates suggest that there should be 100 million of such black holes in our Galaxy, of which we have observed about 50.

Supermassive black holes are located at the center of almost every large galaxy. They weigh a thousand to a billion times more than stellar mass black holes. The way these colossal objects are formed is not yet completely understood.

Gravitational Force

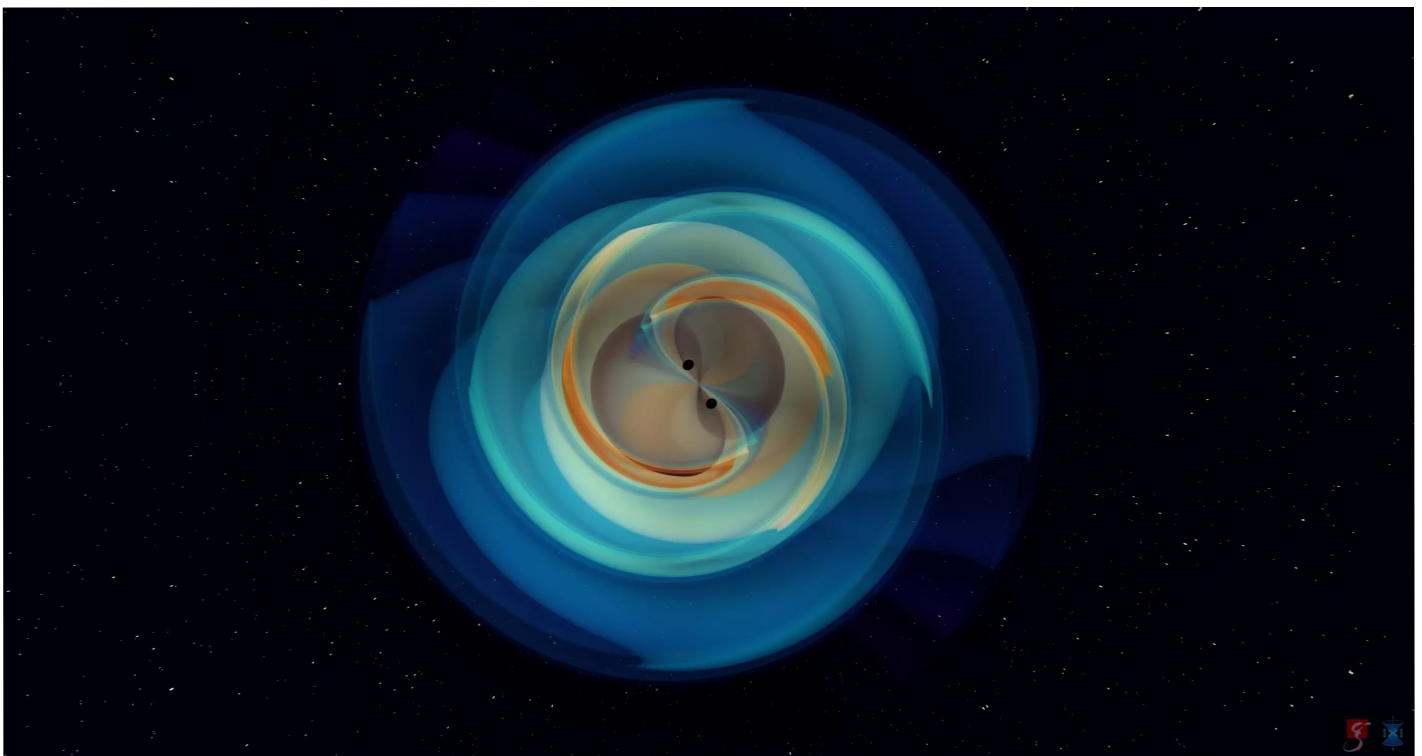
Gravity, the force that draws objects together, can be understood as bends and curves in the fabric of space-time. Anything with mass makes these dents, from the Earth and Moon to turtles and cats.



Gravitational Force. NASA. Available at: <https://universe.nasa.gov/resources/252/gravitational-force/>.

The last 10 years have presented some major breakthroughs in the study of black holes:

- » In 2015, the LIGO and VIRGO collaborations detected small ripples in the fabric of spacetime, so called gravitational waves, caused by the merger of two black holes. Previously, the only way to study black holes was via detecting light emitted in their immediate surroundings. The detection of gravitational waves opened an entirely new window to study black holes and the universe in general. This achievement was awarded with the Nobel Prize in Physics in 2017.
- » In 2018, two independent groups using the Very Large Telescope in Chile and the Keck Telescopes in Hawaii could resolve the orbits of stars extremely close to the center of the Milky Way so precisely, that they were able not only to prove the existence of a black hole at the center of our Galaxy, but also to measure its mass with unprecedented precision. These efforts lead Reinhard Genzel and Andrea Ghez, the leaders of these two groups, to win the Nobel Prize in Physics in 2020.
- » In 2019, the Event Horizon Telescope Collaboration managed in a huge effort of combining numerous telescopes around the globe to take an image of the black hole at the center of the galaxy M87. Never before had it been possible to achieve the angular resolution needed to resolve the immediate surroundings of the black hole, being able to directly detect the effect of the Event Horizon of a black hole.



N. Fischer, H. Pfeiffer, A. Buonanno (Max Planck Institute for Gravitational Physics), Simulating eXtreme Spacetimes (SXS) Collaboration.

I was lucky enough to interview astrophysicists who contributed to these incredible results for the Offspring Magazine podcast. If you are curious and would like to learn more about black holes, check out my episodes with Laura Sberna and Frank Ohme, both from the MPI for Gravitational Physics and members of the LIGO Collaboration, with Gunther Witzel from the MPI for Radio Astronomy and member of the Event Horizon Telescope Collaboration and with Reinhard Genzel from the MPI for Extraterrestrial Physics and Nobel Laureate of 2020.

List of episodes with links:

#4-03 - Black Holes, Spacetime and Relativity
- ft. Dr. Laura Sberna



#4-04 - Gravitational Waves from Black Holes
- ft. Dr. Frank Ohme



#4-10 - Taking Images of Black Holes
- ft. Dr. Gunther Witzel



#4-11 - The Nobel Prize Winning Black Hole
-ft. Prof. Dr. Reinhard Genzel



Are these chemicals dangerous?

By Peter Schlichter

Throughout the pinnacle of scientific research there are many questions that are simply too difficult to answer conclusively, and yet in order to continue to reap the benefits of these scientific ventures we need to try our best. The interplay between chemicals and biological systems is one field in particular that is affected by this fact.

Despite the common perception of chemicals being synthetic and negative, the term chemicals simply refers to a form of matter with a constant chemical composition, both natural and synthetic. We constantly interact with all types of chemicals with the potential of both important positive as well as negative effects on us. However, over the past 100 years we have become increasingly exposed to new chemicals in doses that are higher to what we can evolutionarily deduce are 'safe.' This means we must now figure out the safety of these chemicals without hundreds of generations of trial and error.

In 2015, in not too unusual fashion, the EFSA (European Food Safety Authority) lowered its safe limit of BPA (Bisphenol-A - a plasticiser) by 20,000 times to that of what it was before [1]. While the limit was still above the average daily environmental exposure of the chemical, many companies have pushed to remove this plasticiser from their products. As of 2023, more thorough ongoing investigations now state that an average and high exposure to BPA is of harm to humans of all ages [2]. BPA is still permitted in most food packaging options today.

This story is a reminder of the way in which the chemical toxicity space is ever evolving, and can take time to adjust. Fragrance companies are continually developing new fragrance compounds due to the increasing health concerns related to older (more researched) fragrance molecules. While we would like to think of safety as something clear and finite, our standards across many

fields have changed dramatically. Mostly due to an increased understanding of complex biological systems.

Ever evolving research techniques allow us to investigate new relationships between molecules and the human body and find surprising new ways in which chemicals, assumed 'safe' at given doses appear far less benign the more we research. Here I look ahead at three groups of chemicals which have intriguing questions regarding their safety that are still outstanding. I believe that increased investigations are required to be able to determine whether these chemicals are still safe.

Sweeteners: In 2020, a paper published in *Cell Metabolism* decided to investigate whether sweeteners would disrupt the body's ability to regulate sugar uptake in the body, one of the most important health functions. Sweeteners deliver up to 1,000 times the sweetness in comparison to table sugar (sucrose) and all of this without the calories. The scientists speculated that our brains may have made an evolutionary useful connection between sweet and calories. Therefore, the perception of sweetness without the caloric intake may confuse the brain-body regulatory response.

Interestingly, they showed that sweeteners without calories didn't negatively affect insulin resistance. But when sweeteners were combined with non-sweet caloric foods a significant negative response was observed [3]. The spike in insulin resistance was so strong for the adolescent group they had to stop the study early for ethical reasons. This highlights a quite unusual case where research is put on hold for safety concerns while the interactions they are studying is still common practice in society.

While this can only be seen as preliminary evidence, the study highlights a serious concern for an industry that has risen to 18 billion dollars a year and is still growing.

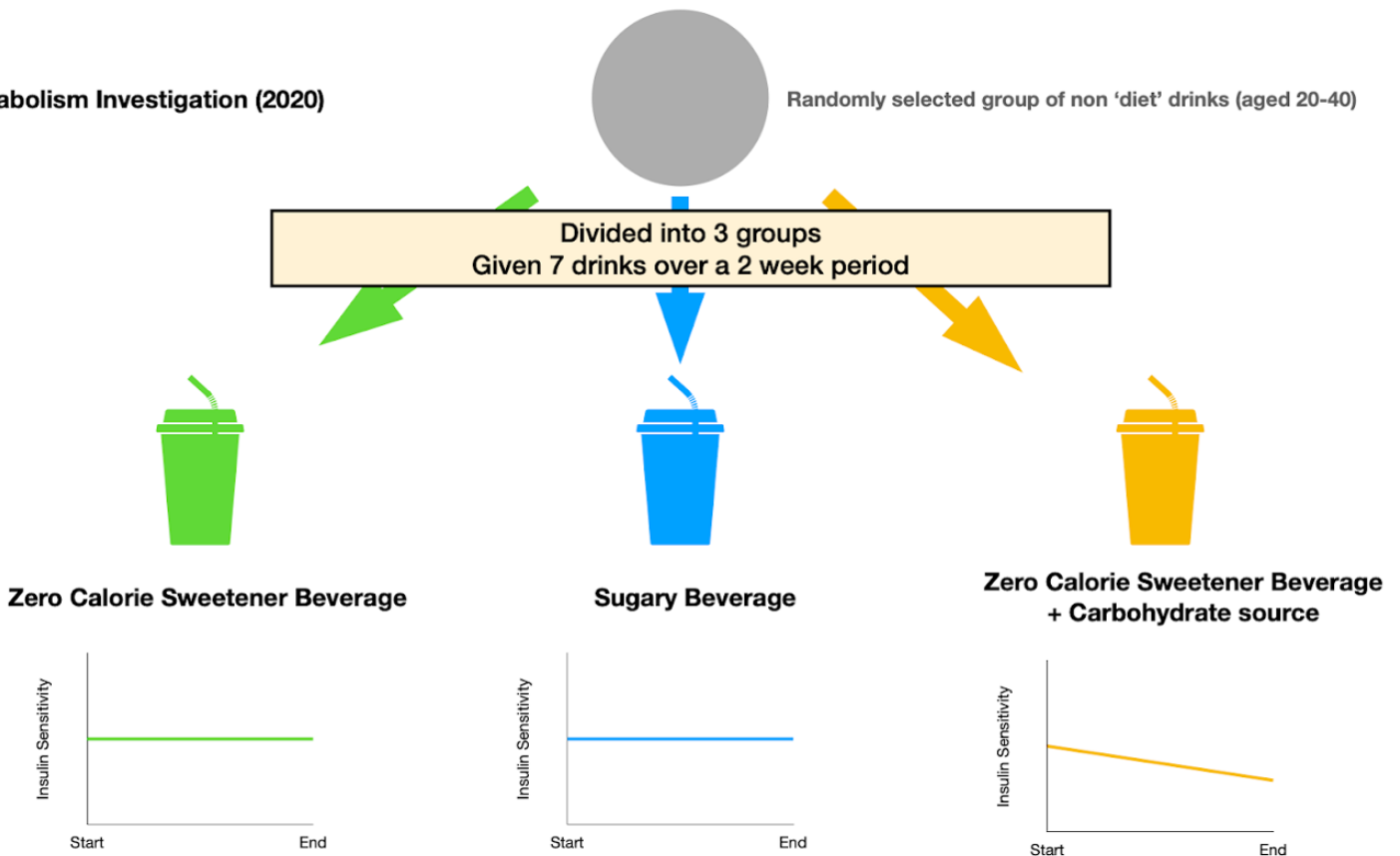


Figure 1: Summary of the recent investigation into sweeteners published in Cell Metabolism.

More recently, groups have found possible links between erythritol, a naturally occurring sweetener, and major adverse cardiovascular events [4]. Transparent, and intense investigation should follow to allow us to make more informed decisions on our health.

Cosmetics: This 260 billion dollar industry has a noticeable advantage over pharmaceuticals in terms of safety testing since only interaction with the skin surface (in many cases) requires testing. This is a very important feature since safety tests account for a large portion of the costs related to the cost of drugs and so would substantially increase the cost of your latest beauty cleanser.

This difference in regulation is mainly determined since the molecules are not intended to have an effect inside the body. Problem is, intentions rarely have anything to say about outcome. Recently, parabens and polyfluorinated compounds (which are increasingly being regulated due to toxicity), both found in cosmetics, previously not thought of to cross into the body through

the skin have been discovered to do exactly that. Transdermal absorption (skin absorption), in particular, is a growing field of research that is highly new possibilities that were previously unimaginable [5]. Additionally, even larger, chemically inert, micro plastics have been detected deep inside the placenta of pregnant women, showing the complex ability of chemicals to penetrate human tissue [6].

This in itself doesn't mean that these molecules are problematic, they may not be negative at all in the concentrations they are in, we simply haven't probed these questions enough. I believe that we can expect this space to be highly dynamic in the future.

Agrochemicals: There's much debate on the effects of agrochemicals on human health, like glyphosate, which recently closed several high profiled legal cases. However, in this case I want to focus on the potential impact towards the soil. Weird right? Who cares about the soil?

Soil is a vital ecosystem that ensures a sustainable growth of plant life, that ultimately sustains everything else. But with significant

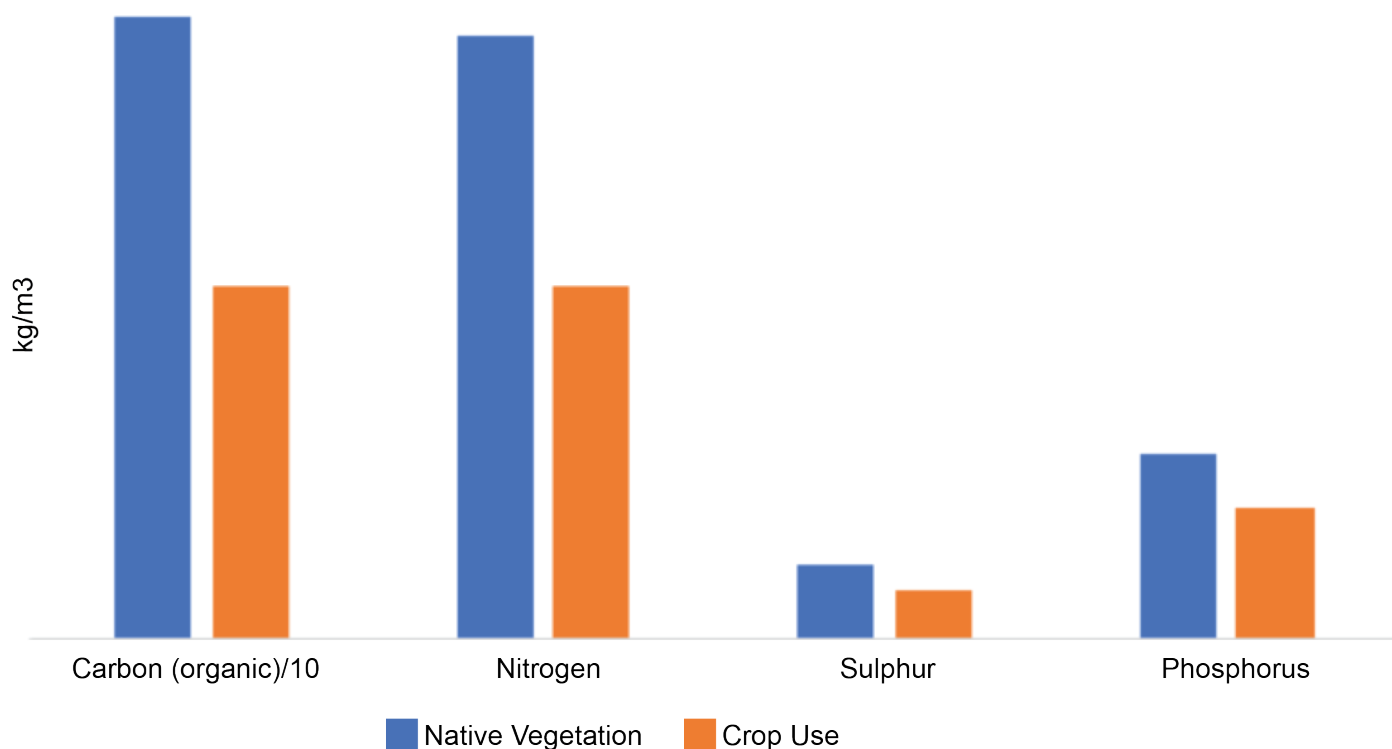


Figure 2: Major nutrient depletion found in farming soil in comparison to naturally maintained soil.

interest, throughout the 20th century, aiming to increase food production, we may have overlooked the importance of maintaining a healthy soil. Soil health by basically all metrics is tanking and multiple predictions show that these practices aren't sustainable. Currently most agrochemicals focus their testing on only a few select animals apart from humans, most soil living organisms, like earthworms, are being completely ignored.

Research has shown that earthworms [7] can be highly susceptible to insecticides in quantities that are currently applied, and data stretching back to the 1990s shows potentially harmful effects of agrochemicals on micro bacteria [8, 9]. We have turned a blind eye to the importance of these organisms in the distribution and uptake of water and minerals, but as our soils continue to be depleted of nutrients it seems clear that we need to change the way we perform toxicology screens on agrochemicals.

Conclusion: None of the reports that I have discussed within these fields of science are on their own sufficient to overturn our current

understanding of any of these chemicals, nor should they be. As the great Carl Sagan once said: "extraordinary claims require extraordinary evidence." However, as Avil Loe says in addition "extraordinary evidence requires extraordinary funding." A disruption in the way we see the safety of these ubiquitous chemicals would be a hugely impactful scientific discovery and we must do our utmost to discover the truth.

Chemical molecules have transformed the world we live in and we can expect it to continue to do so in the future. However, our perception and understanding of these chemicals may also change, as they have in the past. The questioning and challenging of the status quo is fundamental to good scientific research, and is essential to continually benefiting from scientific exploration. While preliminary scientific reports give us little to go by in changing the way we live our lives, they are the spark that initiates new research into new unknowns.

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The Belief Effect: Magic in Science

By Peter Schlichter

It can often be difficult to understand the perspectives of supernatural believers when you have been obsessed with the pursuit of finding the most practical and rational explanations for natural observations. However, in some cases, we observe things in science that are so complex that they appear to us like a mystical force. I am reminded of a law presented by the science fiction writer Arthur C. Clarke: any technology sufficiently advanced enough is indistinguishable from magic. Within this article, I want to present the case for what I believe might be the most impressive of all magical biological processes: it's called the belief effect.

To add context to this process I want to start with a story I read back in 2015. Dean Hall, a 59-year old from Oregon, had decided to swim the length of the river Willamette instead of undergoing chemotherapy after being diagnosed with leukaemia and lymphoma. The aim was to raise money for charity, to fulfil a lifelong dream and to enjoy the final moments of his life. None of these doctors had any hope he would survive much longer; however, quite unexpectedly, after his 184-mile swim, Hall had gone into remission and is today cancer free [1]. The story demonstrates the unbelievable self healing ability of the human body, which, though highly uncommon, is not completely unheard of in science. The surgeon and cancer researcher Steve Rosenberg recounts a case not too dissimilar in which a man with terminal colon cancer had completely recovered without therapy. This inspired him to establish the research field now known as immunotherapy.

While immunotherapy aims to enhance these self healing properties with pharmacological agents, we still know little about how and why these systems get switched on. A possible insight into how one might activate these pathways more regularly comes from the well known placebo effect.

Despite its popularity I am not convinced that many have taken the time to appreciate

how impressive this effect really is. A placebo group is commonly part of a control in a clinical drug trial. It often involves the delivery of a "sugar pill", given so that the patient is unaware of whether they are receiving something of pharmacological activity or not. The need to include this group indicates a rather remarkable fact. Scientists have accepted that, in some cases, the belief that you are getting a treatment is enough to treat your illness, even in the case of cancers [2]. Thinking your way into better health may sound like the words of pseudoscience, but here we are in the heart of science and we can say without doubt that this is a real effect.

Beyond the laboratory, studies have shown that drugs become less effective the longer they appear on the market. Not because of a protective pathogenic adaptation, like antibiotic resistance but because it is thought that drugs are most effective when they are new because they activate the same placebo-esque response. Customers think the new "stuff" must be better than the old "stuff".

The placebo effect is a subcategory of belief effects often observed in a control setting. Little is understood about how this effect operates, adding to its mystery. Nowadays, researchers are increasing their efforts to understand the fundamentals of the belief effect and continue to make new mind-blowing observations.

Recently, a study investigated the way we respond to consuming two calorically different milkshakes, or so the participants believed. One group was told that their milkshake was high fat with up to 620 kcal, while the other group got a low fat alternative. Unsurprisingly, the participants that drank the high fat milkshake perceived a greater feeling of fullness than those that drank the low fat shake. As you can probably guess by now, this was not a nutritional effect, it was in fact the belief effect. Both groups' milkshakes were nutritionally identical - they were the same milkshake! What is even more fascinating was

Identical Milkshake Experiment



| | | |
|----------|---|--|
| Belief: | - high calorie | - low calorie |
| Outcome: | - feeling satiated low levels of ghrelin | - feeling full higher levels of ghrelin |

Figure 1: Research demonstrates the ability for our beliefs to affect hunger hormone levels.

that it was not just a self-perceived feeling of satiety that correlated with the belief. The biochemical signals in the body responded accordingly. Ghrelin is a hormone released in the gut when the body is hungry and drops in concentration after a meal - often referred to as the hunger hormone. After the ingestion of the nutritionally identical milkshake, ghrelin levels in participants that thought they were receiving that glutinous, high fat shake dropped more keeping them fuller for longer in comparison to those that thought they were getting the diet shake [3].

The way we think about our food is not the only thing that has been shown to be affected by our beliefs. Participants that were told they slept badly had a drop in their performance while workers who were told that stress provides an adaptively positive response (what doesn't kill you makes you stronger) showed a marked improvement in job performance and health [4]. Moreover, hotel workers that were told that their average workload accounted for much more physical activity than previously believed, did not only feel better and lose weight but, once again, had improved biomarkers as if the participants had actively started exercising more - though they had not. The hidden ability of the body to improve ourselves can be, in part, unlocked by belief.

Scientific research has discovered an observable, reproducible and even dose dependent phenomenon that may be behind some of the most pseudoscientific practices that we know of today. Homoeopathy, the practice of diluting a drug to the point of nonexistence, and the use of some traditional

medicines, like pangolin scales - which is made of keratin, the same substance as your fingernails - hold no scientific plausibility. However, they may be inadvertently acting through the belief effect, scientifically increasing your likelihood of being healed - if you believed in it.

Today's science has the ability to build on this concept. By combining pharmacological knowledge with the belief effect we have the possibility to combine drugs with self healing properties to activate biological pathways with precision and leaps in efficacy beyond what we ever thought was possible. We can achieve something truly magical.

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Living in France, the UK, Switzerland & Germany: French's perspective

By Davy Lin

During my life I had the chance to live and work in a few different countries, through various placements. I grew up in Paris in France and then moved to Montpellier in the south of the country to study. I then moved to Australia for four months for an internship and afterwards moved to Stevenage in the UK for a gap year in the pharmaceutical industry. After being back in Montpellier for the last semester of my studies, I lived in Basel in Switzerland for nine months for my Master Thesis and finally ended up in Mülheim, Germany in the Ruhr area to do my PhD where I have been living for almost two years at the time the article is written. Through these experiences I could compare the way the different countries were functioning, in terms of mentality but also on the more practical side. The order of the places I have been to has of course also influenced my perception and I also evolved along the way, gaining more life experience. In this article, I want to compare the UK, Germany, France and Switzerland on a couple of aspects of my daily life.

Food quality is a rather big point of difference between those countries. In France and Switzerland, people place a high value on food quality and food taste. High quality food is accessible and affordable, which is probably related to these countries being culturally known for their haute-cuisine and diverse local specialities. On the other hand, after discussing with British and German colleagues, I had the impression that food quality was not a major priority in their countries. I have however positively noted the availability, diversity and accessibility of good vegetarian and vegan options in most local supermarkets in Germany. This is not something similarly well established in the other cited countries.

Craft beer is a developing trend in many countries in the world. In Germany, the laws “for the purity of the beer”, and the attachment to the traditional German beer are two main factors restricting the brew of

more innovative and tasty beers significantly, resulting in a poor overall offer, in my opinion. German beers can be described as “thirst-quenchers”, although the craft beer scene is slowly starting to develop. This is also not very developed in the UK. On the other hand, many craft breweries exist in areas as diverse as Paris, Montpellier and Basel, with a variety of beer styles and tastes. Craft beer is such a specific product that the only way to know if you like one is to try it - even among your favorite styles. I will refrain myself from making comments about their tastes, but I have my favorite beers in all those areas.

The cost of living was highest in Basel, almost twice as much as in all the other places. This is due to the high living costs in general in Switzerland, but it is also largely compensated by much higher salaries. The proximity of Germany and France from Basel makes it quite common to cross the border to shop at lower cost. France, Germany and the UK were overall equivalent: housing was similar, food was more expensive and of better quality in France while electricity was more expensive in Germany. Tobacco and alcohol in general are more taxed in France, hence more expensive than in Germany.

As a EU and French citizen, the administrative work to get into a new country was quite easy, although it was different between the various countries. Upon arrival in Germany, I just had to go to the foreign office with the right documents and I received the confirmation of registration on the same day. I did not need to apply for a residence permit and all this procedure was for free. This and the signature of the contract would give me everything I needed to get paid and start to pay taxes. In the UK (I got there just before Brexit), I had to get an appointment to get a National Insurance Number, which is critical to get paid. I only got an appointment three weeks after I started and I had to go to a job center located an hour away from Stevenage during my working hours as it was not possible there. Now with Brexit this procedure has

probably changed. In Switzerland, I had to register to get paid and apply for a residence permit which in my case would double as a working permit. The application costed CHF 25, and once it was approved, I had to pay an extra CHF 75. I had to repeat this every time I extended my work contract. Fortunately, those costs were reimbursed by my company.

Germans like to complain about the unreliability of their train system as well as the French and British like to do with theirs. I perceived Germany, France and the UK similarly with frequent delays of five to thirty minutes and cancellations in the case of Germany. According to some statistical studies made in France [1], trains in Germany seem more punctual than in France which are both

much more punctual than the UK, although the study does not compare how bad the delays are. Switzerland was on another level: in 9 months of traveling and commuting 5 days a week to work, I experienced only 10 delays, most of them being minor delays of less than 20 minutes. This says it all. It is the only country where I and other people are comfortable with having three minutes to change trains at a station, or one minute from train to bus. All trains and buses are coordinated with each other in a way to keep waiting times below 20 minutes for a connecting train. If the previous train is delayed, buses wait for the train's passengers to board before leaving. The shift from that to Germany and especially North Rhine Westphalia was a big shock for me.



Image Credit: Morgane Peirola

Despite those delays, lots of remote areas can be accessed in all these countries by train and bus and having a car is not necessary to access lots of nice places for hiking for example.

Price-wise, Germany is by far the cheapest, helped quite a lot by their recently-implemented 49 € monthly-ticket for the regional trains in the whole country. Before that, it was quite equivalent to France, cheaper than in the UK and Switzerland.

For long distance travel, the least convenient country by train is France, because the train network is laid out like a star with Paris at its center. It is often quicker to take a large detour through Paris, than to travel on a more direct path. On a positive note, in France high-speed railway lines were the most developed and widespread, more than in Germany. The high-speed railway lines are almost non-existent in the UK or in Switzerland.

The UK was probably the country that tolerated foreigners the most, probably because there is almost no language barrier. Germany is quite paradoxical on this side, as it is very easy to find people who can speak English quite well (their “a little” means actually “quite good” in terms of English level) among all age categories even among more senior people, and all social-professional categories. I was astonished when on a late night, a homeless person in a train station started to ask me for money, and realizing that I do not understand German, spontaneously switched into English with no effort. This is mainly only the case in big cities. In more rural areas it is the opposite, for example in Mülheim where I live, it is very hard to find people who can speak English, and those who can often are not happy to do so and make you feel it. I have never felt as much a foreigner as here. In general, I had the impression that Germans are very attached to their language. People often weirdly stare at me because I could not speak it, and nasty little remarks like “you should learn/speak german” are really frequent. My gem among those remarks was the “you are now in Germany so you have to speak German” on my third day in Germany, with a very unfriendly tone (and in a perfect English!) in a foreigner’s office of all places. It even brought

me to the point of apologizing each time (in German) for not being able to speak German! And countless times I was surrounded by Germans who could perfectly speak English and continued to speak in their language, making me feel excluded. All of this made me feel quite unwelcome and lose my motivation to learn the language.

French and Swiss could be perceived as the least foreigner friendly, for different reasons. The reasons for the French are quite similar to the Germans, but with the added restriction that their English is overall much worse. In fairness, the “unfriendliness” is most pronounced in Paris. As soon as one gets outside of Paris, foreigners are much more welcomed, albeit with a bigger language barrier. The case of the Swiss is different and mainly has been explained to me by my closest colleagues, who were Swiss-German. Most of the foreigners are coming to Switzerland because of the high salaries and the quality of life, but at the same time, do not really try to adapt to their place in Switzerland. This is a major reason why they overall have bad opinions about French and Germans. When those people come to the part of Switzerland speaking their language, they act as if they were in their home country. The locals do not like this because their mentality is very different despite sharing the language. One needs to keep in mind that Switzerland is a Confederation rather than a country. People are much more attached to their canton (region) than to their country and it is the canton that dictates most of the laws. This is why foreigners - at least those who do not make efforts to adapt to the place - are not perceived that well in Switzerland.

Several aspects of life in the different countries I lived in were compared in this article based on my personal perception. It allowed me to take a step back to compare my different life experiences. I feel quite lucky and happy to have had the opportunity to live and work in all those different places and it positively affected the person I have become. I am also grateful to have met and exchanged with so many different and diverse people. Switzerland was by far my favorite place and I would highly recommend it. The UK was fine, and I am quite attached to my home country France.

While I am having a more nuanced experience in Germany, I hope to learn more interesting things about its culture and people during the remainder of my doctoral stay at the MPI für Kohlenforschung!

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Post-Covid Conversation with a PhD student

By Xiaoran Liu

The year 2023 seems deceptively ordinary, like any year before COVID-19. Unrestricted travels and gatherings evoke a sense of normalcy, as if the traumatic experience of the past three years was erased. The only lingering reminder is when someone around us gets Corona positive, yet the anxiety that once accompanied it seems to have dissipated.

However, the aftermath of the pandemic has left a lasting impact for many, leading to severe mental health challenges such as depression, anxiety, and isolation.

I had a conversation with a friend who has been dealing with depression since the start of the pandemic. As you read our conversation, we hope it resonates with those navigating similar situations, offering them a sense of understanding and connection.

What kinds of difficulties did you have during your study and how were you affected by the COVID-19 Pandemic? I remember that you told me you got depressed during this time.

The issue was that I already had some problems before the pandemic. I think it was a mix of several things. The postdoc I had started to work with in the beginning, moved to another country. I did have people I could talk to, but no one was responsible for my supervision. My tasks were not really clear or well structured. Additionally, I moved into my Ph.D. straight from my master's, continuing the work I had done in my master's thesis. So on the one hand I immediately dove deep into my research project but on the other hand, I had missed the initial period of studying the basics. I got to a point where my motivation really dropped. I could not move forward, feeling like I was lacking the basic skills to do the next steps in my research. Eventually, a new postdoc became my direct supervisor.

We connected well and he started to get involved in my project. I was slowly getting back my motivation. Unfortunately, that's when the pandemic started.

Then how was your situation?

I could not concentrate at all while working from home because I need a productive work environment around me. In the first few months, the communication with the group was terrible since all of us were trying to figure out how to work online. That completely threw me back into the hole I had started to climb out of. At the same time, some of my colleagues were suddenly super productive, and I was feeling really bad about myself for not really knowing what I was doing. Because of the pandemic, I could not get the support I needed from my colleagues and supervisor in order to change this mood or feeling. I ended up sliding into a real depression but at the time I didn't realize that that's what it was. I felt really stuck and at some point a family member told me "Maybe you just need to take a break, some time off." Somehow that sentence struck and when I had come to the conclusion that that's what I wanted to do, it felt like I could breathe again. I ended up taking 6 months of unpaid leave.

What did you do during this time?

I started therapy. That helped a lot. Then I made a plan of only doing things that are fun. In summers, I always take part singing in the choir of an opera performance. That year we had two productions and I participated in both of them. I also volunteered for an environmental organization who is maintaining biotopes in and around my city. I helped out with the group of volunteers to work in those biotopes from time to time. And then I just went snowboarding a lot in winter which is just my absolute favorite thing to do and what I

had missed most during the pandemic. When I started this break I wasn't sure if I would come back and if I wanted to continue with my PhD or if I just wanted to drop it entirely. But then while I was getting better and during therapy, I understood the roots of my problems. I decided that I wanted to continue. I started to understand that I needed to change my perspective on my work and myself in order to make it work and in order to be healthy.

Do you think without COVID, you would have gone through the same thing or was it COVID that made it happen?

I don't think it would have gotten as bad as that without COVID.

I also read this somewhere that actually people who already had major mental health issues before the pandemic, actually didn't get that much worse during the pandemic. But the ones that had a little bit of issues, got a lot worse because of the pandemic. And that was definitely the case for me. So I think if the pandemic hadn't happened, I would probably have been able to catch it earlier somehow and get back to a good state with the help of my social environment.

**Do you feel COVID redirected your life?
Did you change your perception of what is important and what is not that important?**

Not necessarily because of COVID, but as just a consequence of my mental situation. I probably value certain things more than I have before. It's really about my personal perspective and how I approach things in my life. This is definitely just something that came out of going through this depression, coming out the other end and learning what led to it. I now better recognize the parts that are good in my life and what are the ones that are challenging. Not everything is perfect, but I have to realize that for me it's still the PhD work that is most challenging and where I tend to not feel good, but now I can realize it. When I have a bad week at work, I try to reflect on why, what's the problem? Is it because my task is not clear to me or I just don't know how to proceed or is it because I am lacking

something else. That way I can understand the problem and change something about it. Then in the next week, I do better. Therapy really helped me with this process.

Could you describe how COVID affected your PhD study in both ways, positive and negative. How would you summarize it?

It's hard to summarize. I think there's really two sides to it. I mean it would be wrong to say that COVID made it better because at first I got really a lot worse. But then I got better. The result is good but maybe the process was a bit tough. I would have preferred to learn these lessons without the pandemic and without the depression. That would obviously have been the better way. But in the end, I'm still glad that I have learned these lessons and now I am happy with the person I am. I think I'm not only a better scientist but a better person than I was before. That's the best thing.

If you need immediate assistance with your mental well-being you can contact the anonymous and free counselling services by MPS. You can reach an Immediate Advisory Service (EMAP) by telephone, online, or in person. For more information you can check MAX.

For immediate support you can call the telephone consultation service:

- For Germany: 0800 80 100 70 70
- For all other countries: +49 69 25738395

When Scientists Fail Us

By Peter Schlichter

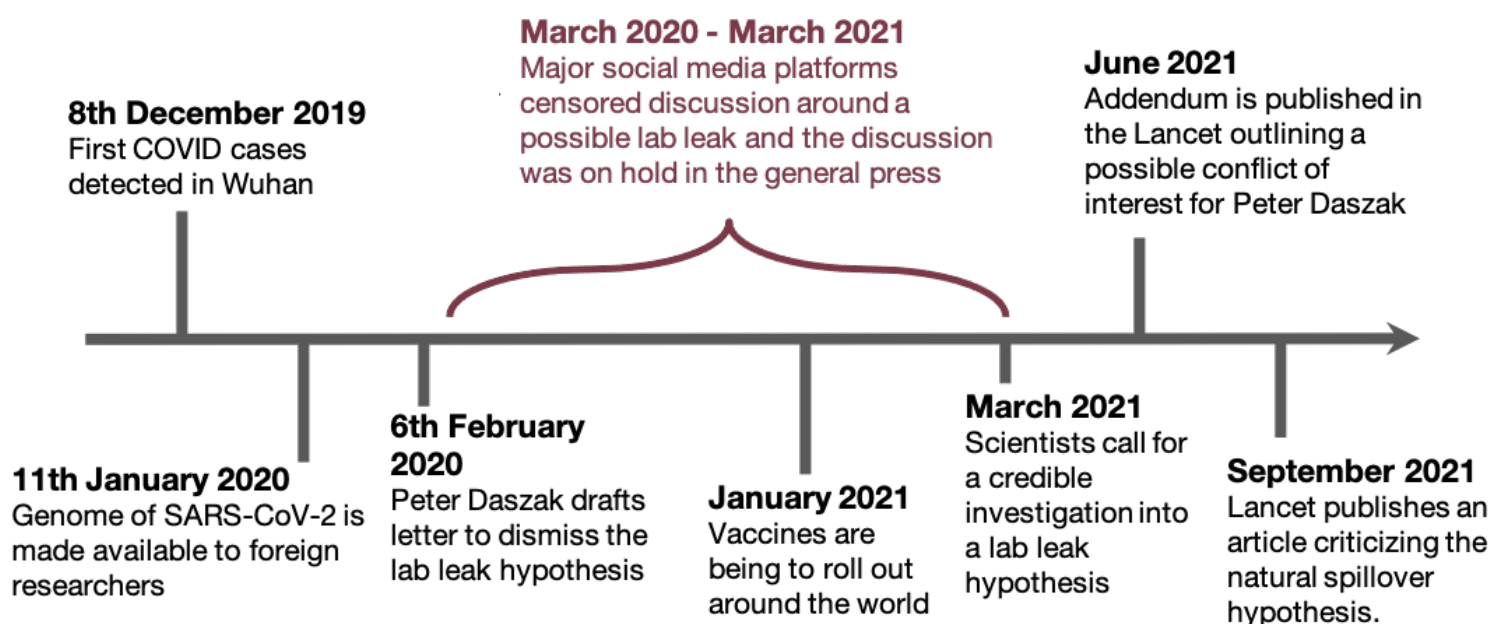
In March of 2020, a letter concerning the origins of the SARS-CoV-2 virus was published in the Lancet, a prominent British medical journal. It contained 27 well-established scientists who had detailed their view on why they believed that the virus was most likely of natural origin. However, this was not an objective review of the facts that we knew of at the time. Instead the article made quite unscientific claims of certainty surrounding its origins among a sea of rhetoric describing arguments to the contrary as “conjecture,” “misinformation,” and “conspiracy.” It also included some unusual claims of transparency from medical professionals in China, which was odd seeing as stories of silenced whistleblower doctors had already surfaced by this time [1].

Despite these flaws, the article had a big impact on the way the conversation around COVID origins continued, probably due to the presence of high profile scientific experts on the letter. Mainstream media outlets as well as social media platforms quickly grabbed up the notion and squashed, discredited and censored opinions or evidence that appeared

to contradict this notion [2]. Science was no longer open for debate, at least for a short time [3]...

The story left me wondering about how a seemingly simple scientific question - how a pathogenic virus started infecting humans - so quickly became resolved in the eyes of so many. How had scientists, so quickly, forgotten the most fundamental principle of science - to question everything? Or had we become too trusting of scientists to be unbiased in their stance?

There were undoubtedly multiple reasons for why this happened in early 2020. Herein, we'll uncover a far less told story but one that is equally as important, if not more so. This is a story about how scientists let their biases get in the way of thorough scientific work and how it had the profound knock on effect that mislead not only other scientists but the whole scientific community as a whole. We will focus primarily on the character of Dr. Peter Daszak for the sake of brevity and clarity, however, he was just one of multiple scientists that deceived the scientific community in 2020 [4].



Peter Daszak had organised and drafted the letter in the Lancet. On the surface this was nothing unusual, Daszak works for the EHA (Eco Health Alliance), which allocates US department research grant money to promising scientific pursuits around the globe. He focused on pandemic protection research and had over his career worked on multiple projects researching the potential for bat coronavirus' to spill over into human populations and cause the next pandemic, making him an ideal expert on the origin of SARS-CoV-2. However, his deep involvement in bat coronavirus research, suggests a potentially significant conflict of interest. This was exemplified by being principal investigator on a 2014 EHA grant which collaborated with the Wuhan Institute of Virology (WIV) for the isolation and experimentation of novel SARS-related coronaviruses. It was, after all, the close proximity of this world-leading coronavirus institute (WIV) to the initial COVID cases that sparked controversy regarding the virus's origin. In fact, FOI'd emails indicate an awareness for the conflict of interest, as emails to, Dr. Baric and Dr. Wang, who had also collaborated with researchers at the WIV, mentioned that their names and link to their collaborations should be omitted from the letter to provide a more "independent voice." Despite this, he not only went ahead and signed the letter but also left the conflict of interest section blank.

In the aftermath of the Lancet letter, new revelations about the WIV's pandemic prevention research emerged, which may have surprised many in the scientific community had they not been able to directly engage with lead researchers at the WIV.

The WIV had sequenced many of the closest related viruses to SARS-CoV-2 from collections made back in 2013 that were sequenced in Wuhan between 2016-2018. Apart from sampling, the WIV, had also been experimenting on recombinant bat coronavirus and SARS-like chimeric viruses which had been shown to grow and replicate in an improved capacity in humanised mouse lungs (Most of this research was not being conducted in the highest forms of biosafety). As of 2021, a different group of scientists had found a slightly more closely related virus sampled from Laos where the WIV had also been taking samples.

In 2018, the EHA and Dr. Daszak had a research proposal rejected that included the plan to collect and experiment with SARS-like viruses at the WIV, including the insertion of a furin cleavage site. It had long been postulated that furin cleavage sites could increase the ability for viruses to enter and infect human cells. When in late January researchers at the WIV released the full genome of SARS-CoV-2 containing a furin cleavage site, scientists around the world were fascinated, despite the authors of the paper completely ignoring this section of the genome themselves. A furin cleavage site hasn't been detected in any of the closest related bat coronaviruses to SARS-CoV-2, indicating that the virus most likely would have needed to acquire the mutation on its journey from the caves in the south, where its closest genetic matches exist, to the centre of Wuhan almost two thousand kilometres away.

All in all the evidence suggests that Peter Daszak should have known better than to discount a lab leak so quickly. Non pandemic causing lab leaks are common and have happened recently in the UK, the US and China to name a few. Within the community of experts several scientists initially raised concerns in private and had meetings and exchanged emails regarding the significant possibility of a lab leak in the early days of February 2020.

A year and a half later (May 2021), the tide began to sway as scientists and journalists started to reconsider the lab leak hypothesis with more seriousness and social media companies began halting the censoring campaign. A little later, a letter published in Science from a different set of 18 top scientists requested for the investigation into the origins to be ongoing, including the lab leak as a possible theory [5]. A lengthy amendment outlining the conflict of interest of Peter Daszak was published, instead of the 4 words "no conflicts of interest" written a little more than a year earlier [6]. Some months later, the same authors behind the original Lancet letter published a second, lengthier, letter, clarifying their thoughts behind their original letter. The letter still supports their opinion that the virus was most likely of natural origin but this time it stressed the importance of an "open and transparent sharing of data and ongoing dialogue" -in quite a contrast to comments

made 18 months earlier [7]. The Lancet, in line with the changing public opinion of scientists, published a critical piece of this latest letter that detailed the poor scientific evaluation that was performed in maintaining the view that natural origin still held the most credible evidence [8].

Stakes were on the line, not just for Daszak but for numerous scientific experts. Many scientists were working on similar projects, including the sampling and experimenting with novel viruses collected from nature. Also in collaboration with the WIV. A potential lab leak threatened to remove the funding that these research groups depended on, a debate that had already been raging in the field for multiple years.

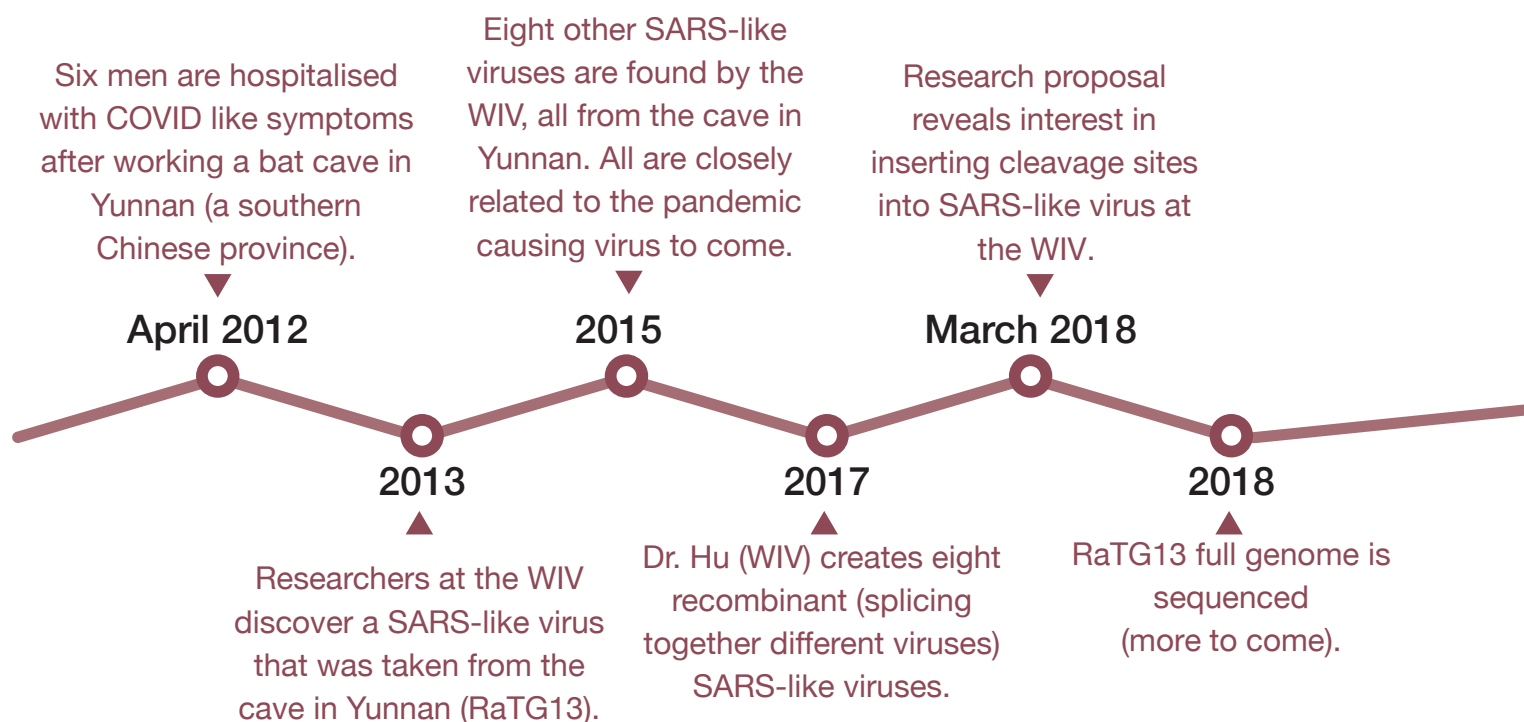
Despite this, science journalists were resistant to think critically and investigate the claims of these experts, at that time. Not self-profiteering themselves, they perpetuated the misleading narrative acting as educators rather than investigators, often believing they were performing a vital role in removing scientific misinformation. Their trust in the experts and their peers led them to take definitive stances,

simply not supported by sufficient evidence. This contributed significantly to the controlling of public opinion for a period of a year.

There is a double edge sword of the definitiveness of the scientific method. While it does have the ability to, more conclusively than any other method, weed out fact from fiction it must also be performed by humans which are fallible to error. What is more, due to the constant striving into the unknown, only a few scientists will ever be on the bleeding edge of what we understand as a species, our so-called experts. So while these individuals are better suited than any other at relaying the results back to the public this affords them more responsibility than any human can possibly carry, if we are to universally trust these individuals.

While a moment of crisis may have made this a particularly poignant example, these are hardly rare. Books like *Bad Science* by Ben Goldacre highlight more examples where scientists have been misled by their own errors and biases. In the 'war against saturated fat' in the 1960-80s several multi million dollar government backed clinical trials were not released for

Pandemic Prevention

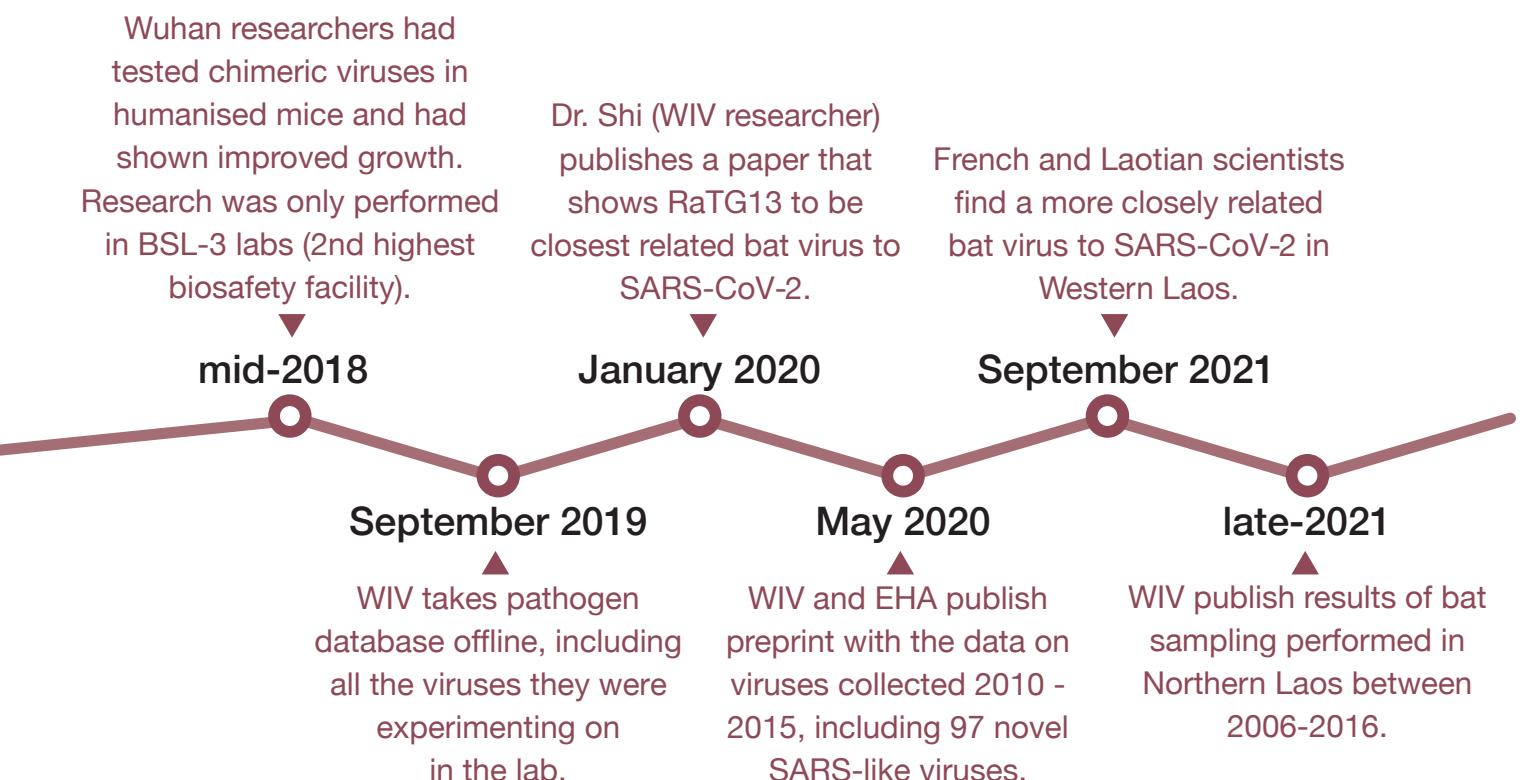


years up to decades later. In one of these studies the lead investigator admitted that the results were unpublished because “we were just disappointed in the way it came out” [9]. Other scientists like John Ionniadis, of Harvard University, have long documented the degree to which bias creates a rampant amount of poor scientific outcomes. Just as we demand that scientists are self-critical of their own work, we must continue to be critical of our experts and continue to demand better explanations of the truth so that we do not leave ourselves vulnerable to human errors in science.

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- [8] An appeal of an objective, open and transparent scientific debate about the origins of SARS-CoV-2, Lancet, 2021, 398(10309), 1402-1404
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Research at the WIV



What to Read Next

Book recommendations from the Offspring Team

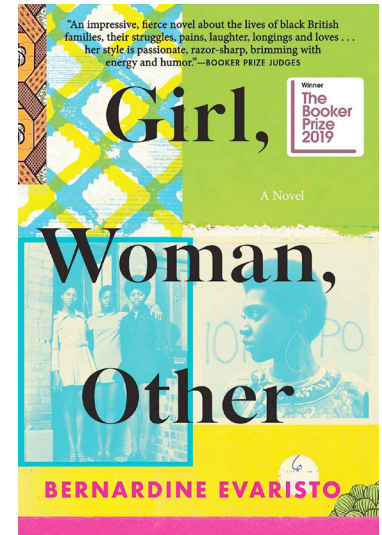
Girl, Woman, Other

by Bernardine Evaristo (2019)

This Booker Prize co-winner follows the lives of 12 different women in the UK. The characters have an age range from teens to 90 years, and we learn over the complete novel that they are interconnected with/related to each other. The book explores difficult topics such as racism, sexuality and the socio-economic status of these women. It leads you to understand their situation without assuming a stereotype, and connect with them on a human level. Though this novel deals with such challenging issues, the author wrote it in a very easy language, often with some satirical essence to the characters making it a fun read.

Keywords: Fiction, Feminism, LGBT

Recommended by Manali Jeste



Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of the Plants

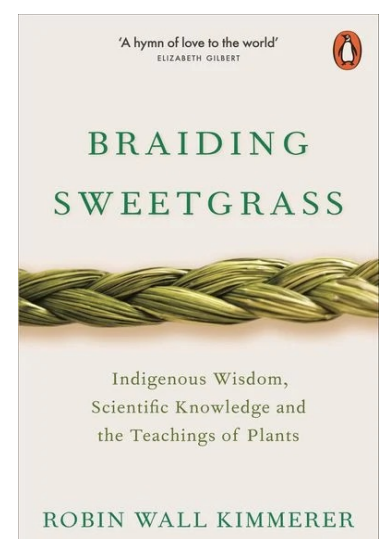
By Robin Wall Kimmerer (2013)

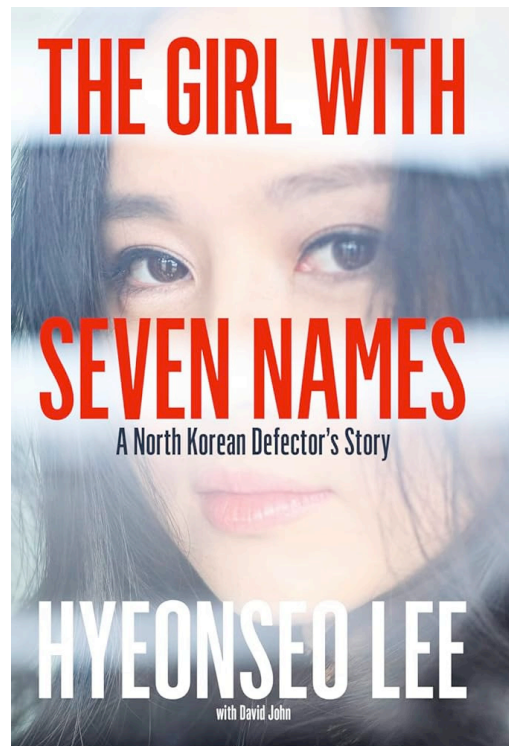
Robin Wall Kimmerer is a plant ecologist of native American descent. Both her profession and her ancestry inform her work as an author and give her an interesting and rare perspective on humans' relationship with land and natural resources. "Braiding Sweetgrass" is her second book and it is full of stories from her own life as a scientist, as a teacher, as a mother, as a nature lover and as an indigenous woman trying to reconnect with her heritage.

The genre of this book is hard to pin-point. In parts an autobiography and in parts an essay, it meanders through Robin Wall Kimmerer's memories and thoughts, always with an elusive spiritual connection to nature. The book is sometimes uplifting, sometimes melancholic and always interesting and thought-provoking. Ultimately, it's a suggestion to learn from native American traditions and to reconsider our place in the ecosystems that surround us.

Keywords: non-fiction, botany, biographical, native american

Recommended by Constanze Reinken





"When you leave North Korea, you don't leave a country but rather another galaxy. I know I'll never be truly free of it wherever I go"

The Girl with Seven Names

By Hyeonseo Lee (2015)

This is an autobiography of a North Korean girl, born in Hyesan, on the Yalu river that marks part of the border with China. The book tells us from her happy childhood, through the great famine, and how she and her family were living in the Hermit Kingdom. At 17, she decides to cross the border more by curiosity than survival instinct. She will not see her family again for 12 years. The book also talks about the permanent dangers involved for North Koreans hiding in China in illegal situations, chased by Chinese authorities in collaboration with the North Korean Police, and also targeted by various criminal networks. Through a very human adventure, the author relates these hiding years, the way she reached South Korea and then tried to make her remaining family escape, in a testimony that will bring her twice through China and South-East Asia. There are additional challenges after coming to South-Korea for defectors, with the difficult adaptation of herself and her family to a language which has almost nothing to do with her native language, an entirely different culture and society, and discrimination from the South Koreans themselves. Overall, a very human, eye opening and instructive narrative about what it takes to cross a 4 km-large abyss between people who were initially unified.

Keywords: Non-fiction, North Korea, cultural differences, family

Recommended by Davy Lin

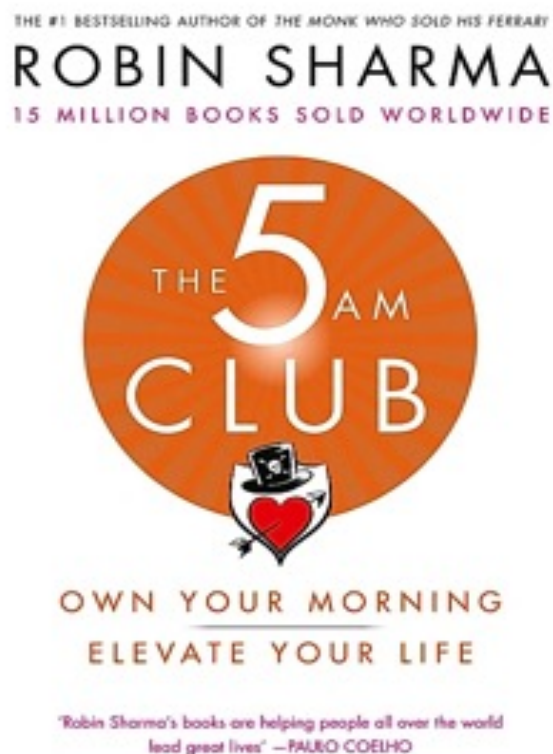
The 5 AM Club

by Robin Sharma (2018)

If you have been looking for ways to improve the overall quality of your life, I highly recommend the book called “The 5 AM Club”, by Robin Sharma. This book explores the meaning of self-teaching and personal development using a fictional story structure. It encourages readers to embrace a morning routine, by following “The 5 AM Club principles” which will help them set the tone for the entire day and easily achieve long-term goals. The story follows a struggling artist and a stressed businesswoman who unexpectedly find a mentor. This mentor will guide them through a journey of self-improvement and life transformation with nothing more than an establishment of new and powerful habits. Through their stories, the book presents valuable life lessons and strategies for positively changing your life. The central message of the book revolves around the establishment of a morning routine, which emphasizes the first hour of the day, called the “Victory Hour”, as the most critical time of the day. During this hour, people should take part in a series of activities designed to improve their mental, emotional, physical and social well-being. The book constantly reminds us that concepts such as perseverance, resilience, and learning from our own mistakes are critical elements towards achieving success. It is a book worth reading more than once, since each time you will find new lessons hidden throughout the story and, especially, remind yourself that the power to change your life lies within yourself.

Keywords: Fiction, Self-Development

Recommended by Juan Alfonso Martinez Greene



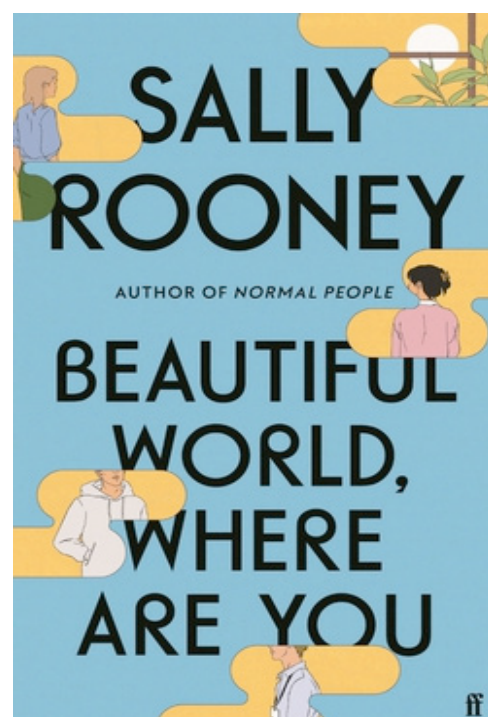
Beautiful World, Where Are You

by Sally Rooney (2021)

As the title would suggest, this book is a feel-good novel written by Sally Rooney, who is already well-known for this genre. The book has two main characters: two best friends who are communicating mostly through emails, through which we also follow their lives. Their email exchange is almost like a conversation one would have with a friend, which makes this novel very relatable to the reader. They discuss their love lives, their philosophical opinions about the world they live in, and their friendship; often reminiscing about it. I would recommend this book if you would like to find positivity while being in the midst of some worrisome situation. It would definitely make you want to have such conversations with a friend!

Keywords: Fiction, Contemporary, Feel-good

Recommended by Manali Jeste



Baudolino

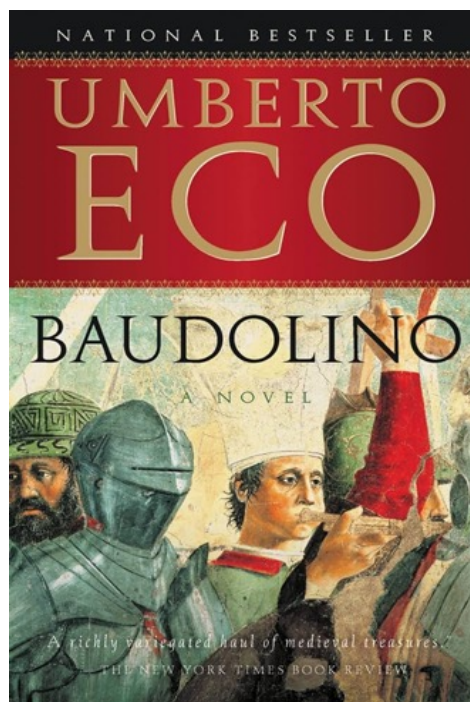
By Umberto Eco (2000)

“‘There is nothing better than imagining other worlds,’ he said, ‘to forget the painful one we live in. At least so I thought then. I hadn’t yet realized that, imagining other worlds, you end up changing this one.’”

“Baudolino” is a captivating historical novel that takes readers back to medieval Europe in the 12th century, where a young and imaginative protagonist named Baudolino embarks on an extraordinary journey. Baudolino has two remarkable gifts that are at the heart of the book: a talent for learning languages quickly and a unique ability to invent stories that he knows people will want to believe in. As you delve into the story, you will find a fascinating blend of history, fantasy, and philosophy, set amidst theological and historical debates. Eco’s narrative explores the fine line between reality and imagination, offering deep insights into the power of storytelling and the human tendency to create myths. With its rich historical background, vivid and interesting characters, and philosophical discussions, “Baudolino” is a literary adventure that will both entertain and challenge readers, especially for those who enjoy historical novels.

Keywords: Historical fiction, Fantasy, Philosophy, Medieval

Recommended by M. Eray Akbas



Featured Episodes

Offspring Magazine - The Podcast has completed its 4th season in last September. Here, we highlight some of the episodes in various interesting topics. However, they are not all! You can find all of the 24 episodes from this season, in addition to the previous seasons in virtually any podcast platform or in the links on our website through the QR code on the right.



#4-05 - Data Minimization, Privacy, and Responsible Computing ft. Dr. Asia Biega

Dr. Asia J. Biega is a computer scientist and group leader of the Responsible Computing group at the Max Planck Institute for Security and Privacy. Her research focuses on responsible computing principles for information access and social computing systems. This includes search, recommendation, assistive typing, sharing economy, crowdsourcing or social media systems.

In this episode, Bea and Asia discuss ethical issues when it comes to data collection, data protection laws, design of ethical algorithms, and the challenges in digital well-being. Asia explains what GDPR (General Data Protection Regulation) is, the importance of interdisciplinary work to achieve responsible computing, and why we are collecting much more data than we actually need. Asia also explains how companies collect our data, what transparency techniques there are, and what we can do to protect us from sharing data without knowing it. Asia also gives perspectives about her experience working at Google and Microsoft compared to academia.

To find out more information about Dr. Asia Biega, check out her website:

<https://www.mpi-sp.org/biega>

<https://asiabiega.github.io/>



#4-02 - Centenarians, Biological Clocks, and Reversing Ageing ft. Dr. Joris Deelen

Dr. Joris Deelen is a group leader at the Max Planck Institute for Biology of Ageing. The research in his group focuses on studying the genetic mechanisms underlying healthy ageing in humans. They specifically look at the effect of genetic variants that are unique to long-lived individuals. Moreover, his group is trying to identify biomarkers of healthy ageing.

In this episode, Bea talks to Dr. Joris Deelen again after one year, about his research progress in the field of ageing and whether we are closer to understanding why some people age more healthily than others.

To find out more information about Dr. Deelen's lab, check out:

<https://www.age.mpg.de/science/research-laboratories/deelen>

<https://www.cecad.uni-koeln.de/research/principal-investigators/dr-joris-deelen/>



#4-14/15 - RNA Networks in the Brain ft. Jernej Ule

This episode is part of a series of interviews on RNA research conducted by Marcel during the fourth season of our podcast. Dr. Jernej Ule is Centre Director at the UK Dementia Research Institute at King's College London as well as group leader at the Francis Crick Institute London and at the University of Ljubljana. His research focuses on the study of RNA networks trying to understand the details of the interactions between RNA and proteins in the cell and how they are related to the cause of neurodegenerative diseases such as ALS.

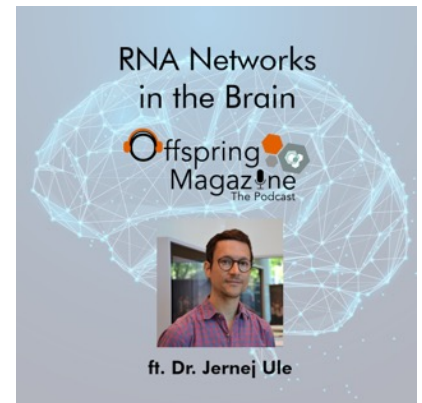
In the first part of this episode Jernej Ule tells us how his family has influenced his scientific career path. His mother, father and brother all have studied interactions and networks in sociology, philosophy or mathematics and computing. He explains that he has always understood the value of interactions and how he incorporates this in his research. He is forming interdisciplinary professional networks to advance his research and has made the study of interactions of RNA within cells his primary research focus.

In the second half of the first episode and in the second episode Marcel and Jernej dive deeper into his research, describing the technological method CLIP, that he has developed, to study RNA-protein interactions and how they relate to degenerative diseases.

To find out more information about Dr. Jernej Ule you can check out his website or Twitter/X:

<https://www.ulelab.info/>

Ule lab Twitter/X: @ule_lab



#4-19 - Human Evolution, Neanderthal, and Denisovans

ft. Prof. Dr. Johannes Krause

Prof. Dr. Johannes Krause is a director at the Max Planck Institute for Evolutionary Anthropology. His research focuses on the analysis of ancient DNA to investigate pathogens from historic and prehistoric epidemics, human genetic history, and human evolution. He has contributed to deciphering Neanderthal genetics and the shared genetic heritage of Neanderthals and modern humans.

In this episode, Bea and Johannes talk about the timeline of human evolution starting from Homo erectus to Homo sapiens. Prof. Krause tells us how he and his colleagues discovered Denisovans and why Homo sapiens won the “species battle” throughout evolutionary history. Johannes also explains how evolution brought us two legs that are well suited for endurance running and discusses what makes humans human.

To find out more information about Prof. Dr. Johannes Krause, check out on his website

<https://www.eva.mpg.de/archaeogenetics/staff/johannes-krause/#c45293>.



General Meeting 2023

By PhDnet Steering Group 2023

From the 9th to the 11th of October 2023, the PhDnet of the Max Planck Society convened at the Institute for Comparative Public Law and International Law in Heidelberg for the annual general meeting. This year's meeting was focused on interaction and participation from the external representatives, in order to share different experiences and issues faced. Besides electing next year's Steering Group, we were able to have a fruitful discussion on current and desired working conditions of all doctoral researchers. This resulted in the suggestion of establishing a new working group related to this topic, to be formalized and voted into the statutes before the end of this year.

Some of the issues discussed included:

Thesis Advisory Committees (TACs) seem to be inhomogeneous across institutes when discussed during the GM, with some IMPRS programs not upholding TACs for students.

Many representatives voiced their desire for a standardization of TACs, and to ensure that there is a mandatory designated time during which students speak to the TAC without their advisor present.

Emerging from the Equal Opportunity Working Group, Safer Spaces is a peer-to-peer trained support network that aims to provide a space for students to express concerns and thoughts about their graduate experience without fear of discrimination. Please reach out to equal.opportunity@phdnet.mpg.de if interested. Power abuse continues to be a common topic of conversation. Compulsory leadership training was discussed as a way to involve problematic scientific leaders that would not attend voluntarily that may inadvertently inflict power abuse, as well as the possibility of annual evaluation reports of permanent staff members that can abide by privacy laws.



Concerns were voiced over a need for onboard packages that are (partially) MPG-standardized for first-year PhD students to receive from general administration upon arriving at their institutes. Onboarding packages would ideally contain concise information (in English) on determination of salaries, worker rights, information about ways to identify and report power abuse and workplace harassment, local points of contact for internal issues, information on mental health support, and information about PhDnet and helpful working groups as additional points of contact.

We have to thank this year's General Meeting group, who did an amazing job organizing and managing the General Meeting. Our further thanks goes to Prof. Dr. Patrick Cramer (President, MPS), Dr. Simone Schwanitz (General Secretary, MPS), Ilka Schießler-Gäbler (Programs & Networks, HR

Development & Opportunities Department, MPS), Sabine Ziegler (Programs & Networks, Alumni, PhDnet & Career Steps Network, MPS), Kerstin Dübner-Gee (Head of HR Department, MPS) and Anne Grewlich-Gercke (Industry Tracks, Human Resources Development & Opportunities Department, MPS).

Last but not least our thanks go out to all external PhD representatives and working group members – PhDnet would just not be possible without you!

For a detailed summary of all the events and discussions that have taken place at the General Meeting, check out our website www.phdnet.mpg.de. Please also feel free to reach out to your external representative who attended the meeting, if you have specific questions. If you have missed the General Meeting this year, make sure to watch out for announcements of the General Meeting 2024.



Steering Group Overview 2023

By PhDnet Steering Group 2023

Issues from our Agenda

1. Mandatory TACS

TAC guidelines with the required processes have been established after multiple rounds of corrections between the 2022 Steering Group, Working Groups and the General Administration. They have also been presented in the Scientific Council with subsequent incorporation of the feedback.

The President is currently looking into the possibility of these guidelines being mandatory as they are currently only guiding. We have shared these TAC guidelines with the external representatives and encouraged those who want to, to discuss directly with their supervisors about the possibility of implementing them.

2. More Inclusive Workplace

MPS has one of the most diverse scientific communities in the world and our goal is to make it a more inclusive space for everyone. We propose a bottom up and a top down approach. These are, respectively, the implementation of the Safer Spaces Initiative and training on intercultural communication and inclusiveness for the MPS leadership.

The GA is currently putting together the curriculum for Safer Spaces and we hope that 2024 will see agents from each institute being recruited and trained. We hope that the implementation of this initiative will mean doctoral researchers having easier access and understanding of the various MPI channels when an issue arises.

3. Onboarding

We proposed that the job offer to new DRs to contain clear information regarding contract details, German courses, immigration support, amongst others. Upon joining the institute, we propose that the PhDnet and other support structures and work groups should be

introduced to the DRs by Human Resources or a member of the International Office (if the institute has one).

This appears to be in the final stages and close to being implemented by the GA across the institutes. Individual institutes have already made the effort to improve their onboarding and we hope that in 2024 this officially standardised and improved onboarding will become the norm at every institute.

4. TVöD contracts and binding contract guidelines

We were interested in having written binding guidelines regarding contract duration and minimum contract extension, ensuring that +1 extension will be granted to every DR who has not yet completed the thesis, and assuming that the contract is automatically canceled upon thesis submission. Furthermore, we proposed that we get TVöD contracts instead of support contracts.

No consensus was reached on the binding guidelines regarding extensions. However, we hope to continue to push on this issue. Regarding the TVöD contracts, the President endeavoured to look into the pros and cons of TVöD contracts versus support contracts and make a decision on this basis.

5. Tracking of Working Hours

We believe that the tracking of working hours shall neither hamper nor delay progression of work in the lab. Additionally, we advocate that DRs should be compensated for overtime – if not financially, with extra holiday days, as it is described in the official regulations.

There is currently no update on this issue as the GA is still in talks about how to proceed with this and whether scientists are an exception to the tracking of working hours.

6. Researchers on Stipends

We proposed that MPS offers top-up contracts to stipend holders whose stipends are lower than the regular net salary of MPS DRs. Alternatively, MPS could negotiate with the stipend providers to increase their stipend or remove the exclusivity clauses. Finally, stipend holders are also being excluded from the inflation benefits although they are most affected by inflation and we would be sincerely grateful if they are also included in the negotiations.

The President suggested that he would write letters to the top ten stipend providers in order to enter discussions with them on increasing the stipend amounts. There was also suggestion of looking into the possibilities of top-up contracts, to the extent they are allowed within the stipend framework.

Ad Hoc Issues

The inflation payment topic was unexpected and yet one that we immediately felt passionate about given the direct impact it would have on all of us. We were in constant communication with the GA throughout the discussions but the biggest issue was having enough information to be able to update the doctoral researchers with. Most times the only update we had was that there was no update, and we were not always sure if this was worth sharing. We pushed as hard as we could to ensure that all doctoral researchers could receive the inflation payment. We are grateful to the GA for including us in the discussions and helping push this issue forward.

The MPS statement on the conflict in Israel/Palestine was another unexpected moment for us to assist in making all doctoral researchers feel heard. Although the letter was not an initiative from PhDnet we were involved as a distribution platform. This along with the contents of the letter was done in close communication and with approval of the general administration of the MPS in Munich. By sending this letter we specifically tried to stay true to our mandate as written in the PhDnet statutes - to identify and voice the concerns of PhD researchers as we have been doing before in several political and non-political issues.

Lessons Learnt

Our biggest lesson from both ad hoc issues was regarding communication. Not only were we still learning how to communicate as a team between the six of us but we were also facing the challenge of how to adequately communicate with the PhD community. We tried our best to be open to constructive criticism and learn as we went.

We know now that more communication is better than less and providing a minimal update is better than none at all. We learnt that when dealing with polarising issues, it is important to have surveys that allow everyone to participate.

We are grateful for all the emails that you took the time to send. We tried to always reply respectfully and within a reasonable time frame, given that we are all also trying to work on our PhDs and are volunteering for the SG in whatever time we have available.

We grew tremendously as a steering group. Learning more on what it means to work as a team and really coming together when things are tough.

Steering Group of the Max Planck PhDnet 2024

(As elected at the General Meeting, on October 11th, 2023, in Heidelberg)

Spokesperson:



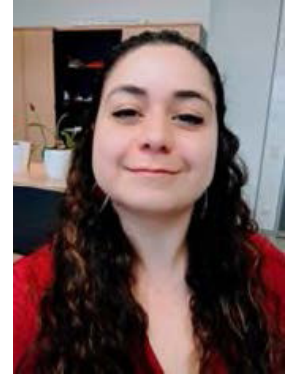
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Deputy Spokesperson:



Anne-Lena Moor
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General Secretary:



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BM Section Representative:



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CPT Section Representative:



Ellen Rumley
MPI for Intelligent Systems,
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HS Section Representative:



Philipp Sauter
MPI for Comparative Public
Law and International Law,
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PhDnet Work Groups

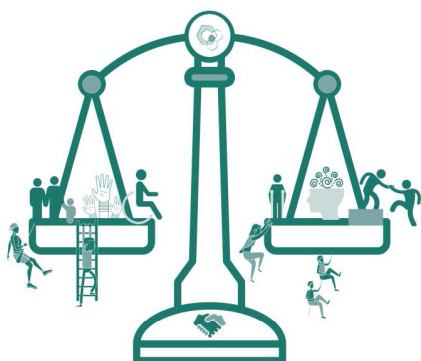
Equal Opportunity Group

Doing a PhD is hard enough; we in the Equal Opportunity Work Group (EOWG) believe systemic barriers disproportionately affecting specific groups should not make it more difficult. The EOWG's mission is to promote equal working conditions regardless of sex, gender, sexuality, ethnicity, nationality, religion, (dis)ability, or other aspects of diversity. Within our group, we help PhD students by answering emails to our mailing list, distribute helpful and relevant materials and events about diversity and inclusion in academia, and communicate with the central administration and other networks to work towards long-term solutions for DRs and beyond.

An ongoing project since 2021 has been the development of a local peer support program, Safer Spaces. Following survey results from 2020-2021, we identified a

need for a local (institute-specific) contact person for which one can seek moral and practical support when one feels discriminated against (e.g. experiencing microaggressions, disagreeing with non-inclusive policies). The idea is to have MPI members trained in diversity topics and active listening skills designated as "Safer Spaces Agents" at their respective institutes.

Additionally, in 2023, we represented the PhDnet at the annual Gender Equality Officers meeting on April 20th at Harnack House. We also promoted the celebration of German National Diversity Day on 23rd of May 2023, and hosted a panel discussion on ethnic diversity in Germany, with invited panelists



Hristio Boytchev (Freelance Journalist) and Richard van Noorden (Features editor, Nature) for the occasion.

In the next year, we will decide on a new group co-ordinator. We will also continue developing the final structure of the Safer Spaces Initiative and we foresee the launch as early as Spring 2024, when we will begin to recruit the first Safer Spaces Agents for training. You may also contact us in case you are interested in becoming a "Safer Spaces Agent".

Feel free to write to us anytime with any concerns or comments about equal opportunity in PhDnet, MPS or academia. You can join our mailing list to stay connected or join our growing list of active members to contribute to specific sub-projects based on your interests and skill sets.

We look forward to hearing from you at equal.opportunity@phdnet.mpg.de

General Meeting Group

Do you like to organize meetings, interact with Doctoral Researchers across different disciplines, and work in an awesome team? The General Meeting Group organizes our yearly General Meeting, where we bring together the Steering Group, General Administration, and external speakers for a three day meeting with the DRs from the Max Planck Society.

One of the main tasks at the General Meeting is to hold elections for the new SG every year and recruit new Working Group members. There was also an opportunity for the external representatives to discuss with the GA, any issues that they/their institute might be facing.

So if you like being part of a team to bring the DRs together to network and create a platform for a fruitful discussion, join the General Meeting working group!



Offspring Magazine and Podcast Group

The Offspring Magazine and Podcast team serves as a platform for Max Planck Researchers to express their scientific endeavors, share personal experiences, and foster a supportive community through the mediums of journalism and podcasting. We, at the Offspring team, delve into all things scientific and PhD-related, aiming to encourage an ongoing dialogue among Max Planck DRs. Our contributions include an annual magazine, online articles, and regular podcast releases. Our mission is to amplify the voices of PhDs, shedding light on their Max Planck researcher journey, making the process more transparent and accessible. Our diverse content spans book reviews, opinion pieces on general interest topics, and issues directly impacting the lives of DRs. If you'd like to contribute an article, suggest a topic, or share ideas, feel free to reach out to us at Offspring. magazine@phdnet.mpg.de.

Offspring Magazine the Podcast is a podcast series published by the Offspring team members, exploring various science-based themes, including scientific research, science communication, publishing, sustainability, and career insights. Our episodes cover topics of interest to not only DRs but also the broader scientific and academic community. We've had the privilege of interviewing influential figures in Science Communication, such as Dr. Neil deGrasse Tyson, Nobel Laureate Dr. Ben List, and renowned authors like Dr. Sachin Panda. Our podcast typically follows a direct interview format, occasionally incorporating narrative storytelling. Feel free to reach out to us at offspring.podcasts@phdnet.mpg.de, if you have any feedback, comments or suggestions.



Open Science Group

The Phdnet Open Science workgroup focuses on the accessibility and transparency of science. As early career researchers, we understand the importance of open dissemination of scientific knowledge. Therefore, we seek to highlight the benefits of open science throughout the Max Planck Society.

We asked doctoral researchers from all Max Planck Institutes about their knowledge and interest in open science. Our survey showed that early career researchers are keen on learning more about it, but that they lack the information on how to make their work open. Only 20% of the doctoral researchers were able to publish their articles in open access journals, while nearly 50% said they are planning to do it in the future. Following the survey, we presented a discussion paper to the general administration where we emphasized the lack of a systematic implementation of open science practices throughout the MPS as well as a list of recommendations on how to better support young researchers trying to make their findings accessible.

We have created a “quick guide” to open science publishing with specific advice for Max Planck researchers, and we are currently working on a video series which will inspire early career researchers to put open science in practice. Together with MPDL, we organize yearly Open Science



Ambassador Programme conferences where we provide the opportunity to discuss Open Science practices for scientists from all career stages with the aim to integrate these principles as a standard process in the research workflow at the MPS and beyond.

If you are interested in pushing the boundaries of access to knowledge, get in touch with us! We are always happy to welcome new members to the group. You can reach us at open.science@phdnet.mpg.de.

Secretary Group

As you might know, the Max Planck PhDnet was founded in 2003 to represent all DRs amongst the Max Planck Society and to advocate for their interests. Without proper elections of External Representatives for each institute and the Steering Group of the PhDnet the foundation for all the good work of the past and the future generations will be at risk.

These essential elections are organized with the assistance of the Secretary Group of the PhDnet. We assist each individual institute with the election process, keep the communication amongst institutes and the Steering Group flowing and, most importantly, ensure that the PhDnet is legitimized by all of you.

Speaking of the next few years: It would be great if more volunteers would come forward to support the General Secretary elect with the very important task of organizing the upcoming elections. This work is not only very vital for the existence of the PhDnet, but also it is very satisfying, the organization is well-structured and you get to know a lot of great people! You can reach us at secretary.group@phdnet.mpg.de.



Social Media Group

Check out our brand new working group: Social Media! Our aim is to keep the PhDnet Doctoral Researchers, alumni and the general public informed about our latest news, events and updates. Check out our coverage of the General Meeting 2022 and other exciting news on our twitter and instagram pages (@maxplanckphdnet). Our goal for next year is to increase our social media presence on all platforms, promote more of our doctoral researchers' publications and give the general public an insight into what the life of a PhD is like.

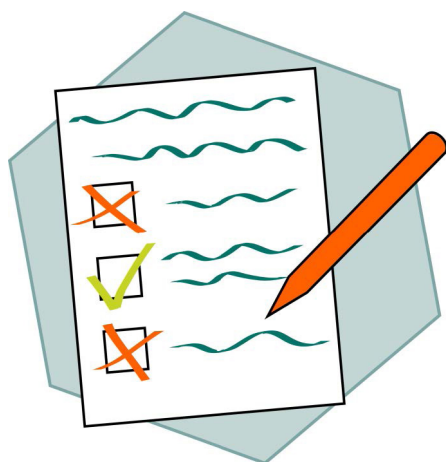
Do you have a passion for social media? Do you spend endless hours looking at PhD memes? Or just want to learn how to manage an account? Join us! No experience needed.



Survey Group

The PhDnet conducts an annual survey with current doctoral researchers to assess the working environment in the Max Planck Society. We are interested in topics as diverse as demographics, working conditions, support structures, power abuse, mental health and supervision. The collected data is crucial evidence used to support our arguments to improve our working conditions. In the previous years, we were able to gain insights into pay gaps, employment types and durations, discriminations, mental health, integration and career development. Our work gives directions toward the areas where improvements are possible and necessary. It also shows the positive impacts of the measures negotiated by the Steering group. We work in close relation with other workgroups which are specifically focusing on one or multiple of these problems.

Our work consists of designing the questions, sending out the survey, analyzing the gathered data and writing the final report. During analysis, we are free to choose the topics we want to study and deepen. We always welcome new members if you would like to join us to investigate the current work surroundings of DRs in the Max Planck Society and contribute to their improvement - get in contact if you want to join us at survey.group@phdnet.mpg.de and check out last year's report on the PhDnet website!



Webgroup

Have you always wanted to know how to make a website? Or do you have hidden web design skills and want to bring them to use? We are the workgroup for you! The Webgroup works tirelessly in the background of the PhDnet. Our main focus is the design of web pages, like the PhDnet website, where you can find information about all of our working groups, our events, and latest PhDnet news. We also curate the different mailing lists, and work in collaboration with all the other workgroups.

If you have prior web design knowledge, that's great! Join us. If not, but you are curious to learn together and develop your skills? Fantastic! Join us. We have no requirement except for an open mind and enthusiasm. Feel free to reach out to us at webgroup@phdnet.mpg.de.



Offspring Magazine

The Podcast



Jaswanth Subramanyam



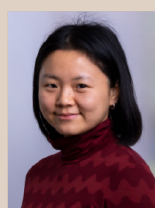
Andres Tangarife



Marcel Jüngling



Beatrice Lansbergen



Huizi Kuang



Juli van Scherpenberg



Xiaoran Liu



Manali Jeste



M. Eray Akbas



Constanze Reinken



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Morgane Peirolo



Davy Lin



Melisa Özmen



Peter Schlichter

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The Offspring Magazine



Workgroup of the Max Planck PhDnet.



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