

ISSUE 2022

The Offspring Magazine



A Publication of the Max Planck PhDnet

The Art of Communication



PhD Stipends:
A Thing of the Past?

Age of Scientific
(Mis)Communication

Letter from the Offspring Magazine Team

Each of the last few years has been an extraordinary one, and 2022 also has not fallen short. We started it with a huge Omicron wave, finally getting our booster shots, which was followed by anti-vaccine protests all over the world, next came the excruciating news of the war, later we heard about the protests in Iran, the heat waves lasted until well into the autumn has shown us that we are getting closer and closer to the point of no return in terms of climate change. But not all has been bad, we had some good times, too. For example, in the second half of this year, we have learned to live with COVID, adjusted to the current situation, and managed to all be in the same room again. It has been a difficult year with a little bit of a spark, and in this atmosphere of the last year, something has always been at the center of our conversations: communication.

Communication has always been an important part of our lives, but it was especially present this year. Therefore, we have decided to cover communication in this year's Awareness Month (if you want to learn more about what we covered during our Awareness Month in the past, see our 2021 issue about "The Doctorate" or 2020 issue on "Mental Health"). With the spread of fake news and distrust towards vaccines, information about climate change or whichever science topic directly affects the public, we have seen, again and again, how important it is to accurately communicate science. You can read our take on social media's effect on science communication in the centerpiece of this issue, "Age of (Mis)Communication". We also asked several experienced science communicators about communicating science on social media. You can read more about that and about creating content and building your own platform in their interviews. However, communication is important to us not only when it comes to relaying information about our research to the public, it is also affecting our everyday life as scientists working in a collaborative lab environment. That's why we couldn't help but discuss our experiences of communicating with our PIs, colleagues, and peers in our article "The Art of Communication".

But don't fret, it's not all doom and gloom and serious articles! There is some fun in here, too! This year, we have started a new section allotted for anything that doctoral researchers want to write about (Um, isn't it what the whole magazine is about?), related to science or not... Birte shared her experience of moving to Germany from the Netherlands, Peter discussed a bottleneck he had noticed while trying to cover all the literature important to his field, and Davy expressed his enthusiasm and knowledge about the current and the future aromatic state of whisky. In addition to these contributions, we share and review some books that we have recently read and would recommend if you would like to take a break from reading papers.

Last but not least, Offspring Magazine - The Podcast's team finalized an incredible season covering topics such as science communication, climate change, circadian rhythm, and many more. It has been an amazing year for the podcast, and we share some statistics about the episodes and the audience in the magazine. You can follow the Podcast on virtually any podcast platform, and you can find a couple of featured episodes, as well as parts of the interviews in written format, in this issue.

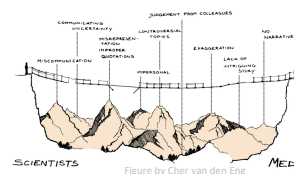
Another positive note from this year was the Phdnet General Meeting in October, which took place in person for the first time since the COVID outbreak started. It was great to be in the same room all together, and the sense of built up energy from years of sitting in front of the computer was palpable throughout the lively discussions. It also gave us a chance to get the latest updates from the work groups and catch up on what they have been up to. For those who could not join the meeting, in person or online, we now have a bigger space for work groups to share their information, which you will find towards the end of the magazine. Additionally, we have even more content from the Open Science work group, where they introduce their now revived Open Science Ambassador Program, its progress through years, and share a quick guide to help you start implementing Open Science in your research. Danielle also brings our attention to a very important topic that affects the lives of many DRs but is not talked about enough in "PhD stipends: a thing of the past?", in our Equal Opportunities section.

In closing, I would like to thank everyone who contributed to the magazine! We had a tough year but we survived. One of the highlights has been the almost completely new Offspring Team that worked on this magazine very hard. If you have feedback about this issue, would like to join the team or to submit an article on something you are passionate about, do not hesitate to contact us at our email address: offspring.magazine@phdnet.mpg.de.

See you next year!

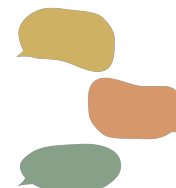
Cemre Coskun on behalf of the Offspring Magazine team

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PhD stipends: a thing of the past?

By Danielle Pullan

It is a privilege to pursue a doctoral degree, particularly inside a highly-regarded institution like the Max Planck Society. It is unlikely that many of us will ever again get the opportunity to spend three to five years focused on one core research project without many of the distractions that more senior academics have to manage. We learn so much about how things work inside academia, how to read and research more efficiently, and how to effectively communicate our scientific findings.

But despite all of these benefits and the personal satisfaction, we are researchers doing a full-time job. The Max Planck Society recognized this in 2015 when it converted all internally-financed stipends into proper employment contracts across the entire Society. Furthermore, the MPS recognized the value of doctoral researchers' (DRs) labor when they increased the base contract rate from 50% to 65% of TVöD level E-13 in late 2020. This change came about after years of advocacy work from our predecessors in Phdnet. We are grateful for their tireless efforts and for the work done by the MPS General Administration to make this change happen.

But are PhD stipends really a thing of the past?

It's complicated. While the MPS' policy requires DRs to be paid with contracts, some members of our community are externally funded: 5% of DRs report currently receiving a stipend instead of a contract in the 2020 Phdnet Survey. This number is higher among non-Europeans, women, and DRs in the Human Sciences section. Some stipend recipients are members of IMPRS programs; some of them are funded by foreign governments; some of them work on third-party funded projects; some of them receive prestigious fellowships from foundations. What they all unfortunately have in common is the stressful experience of "working" while not really being employed.

"While the MPS' policy requires DRs to be paid with contracts, some members of our community are externally funded: 5% of DRs report currently receiving a stipend instead of a contract in the 2020 Phdnet Survey."

In the spirit of full disclosure, I, the author, am paid a 50% stipend by my university. I applied to my IMPRS program, the job posting for which was on the MPI's website. All candidates for the IMPRS were held to the same academic standards and went through the same interview procedure. I only learned about the stipend/contract issue after I had already been offered a position in my program. To their credit, my IMPRS has taken steps since I joined to make this information more transparent: they now list on the application page that some members of the IMPRS will receive stipends while others receive contracts, and they provide a bit of information about what this tangibly means. I am not writing this piece to put my own institute or IMPRS under the microscope. But there are many of us with such stories hidden in plain sight across the Max Planck Society, all with stories that follow a similar pattern.

While the Max Planck Society has taken significant steps to improve the working conditions of doctoral researchers, they do not work alone, and they cannot control the way that other academic and funding institutions are managed. In my case, the issue is that our IMPRS is jointly funded from the budgets of the MPI and the university, and my funding comes from the university's account. Until universities and other funders of research across Germany start to adopt policies like the MPS', there will continue to be many DRs who are paid stipends instead of contracts.

What's the **big** deal?

The implications for doctoral researchers' total compensation, social security benefits, immigration status, and general sense of security in their life in Germany are manifold, and detailed in the table next page. To summarize, stipends offer lower payments in the first place, which are further reduced by the fact that stipend holders need to self-finance their health insurance and retirement savings, and they have no social safety net in case they are unemployed after finishing their PhD.

Over the course of a four year PhD,
a DR receiving a stipend may be
losing almost 30,000 €
compared to their colleagues with contracts. Moreover, the cost
of purchasing health insurance, would add
another 10,000 €.

CONTRACTS		STIPENDS
This varies across the Bundesländer and depending on the individual's marital status and religious registration, but a 65% contract pays between 1900 - 2000 euros per month after taxes.	Amount of monthly cash compensation	Most stipends are supposedly equivalent to 50% of TVöD E-13 or less. Stipends paid by foreign governments are typically the lowest paid. Stipend recipients receive between 1300-1600 euros per month, which is not taxed.
Most MPG DR contracts are offered for an initial period of three years, with possible extension up to one year.	Duration	Varies depending upon the funder, but sometimes as short as only six months. University stipends usually last longer than foundation ones.
Christmas bonus is typically included, as well as cost of living increases each year. Over time, employees move up steps of compensation within the E-13 band. Government assistance during COVID and energy crises is another employee bonus.	Increases and bonuses	No Christmas bonus, and cost of living increases are not guaranteed or common. Years worked on a stipend do not count for moving up steps of the pay band, so postdoc salary is started at a disadvantage. Less or no government assistance during crises.
Employment contracts include health insurance, retirement insurance, and other types of social security contributions. After finishing a contract, they are eligible to collect unemployment benefits.	Social security	Stipend holders need to purchase their own health insurance and the employer does not contribute to retirement or other social security funds. They are not eligible for unemployment benefits after the stipend ends. Non-EU citizens often must purchase private health insurance, which is very expensive if you have preexisting conditions.
Residence permits are typically awarded for the entire duration of the contract period.	Immigration status during PhD (for non-EU citizens)	Residence permits are often not awarded for the entire planned PhD period, requiring multiple renewal processes that take time and can result in limitations on the DRs' ability to travel while awaiting renewal.
Regulated by §18 of the Residence Act, as employees. Time during PhD counts toward permanent residence and citizenship.	Residence in Germany after PhD (for non-EU citizens)	Regulated by §16 of the Residence Act, a special category for doctoral students. Time during PhD does not count toward permanent residence and citizenship.

The worst effects of stipends are felt by non-EU citizens. Aside from the challenges that all international researchers face of living far away from home and needing to save up to travel to see family, non-EU stipend holders often pay higher health insurance costs, and spend more time repeatedly renewing their residence permits. They also have a harder time staying in Germany after their PhD, since time spent as a “student” is not counted towards permanent residence and citizenship applications down the road.

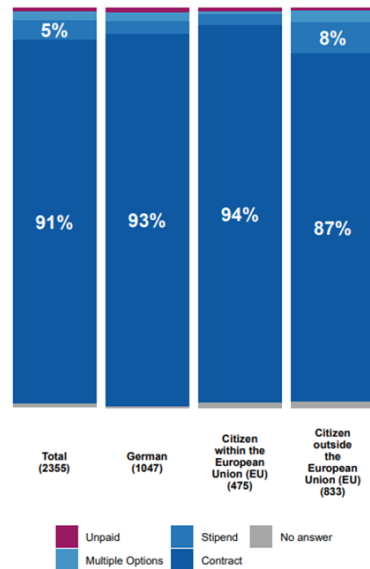


Figure B.10: Types of Contracts of DR by Citizenship (Total: 2356, German: 1048, Citizen within the European Union: 475, Citizen outside the European Union: 833; Responses given less than 3% are not labelled)

Strikingly, more non-European citizens (8%) are awarded stipends than Europeans (less than 3%) according to the 2020 PhDnet Survey. This is hugely problematic, as it suggests that the intellectual contributions of non-European researchers are less valuable than their European colleagues’. A structural explanation for this phenomenon is the use of stipends by foreign governments and German institutions that support foreign researchers. These institutions feel justified in this practice because stipends that are low by German standards may be high in their country of origin, **but when DRs are working in Germany and producing value for German academic institutions, they need to be paid equally to their German and European colleagues.** Truly solving this issue will probably require policy solutions bigger than the MPS. But as an institution that values the diversity of our research communities, we owe it to these colleagues to pay them equally, and pay them enough to live in Germany.

The financial and legal implications of stipends are the most dire problem that many recipients face, but there are also social and community-related downsides to receiving a stipend. Many stipend recipients are the only one in their research group or even in their entire institute, which can feel isolating and mean that they are under supported. Some DRs report feeling excluded from their academic community, as though they are not as qualified or not as valued as their contract-holding peers. Externally-funded DRs may be invited to participate in some aspects of institute life, but then arbitrarily denied access to certain meetings, certain types of funding, use of certain resources, and membership in certain associations. These smaller exclusions serve as regular reminders that stipend holders are not truly equal members of their institutes.

What can be done?

As noted above, the Max Planck Society is not offering these stipends. The problem is diffuse and difficult to solve because there are many smaller organizations involved, instead of a single institution with the power to end stipends with the stroke of a pen like the Max Planck Society did. But we as scientists work in a community together, and stipend holders are our colleagues, office mates, and even community leaders. So what can allies within the MPS do to help?

Institute directors and administrators are crucial in the fight to end stipends across German academia. Leadership in our institutes can send a strong message that externally-funded members of our projects and teams are – or are not – members of our academic community. Include these researchers in all of your institute activities. Share your communal resources with them. Allow them to fully participate in institute life and academic exchange by embracing their academic contributions as valuable, regardless of the bureaucratic technicalities about how they are paid.

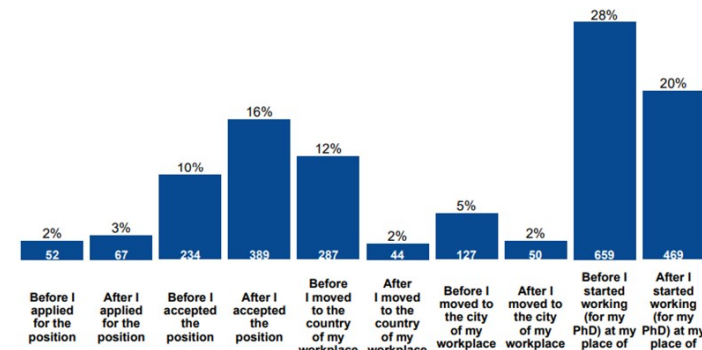


Figure 4.13: “When did you get your contract?” Responses represent the earliest of the chronologically ordered time points at which the contract was received.

Institute leadership also can bring financial support for stipend holders. While directly hiring these DRs with a full employment contract would be the best solution for the DR, this is obviously expensive. A middle-ground option, though, can be to provide top-up contracts to the DRs in exchange for minimal extra responsibilities. By granting DRs a small contract paying around 500 euros per month, the cash compensation is almost equalized, and the employer will cover the cost of health insurance as well, which is equivalent to another 200-300 euros in the DR’s pocket. However, it should be noted that this still does not solve immigration issues, and it only partially solves social security. Additionally, if the DR needs to do a significant amount of work to “earn” this top up contract, the inequality in compensation will persist.

Socially and professionally, research group leaders and PIs can help by being well-informed about the disadvantages of stipends, and sharing this information candidly with their supervisees. When a senior academic in a position of power over a DR “encourages” them to apply for a stipend based on the supposed prestige and promises of future networking, the DR may feel forced to apply for that external funding. The DR may also not be aware of the trade offs they are making in terms of security until it is too late.

Good supervisors will not pressure their DRs to apply for external funding. DRs should not have to fear that they cannot finish their PhDs unless they acquire third party funding; this is a problem that more senior academics surely face, but it should not be passed off to the most junior and vulnerable members of their community. Some senior academics may have affiliations with funding institutions or professional connections to their staff. Leveraging these relationships to press other institutes to convert their stipends into contracts is a key act of allyship.

But if you are just a doctoral researcher, how can you support your colleagues who receive stipends?

Be a listening ear. Come with us to the immigration office if you speak German. Treat us like full and equal members of your community. Most importantly, keep this issue on the agenda in your institute, and make sure your directors know that this is important to you. Because so many stipend holders feel like they're the only one. When just one or two people in an entire institute have this exceptional case, their problems can seem unique. Thanks to the network we have built in PhDnet, we know that unfortunately, their problems are not at all unique, and in fact there are affected doctoral researchers across all the different fields. Know that you are not alone – we here at PhDnet stand in solidarity with you!

Age of Scientific (Mis)Communication

The importance of good science communication in the age of modern communication through social media

By Aidan Wastiaux, Srinath Ramkumar, Juli van Scherpenberg, Cemre Coskun

The rise of social media brought us together more than we could imagine. It became possible to interact from afar and create content online that could easily be shared with masses. While previous generations had shaped our social fabric in an effective way to communicate locally, we were understandably not ready for this online life and distant socializing. Now that the first generation of humans are born surrounded with online media and virtual relationships, one can only hope that optimal communication will be established soon to meet the demands of this interconnected world. But unfortunately, we don't have the time to wait and see how it unfolds. Together with this digital revolution, we are also facing important socio-political and environmental crises that demand a strong response from the scientific community. Although science can bring solutions to these problems, scientists may not be ready to present scientific facts to the public in a way that is clear and reassuring. On the other hand, professional communicators potentially lack the scientific knowledge to present facts in the correct way. This creates a gray area which cannot be elucidated by either party, leaving room for misinformation and miscommunication. Given the importance and impact science has, and will continue to have on the world in the near future, it is crucial to identify the current needs in scientific communication, the gaps to fill and the malpractices to fight in order to overcome this barrier between science and the public.

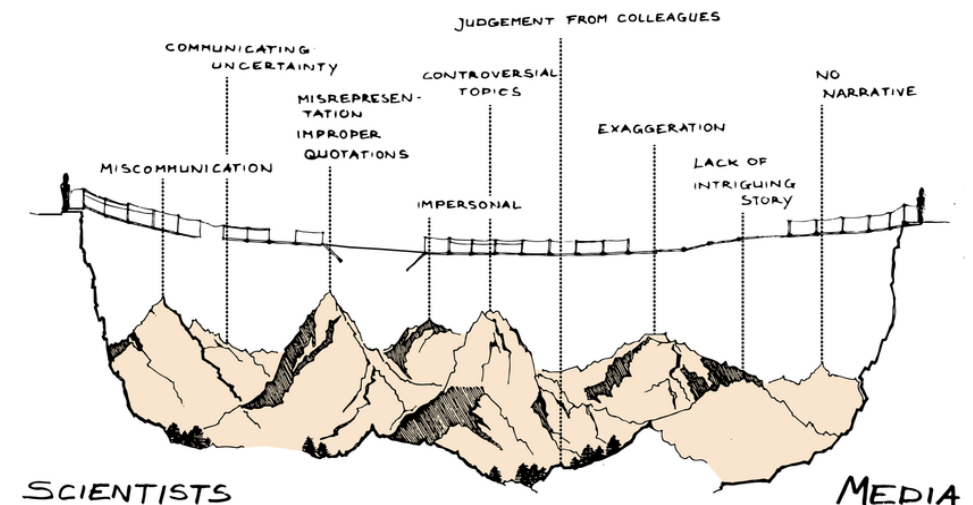


Figure by Cher van den Eng. https://www.researchgate.net/figure/The-benefits-of-communicating-your-research-via-the-media-figure-by-Cher-van-den-Eng_fig1_326259999

The relationship between science and society has always been very complicated. Ancient examples of this include the way astronomers like Galileo and Kepler were treated by society when they tried to question the common belief that the earth was the center of the universe. In today's day and age, scientists do not have to defend their findings since science is in general trusted. However, with the extensive reach of social media, there are different kinds of obstacles that we need to overcome. One of such is the fact that many scientists lack the training as communicators and they are not able to reach as large proportions of the society as journalists or social media personalities. The authority they may need to assume outweighs their responsibilities and training. Hence, they may not be ready for such modes of direct communication which require a new popular language, new tools, while maintaining the level of confidence.

“...many scientists lack the training as communicators and they are not able to reach as large proportions of the society as journalists or social media personalities.”

A prominent form of misinformation, in connection to the previous point, comes from sources without credibility. Examples of this include non-specialized journalists such as bloggers and influencers without strong scientific background reporting stories from secondary sources. And because of their online presence or positions in the media, these messages often spread much more efficiently in comparison to official sources and scientists. These types of misinterpreted information lead to another source of confusion based on speculations and predictions. This adds another layer of subjectivity to the scientific information. Understanding the data the same way the scientist interprets it, requires a certain sense of advanced knowledge which is rooted in the basics of modern scientific discourse. A lack of nuance leaves room for conspiracy theories or fantasies to arise. As a result, although the original knowledge was based on scientific data -therefore, it should leave little room for debate,- stances on science related topics frequently get politicized such as the anti-vaccine movements. This leads people to take sides and not just choose the “news” they want to see, but choose the “facts” they want to believe in. Changing the public perception about falsehoods hence becomes a daunting task.



Science is not built on opinions, it is built on facts backed up by data driven arguments. The pre-existing scientific method provides a rigorous framework for the collection and processing of data. The results and their scientific interpretation are subjected to skeptical assessment during the peer review process before being published in scientific journals. From the collective reviewed results, a scientific consensus is built which is adopted by the vast majority of scientists in the respective field. This common agreement is constantly updated as more details emerge, and in the case of fast moving research fields newer research can lead to frequent alterations to the consensus in short timespans. The beginning of the COVID-19 pandemic serves as a prime example, when researchers were getting new information about the virus almost on a daily basis and were constantly updating their recommendations and predictions. Scientists not following this consensus are usually a small minority among all the researchers in the field. The media, however, often present a very different picture of this situation. Here, the distinction between peer-reviewed and non reviewed publications is often not made clear. In talk shows scientists with opposing opinions are seated next to each other and newspapers quote them equally often, creating the illusion that the entire scientific community is undecided or divided. Limited explanation of the research process can lead to the perception that scientists do not know what they are doing or are constantly correcting previous mistakes.



“The social media algorithms reinforce this issue by presenting the users exclusively the content fitting their profile.”

The people consuming these media might not possess sufficient information and skills to critically question the facts they are presented with. It is easy to adopt the predominant opinion of society in general or your personal environment in particular. The designs of social media algorithms also reinforce this issue by presenting the users almost exclusively the content fitting their digital profile. Breaking out of this loop can be intimidating as you risk becoming isolated from your community. Developing a critical mindset is difficult to achieve without being subjected to varying opinions and informed discussions.

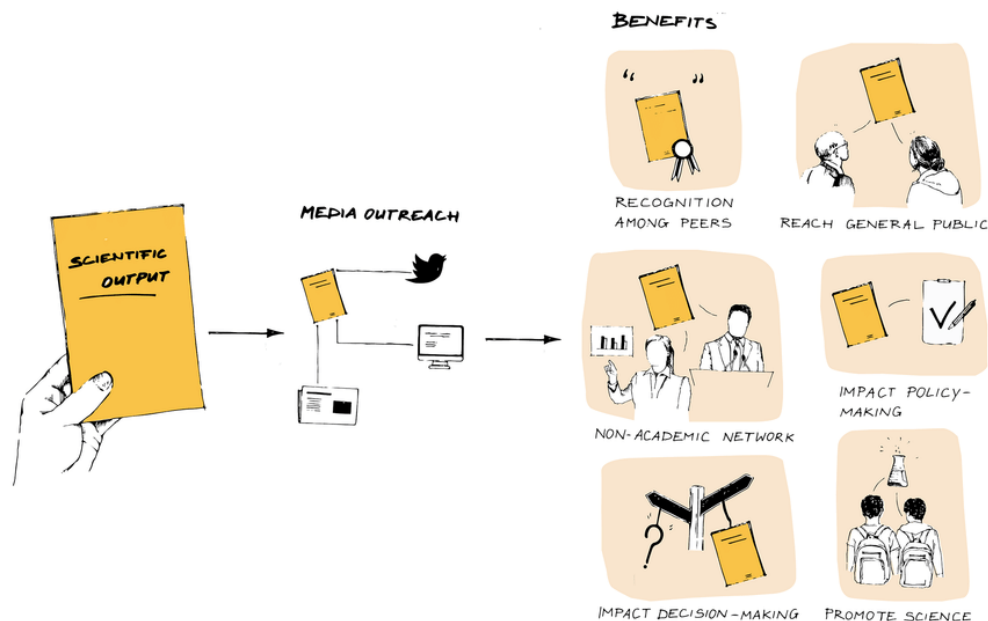
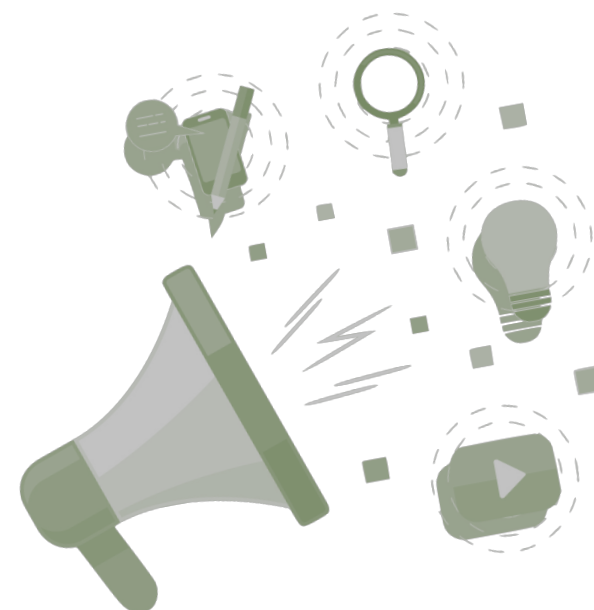


Figure by Cher van den Eng. https://www.researchgate.net/figure/The-benefits-of-communicating-your-research-via-the-media-figure-by-Cher-van-den-Eng_fig1_326259999

There is no straightforward solution to this problem of misinformation and miscommunication. Solutions can come from multiple angles, from the scientists, as well as from the recipients of the information. Training scientists for popular communication and outreach is a key factor which can improve delivery and clarity of scientific messages. On the other hand, citizens should be encouraged from a young age to think critically and validate information. Communication of science through social media is a relatively new endeavor, and the scientific community as a whole is transitioning into this at a rather slow pace. Journalists and professional communicators can help bridge the gap between scientists and media consumers by showing a more accurate picture of the scientific landscape and methodology.

“With such powerful outreach tools, one can hope for the future that data driven research and information overcomes the threat to society posed by misinformation.”

As social media is adopted more by scientists and science communicators, the accurate reach of data driven arguments is enhanced in society. A few breakout stars such as Neil deGrasse Tyson, Mai Thi Nguyen-Kim, and Bill Nye, have changed the landscape of science communication through active involvement in the media. Many science communicating YouTubers and TikTokers have emerged in the past years with appropriate scientific training as well as social media know-how to navigate engagement as well as audience retention. With such powerful outreach tools, one can hope for the future that data driven research and information overcomes the threat to society posed by misinformation.



The Art of

By Nikolai Hörmann, Xiaoran Liu, Birte Zuidinga

The success of a PhD project depends on many different factors such as luck, available funding and equipment, and a good work environment. A factor that might be overlooked is communication. Especially with science becoming more collaborative -as seen in the average number of authors per publication¹- researchers need to spend more time and effort communicating with others to work effectively. Additionally, doctoral researchers need to navigate the communication with their supervisors, which can bring about a range of difficulties. A recent article released as a Nature career column² highlights some problems and mentions possible solutions. Here, we would like to illustrate some personal challenges and how rethinking and improving our way of communication helped us to resolve them.

I am a third year PhD student. At the beginning of my PhD, I had struggles to have proper communication with my supervisor. My supervisor is more hands-off. One time, I had a project progress appointment with him. During the meeting I felt like I did not receive the attention and feedback that I needed to push my project forward. Preparing the meeting had taken me quite some time so I did not feel respected for my work. For two weeks I did not know how to bring this topic up and improve our way of communicating. Then I decided to ask for another meeting with my PI, but before that, I sent an email to let him know about my bad feelings from the last meeting. After clicking send, I was very nervous for two days until he replied to me "Let's have a talk next Monday." During the meeting, we finally communicated openly with each other and he gave me space to express my expectations and also appreciated my direct approach. Our relationship has improved a lot since this meeting, which strengthened our mutual trust and respect. So, I think that open communication is the key. It is necessary to approach your supervisor when you feel the way you work together is not working for you. To tell your supervisor your expectations about the supervision method, including, among others, your desired frequency of project update meetings. I think that the relationship between PhD students and supervisors should be centered on cooperation rather than boss-subordinate.

Xiaoran

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Communication

For me, the whole process of doing a PhD has been a great opportunity to improve my way of communicating, and to find out what works for me and what does not. Currently, I have completed two years of my PhD in a large department. As can be expected from a research group with many people, my PI is fairly hands-off with regards to lab work. I have been fortunate to work together with a postdoc who is available to help with a lot of practical and theoretical questions. I think this lab setting is very effective for me, but I did have to learn to stay in touch with my PI. In the rush of daily lab life, I tend to forget to plan meetings with my PI. If we then do have a meeting, it usually turns out that small issues that I might have been stuck on can be resolved easily. More broadly speaking, knowing when, where and how to ask for help for different kinds of problems, is a major thing I have learned and am still learning. There is usually something unique to your project, that your own research group might not have enough experience in to teach you effectively. It was very helpful that I participated in a multi-week practical and scientific training on the methods that I was trying to incorporate in my project. Meeting many fellow doctoral students from all over the world that work with similar approaches on different problems was especially useful. Now that I know these people personally, it is much easier to reach out to them for help on specific topics.

Birte

During my time as doctoral researcher, I helped to organize two conferences and was also involved in some administrative tasks around the institute. In all these different settings, I experienced the importance of good communication first hand. With the number of meetings increasing right before the conferences or when organizing an event, it was essential to keep them as short as possible, especially since everyone was helping out on a voluntary basis. I found out that in these situations it is crucial to have a person leading the meeting, who stops discussions that go around in circles while still making sure that all opinions are heard. Meetings with a discussion leader who prepared the outline in advance were more productive and efficient. Another aspect I learned to appreciate is clear and understandable communication. Since communication depends on the mutual understanding of the conversation, it helps when all parties involved have their thoughts sorted out and can put forward an understandable argument. If that is not the case, the conversation can drag on, leading to confusion instead of resolving some issues. Especially in science, where people from different backgrounds work together, the meaning of certain concepts might be interpreted or understood differently, resulting in miscommunication problems. Therefore, it is essential to recognize when something that is common knowledge to you might require an explanation for someone else, and vice versa. I have learned to ask for better explanations when things are not clear to me and I try my best to make sure the other parties can follow me as I explain my own research.

Niko

SciComm Conversations

By Cemre Coskun and Beatrice Lansbergen

For us, scientists, one of the most interesting branches of the huge theme of Communication is, naturally, Science Communication. In our efforts to get more information about the work life of scientists who are also working in science communication in different forms we have interviewed Dr. Ben Rein and Clemens Steinek.

A sudden entry to the world of Science Communication:

Dr. Ben Rein is a postdoc in Dr. Robert Malenka's lab at Stanford University and is also a science communicator. He started his science communication journey in 2020, when he made a video on how to wear a mask at the start of COVID pandemic, and it went viral on TikTok the next morning. Since then, he has continued to post about neuroscience, which is his main field of research, and also on common misconceptions in science with the aim of debunking any misinformation put online. Currently, he has over 850.000 followers on TikTok and 80.000 on Instagram. Here, we share the highlights from Bea's conversation with Ben about his journey where he also shared some tips on how to make a career in science communication.

Bea's extensive interview with Dr. Ben Rein has been published as a two-part podcast and you will only find a glimpse of it. To listen to the entirety of their conversation, you can scan the QR code below.



To start, as per usual, could you introduce yourself?

My name is Ben Rein, I'm a postdoc at Stanford University in the department of Psychiatry and Behavioral Sciences. But my research is in neuroscience and I'm studying the neuroscience of empathy right now. Outside of the lab, I also do science communication work, where I share educational videos on social media apps like TikTok and Instagram. And the reason you invited me is to share a bit about the science communication work and discuss my research. And hopefully, we'll get to both and have exciting things to discuss about both of those topics.

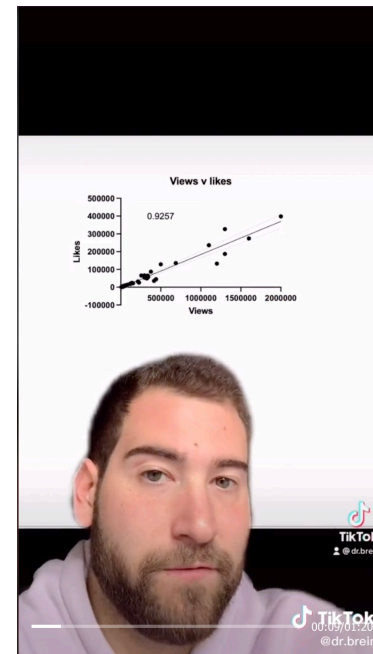


Exactly! I'm definitely very excited to learn about how you started in science communication.

It's actually a funny story. In 2020, I was just a regular old PhD student, no interest in science communication, only interested in finishing up my thesis. And the pandemic started. I went to Walmart to get some groceries and I just noticed that everyone was wearing their masks wrong. And I thought, "maybe my friends and family would benefit from a short instructional video on how to wear one of these, just since I happen to know how to do this". It's sort of the same reason why I got into academia - because I love to mentor and share information. If I have a piece of knowledge that someone else could benefit from, it is a joy for me to share it with them. So it was in that spirit that I created this video.

And I was looking for an app where I could film myself. And I happened to have TikTok on my phone which I had recently downloaded. So I filmed myself on TikTok. I just wanted to record a video so I could post it on my Facebook and Instagram.

But the only way to download it was to post it. And I uploaded it on TikTok. My username was something like user7741, just a string of numbers, and I had no profile picture. And the video just went viral, it got 1.8 million views. This was April 2020, right when COVID was starting, at a time when they really needed to see it, and no one else was creating this type of video. It made me realize how social media can be really really effective for science communication.



So what did you do to actually build your platform? Was it more the type of video that helped or the topics that you chose?

I am a scientist, and so I definitely took sort of an experimental approach. I analyzed 140 videos, I pulled all the metrics, and I ran a bunch of analyses trying to figure out what makes the algorithm work, what makes videos go viral. And by the way, for anyone wondering what makes videos go viral - it is basically just engagement. We're just looking at a simple linear regression: the more views a video has, the fewer comments. So commenting probably doesn't contribute to the algorithm. But likes and shares are the top two predictors. So if your video has more than 20% of its viewers like it, it's set to go viral. Especially, in the first thousand views. I didn't know this at the beginning. I experimented with different styles of videos and spent a long time trying to figure out what I was doing.

I admire your misconception videos, especially when they're done in different fields or topic areas than your own. How much literature search does it require for you to feel comfortable with a topic?

Those videos take a long time because I need to grasp the full breadth of the literature. I can't just read one paper. It's like, if I'm going to debunk someone on a topic that I'm not familiar with, I need to read at least five or six papers and make sure that they're all consistent with each other. And then I get an understanding of where the field stands, and that multiple labs have found the same finding, and that everyone's on the same page about this thing. Because, otherwise, I don't want to just say: "Well, here's one paper that goes against that", put it on the internet, and then it turns out that was the one bad paper, and there were 10 other papers that showed the opposite was true, because that happens.

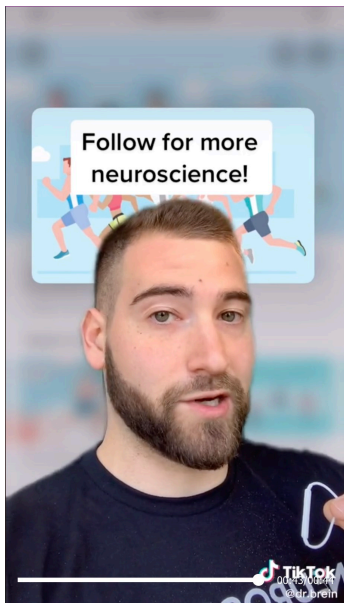
How do you choose exactly what topic to post on?

I've sort of developed an intuitive sense for it over time. In the beginning, there was a point, where I had a list of topics, and I got through all of them, and I said, "that's it, I'm done, there's nothing more I can cover". Then when a new paper comes out, it just feels like this is something that people will be interested in. Now, I have a document that's 40 pages long. It's literally bullet points of papers that I want to make videos on. I will never get to all of them, it grows faster than it drains.

People are interested in what affects them, everyone's selfishly motivated in some way, which is perfectly fine. We're all alive and controlling our own bodies and lives, so we want to know things that will affect our bodies and lives. People are interested in things, like sleep, because we all sleep, or memory –we all memorize things. But not everyone's interested in something like Huntington's disease, because not everyone has it, not everyone knows someone who has it. Of course, those topics are still important to cover. When there are breakthroughs, I like to talk about them, but those videos never go viral, and I don't expect them to because people aren't interested in them as much. Rare genetic diseases, for example, are not a good topic for virality. However, a new paper shows that coffee makes your brain degenerate -which is not a real thing- everyone will care about it because everyone drinks coffee and everyone wants their brain to remain healthy.

Do you sometimes want to make a longer video where you can go into more detail and explain things a bit more?

Always. I think good science communication requires longer video length. One of the biggest challenges for everyone is to get their videos down to such a short length and keep it accurate. And, I guess, that's just something I figured out. I think about the key pieces that need to be in the video. But every time you shorten a statement, you're sacrificing accuracy. So I do my best to keep it as accurate as I can. Unfortunately, if I do post three-minute videos, and I go into greater detail, the video won't do well. It's so sad, but I think it's more important to get a larger group of people interested and excited about science than to reach those who are already interested enough to watch a three-minute video of me going into detail. I can always add things or reply to comments and answer questions. My goal on social media is to excite the general public about science because I think right now in society, especially post-COVID, people have lost a lot of trust in science. Not everyone, but I think, at the margins, a lot of people have been driven into extremist anti-science.



How do you balance your science communication work with your postdoc life?

I started making videos in the late stages of my PhD when my main thesis work was ready to be published. It was good timing because I had a lot of extra time. Now, I'm an early stage postdoc and it's a lot of work. I don't mean to mislead anyone or just steer people out of science, but being a postdoc is one of the worst fates that could happen to a human. It's so much work. But the reason I do it is because I want to be an academic professor.

I'm extremely lucky that I work in a lab where I get to manage my own workload. That's how I am able to make it work. I set up my experiments, I just go to the lab to crush them as fast and carefully as I can. Then, I come home and do extracurricular science communication stuff.

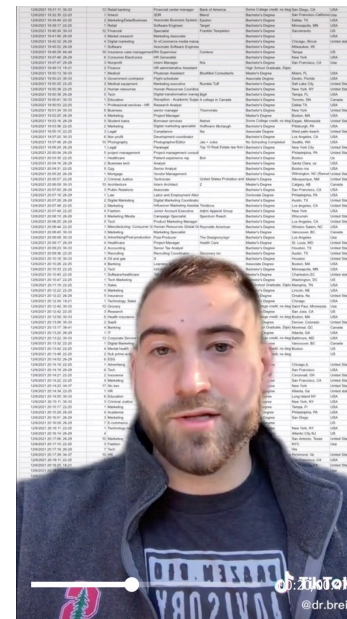
How long do you spend, per week, on science communication?

If I'm factoring in filming videos, reading papers, making the scripts, also things like doing podcasts, replying to emails, doing meetings with people... The one amazing thing about science communication is you get to meet a lot of people. There are not so many scientists on the internet so whenever a company or whatever is looking for a scientist - I'm one of the few people that they know, and they reach out to me, and I get to meet all these cool people.

So a lot of meetings and things like that take time. I would probably say, I spend 20-25 hours a week, weekends included.

So I guess, in the future, you want to go into academia, become a professor, but you still plan to do science communication? As long as you enjoy it?

That's the goal but it constantly changes. Being at Stanford, so being in Silicon Valley, I've met people at Google, and Meta, YouTube, Amazon... And everyone's like: "Oh, you should consider coming to work for us". The thought of immediately tripling my salary is encouraging but, as I mentioned, I love mentoring, teaching, research, and science. If I leave science and I go work at Google, let's say, and I'm on the internet talking about neuroscience, who am I to be talking about neuroscience? I'm not a neuroscientist anymore. It's not a huge factor but I have thought about that. I should probably remain active in this field, if I want to remain a credible source on this topic. If I go work at Google, I'm probably going to stop paying attention to the literature, and my merit to talk about these things actually does decline.



Lastly, I realized you have a big following all around the world. For example, a friend of mine from Austria, who is not a scientist but works in journalism, follows you. Do you get contacted by many of your followers worldwide?

That's extremely cool, thank you for sharing that! Early on, I started interacting with a lot of students when I was still growing my platform. I would get a lot of DMs from students asking for career advice. I would just take meetings and talk to students worldwide. Through these, I started to realize that people all over the world don't have the access to the same types of resources and the same types of mentorship. So I created this group, called the Aspiring Scientist Coalition. We host -I have to admit we haven't done anything in a long time but I want to start getting it going again,- networking events between our members and bringing in scientists to talk about their career. We have members from over 75 countries. So this shows how global these platforms are: TikTok, Instagram... I mean people are tuning in from all over the world, it's amazing.

Our audience is mostly scientists so they could be interested in it, can they join?

Yes, of course! ASC is free to join, everything's free. If you're a scientist, and you want to present, or speak to our student members about your career trajectory, or give tips, please contact me.

From an attempt to stay up-to-date on topics outside of own field to a recognized YouTube channel:

Clemens Steinek is a PhD student in the IMPRS Life Sciences program and he is doing his PhD project in Dr. Heinrich Leonhardt's group in Munich. He has been creating videos about various areas of biology on his YouTube channel for more than three years. The audience of his channel consists of a wide range of people, both scientist or non-scientist enthusiasts from any age group may find something entertaining and educational in his videos. Currently, his YouTube channel, Sciencerely, has over 60.000 subscribers. And his work as a science communicator was recently recognized with a ScienceFluencer Award by Gesellschaft für Biochemie und Molekularbiologie (GBM) and Merck.



I have talked with him about how he started doing science communication in his free time, balancing his lab life and SciComm work, and his suggestions for scientists who would like to start communicating science on social media. To learn more about his videos, scan the QR code and visit his YouTube channel.



Clemens (second person from the left) with members of the Junior-GBM at the ScienceFluencer Awards Ceremony

Could we get to know you a little bit first, how did your interest in science start?

I always had an interest and tendency to go into some form of science. It was initially chemistry, later a bit of math but in the end my focus landed on biology and fundamental research. It was a process. Also a summer school I participated in Cambridge during high school, where I had my first real lectures, helped a lot to make the decision to study biology.

Can you tell us about your career path and how you have started creating media content about science?

I did my Bachelor's in Vienna and Imperial College in the UK. And I did my Master's here at the LMU, and at this point I already knew that I would like to do something in this direction. There are many answers to the second part of your question but the main answer is that I really like having a broad overview of many topics. However, one focuses more and more on just their main topic during their Master's and PhD studies. So, I thought this would be a good reason for myself to continue to read about different topics.

One can really tell after watching a video of yours that you read a lot on the topic and spend a good amount of time. How much time is typically spent on research for content production? What does a typical day of work look like for you?



I see myself first and foremost as a scientist but one that communicates. Of course, my PhD is the most important thing. I normally work on videos in my free time after my day of work is done. Right now, I got a bit faster than how it was in the beginning but still I get one video done in two to three weeks. Sometimes it takes a bit longer to find a topic that is interesting to me and the viewers, and relevant right now. It is a very good thing that comments exist on YouTube, I also take suggestions from there.

So in general, writing a script takes quite long and I also tend to spend a lot on editing the video, both take around equal amounts of time. One advantage of this is now I can make my figures much clearer, since I have done a lot of thinking about the best ways to deliver information.

So this thing that you are doing on the side is positively affecting your work, what are the other ways that it helped you with?

I can say that I became a much better reader. You may also relate how master's students or early doctoral researchers read papers in so much detail, underlining every sentence... Of course if you are reading in your own field it might be the case. However now, I feel much better at finding the most important and relevant information for me and my research.

What are the benefits (and/or drawbacks) of the specific medium (TikTok, Youtube, Instagram, etc.) that you share your content on?

I guess the first thing you decide when you want to communicate science is the form of your content. Some go to TikTok for bite-sized content, but for me, it is more interesting to go into depth about a topic. For this kind of long form information, YouTube is the most suitable platform. One can make a summary and put in the other platforms too but, to be honest, I am just too lazy for that.

And maybe some information may get lost or misinterpreted in the process of summarizing...

Yes, definitely. I, of course, do not expect people to remember everything from a 10-15 minute video, but they will at least have the big picture and will not jump into the shortcut conclusions, for example, like "Oh no, I may die from over-oxygenation of my brain" and such.

What do you like and dislike about communicating science? What are the most challenging aspects of what you do? What drives you to keep creating?

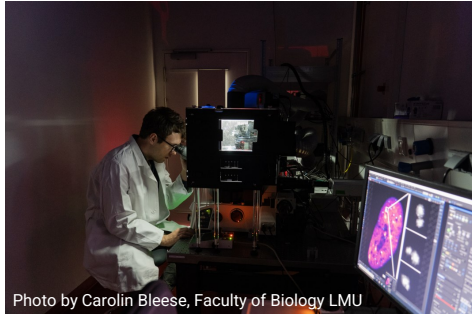


Photo by Carolin Bleese, Faculty of Biology LMU

The fact that you get feedback much faster -in the form of comments- is something we PhD students are often not used to. We often work for years to write one paper, in the internet you get appreciation quickly. I would say people are generally nice. Of course, you might get those infamous negative comments from time to time which you would not have experienced otherwise, but it is such a small proportion that can easily be ignored.

What is great about the internet is that you also get honest criticism if something is not optimal.

Someone might tell me that one part was not clear or too fast, and then I also learn something from it, which is something that I like and it helps me to improve my communication skills.

What drives me is just wanting to see how far I can go with this and the process of making a video itself. I really like how an idea translates into a video, and how it is perceived afterwards and returned to me in the form of feedback from the viewers. Every time it is really fascinating to see.

Has the pandemic affected your audience? Did you notice any changes in the demographics of your followers? I feel like people are more interested in science related to health/biology now but am not sure if the sources they find are all credible or enough.

That's exactly the point. There are now two categories: the general topics of science and some topics that become very controversial through extensive discussions. For the first part, it is hard to say, I think the interest towards that area might be indirectly affected by the pandemic. There are many people who are interested in science and would like to get a glimpse into what researchers are actually working on today, independent of the pandemic. It is great to produce videos for these people as they genuinely want to learn and they are generally appreciating the work. However, for the second part, such as topics like the pandemic and vaccines, it can get a bit more painful. Those discussions often become less and less about science and turn completely into politics. "So and so said it is bad, or someone in my Telegram said this is bad, so it means that everything about this is bad." It reached such ridiculous points that the other day in a protest against vaccines I saw a sign that said "Abolish qPCRs".

How do you come up with topics to cover? Are they your general interests, do you take requests from your followers?

Sometimes I get suggestions, or just follow the trends. For example, about monkeypox, I had the idea of making that video from an issue of Nature. Now, I make more video series around the same topic. One of the recent ones is called "Super Healthy, Extremely Sciency". It is about the good or bad habits that may affect our bodies. It starts with videos on the importance of sleep, meditation, diet, and goes into more detail, such as brain plasticity and how languages can help you with attention tasks. These kinds of topics are more relatable and not abstract things for everyday life of people.

What is next for you, what are your future projects?

I plan to continue working in science and, on the side, see how far I can go with the YouTube channel. I have some projects going on, outside of my research, soon I will start doing science communication consulting for pharmaceutical companies that are interested in hearing an outsider perspective. Other than these, I will continue to make new video series, and I would like to invite more scientists to talk about different topics.

Is there anything else that you want to share with the scientists from Max Planck Society and aspiring science communicators?

If you think about starting, I always say that it took me 1.5 years to make my first video. I had the idea, I thought I had to have the perfect video or a certain type of camera, this and that. It delayed me a lot, in the end, they were my worst videos. The important thing is just to start from somewhere: take your iPhone and film yourself talking about something that interests you, upload it somewhere, and it's perfect. You will anyway develop and improve in the process if you enjoy it.



Dutch perspectives on Germany

By Birte Zuidinga



About three years ago, I moved from Netherlands to Germany. To be honest, I did not know a lot about my neighbouring country, and especially not about Bavaria or Munich, where I would eventually end up. I thought that both countries are really similar, which in a sense they are, of course. Just think about the two languages that use lots of the same words. But over time, I have noticed more and more subtle and bigger differences. There are some things I often complain about, for instance the bicycle infrastructure that is way worse here in Germany. Of course, coming from the Netherlands puts me in a very privileged position regarding cycling, and I know that lots of people find the German streets an improvement from what they are used to elsewhere. So, instead of criticising infrastructure further, let me describe some other remarkable things I noticed upon moving to Germany.

Let me start with some interesting observations from the streets. On my bicycle ride to work I regularly encounter objects that I have never seen in the Netherlands. The most shocking to me are the cigarette vending machines.

Especially the sheer abundance of them. You can find these machines scattered throughout the city along sidewalks in a seemingly random pattern; some are only twenty meters apart, and they do not seem to shy away from sports clubs or schools. Having grown up in a country with anti-smoking campaigns and regulations everywhere, it felt very unreal to me that the ability to buy cigarettes is basically advertised on every corner of the street, all the time.



The five cigarette vending machines that I pass every day during a 10-minute bike ride.

This, of course, is in stark contrast to everything else that one might want to buy. All shops and even grocery stores are closed on Sundays in Germany; something I knew before moving here. What I was not prepared for, though, was that lots of companies also have impossible opening hours outside of the holy Sunday. You are already lucky if the place you want to go to is open on Saturdays until 1 PM. On work days, it is very likely that they are only open until 5 or 6 PM, so you either have to race from your workplace to the pharmacy, post office, or book store, or take a day off. If you manage to find a suitable time to do your shopping, you better also have cash with you. Lots of places still do not accept cards, and when they do, there is about a fifty percent chance they only accept "EC Karte". This is a specific type of bank card that I, apparently, do not have.

Another type of historical street ornament that stands out to me are the public payphones. I only remember seeing them during my early youth in the Netherlands. I have never even used one before they got removed, about fifteen years ago. Funnily enough, very recently the news came that Germany will also start removing all payphones¹, since, apparently, they are not profitable anymore. Could we therefore conclude that Germany is at least fifteen years behind when it comes to digitalization? I would say this is not too far off...



To register at the university, I had to send all my documents by post. I got back more documents and had to fill out an online form, which I then needed to print out and send by post again. Or consider the way the janitor of my apartment building communicates with the inhabitants: they do not use emails or even send letters for important announcements. They only hang up a few sheets of paper at the entrance of the building, packed with information. This can make for nice surprises upon returning from vacation.

Of course, not everything that stands out when comparing the Netherlands to Germany is negative. One thing I really like in Germany is the habit of having a warm meal at lunch time. In my research group we usually take the time to walk to the university mensa nearby. There is ample choice for everyone to find something they would like to eat, although sometimes it seems like a national sport to complain about mensa food.

During my whole life in the Netherlands, I was used to eating homemade sandwiches for lunch and eating a warm meal at night at home. This was fine, but now with a proper meal at lunchtime, I do not feel forced to cook every night anymore. This frees up a lot of time after work. Compared to eating something quickly at my desk for lunch, having a walk outside and talking with people from the lab really helps me to get a proper break from work. Usually, these interactions bring up the most interesting new ideas for projects where one is stuck.



Will this view finally become history?

Together with the (albeit sometimes annoying) short opening hours of companies, the more elaborate lunch breaks signal a fundamental difference between the working culture in the Netherlands and Germany. At least based on my perception, the work-life balance in Germany is better. Overwork seems to be less normal, and employers have more respect for the employees' time outside of work. The German concept "Feierabend" perfectly expresses this part of the work culture, and this is something that the Dutch language does not even have a word for. As far as I understood, this indicates celebrating the free time after a day of work. People say it out loud when they are done working, looking forward to their plans for that evening. Just the fact that this after work time is not a special occasion (as I originally thought when I first heard it) but a reason to celebrate every day, makes me smile.

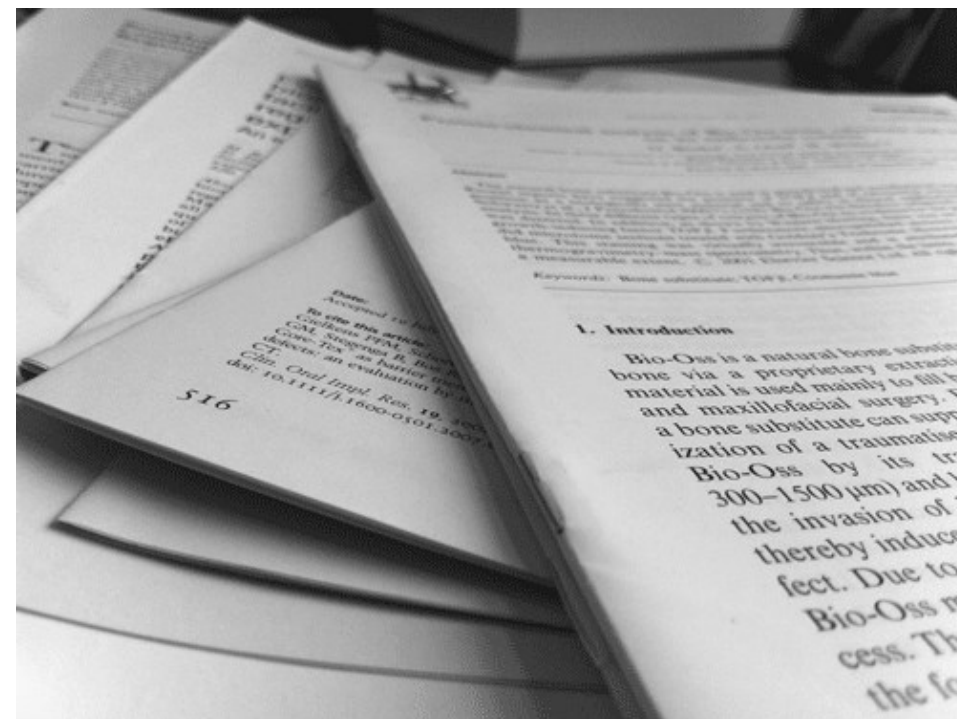
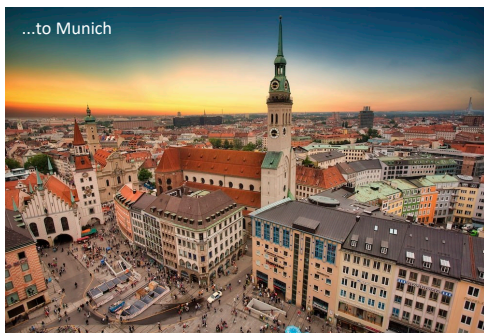
Before moving here, I never imagined that people in Germany were so superstitious with regard to birthdays. Celebrating your birthday before your actual birthday is the biggest mistake you can make. Wishing someone a "Happy birthday in advance" is quite common in the Netherlands if you would not see this person on their actual birthday. Across the border, this small sentence apparently brings lots of bad luck for the person-



not-yet-having-their-birthday. I might have made this mistake more often than I would like to admit, so hereby I apologize for all the failed experiments and bad reviews that they had to go through afterwards.

The last thing I want to mention here is something small that I also had to learn by first making a mistake. When the audience of a lecture or presentation has access to tables, they do not applaud by clapping but by knocking on the table. This might happen in more places, but I have never witnessed this in the Netherlands. So, while attending the first meeting in the lab where I had just started, I started clapping after the presentation. After two seconds I noticed that this felt very strange, because I heard my own claps among a strange rumbling sound. I quickly realized I had to change my behaviour and also started knocking on the table. It was an interesting feeling, since something that I had done my whole life in this specific type of situation, was suddenly not normal anymore.

Noticing these big and small differences has given me opportunities to pause for a second and realise that what is normal for me, might not be normal for others. Overall, it has been an interesting journey in Germany as a Dutch person, and I am sure I will find more remarkable things as I stay here longer.



A hidden bottleneck to research

What is making scientific breakthroughs more challenging and how can we fix it?

By Peter Schlichter

Each year more than 6 million research publications are put online.¹ When it comes to the number of publications, every year is a record-breaking year. The increasing quantity and improved accessibility are relatively new developments in science. For much of history, due to political reasons and language barriers as well as different cultural attitudes towards publishing, similar discoveries were made simultaneously or even, in some cases, a lot prior. Famously, in 1965, J. Cooley and J. Tukey published the modern FFT (Fast Fourier Transform) method unaware that Carl Friedrich Gauss had discovered a very similar method in the beginning of the 19th century, over 150 years prior.² The research, found in his collected works, in its original Latin, was unknown to many scientists until much later. Fast forward to today, with the emergence of the modern internet, the world is now more connected than ever. Especially, when it comes to ongoing scientific discoveries happening all across the globe. These advances in technology have provided great benefit to the scientific community, developing on the discoveries of others much faster and making scientific research faster and more efficient than it has ever been.

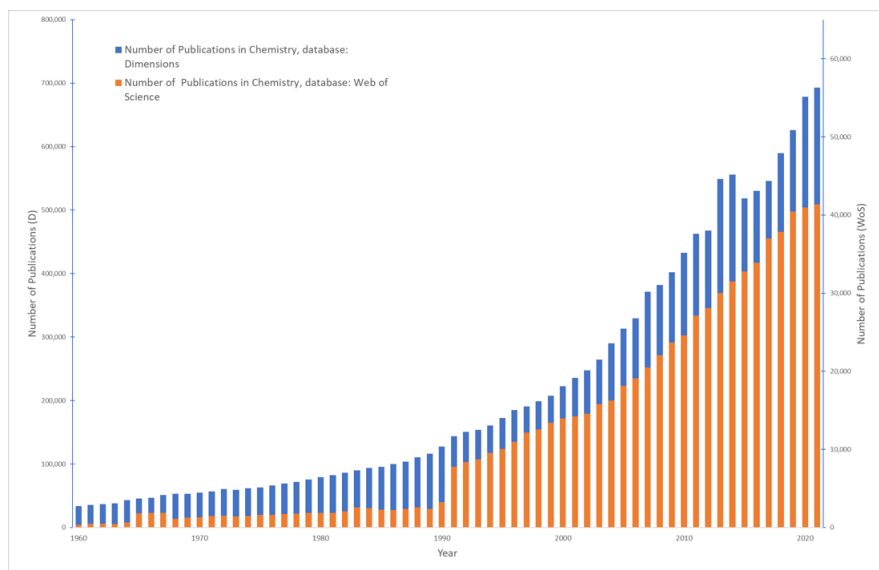


Figure 1: Chart showing increased number of publications in the field of chemistry over the last 60 years. Blue series (left axis): Total number of publications per annum under the field of chemistry as given by Dimensions database.³ Orange series (right axis): number of publications per annum under the topic chemistry given by Web of Science database.⁴

With a look to the future, it seems clear that the continuous growth in the number of scientific breakthroughs per year will continue. This is partly through an increasing number of research institutes globally; university projections estimate that by 2040 almost 600 million students globally will be enrolled in higher education - a significant increase compared to the 216 million recorded in 2016.⁵ More effective research, achieved through the use of more technologically enhanced machines and AI systems, will also undoubtedly play a big part in the increase rate of discoveries. In the field of chemistry, it wasn't too long ago that researchers would need to spend their afternoons manually programming the nuclear magnetic resonance (NMR) machine to provide usable spectrums of their compounds. Today, undergraduates are no longer taught how to manually program NMR machines, instead taking the fast automation for granted.

We also don't seem to be running out of scientific questions anytime soon, with each research project giving rise to more questions than they answered. The field of plastics is a good example of this. Plastics, invented to replicate the properties of naturally occurring substances that were limited in their scalability due to their abundance, have now become a 609 billion dollar per annum industry.⁶ The field now works on inventing novel compounds with properties not observed in nature, in utilising plastic waste as an environmentally friendly building block for a whole new field of science, and on the generation of new bio-derived, bio-waste, and biodegradable plastics, a span that only few early researchers could have ever dreamed.

The growing numbers of publications may come as no surprise to those in academic research. What formerly never existed, filtering through search engines to find the appropriate scientific literature, is not only a time intensive exercise for the modern PhD students but also an important skill that must be honed. Swimming through the swamp of scientific literature to find relevant papers is now as normal as eating breakfast before work. Perhaps this task is something we take for granted too often in modern science and is not as much of a benefit to our scientific progress as we think. Naturally, I am not suggesting here that more knowledge is bad for research: Isaac Newton was famously quoted as saying his work could only be done by "standing on the shoulders of giants" when acknowledging the 'literature' that came before him and this isn't any less true today than it has been historically. However, if the research is not being efficiently conveyed to the relevant audience, we are leaving a lot of scientific progress on the table. In today's research, it's not just that the researchers are falling behind on their literature research, but also that the publication databases are unable to keep up with the sheer volume of publications (see figure 1). This may explain why many researchers use multiple databases and search engines in an attempt to cover the entirety of the relevant research in their field.



One of the issues arising in modern science, as a result of increased publications, is the sheer volume of different journals, each more specialised than the last. Though potentially designed in a way to streamline the searching of new publications, more often than not the categorisations are so multidisciplinary that they rarely provide more benefit to subscribers, even without mentioning that fewer researchers now read journals cover to cover, instead using search engines like Web of Science or Google Scholar. With publishers selling subscriptions on a per journal basis, even some of the wealthiest institutes around the world don't have access to many 'relevant' journals. I recently noticed that the institute I work for, MPI for Chemical Energy Conversion, specialising in many areas of green chemistry, especially the conversion of bulk waste products like CO₂ into useful feedstocks, did not have a subscription service to the "Journal for CO₂ Utilization (Elsevier)".

In the last decade, Open Access (OA) journals have become more popular for multiple reasons, especially in response to exactly these types of issues. OA would release the research currently stuck behind paywalls. OA is based on a fundamental shift in the way that academic publishing is financed: instead of paying at the point of consumption, the publication is paid for by the researcher and is released free to read for everyone. Particularly for smaller institutions with limited funding, OA may help them reach the relevant publications and accelerate their research. Coincidentally, the Journal for CO₂ Utilization is becoming open access from January of 2023.

“...defining quality in practical terms is not just a difficult task but, in fact, a truly impossible one.”

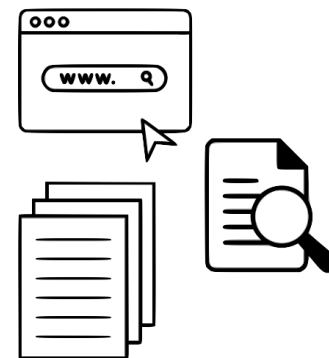
When it comes to reducing over-publication, Open Access may also play a major role. By placing the burden of fees on the researcher, you incentivise only the most important work to be pursued to the point of publication, de-incentivising frivolous publishing, and thereby potentially improving the quality of the work. In opposition, some have argued that Open Access might incentivise publishing of more papers by journals and lead to a reduction of research standards, since the journals' revenues are now directly related to the number of articles they

publish. With more and more publishing companies moving towards OA, only time will tell what effect it will have.

Another approach to reduce over-publication would be to favour quality over quantity, post-publishing. Unfortunately, defining quality in practical terms is not just a difficult task but, in fact, a truly impossible one. The difference in perception of quality is most evident when unexpected discoveries provide the biggest developments to a field of research. Current measurements of research success are based on citations, such as impact factors and h-indexes. These values have added much to the discussion of defining the quality (and quality-to-quantity ratio) of one's work. However, some have argued that the political nature of any competitive enterprise makes publishing in “higher impact” journals easier for wealthier research institutes. Hence, using “impact factor” as a comparative metric for direct comparisons of research quality may be unfair. With this in mind, we need to understand that “impact”-based incentives alone may not be enough to transform the attitude towards scientific publication.

With a look towards social media discussions, can we draw inspiration on how to incentivise quality over quantity via a different mechanism? Instagram, as well as many other social media outlets, have often been heavily criticised for incentivising quantity over quality. Some commentators have suggested that by limiting each user to only one post per day, one would encourage content creators to pay more attention and put more care into the design of each post, improving the quality of the material on the site. Could this approach of limiting publications provide benefits to scientific discoveries? Restricting the number of publications in a given time frame per researcher may result in researchers summarising larger quantities of data into more compressed and accessible formats as well as incentivising a greater degree of effort on more challenging problems. However, this might also delay the release of each individual discovery which may result in seemingly ‘small’ discoveries ending up in the back pages of articles, perhaps even being completely overlooked.

So far, I have discussed the issue occurring with increased publications – inefficient communication of discoveries – in the context of changing the way we as researchers think about publishing and the way publishers themselves convey the articles. However, another approach could be to explore the effective strategies of bringing the relevant publications on an individual basis to the forefront,



even in an ocean of literature. Social media companies struggle with this all the time with an ever growing number of youngsters wanting to be influencers, TikTokers, and social media stars. The solution works through two main routes: search engines and personalised data collection. Trademarked in 1997, google.com developed a search engine with an intriguing bit of innovation. While the big portal competitors (Yahoo the largest at the time) were swamped in indexing web pages with mere humans, Google used mathematical algorithms to rank sites based on a form of indexing. The 1.1 billion websites, of which 200 million are active, are now so effectively indexed that a search is accomplished in a few

milliseconds.⁷ By adding personalised preferences, companies like YouTube hardly require a search to steer you to the video you desire, and platforms like Instagram and TikTok are now so effective that the search bar is rarely used at all. Would it be interesting if such algorithms could be applied to scientific literature?

Taking inspiration from above mentioned breakthroughs, with an eye on the ‘over-publishing’ climate, perhaps the burden of finding relevant information is a result of the deficiency in our search engines rather than the quantity of information. By creating intelligent systems that understand the content of the scientific articles as well as the science that the researchers are interested in, future technologies can provide customised article suggestions. The future of literature search may be much more intuitive than we could currently imagine, freeing up much-needed time and energy for pondering how best to progress. It is hard to predict what will change in the coming decade, but it seems clear to me that the benefit from alleviating these research bottlenecks will pay back any investment. For now, I'll just keep searching...

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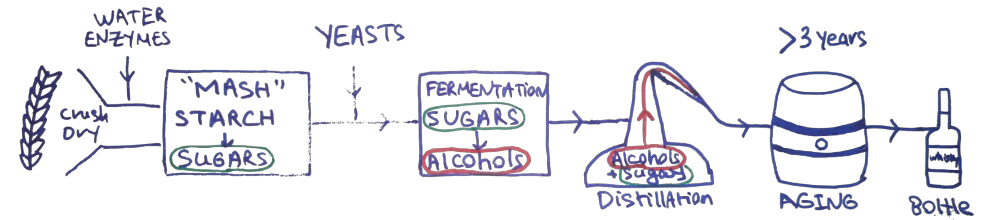


Geographic perspective on the aromatic future of the whisky industry

By Davy Lin

Whisky is a spirit made from cereals that are dried, crushed, later mixed with water and enzymes before being fermented, then distilled 1-3 times. Some distilleries use “peat” during the primary drying process, giving their whiskies a typical smoky character. It is next put to age in oak casks for at least 3 years. Those casks can have contained other alcoholic juices, for example Bourbon or Sherry. During the aging process, part of the whisky is lost every year by evaporation: the “angel’s share”. After those years, the whisky is chill-filtered then diluted to desired alcohol strength and bottled, or bottled directly straight from the cask. The ethanol percentage ranges from 40-70%, with most core range whiskies around 40-46% and most cask strength around 55-65%. Whisky does not age after it is bottled.

Scotland is the historical land for whisky, with a long tradition around it. This results in a great knowledge but is also a limit for innovation. The specifications around the Scotch whisky label is a straightjacket that limits its possibilities to reinvent itself, the same way that works for German beer.



It is harder to imagine innovations that will revolutionise its taste. In most cases, the overall aromatic sensation will be similar, no matter the casks involved for aging, or the distillery. This is not a drawback as the historical side attracts the people who discover whisky and the “hardcore purists” that accept innovations more difficulty. The limitations described above apply to Scotland, and recently to Japan in 2021.

Single casks are a possible direction for improvements. The exact parameters influencing the distillate in the casks are not fully understood, resulting in variable aromatic properties from similar casks. Distilleries can bottle “single cask”, but also companies who buy casks from them directly, age them themselves in the casks they want and bottle it under their names: Independent Bottlers. These not only propose alternative versions of official bottlings, but also bottlings from distilleries that do not bottle anything themselves, like Milnorduff (pastry-like) or Benrinnes (floral). These bottlings bring a new flavor space. The limit to single casks lies in their definition, as their tastes are hard to reproduce even within the same distillate, limiting the spread of each expression (a cask usually fills 100-500 bottles). The research for distinctive aromas triggered a “fancier-cask race”,



usually wine casks. These casks are mainly used for finishes (transfer the whisky into a completely different cask a few months before bottling to give subtle flavour change), since wine marries with whisky difficultly, bringing unpleasant aromas, though successful examples exist.

Blended whiskies gained a bad reputation because most of the whiskies that are mixed with diverse sweet drinks also belong to this category. But blending quality juices is a creation activity that Compass Box elevated to the rank of art. They only sell blends with a wide range of flavour profiles, from fruity (Orchard's House) to peated (Flaming Heart). The idea is about providing added value by blending quality whiskies to make it more flavour-rich. The Japanese are also well-known as peerless blenders. Blends are a major area of aromatic innovation in whisky, since the creativity and palate of the blender are their main limits.



"Innovations" in Scotch whisky are sometimes just marketing arguments. A major known distillery for that is Ardbeg with most of their limited releases advertising specificities that barely influence the overall profile (Fermutation, Ardcore...).

With the growing popularity around whisky, lots of distilleries started to emerge and sell their own bottlings around the world. Those distilleries have their strict quality specifications, and give a new wind to the whisky industry. There are those who try to produce whisky in a similar way as the Scottish. Among the biggest successes lies the Taiwanese distillery Kavalan. They are taking advantage of their tropical climate, triggering a much higher angel's share, hence much quicker aroma concentration, making them able to produce in 7 years what would take 25 years in Scotland. Their whiskies are known aroma-bombs with distinctive exotic fruit tastes. In mainland Europe, the Bavarian Slyrs is too light and simple for now. Most young French distilleries attempted to use the country's wine heritage to apply it to whisky, without much success. Starward is an Australian distillery that succeeded in using wine heritage, producing a glazed autumn-fruits whisky.



And there are the distilleries who take their own directions, by different aging, or other production factors that result in a new character. The Welsh distillery Penderyn, using a Faraday still, produces a distillate with distinctive smooth, pear and dry fruits flavours. The Swiss distillery Sântis malt (a hidden gem) takes advantage of their historical beer expertise and mountainous location to use their best beer casks to at least partly age their juices. This results in a malty and sweet whisky. Rozelieures (France) produces a completely traceable and flavorful whisky, an area where the Irish Waterford gave more mitigated results. Eddu takes advantage of Brittany's tradition around buckwheat to create a flavorful woody and malty juice. Hellyers Road in Tasmania achieved masterpieces using American oak casks to create a coconut and tropical fruit whisky. On the peated side, non-classical flavours were successfully brought by the Icelandic Floki (using sheep dung for smoking) and the Dreifaltigkeit edition of Sântis Malt, using various woods for smoking, giving a smoked bacon character.

Those distilleries propose, in their ways, outstanding and diverse whiskies that open up new horizons, with their own "aromatic signature". Hence, for me, the "Rest of the World" is where lies the aromatic future of the whisky industry.

What to Read Next

Book recommendations from the Offspring Team

The Art of Loving

By Erich Fromm (1956)

The Art of Loving was written by psychoanalyst Erich Fromm more than 60 years ago. The book is academic in its style, but it is accessible to anyone with a basic understanding and interest in psychology. It works as a self-help book without actually being labeled as such.

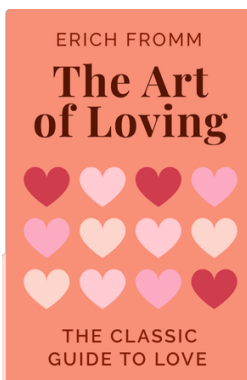
As human beings, we spend at least some part of our lives experiencing, waiting, or searching for love. The definition of love could be in the context of your family, your relationship with a person, your allegiance to a country, or your understanding of God. Just take a moment and consider your definition of love. What is love? An intense feeling of passion and deep affection? A sensation we hope to experience? All we need in life? While it can be all of these things, there's more to love than passion and fate.

Fromm suggests that many individuals view passion as something to prove the strength of love, despite the fact that this demonstrates how alone they were previously. How frequently do we want love in order to feel less lonely? According to Fromm, falling in love quickly, reflects our greatest loneliness. Falling in love is a straightforward and quick process, however mature love is a more complex experience. Love, like any other art form, must be learnt.

Keywords: non-fiction, psychology, self-development, love

Recommended by: Melisa Özmen

"Love is not something natural. Rather, it requires discipline, concentration, patience, faith, and the overcoming of narcissism. It isn't a feeling, it is a practice."



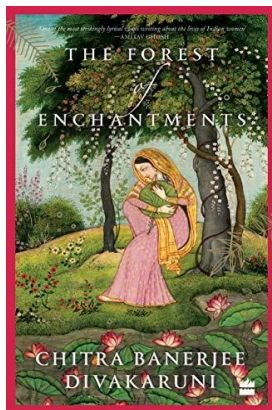
The Forest of Enchantments

By Chitra Banerjee Divakaruni (2019)

In this book, Ramayana, one of the most renowned epics written in the Indian subcontinent, is retold with Sita as protagonist. Chitra takes us through the events as Sita herself, and we are confronted with a woman's perspective on various familiar aspects of the tale. The story does not only focus on Sita, but it also shines a light on other female characters who have been misunderstood in previous retellings of the story over many years. These women are finally given a voice to explain the motivation of their actions. This book gives a fresh perspective to a beloved epic, placing the interest of Sita at the forefront. It makes the reader think about how Sita, or other women in general, are treated by people. This is reflected through the various relationships she maintains throughout her life, to name a few, as daughter, princess, wife, and mother.

Keywords: fiction, fantasy, India, feminism

Recommended by: Manali Jeste



The Sky Is for Everyone

Women Astronomers in their own words

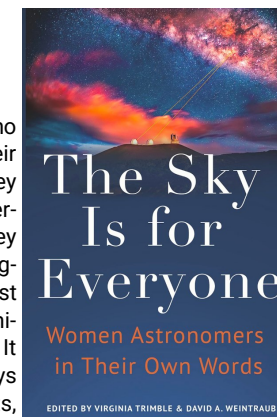
Edited by Virginia Trimble and David A. Weintraub (2022)

This book is a collection of essays from female astronomers who finished their PhDs between 1963 and 2010. They look back on their careers - how they became interested in astronomy, what steps they took to get to where they are now and the obstacles they had to overcome. On the one hand, this book takes you on a fascinating journey through the history of astronomy and describes the major technological innovations and scientific discoveries led by women in the last 50 decades. On the other hand, it gives a clear view on the discrimination and injustice these women had to face during their careers. It shows how the situation has improved over the years - in many ways thanks to the fights several of these authors had within departments, universities or scientific research associations. The book also makes it clear that we still have a long way to go in order to ensure gender equality in the field of astronomy.

A collection of fascinating and inspiring stories, upsetting and encouraging at the same time - not only for astronomers!

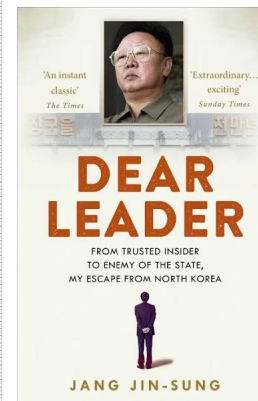
Keywords: non-fiction, astronomy, science history, feminism

Recommended by: Juli van Scherpenberg



Dear Leader

By Jang Jin-Sung (2014)



This autobiography tells the life story of Jan Jin-Sung, a North Korean defector and poet. The book starts with explaining how Jan Jin-Sung discovered the poetry of Lord Byron, which incited him to become a poet himself. After winning poetry prizes, he was recruited as a propagandist after personal recommendation from Kim Jong-Il that gave him the "Admitted" statute. As a propagandist, he was rewriting the Legends around the Kim family to tighten the North Korean regime's grip on the society. He then started participating in Inter-Korean affairs, trying to influence the South Korean public opinion in favor of the interests of North Korea. The "Admitted" statute gave him food supply in a country that was at that time going through its great famine. He also had political protection and access to censored information. But when a strictly forbidden book he lent to a close friend went missing, the only option to save his life was to escape to South Korea in 2004. Reaching South Korea was not going to be a relaxing walk, as he was chased by the Chinese police that collaborated with North Korea to retrieve its defectors, especially the "important" ones.

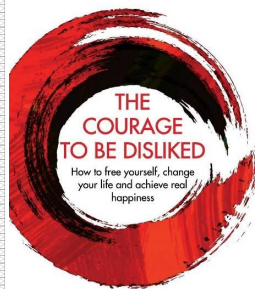
This book gives a deep insight into the inner workings of one of the most secret countries of the world, its policy toward South Korea and its propaganda system, from the point of view of one of the elites. It describes the story of his gripping escape to South Korea in a fascinating and breathtaking narrative.

Keywords: non-fiction, North Korea, propaganda, insight, escape

Recommended by: Davy Lin

"All you can do with regard to your own life is choose the best path that you believe in."

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ICHIRO KISHIMI and FUMITAKE KOGA

The Courage to be Disliked

By Fumitake Koga and Ichiro Kishimi (2013)

Before starting my PhD study, I had two years of thinking and asking "What is the meaning of life?", but when I read this book, I found my way. I would say it is a great book for second-year PhD students, when you feel lost in the research and work pressure.

The book explains the philosophy of being yourself in the form of a dialogue between a philosopher and a young man. This interesting writing style makes it easier to engage with the theory that the authors want to deliver.

This book will give you another perspective about life and about yourself. The book, in my perspective, cannot change your life. However, it can change your mindset and give you strategies to address problems in a way that you feel hopeful and encouraged.

Keywords: non-fiction, philosophy, being yourself

Recommended by: Xiaoran Liu

The Overproduction of Truth

Passion, Competition and Integrity in Modern Science

By Gianfranco Pacchioni

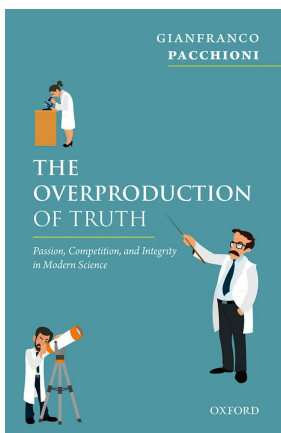
In this attempt to rescue our distressed scientific ecosystem, Gianfranco Pacchioni exposes the flaws of the modern way of doing science in great detail, with abundant references, and without taboos. In his personal account of how a passion became a business model, he blends entertainment with horrifying portrayals of what many of us have guessed but rarely discussed openly: the organization and leadership of science must change. This courageous step taken by a leading chemist of the past century collects the worries of many and the hopes of some in a call for new solutions and a more sustainable future for the next generations of scientists.

The fundamental research that I have been practicing as a passion during my PhD is often questioned by my non-initiated friends. They see it as a waste of time, energy and money. I have always vigorously fought back against these impressions. Pacchioni's approach to the current development of science impressed me with its critical perspective. After insisting on the central role of erratic fundamental research, he started to tackle the scientists' daily tagline "publish or perish". While I always thought of it as a paraphrase for time pressure, Pacchioni reminded me that the overproduction of scientific results, the overpopulation of scientists in fundamental research, and the limitation of resources for scientists are intricate, sensitive cycles undermining the production of real truth. Unless we break these cycles, they will slowly lead science on a path where it would indeed start wasting precious time, energy, and money.

Keywords: non-fiction, science

Recommended by: Aidan Wastiaux

"The danger is fragmentation [of science into] less and less relevant issues."



A Year in the Life

By Nadya Pirogova

Another year, another season coming to a close. And this year has brought with it some big milestones for our podcast:

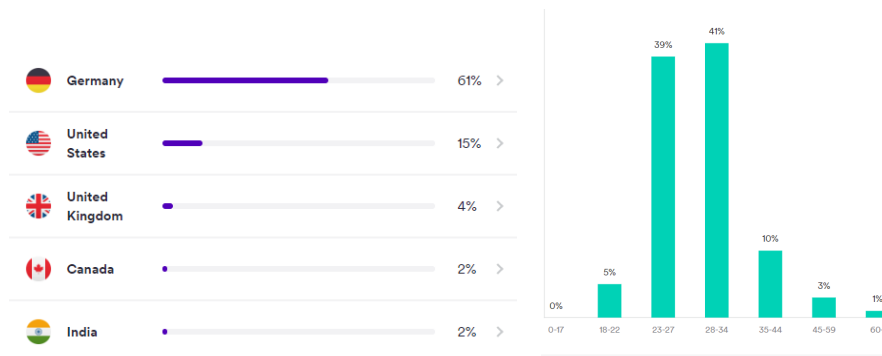
- We are rapidly approaching 30,000 views/listens across platforms! Did you know that you can find us anywhere you listen to your podcasts?
- With season 3 finished, we now have 75 episodes, making it 58+ hours so 2.5 days of your favourite podcast to listen to on your way to the lab or during a coffee break.
- We are getting our own section on the PhDnet website that will include all the episodes, resources and links, and full transcripts. So keep an eye out!
- All our episodes are also available on YouTube, with a special playlist for our video interviews! Did you know that season 3 has subtitles available on YouTube already?



Have a look at our link-tree: <https://linktr.ee/OffspringMagazineThePodcast>

Our Audience

(statistics from Anchor)



#3-19 - Special Episode for Mental Health Awareness Week 2022

For Mental Health Awareness Week in the Max Planck Society (MPS), we prepared a very special episode with the members of the Max Planck PhDnet Steering Group. In this episode, we discuss mental health statistics among the MPS Doctoral Researchers and provide some resources for you to use:

1. **... for counseling, specifically related to mental health:** EMAP (Employer and Management Assistance Program by pme Familienservice): <https://www.mpg.de/16344036/counselling-and-mental-health>
2. **... in cases of scientific misconduct:** Ombudsperson of your institute
3. **... in cases of discrimination or micro-aggressions:** Equal Opportunities Officer, Safer Spaces Agent (coming soon) of your institute
4. **... for employment issues in general:** Betriebsrat (works council), IMPRS/PhD Coordinator, Administration of your Institute
5. **... for legal advice:** <https://www.mpg.de/16344048/conflicts-and-non-scientific-misconduct> or send an e-mail to report@mpg.de
6. **... for Doctoral Researcher's concerns in general:** PhDnet Steering group or send an e-mail to steering.group@phdnet.mpg.de
7. **...for professional counseling in Germany:** Hotline 116 117 or <https://www.bptk.de/krisen-hotlines-und-zentraler-terminservice/>. Note that you can be reimbursed for private psychotherapy if you can give proof that you contacted a number of state psychotherapists who could not offer you a therapy spot.

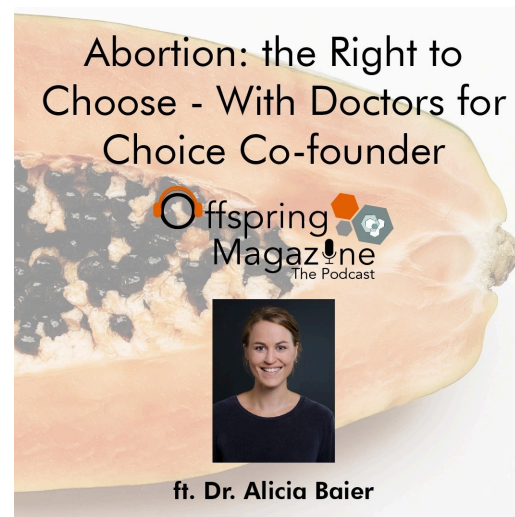


Scan the QR code to listen to this episode

#3-22 - Abortion: the Right to Choose - with Doctors for Choice Co-founder Dr. Alicia Baier

Doctors for Choice Germany is a German network of physicians, medical students, and other health professionals that work to contribute to the sociopolitical and public debate about abortion with scientific, evidence-based, and health-oriented facts. **Doctors for Choice campaign for the improvement of medical education and training as well as access to abortion care.** Doctors for Choice Germany believe that everyone should have an autonomous choice in all areas of sexuality, reproduction, and family planning.

In this episode, **Dr. Alicia Baier, Co-Founder & Chairwoman of Doctors for Choice Germany** talks about the abortion laws in Germany and discusses the different aspects of the current situation, including the lack of education on the topic, the myriad of ethical and political arguments as well as the feminist perspective on abortions. Alicia also explains how medical students study to conduct an abortion and what the abortion procedure normally entails, and talks about the physical and psychological effects of pregnancy and abortion. Learn more about Doctors for Choice Germany here: www.doctorsforchoice.de



Scan the QR code to listen to this episode

#3-06 - Effect of Sunlight and Sleep on our Circadian Rhythm and

#3-07 - The Effect of Time Restricted Eating on the Circadian Rhythm - ft. Prof. Satchin Panda

Satchin Panda, PhD, is a professor at the Salk Institute for Biological Studies. He is interested in understanding the molecular mechanisms of the biological clock, which, in most organisms coordinates behavior and physiology with the natural light-dark and feeding cycles.

In these episodes, Professor Satchin Panda, gives an introduction to circadian rhythm, and how it allows us to stay at our optimal physical and intellectual health during the day, as well as to repair and rejuvenate in the night. He emphasises the numerous health problems, short- and long-term, that can be caused by disrupting one's circadian rhythm but also highlights the ways, in which we can take control back.

"When the circadian rhythm disruption happens, based on all of the studies, what we are finding is that [there are] more than 100 diseases the risk of which goes up"



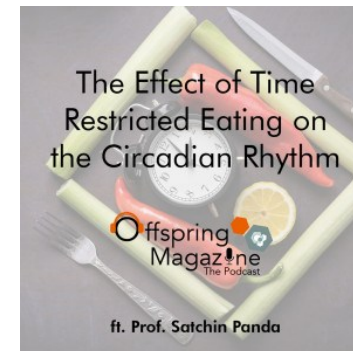
Satchin talks about the role of light in resetting the circadian rhythm, the discovery of melanopsin, why the role of melatonin in sleep seems to be overestimated, and the role of "sleep debt" in our lives.

"The ideal eating window should start 1-2 h after waking up and should end 3-4 h before going to bed."

Satchin also introduces his 6-step formula that allows one to stay at their peak optimum performance during the day, as well as to get deep restorative sleep at night.

If you would like to know more about Prof. Panda's research, check out his lab's page <https://panda.salk.edu/> and his books "The Circadian Code" and "The Circadian Diabetes Code".

To better understand your circadian rhythm, check out myCircadianClock app that Satchin and his team designed get an understanding of our society's lifestyle: when, what, and how much we eat, sleep, and move: <https://mycircadianclock.org>



Scan the QR code to listen to this episode



Scan the QR code to listen to this episode

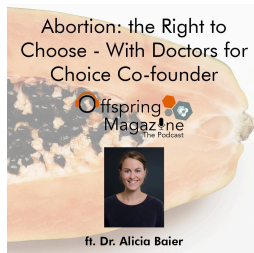
Abortion: Right to Choose

with Dr. Alicia Baier

By Xiaoran Liu

The U.S. Supreme Court overturned the constitutional right to abortion in June 2022, which put abortions in the center of attention. There are worldwide protests to support abortion rights from different political and social groups, and among these, Germany is one of the hotspots for this topic.

We talked to Dr. Alicia Baier, Co-Founder & Chairwoman of Doctors for Choice Germany, about abortions on our podcast. If you haven't given it a listen yet (or don't know that we have a podcast), you can scan the QR code to check out the episode. Or keep reading to catch a glimpse of our conversation with Alicia in several selected questions.



How would you define feminism? And what role does the right to safe and legal abortion play in feminism?

Abortion is a very important component of feminism. Feminism is about gender equity, and genders having the same rights and chances to lead an independent life of their own choice. Now, we have the situation that roughly half of human beings have a uterus and are able to become pregnant, and the other half do not have the uterus. And the half that have got the uterus are mostly women, not all of them, because there are also trans men and non-binary people. So, it is an inequality that we have that some people are more affected than others by the consequences of having sexual intercourse. Society cannot be equal if not everyone has the possibility to decide on their own family planning.

Could you shortly describe what an abortion procedure entails, medically?

An abortion is an induced termination of pregnancy by using either medication or a surgical procedure. So the medication abortion is: you take one pill that stops the pregnancy from growing, then, two days later, you take a pill that causes cramping of uterus and expulsion of pregnancy.

The surgical procedure can be done in full or local anesthesia, and it takes five to ten minutes, so it is a small surgical intervention. You access the uterus vaginally, and you dilate the cervix, and then you insert a tube, and you use suction to remove the fetus.

Abortions are very safe and won't affect your probability to become pregnant later if conducted with modern methods.

How would you wish to see the current situation develop? What needs to be done in regard to the legality and accessibility of abortion services?

Abortion is still regulated in the criminal code. There is still an obligatory waiting period of three days and mandatory counselling. These are actually barriers to access the abortion as quickly as you can and delay the process. Medical abortions are safest when they are performed as early as possible. And it is also a lot of psychological stress – in the situation, where the decision is already taken, but you still need to do these bureaucratic steps, and, at the same time, you have the limit of 12 weeks. After these 12 weeks, you would have to go to another country to perform the abortion, it would not be possible in Germany anymore.

What we need is decriminalization of abortion, which includes abolition of the waiting period and the counselling. But we need more things. The problem is also that abortions are not covered by health insurance, so you have to pay the cost by yourself. It is between 300 Euro to 600 Euro, depending on the methods. If you do not earn a lot, you have the option to get the abortion refunded by insurance, then you need to go through these bureaucratic steps, so refunding may delay the procedure further.

So when we decriminalize abortions, what we need is a real legislation. This would also regulate that abortions are covered by health insurance. Also, the important thing is to regulate who could provide abortions. Because we have this problem of less and less physicians who want to provide abortion services, which leads to the problems of access in some regions in Germany. One solution could be that you allow nurses and midwives to perform abortions, which is something that happens in other countries.





By Pamela Ornelas, Ashmi Mishra, Anna Czepiel, and Pablo Lemos of the PhDnet: Open Science Workgroup

The **Open Access Ambassadors** (OAA) initiative originated in 2014 as a collaboration between the **Max Planck Digital Library** (MPDL) and the members of the **Max Planck PhNet** with the goal of strengthening Open Access within the early career researchers of the **Max Planck Society** (MPS). In this first in-person meeting the idea of training members from all Max Planck Institutes in the principles of Open Access has been developed. The aim was for these trainees to become Open Access representatives at their institutes and spread the message to their colleagues.

The Open Access Ambassadors program provided the ambassadors with both lectures and workshops, highlighting the importance of Open Access and its application to research. There was mutual exchange between both early career researchers and experienced researchers providing perspectives from diverse career levels as well as research fields and institutions. The workshops were also meant to promote the services and tools provided by MPDL for Open Access. Based on these initiatives, in 2018, we established our **PhDnet Open Science Working Group**.

The program continued through online communication and another in person meeting in 2019. By then, the number of ambassadors grew to over 80 early career researchers from all three sections of the MPS. The ambassadors shared their concerns regarding the impact of Open Access in the career of early career researchers, the lack of support in some institutes, and the pressure to publish in high impact journals independent of their open status. They also reported disparity in Open Access information between institutes, as some are very active in Open Science topics, while others portray a lack of interest in general. The results of this survey were published in 2021 as part of a research paper and can be found in the PhNet website.

2014:
Founding of
the OAA

2018:
Founding of
the Open
Science
Workgroup

2019:
Second
OAA confer-
ence in the
Harnack
House

2021:
Published
survey as-
sessing
open sci-
ence

2023:
Third OAA
conference

Following the success of this meeting, the PhNet Open Science Workgroup organized a survey on Open Science topics targeted to all the doctoral researchers in MPS. As the group's focus grew beyond Open Access, survey questions included topics related to more general Open Science practices, such as Open Data, pre-registration, registered reports, and replication studies. The results of the survey revealed PhDs had a great interest in such practices, but very limited knowledge in most topics. This became our inspiration to expand the program from Open Access to **Open Science**.

With the arrival of the devastating COVID pandemic in 2020, the program slowed down and activities were reduced. However, in 2021 with on-going support from MPDL, **we relaunched as the Open Science Ambassadors Program (OSAP)** with an online conference. Around sixty early career researchers from all sections participated virtually. Based on the results of the 2019 survey, this time the program focused on practical examples of Open Science within the MPS. We heard from both early and senior researchers from institutes, who showed us how they use different types of Open Science practice in their daily research activities and how their projects benefit from this.

During the 2022 online conference we aimed to discuss the current status of Open Science, as well as to highlight the efforts made from within MPS. For this reason, we invited speakers with different expertise and backgrounds: on one hand, we welcomed speakers that told us about the current challenges in science and how Open Science can be an alternative to overcome them. We also hosted representatives from international platforms that promote Open Science practices, such as FAIRmat and UNESCO. On the other hand, we invited doctoral researchers from different institutes who told us about their experiences with Open Science in their daily work. Additionally, we provided the ambassadors with a quick guide on how to publish Open Science within the MPS, including basic resources, Open Access opportunities and some resources provided by MPDL.

Now we are working on bringing back the OSAP in 2023 with an in-person event. Although we are in the early planning stages, we believe that it is important to give the ambassadors a platform where they can get to know each other in person. Our goal will be to focus on discussion. We have seen that individual institutes deal with Open Science in very different ways and have little communication with each other. Therefore,

we want to break those borders and strengthen the ambassador network. We want to offer discussion tables for diverse Open Science topics, hands-on workshops on Open Science at the MPS, as well as to provide them with materials they can take back to their respective institutes and share with their colleagues.

Aligned with the Open Science spirit, all materials and presentations provided at the Open Access and Science Ambassadors events are available at the **OSAP website** under the authorization of the authors. An online platform has been set up for the communication between the ambassadors, intended to promote activities outside of the conferences. Despite interest in this initiative, there is always room for improvement and we welcome any ideas to further expand this project.

The journey of the OSAP and its organizers is a constantly evolving one. The events are mainly organized by and for early career researchers, which means that the fleets are ever changing. In order to continue with this effort, we need support from the general administration of the MPS and we thank the continuous support of MPDL, mainly the team of Michael Franke. Also, in the Phdnet OS workgroup, we always welcome doctoral researchers who are passionate for the open dissemination of science to help us with the organization of this event. If you are interested or curious to know more, come join our group! Get in touch with us at [open.science\(at\)phdnet.mpg.de](mailto:open.science(at)phdnet.mpg.de)

The goals of the **Open Science Ambassadors Program** are:

- To **train** early career researchers from the MPS in Open Science in order to share and distribute knowledge throughout and beyond the MPS.
- To **promote** the integration of principles of openness and transparency into the standard research workflow of early career researchers.
- To **push for real changes** and a sustainable transition towards open science in the long term within and beyond the MPS.

Get in touch with us or visit the **OSAP website** to find out more!

OSAP website:

<https://osambassadors.mpd.mpg.de/>

Survey results:

<https://www.frontiersin.org/articles/10.3389/frma.2020.586992/full>



Phdnet presents:

Open Science at the MPS

A quick guide for the Early Career Researcher!



Open Science (OS) is a movement to make methods and results in research **open** and **transparent** for everyone.

As a Doctoral Candidate in the MPS

What can I do?

The **Phdnet OS workgroup** has put together this **quick guide** with some resources you should know to start making your research **OPEN**!

Pre-Registration

Publicly document a research plan prior to the start of your study. It is mostly beneficial for hypothesis testing and confirmatory research. Great for **reproducibility**!

Registered Reports

Two-step peer review process: one prior and one after data collection and analysis. It highlights the importance of the research question and methodology. Allows publishing of **negative results**! You can get started at **OSF**!

Publishing Open Access

The MPS supports **Open Access**! Instead of the traditional route, you can choose:

Gold Open Access

The **Max Planck Digital Library** (MPDL) can cover the **Article Processing Charges** (APCs) of some journals when the corresponding author is affiliated with the MPS.

Green Open Access

Self-archive a version of your publication in an online repository, such as **MPG.PuRe**. Be aware that these publications are not always peer reviewed.

Choose your license!

As the author of the publication, you set your copyright license. MPDL encourages using CC-BY



What about my data?

After you are finished, **make your data available to others** to analyse and reuse!

Consider the **FAIR principles**: Any data that you share should be **Findable, Accessible, Interoperable, and Reusable**.

Publish your code on **GitHub**, find a specialized repository in **rs3data.org** or load your data into **MPDLs Edmond**.

Find out more!

You can find more information on the MPS and Open Science by visiting the **Phdnet: OS Workgroup** website. Learn about **MPDL's** tools on:



General

By Steering Group 2022

"We will meet again" – many of us were carried through endless online meetings, virtual Christmas parties and quiet lunch breaks at home only by the thought that, someday, things will get back to how they used to be: in person. We were elated that, for the General Meeting 2022, we could make that thought a reality again.



From 10th to 12th October 2022 the PhDnet of the Max Planck Society convened at the Institute for the Biology of Aging in Cologne for their annual General Meeting. After two years of online meetings, the excitement was tangible. Besides many interesting talks, this year's event was mainly characterized by the lively discussions of the participants. One could finally get to know the person behind the e-mail address and exchange experiences of the life as a doctoral researcher at the Max Planck Society. Besides electing next year's Steering Group, we were able to get an insight into the great work and projects the PhDnet working groups have been doing over the last year.



Meeting 2022

First and foremost we have to thank this year's General Meeting group, who did an amazing job organizing and managing the first hybrid General Meeting in PhDnet's history. Our further thanks goes to Prof. Dr. Stratmann (President, MPS), Prof. Dr. Lindenberg (Vice President, 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), Ben Braun (MPI for the Study of Societies), Aline Lückgen (Senior Editor, Springer Nature), Frauke Logemann (Talent, Gender & Diversity, HR Development & Opportunities Department), Elifcan Celebi (Postdoc, Cologne Center for Comparative Politics) and Fateme Kamali (Data Scientist, DHL Consulting). 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 taken place at the General Meeting, check out our Website www.phdnet.mpg.de. If you have missed the General Meeting this year, make sure to watch out for announcements of the General Meeting 2023 next summer.

Check out the new Steering Group 2023!



Muhammad Osama Iqbal

Spokesperson



Elisaveta Bobkova

Deputy Spokesperson



Franziska Schulz

General Secretary



Jaswanth Subramanyan
CPT Section Representative



Maria Elisa Almeida Goes
BM Section Representative



Alicia Haripershad
HS Representative

The Max Planck PhDnet



Offspring Magazine and Podcast Group

Offspring Magazine and Podcast team provide an outlet for Max-Planck Researchers to communicate their science, share their experiences, and support each other using the medium of journalism and podcast. We at the Offspring team are interested in all scientific and PhD related matters and aim to promote constant dialogue amongst Max Planck DRs. We publish an annual magazine and articles online on a regular

basis, and release weekly podcasts. We aim to get the stories of the PhDs heard and make their experience of getting a doctorate as a Max Planck researcher more transparent and open. We cover a broad range of topics including book reviews and opinion pieces on topics of general interest, as well as topics which impact the lives of DRs directly such as the stipend situation. Feel free to reach out to us at Offspring.magazine@phdnet.mpg.de if you would like to contribute an article, topics or ideas.

Offspring Magazine - The Podcast is a weekly podcast series published by the Offspring team members. The podcast covers a range of science based topics such as science research, sci-comm, publishing, sustainability, careers, etc. as general topics of interest that concern not only DRs, but also the broader scientific and academic community. In the past, we have interviewed eminent personalities in the field of Science Communication such as Dr. Neil deGrasse Tyson, Nobel Laureate Dr. Ben List, as well as famous authors such Dr. Satchin Panda. The podcast generally follows a direct interview format, except for certain episodes which follow the narrative format of storytelling. Feel free to reach out to us at offspring.podcasts@phdnet.mpg.de, if you have any feedback, comments or suggestions.

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. Reach us at social.media@phdnet.mpg.de!



Working Groups

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 close to 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 Max Planck Society 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 Max Planck Digital Library, we organize yearly Open Science Ambassador Program 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! It doesn't matter if you are experienced or just curious, we are always happy to welcome new members to the group. Email us at open.science@phdnet.mpg.de!

Career Development & Conference Group

Do you consider transitioning from academia to industry? Are you interested in working more closely with industry partners, and organizing seminars and workshops that help doctoral researchers develop soft skills? Our Career Development & Conference Group offers support for doctoral researchers to expand their career possibilities and prepare for their next career steps.



In the past two years, our group has been working closely with the Max Planck Career Evolution Group (a joint initiative from Planck Academy, Phdnet and PostdocNet) and has developed joint projects, such as Science2Industry Webseries, Career Evolution Games Week, and Career Evolution Hub. The first two initiatives consist of moderated interviews and workshops for Max Planck researchers who seek career coaching, inspiring career transitioning stories, and developing business acumen. Finally, our latest initiative, the Career Evolution Hub, is a digital platform that brings all these initiatives together on a single digital space, also allowing an exclusive networking exchange between Max Planck talents and industry partners.

If you are interested don't hesitate to reach out at career.conference.wg@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.

This year we made an effort to move elections back to the initially intended period as mentioned in the Phdnet Statutes (between February and August) without endangering the eligibility of the External Representatives during the General Meeting. Despite the fact that we were short on people, we managed to deal with the challenges. Not all election dates could be reset so far, but we will continue to work on it for the next years to come.

Speaking of the next few years: It would be great if 2023 more volunteers would come forward to support the General Secretary elect Franziska Schulz 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.

General Meeting Workgroup

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.



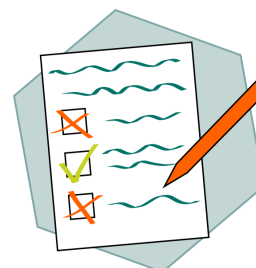
This year's GM22 was extra-special because we were able to meet in person after 2019! The meeting took place in MPI for Biology of Ageing from 10-12 October 2022 with more than 70 participants present. We had talks from the President and Vice-President of MPS, various alumni, Working Group coordinators etc.

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! You can reach us at general.meeting@phdnet.mpg.de.

Survey group

The Phdnet conducts annual surveys with current doctoral researchers to assess the working conditions within Max Planck Society. We are interested in topics such as working conditions, support structures, power abuse, vacation entitlement, salary, and mental health. The collected data is an important evidence used for supporting our arguments to improve DRs' working conditions, and further encourages collaborative efforts with the General Administration. In previous years, we were able to gain insights into and work towards bettering pay gaps, supervisory relationships, discrimination, microaggressions, mental health, integration, and career development. We also work in close relation with other workgroups which are more specifically focusing on one or multiple of these problems.



Our work consists of designing the questions, sending out the survey, analyzing the data and writing the final report. Would you like to join us while we investigate how the current status of DRs experience in the MPS is and what could be improved? We always welcome new members - get in contact with us if you want to join and check out last year's report on the Phdnet website. Contact us at survey.group@phdnet.mpg.de.

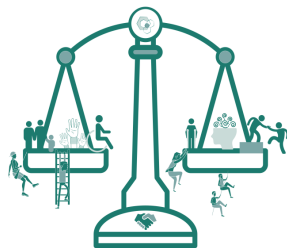
Webgroup

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.



Equal Opportunities Group

Doing a PhD is hard enough; we in the Equal Opportunity Working Group believe systemic barriers affecting specific groups disproportionately should not make it more difficult. The EOWG's mission is to promote equal working conditions regardless of sex, gender, sexuality, ethnicity, nationality, religion, disability, or other aspects of diversity. Within our group, we help PhD students by answering e-mails 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.



Last year, group coordinators changed from Barbara Safaric to Grace Ho and Danielle Pullan. We further developed our Safer Spaces initiative with support from the MPS general administration. This initiative aims to provide peer-to-peer support locally in each institute by training dedicated Safer Spaces Agents. We presented the initiative to the MPS Presidential Commission for Equal Opportunity, and they support the project.

In 2023, we will host an information booth at the Gender Equality Officers meeting on 20th of April at Harnack House. We plan to start a social media presence to expand beyond our Phdnet. We also have plans to contribute to the Offspring Magazine and Podcasts. We hope that with increased outreach beyond Phdnet, we might raise awareness of inequalities in the workplace while reducing the burden of education about working in diverse environments. Finally, we will promote National Diversity Day on 23rd of May 2023, and will offer help in planning activities at your institute, if desired.

Feel free to write us any time 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 subprojects based on your interests and skillsets. We look forward to hearing from you at equal.opportunity@phdnet.mpg.de!

Meet the Team



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