Judith Barnsby: On Her Career, Open Access, Artificial Intelligence, and Public Trust in Science

Eleonora Colangelo, Jonathan Schultz, and Janaynne Carvalho do Amaral

A leading figure in scholarly publishing for over 30 years, Judith Barnsby has shaped the field by connecting quality with Open Access (OA). Since joining the Directory of Open Access Journals (DOAJ) in 2015, she has served as Senior Managing Editor and later Head of Editorial, overseeing the evaluation of journals to ensure high standards and ethical practices. Under her guidance, DOAJ has become an authoritative entity determining the quality of OA journals.

In an interview with Eleonora Colangelo (Frontiers) on January 6, 2025, Jonathan Schultz (American Heart Association, *Science Editor*), and Janaynne Carvalho do Amaral (University of Illinois Urbana-Champaign), Judith reflects on her career and shares insights on what the publishing landscape might hold for the future. She discusses the challenges of predatory publishing, the transformative potential of artificial intelligence (AI), the possibility of journal obsolescence, the risks to digital preservation, and the need for equity and inclusivity in global publishing, for both researchers and professionals.

Eleonora Colangelo: You have had an incredible 30-year career in scholarly publishing and have made a significant impact through your work, with both nonprofit society publishers and service providers. Joining DOAJ in 2015 seems like the perfect culmination of your remarkable career. What initially attracted you to this field, and how did your path specifically lead you to join DOAJ?

Eleonora Colangelo is Policy Analyst at Frontiers (https://orcid.org/0009-0006-5741-1590); Jonathan Schultz (https://orcid.org/0000-0003-1030-5062) is Sr. Director of Journal Operations at the American Heart Association, and Editor-in-Chief of Science Editor; and Janaynne Carvalho do Amaral is Postdoctoral Research Associate at the University of Illinois Urbana-Champaign.

https://doi.org/10.36591/SE-4801-10

Judith Barnsby: I never intended to go into publishing. I think many people enter publishing by accident, and I didn't really have a specific career plan in mind. After graduating, my first job was in an analytical chemistry laboratory, but I quickly realized that lab work wasn't for me. I applied for and got a job as an information scientist at the Royal Society of Chemistry, where I initially worked as an abstractor on the *Analytical Abstracts* database. That was my entry into publishing.

My career path wasn't really planned out. At one point, I wanted to relocate because I was in a long-distance relationship. I moved to Bath, where I live now. My new role was in marketing, and it was an exciting time because it coincided with the early stages of putting journals online. We provided a hosting service and collaborated with forward-thinking publishers interested in publishing their journals online. I was part of a publisher liaison team, which marked the beginning of my work with online journals. I created web pages for journals, worked with publishers, and managed access control.

Eventually, my role expanded in publisher liaison, and I worked with a large number of publishers. I later joined IOP Publishing, managing the journal service and getting involved in metadata and publishing standards. After taking a break, I found myself again with an unexpected opportunity. A friend who worked at DOAJ posted a temporary job on Facebook, and I decided to give it a try for what was supposed to be 9 months. Nine years later, I am still there. My responsibilities at DOAJ have evolved from reviewing journals to more managerial activities, leading to my current role as Head of Editorial. As you can see, there hasn't been much of a plan, but it has been an interesting journey!

Janaynne Carvalho do Amaral: I see that you have many roles, and I am curious to hear more about your position as Head of Editorial at DOAJ. What would you say about your

CONTINUED

tenure, and do you have, or did you have, a favorite role in your career?

JB: It is hard to have a defining moment, but I would say there are 2 things in particular at DOAJ. One is that I think I brought them a better understanding of how publishers work, because when I joined DOAJ, it was quite a small team, mostly composed of researchers and librarians. Throughout my time there, and especially in recent years, I have been focused on improving our processes to be more efficient. When I joined, there was a big backlog of journals awaiting review, sometimes taking over a year to be reviewed. I prioritized reducing this backlog, and now we are reviewing journals in about 3 months, handling about 8,000 applications a year, making us much more efficient. We have built an editorial team that can manage the workload, with a wide diversity of people from different parts of the world, which is really beneficial. We have recently added team members from Indonesia and Turkey, 2 key countries for OA. We are aiming to have a global view of the publishing landscape and cover it as best we can. So, I joined a small team, and now I am part of a larger, more efficient, global, and professional team.

Jonathan Schultz: I am guessing that many of your efforts to make processes more efficient have been scalable because the number of journals you review must have increased during that same time period, right?

JB: One of my hopes for the future is to be able to use AI or other automated tools to make certain tasks easier. But currently, it is still a very manual process. It is a matter of looking at each journal and determining whether it meets our established criteria. Sometimes, especially when evaluating journals that might be predatory, you really have to dig deep. At the moment, there is no real substitute for the human brain in identifying some of the red flags we use when examining those kinds of journals. So, in terms of scaling, we've mostly had to increase the number of people involved. Hopefully, in the future, some of these manual processes will be more automated.

JS: I would like to transition to getting your reflections on the wider industry. Over the past 3 decades, working with many different actors, you have probably witnessed a lot of monumental changes in the scholarly publishing landscape. In your view, what have been the most transformational shifts, for better and for worse?

JB: Hearing that question really made me think back to when I started as an abstractor. We received print versions of journals sent from places like Japan, India, or the U.S. We wrote abstracts on forms, which were then sent to a pool of people to type into our system. We proofread enormous computer paper printouts, and everything was put on a big tape and sent to the printer at the end of the week. That process feels like the Dark Ages now! This encapsulates the change from when I started to where we are now. When I began working on online journals, it was really the start of the World Wide Web, and I think that was the biggest change we experienced. Suddenly, you could move from a print journal sent around the world to accessing individual articles instantly online. Over the whole 30-odd years, that was the most significant change. The web is ubiquitous now, but back then, we trained people to do searches on our database using a command line on services like Dialog or Data-Star. You had to type in the exact search, and pay for the results, which made it interesting because every mistake was costly. If you wanted 10 results and got 100 by mistake, it was quite a disaster.

In terms of where I am now, OA is another major shift. It has positives, such as increased access to content, which is wonderful. However, it also has negatives, like the entrenchment of big publishers, who have successfully navigated the move to OA, which may not benefit the wider scholarly publishing industry. At DOAJ, we have seen the rise of predatory publishers, another side effect of the move to OA. When I started at DOAJ, they were quite amateurish, but now they are very sophisticated. This poses a significant challenge, both for us, aiming to maintain a trusted journal database, and for researchers, who need to discern good journals from bad ones. It is especially concerning when journals are posing as reputable ones, attracting contributors from the Global South who are misled into publishing in poor-quality journals.

EC: Discussing the pros and cons of scholarly publishing for how it stands now naturally leads to the next question on OA. It was a revolutionary concept not long ago, but now it stands at the forefront of scholarly publishing. The question here is twofold: How do you see this evolution, and what do you think will be the next major revolution in the industry?

JB: One of the things I have been criticized for over my career is my tendency to see the potential for misuse in new developments. I often take a practical approach, asking, "Here is the change you are interested in. Have you considered how it might be used differently from what you imagine?" Unfortunately, we have seen some of that with OA over the last 20 years. Ideally, OA should be open and equitable, allowing everyone to read the papers they want and publish where they want. However, that hasn't always been the case.

CONTINUED

As for the next big thing, I can't see much beyond AI at the moment. There is so much to consider regarding how it can be used for good—how publishers can utilize its capabilities to make processes better and more efficient, and how it can assist human editors in making good decisions. But it is also crucial to recognize unethical use and learn how to combat it. We are seeing publishers working together now to address this, which is really important. They are sharing experiences from the past few years which is good because, to be honest, I don't see unethical use diminishing. People are quite clever, and someone will always find new ways of doing things. For instance, publishers in recent years didn't expect guest editors to publish subpar content in special issues, nor did they expect people to publish nonsense papers with AI's help. One of the challenges for publishers is to think like the "bad guy"—to foresee potential misuse and ensure it can't happen to them.

JA: Identifying predatory journals is challenging, especially with new developments and issues regarding AI. What makes a good journal, and what defines quality amidst all this? Since quality is at the heart of DOAJ's mission, could you talk a bit more about the dramatic changes or grey areas that journal editors and publishers might face in the near future?

JB: One of the challenges we face at DOAJ is distinguishing between journals that are predatory and those that are simply not adhering to best practices due to low quality. Particularly for new journals or those led by individuals without a publishing background, there is a need for education on best practices. I recall a journal we removed from DOAJ because it appeared predatory, publishing many papers quickly and significantly increasing their APCs (article processing charges). However, some industry colleagues familiar with the journal argued it wasn't predatory but had become overwhelmed by too many submissions without enough editorial resources. They hired a consultant to help manage their workload more effectively. This taught us that journals might inadvertently slip into poor practices, and some need guidance rather than punishment.

At DOAJ, we aim to discern when a journal requires assistance vs when a publisher is acting with ill intent. It is a balancing act when deciding whether to index a journal or publisher. This process can feel like detective work—verifying claims such as whether a journal is truly based at the location it claims, for example, whether the "American Journal of Whatever" is actually based in the U.S. or elsewhere. This involves investigating ownership and links with other questionable publishers.

Journal editors and publishers need to ensure the quality of the content they publish and have procedures to filter out undesirable papers. There is also a need to ensure equity in publishing, allowing everyone the opportunity to publish in their chosen journals. Many authors are priced out by high APCs. Even with waivers for the poorest countries, other researchers, such as those in India, might not receive waivers, facing APCs equivalent to 6 months' salary. Addressing such inequities is a broader industry challenge beyond the responsibilities of individual journal editors.

JA: Can the journals that are removed from DOAJ reapply?

JB: Yes, journals can be removed from DOAJ and then come back again. After a certain period we specify, they can reapply. However, there are some journals that we know we will never allow back because we have discovered enough about them to be certain they won't meet our standards.

JS: You mentioned looking forward, and I want to focus on that specifically. We are doing this special issue now in 2025 because we are a quarter of the way through the 21st century. We are thinking about what the halfway mark might look like in another 25 years, especially regarding OA. If you were in 2050 reflecting back, what do you think might be considered relics of the past, or what challenges do you think we will still face 25 years from now?

JB: It is challenging to predict the future, as it is hard to imagine today's landscape from when I started in publishing. However, I would hope that in 25 years, the obsession with impact factors and the "publish or perish" mentality that drives the excessive number of publications will have diminished. Regarding OA and publishing in general, I would like to see restrictive copyright gone, allowing authors to use their papers freely without transferring copyright or exclusive licenses to publishers. It would be fair since they are the original creators.

One interesting thought, prompted by past discussions, is whether journals will still exist. I have had many conversations where people proclaimed "the journal is dead," yet it persists largely unchanged. The structure of academic papers has remained similar for centuries. There was once talk of everything becoming interactive and multimedia, but most papers today are still relatively static PDFs, sometimes with supplementary data or a video abstract.

There is a shift toward preprint servers and research platforms, but the journal brand remains strong, serving its purpose to gather papers on specific subjects or serve society memberships and community segments. I will be interested to see if the journal concept endures, but I am not convinced it will disappear.

CONTINUED

EC: You have navigated significant technological and procedural changes throughout your career. If you could go back to the beginning of your journey, what advice would you give your younger self?

JB: That is a really interesting question, and there are definitely a few things I would mention. Reflecting on my career, especially during high-pressure jobs, I would advise managing your stress. No job is worth compromising your well-being. For those early in their careers, I suggest considering your work–life balance. It is important to focus not just on your job, but also on your life and what makes you happy.

So, don't pressure yourself to be successful if it doesn't make you happy. I have left jobs and moved to new positions at lower levels, only to work my way back up again later. It hasn't hurt my career overall, but it positively impacted my well-being.

JA: You mentioned concerns about making publishing inclusive for all authors. On the other side, we have seen many initiatives to make publishing roles more inclusive as well. What advice would you offer to the next generation of editors entering the field of scholarly publishing?

JB: That is a great point about making roles equitable. In my experience, publishing has generally had a good male/female balance, but it's often been predominantly white. It is important, especially in the Glosbal North, that we better reflect society in the publishing industry. One of the nice things about being at DOAJ is that we have a global focus and a more diverse team than I have experienced elsewhere, which is really rewarding. We also have volunteers from all over the world.

For someone entering publishing, my advice is to embrace new technology. Never be afraid of it, and take opportunities as they arise.

Build your network, as publishing is quite a small industry. If you are not happy where you are and want to move, your network can help you find new opportunities. I got the DOAJ job because it was advertised by a former colleague on Facebook, and we were connected there. While I didn't originally build my network for that purpose, having connections from various conferences and interactions proved invaluable. So, having people who know you can lead to new opportunities.

Networking is key. Connect with people, and that network will be useful throughout your career.

EC: Before we wrap up, I wanted to touch on artificial intelligence and machine learning. How do you see these technologies reshaping scientific editing and publishing in the next decade, more practically?

JB: Well, we already see some of the bigger publishers using AI for decision-making, such as assigning reviewers. I think this is only going to grow. Especially in publishers that have forward-thinking technological teams, there is huge potential for incorporating these technologies. Honestly, the sky's the limit. But, as always, we have to think about the implications. One key consideration is how these machines are learning—what information set are they being trained on? Particularly if we are giving them decision-making capabilities, we need to ensure the training data is comprehensive and unbiased. For example, when it comes to equity: if the dataset doesn't include enough papers from certain countries, how will the AI handle submissions from those regions? Will it unfairly reject them because they are underrepresented in the training data?

There are important questions to address when shifting decision-making from humans to machines. Computers often make the wrong decisions, not because they are inherently flawed, but because humans didn't program them correctly. I think AI will certainly reshape scientific editing, and I hope it does so equitably, while still giving editors the authority to override AI decisions when needed. It is vital that editors remain the ultimate arbiters of what goes into their journals—not an AI system, no matter how well it is trained.

I can't predict exactly how things will change, but looking back at the last 30 years, it is clear that change is inevitable. My hope is that AI tools won't exacerbate the divide between wealthy publishers and those without resources. In global scientific publishing, we need to ensure that underrepresented voices—whether from specific regions or disciplines—are not left behind. Diamond journals and smaller publishers, which often lack substantial funding, must also have access to these technologies.

This brings up another point: equity isn't just about authors—it is also about journals. In the past, when journals were in print, they were preserved in libraries around the world. Now, if a journal's website goes down and there is no digital preservation policy, that content can be lost forever. Unfortunately, under-resourced journals often don't have preservation measures in place. As the industry moves forward, it is critical to address this.

We need to ensure that as more journals are published exclusively online, they are safeguarded from being lost when a journal folds. This is already happening, and it is a real danger. I think the richer parts of the publishing industry should support the less-resourced ones—whether through subsidies or shared services. It would be wonderful to see more of that collaboration and mutual support in the future. That would be a truly positive development for the next 25 years.

CONTINUED

JS: You mentioned opening copyright, OA, and the role of AI. With AI potentially using this content in their tools, we might also see a decrease in the value of the journal as a bundle or a gatekeeper. What do you think will mediate that? Do you see the role of an advanced, future version of the DOAJ—maybe for AI databases? What do you think the role of an organization like DOAJ could be in that framework?

JB: I am not convinced that journals are going away anytime soon. I think DOAJ is fairly secure for a while, but you are right that if the concept of journals starts to fade, it leaves a gap. Someone has to be the gatekeeper. Someone will notice that and step in, though it might not be the first person who tries it. Someone else might come along and do it better.

The challenge is: without journals to hold things together, what will give one paper credibility over another? Without journals, who handles peer review? There are different levels of peer review quality, with some better than others. How will you identify quality across papers? You read them, but there is just so much content out there. Without journals, the sheer volume could be overwhelming.

I am not sure what the service that fills that gap would look like. But I agree, there would be one—someone will provide that service. Whether it would be someone like DOAJ, I am not sure since we are focused on journals. Acting as a gatekeeper at the article level would exponentially increase our workload.

If journals really do disappear, it would lead to interesting changes. In 25 years, it might surprise us, and it likely won't be what we expect. I certainly couldn't have predicted today's landscape at the start of my career.

JA: You mentioned that it is very important to trust what we read today. Do you think a lack of transparency would impact public trust in science, both among academics and nonacademics? How might this affect the trust scientists have in each other if there is no clarity on how AI tools are used by editors and publishers?

JB: It is a bit unclear at the moment. There are many instances where people aren't sure where AI is being used and where it isn't, or what is considered acceptable use of AI. I do think there is a risk that trust could diminish. You are right—transparency is really important. For publishers using AI in their editorial systems, it would increase trust if people knew where an editor is making a decision versus where AI is involved.

For example, if AI suggests reviewers, how easy is it for the editor to override those suggestions and choose others? Similarly, editors should know where authors have used AI, whether just to polish the English or in other areas of the paper, because we know AI can create fake references. You make a great point that transparency on both sides is crucial. We should encourage editors to clearly state where they are using AI and require authors to do the same. Transparency in decision-making is important wherever possible.

As an organization, we have to be mindful about being transparent because we want to provide journals with feedback when we reject them, but we also need to be careful not to reveal too much to predatory publishers about how to game the system. It is a balance of how much to disclose, and it is often easier said than done.

EC: I would like to conclude with a question about your legacy and the impact of your work on future generations. Let's approach this with an optimistic perspective. What is one thing you hope the publishing community and your organization will continue to focus on after you step back from your role? And, as someone passionate about detective fiction, what predictions might you offer as a "detective" of scholarly publishing quality?

JB: I hope for DOAJ that they will continue to provide their trusted service. I also hope that, for the publishing community in general, publishers and editors can navigate these slightly tricky waters we are in, ensuring they provide trusted services. It is crucial that people know the papers in the journals they are publishing are written by the authors they claim to be, are properly peer-reviewed, and meet the quality standards we want to see in publishing. Hopefully, we can remove some of the menace of the bad practices we are seeing at the moment.

I would like to see people trusting the scholarly literature because that is really, really important. There has been a danger, especially with recent issues, that people don't trust anymore. In an age of disinformation and misinformation, being able to trust what you read is really vital.

From a DOAJ perspective, I would also like to ensure that the community continues to support essential infrastructures, particularly those sustained by voluntary donations like DOAJ. There is a lot of emphasis on the importance of DOAJ, but some people don't follow that up with financial support. Services like ours really need backing from the whole community—libraries, publishers, vendors, etc.—so that we can continue our work.

It is an interesting time to be retiring because there are still so many challenges. When I look back, they are very different from the challenges we faced when I started in publishing. Back then, nobody really thought about issues like research integrity in the way we do now. That is a key difference: technological advances have made addressing these issues easier. But I shouldn't get pessimistic.

CONTINUED

I have loved working in scholarly publishing. It is a great field. You learn so much—not just about the subjects you are involved in, but also about how publishing works, how research works, and about standards, metadata, and quality. It is also a really nice community to work in.

When I was made redundant, I went to some interviews for jobs in other sectors. But then I attended an online conference, and I thought: why would I want to work anywhere else? Scholarly publishing felt like home, so I stayed. It is something to be cherished, and it is up to all of us to make it as good as we can.