SCIENCE JOURNALISM IN THE DIGITAL AGE

The virtual SciCon conference series | Transcript

Deborah Blum, Thomas Lin, Volker Stollorz | Best Practice Foundation-based Financing: Quanta Magazine/Undark/SMC
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Mod.: Christina Sartori

[Christina Sartori] OK, it's 4 o'clock in the afternoon in Germany, we'd like to start this session, the second session. Hello, everybody, and welcome to our session today, our second session. This will be a best-practice session about foundation-based financing of science journalism. It will be presented by three editors-in-chief, namely, we have Deborah Blum from Undark. Hello. Very nice to meet you. It's a great pleasure to have you here from the US. And Thomas Lin from Quanta Magazine and Volker Stollorz from the Science Media Center. Welcome, all of you. My name is Christina Satori, I'm a freelance science journalist and I will be the host of this Zoom session. Just briefly, SciCon discusses the future of science journalism from an international perspective. So we are looking for ideas, perspectives, experiences, models. We already had six lectures about different aspects. They took already place.

But today is not only the last online session of this year, but it's also the first best-practice session of SciCon that we have. Before we start, let me give you briefly, just a small background for SciCon. SciCon was created by the Wissenschafts-Pressekonferenz, WPK, that's German Science Journalists' Association, and the Deutsche Akademie for Technikwissenschaften, Acatech, that's the National Academy of Science and Engineering. And SciCon is funded by the German Federal Ministry of Education and Research, BMBF. And in the name of SciCon, I'd like to thank the BMBF for its support.

Due to corona, SciCon is organized in a two-pronged strategy. So first, they are online lectures and sessions like this one with international speakers. Every lecture and session will be recorded and transcribed so that we can create a reservoir of knowledge. And you find this and all the lectures we already had on the SciCon website, and the SciCon website you'll find under science-journalism.eu. There you'll find another, a lot of other information too about SciCon. So please be aware that by participating in the session today, you accept that we will record and transcribe the whole meeting and eventually you and your questions afterwards. Thank you for accepting this.

The second part of SciCon will be an actual meeting, so no virtual thing, no online session, it will be really taking place in Germany, in Freiburg, next year in May. That will be a working conference. So the second part of the strategy. And today we want to take a closer look at the role that foundations play as well. How do they shape the

transformation of journalism? As I told you, we have three editors-in-chief here today. They are going to present their media, especially their financial concepts. And afterwards, there will be some time for questions of understanding and a panel discussion about the different types of financing. So I'd like to start – ladies first – with Deborah Blum. Hello again. Deborah Blum won a Pulitzer Prize. She is director of the Knight Science Journalism Program at MIT in the US, and she is the publisher of Undark Magazine. She founded this Undark Magazine together with the former New York Times journalist Tom Zeller, Tom Zeller Jr., in 2016. Undark Magazine is a nonprofit online publication exploring science. And here I have to quote, "a frequently wondrous, sometimes contentious and occasionally troubling byproduct of human culture." And the publication's tech line is, this I like a lot, "truth, beauty and science". Everything else there is to know about Undark magazine and its financial foundation Deborah Blum will present now herself. So if you'd like to start your presentation, please.

[Deborah Blum] Thanks so much, Christina. It's a pleasure to be here, everyone.

I'm going to screen share.

Now, and so, and slightly repeating what you just said, so Undark was organized by Tom Zeller and I, we were the only two people working on it, starting in 2015. And at that point I had just started as director of KSJ.

And I was interested in publishing a magazine that would be a home for good science journalism. And I should explain our funding model a little bit here. It's a simple funding model in which we, I, pay for the magazine. The Knight Science Journalism Program lives on an endowment that was created by the James L. and John S. Knight Foundation in the 1980s. And I decided when I became director to take a portion of the income from that endowment to start this magazine. And so one of the things I should explain that we figured out when we were starting was the title of the magazine, Undark, and Undark was the name, the trade name, of radium-based luminous paint in the 1920s, which turned out to precipitate one of the great occupational health crises in the United States and became the model of the first uncontrolled exposure to radioactive materials in the workplace. And so Undark, we picked the name because it is about science and in both light and dark. But it's also, you know, from a moment in history that really, I think, illustrates some of the tension between science and society.

And so one of the things we decided early is that was where our magazine would sit, it would have this unique niche. We would not do, gee-whiz beautiful science. We would really explore that kind of push and pull between science and society and the way one or the other influences each other.

So this image I'm showing you here is from a series, an international series we did on particulate pollution. It was called Breathtaking. It focused on two $PM_{2.5}$ pollution in particular. If you went and looked at that on our website now, you would see that we're still showing live readings from the seven places in the world that we sent reporters and photographers to cover this. We take a similar approach in the United States and abroad. Most of our copy is freelance written, as you see here in this story from Afghanistan. Our staff look something like this. We have several

staffers, the Knight Science Journalism Program, who are hybrid. They work both for the Undark and for the program. We have several who are full-time dedicated to the magazine. And then we have a quite large network of freelance editors, writers, contributing writers and fact checkers. And one of the things we also decided early is that we would try to be both a home for this kind of serious science journalism, but also for integrity of story. So the actual first staffer that Tom and I hired was a fact checker.

And we have since made that one of the models of the program. We're a... one of the questions that I was asked is how these nonprofit models are accepted by other mainstream publications. So I wanted to put up here a list of all the publications that we partner with at Undark. Undark is what we call a "steal our stuff" model. We're foundation-funded. We don't take advertising, we don't need money and we don't charge for our articles. So there's actually a republish button on our website in which anyone can just come to Undark if they choose and republish the story wherever they want to publish it. But we also work in partnership with a wide variety of other publications and I've listed some of them here in this slide. We're actually working on a project right now with Scientific American, which is funded by the Pulitzer Center for Crisis Reporting.

And that will be an actual deliberate co-publish.

Some of these are just examples of places who have picked up our work. And it doesn't actually mention everything that we do. One of the things we do is we try to get our stories out of the big national markets and into regional and local publications. Because that's an audience that's really underserved by science journalism. So we've also had front page stories at the Las Vegas paper and in papers in Costa Rica, depending on what we're writing about. We... another example, I think, of how seriously these nonprofit magazines can be taken is the awards that they win. And I've put up some of the awards that Undark has won in the four years that it's been publishing. We actually planned it in 2015 and launched in 2016.

And so you'll see here a wide variety of awards for different work that we've done.

The Endocrine Society award down at the bottom was actually won by me for a story I did on the health effects of soy formula for babies. I wanted to briefly show you a little data mostly focused on growth of the magazine. So if you go back to January 2017 here, you'll see that our monthly page views started at about sixty-six thousand.

And if you come up here to 2020, you'll see that we average about 500,000 a month now. This does not include all the page views from the other publications that publish our work, but this is simply unique visitors to Undark. And if you look at 2020, what you'll see is, you know, a real peak in the height of the COVID-19 pandemic in the spring, going down in the summer, starting to come back up actually as COVID comes back up in the fall. I'm not advocating for COVID-19 as a driver of readership, but, you know, it certainly has driven a lot of audiences as we've moved forward. But the most important thing on this slide, I think, is the amount of growth we've experienced in the last three years. And you'll see the same

thing here, looking at our social media, social audience growth. This chart shows Facebook, Twitter, Instagram, Flipboard and our newsletter. And you'll see on all cases, it's a steady upward trend for us.

Finally, I want to mention that this is a team effort for all of us, I think I mentioned that in the award thing, that although I'm publisher, I'm not editor-in-chief.

That's Tom Zeller and I'm not a staffer of the magazine. I pitch in at the magazine as needed. I've done some narrative editing there. And I also contribute to this – Abstracts is our weekly roundup of science news. It's actually, the main sort of introductory part of that is written by one of our staff writers, Michael Schulson. But every member of the KSJ staff, including our program assistant, pitches in on Abstracts and writes a... one of the news items. And I actually do this every single week myself, because we do see this as both an independent magazine, it is independent from MIT. MIT does not direct this magazine in any way, in the same way that KSJ is an independent science journalism program at MIT and does not receive any funding from MIT. And you would see that with all the other Knight programs.

By the way, the Nieman's at Harvard, the JSK at Stanford, they do not receive funding from the university. They are funded by the Knight Foundation.

So we keep this independent, but we also recognize that it's part of the mission of the Knight Science Journalism Program, which is to raise the bar, we hope, on good science journalism and give it a good home and provide examples of what we think is important about science journalism in this magazine, which is why we all write for it.

I should finally say that, you know, I'm not sure how easily our model translates.

There are other publications in the United States that are funded directly by foundations, obviously Quanta being one of those, or Knowable being funded by the Betty Moore Foundation.

But we are funded by me, right?

And it's a decision by me at the Knight Science Journalism Program that was not a decision of the Knight Foundation. And that makes us a sustainable model as long as I'm director of the Knight Science Journalism Program, right? I'm hoping that we have built something that the next director will want to continue, but I also recognize and hope that the next director will have their own vision for the program, which may or may not include a magazine like this. So that's also one of the downsides of foundation funding. And we've certainly seen that in the United States and publications like Pacific Standard in which the foundation decided they were going to move on to something else. So. Anyway, I hope this is giving you a sense of Undark and what we do, and I'm happy at the appropriate time to answer any questions. Thank you.

[Christina Sartori] Thank you. Thank you very much. While you did check a lot of points that we asked you before and wonderful, wonderful pictures, by the way.

Thank you for all the information. And I'd like to go directly to the next speaker, which is Thomas Lin. Hello again and welcome. He is a former New York Times journalist and now he's editor-in-chief and the founder of Quanta Magazine.

Quanta Magazine was launched in 2012. It's an online publication of the Simons Foundation and it covers developments in physics, mathematics, biology and computer science. The articles are freely available to read online and several publications like Scientific American, Wired, The Atlantic and The Washington Post, as well as international science publications have reprinted articles from Quanta Magazine. How this works and how this is financed, and more about this financial situation of Quanta Magazine, we'd like to hear now directly from Thomas Lynn, if you'd like to go ahead, please.

[Thomas Lin] Sure. Great. Thank you so much for having me here today. Very happy to join everyone and to talk a little bit about Quanta.

So some of this may actually sound similar to what Deborah was just talking about, because we're both foundation-funded in some sense, even though she's more of a funder, I suppose, and I'm the editor-in-chief of this magazine. So I had to propose this magazine and get it funded. But, so Quanta is, as Christina was just saying, a nonprofit foundation-funded editorially independent science and math magazine that focuses on areas of fundamental research that... I'll just see if I can advance this... that mainstream newspapers and other science publications tend not to cover as much, I mean, because some of these areas of basic research and mathematics don't necessarily have that direct connection to people's everyday lives, they're not necessarily going to be applications right away, but it's much more about examining what reality is, what the universe is made of, answering some of those big questions we have just to gain more knowledge first and then eventually, maybe decades down the line, there will be some, in fact, all of the technology that we enjoy today started as basic research many years and perhaps decades ago.

And so my thinking in proposing this to the Simons Foundation in 2012 was to create a magazine and fill, I think, what was a gap in this area of coverage of more fundamental research and also like Deborah, like Undark, to try to model what high-quality in-depth, accurate science journalism could be, because I think if you look out there, it's a mix, right? There are some very solid, long time science sections of newspapers, for example, like The New York Times and magazines like Scientific American that have been doing great science journalism for many, many years.

But there's also, I think, places that do less well in terms of providing meaningful, accurate science coverage. And so part of this is to also provide somewhat of a proof of concept that both that this can be done in a way that both the public and scientists will trust, and also that, to show that there really is an audience for this type of journalism. And so our main goals are to make what otherwise would be very inaccessible areas of science and math accessible to the public and to allow people to be informed about what's happening in these areas and at the same time to hopefully sort of lead and show that a different model for science journalism is possible.

I'm just trying to advance this, OK? And so.

This is just one of our stories, just to give an example of a math piece that we published this year, which in fact is our most popular story of this particular year. And I think it's been viewed something like six hundred and seventy thousand times. It's about the Conway Knot problem.

And a graduate student who is very advanced for where she is, I guess, in terms of her career, was able to solve this longstanding problem that got a lot of people excited. And she ended up winning one of the Junior Breakthrough prizes this year as well. So that was a great story that is a good example of the kind of journalism that we do. In terms of funding, so we are a foundation-based publication, an example of what you might call philanthro-journalism. And that's a little different than I think some places that either apply for grants or try to get funding from a variety of sources. And so how this came about, and so I think this is not too common a model – there are one or two other places that I'm aware of, like Kaiser Health News, for example, also is a foundation-based publication – but how this came about was really that I was at The New York Times and I had the opportunity to go work at the Simons Foundation as a journalist to produce editorially independent science articles. And, but, in my mind, I was thinking, OK, maybe we can do something more. When I got there, I proposed a much bigger project of creating a magazine like Quanta, and I was fortunate enough to have people who also cared enough about trying to make these areas of science and math more accessible to people, that there was an opportunity to at least give this a try.

So it wasn't that at the beginning that anyone said, here, here's this whole big budget and create this fully fledged magazine. It was much more having to prove it sort of from the beginning with a very, very small staff and then building it up.

And really what I liked about that model, though, is that it was very much based on the quality and impact of the journalism that we were producing. And that for me was all you can really ask for, I think, in terms of having somebody give you a chance to build something like this. And so we have a single source of funding, just one foundation. We're actually employees of the Simons Foundation. The... one of the benefits of that is that all of the resources that we have are invested in the journalism itself.

We don't have to worry about trying to get advertising or to, you know, to do some other things that that commercial publications have to do. It also means that we're free from many kinds of potential strings that might be, you know, that might affect our coverage, which doesn't happen at the best places, but in some publications, that could be an issue as well. So we're free of that.

At the same time, we're fortunate to be in a position where – and this is something that is a condition for me to even work at the foundation – was that I could do independent journalism. It was something that I was not interested in going into PR or communications or anything like that. So this is something that required a lot of discussion and communication early on, because one thing I've noticed is that – and it's completely reasonable and not surprising – but that people outside of journalism don't necessarily – and there's no reason why they would – understand what, well, what journalism is at all, but what journalistic independence really means. And I

think people in the sciences don't really know what that means or why it's important. And I think the perception can be, well, hey, you know, we're scientists. We're trying to be honest. We're providing all this, you know, honest information about our work. Why does there need to be this sort of independence and all these layers of distance between the journalists and the subjects? And, you know, I come from, again, in the background of The New York Times where that's crucial to be able to produce trustworthy journalism. And so that was a lot of the early time in terms of gaining that trust, making sure. And also, I will say that scientists in general don't trust journalists for the most part because of what they see out there, because they see coverage that's often misleading or that doesn't quite get it right or that sensationalizes or, you know, there's just there's lots of sort of complaints that you get from scientists. And so our goal here was to produce independent journalism, but to sort of to get it right and to capture it in a more nuanced way and also show how science is really done. And I think both the public and the scientific community have really appreciated that.

And so an important piece of this is – just make sure where we are on time – is that we are able to produce our journalism with no interference whatsoever from the funders, and it's really just based on, again, the quality and impact. And that's why it's important, I think, if you're going to try to do a project like this, to be able to find specific metrics and measures for success, you need to be able to agree with the funder on what success look like and how we measure it: are there both qualitative and quantitative measures for what that looks like? We currently have a staff, a wonderful staff of twelve, including me, at Quanta Magazine, but it wasn't always this way. Again, we started very small. It was just, you know, it was just me first, then I hired one writer. And then for the first couple of years, we had a staff of about three. Then for the next few years we had a staff of about five and only more recently, the last few years, have we grown up to the current staffing. And I think, you know, in terms of whether we want to expand further or not, that's certainly a possibility. But I will say that I'm not in favor of growth for growth's sake. I think it's important to, for me to stay as lean and efficient and nimble as possible, because I think part of this is, is sustainability. I think it's very important to be able to say and to show funders that you're having this much impact for, you know, this much expenditure. And I think it is easier to do if you sort of grow and also to grow, I think, with a lot of self-examination and to be able to look after every few years to say, OK, well, things are going well. What things should we continue doing? What things should we maybe cut back on? Before thinking about... I think you can improve without expanding. Also, how am I doing on time?

Well, am I going along OK?

[Christina Sartori] it's OK now, but if you can

[Thomas Lin] I will wrap it, I'll wrap things up.

[Christina Sartori] Thanks.

[Thomas Lin] One quick note in terms of being able to measure impact again, there's the quantitative – you want to be able reach a lot of people. So, you look at your numbers, the traffic and unique visitors. I have a, it's not working very well.

This is a chart showing growth from 2012. I was, we were at basically zero at the beginning. This year we'll have something like 13 million readers and probably around 30 million pages for the year.

If we go back, we did a reader survey recently where we had six thousand responses, and this is one of interesting questions in the survey, where we asked people if they thought most of the science journalism they saw was accurate, fair and useful.

They gave that a rating of seven, of respondents. And then we asked if they thought Quanta was accurate, fair and useful, and we got to eight point nine. So that just showed that at least in terms of the qualitative sense of whether we were producing the kind of accurate fair and useful journalism that our readers felt was, supported, that idea. And then also, you know, a few awards this year. Very nice to get those, of course. And just again, for the kind of sort of more niche area of science journalism that we do, to have some mainstream awards like the National Magazine Award for General Excellence last year was a huge, a big honor, I think, for that for the entire team. And I just had a few recommendations for it from anybody. I mean, again, I think our model is quite unique in a way, but I think it's very important to both know your audience and to know your funders, to ask yourself, you know, why should a funder support your project, right? I like to think of things from their perspective to obviously demonstrate your ability to execute on that vision, to learn the business side in addition to the journalism side. And also, again, to know and share metrics for success, we have syndication partners [indistinct]. I know I'm sort of out of time, so happy to answer any questions. Thank you.

[Christina Sartori] We come to the questions later. Thank you very much for this insight. And we go directly to, last but not least, Volker Stollorz from the Science Media Center. He's a science journalist. He wrote for major newspapers in Germany, for example, Die Zeit, Die Woche, Frankfurter Allgemeine Sonntagszeitung. Volker Stollorz is chief editor and managing director of the Science Media Center, Germany. Since it was founded in 2015, the Science Media Center, SMC in short, bundles information for journalists on current and socially relevant science topics, and it makes available the expertise of over 600 selected scientists. It was funded with startup funding from the Klaus Tschira Foundation, and it pursues a multi-funder model. What that means and how this works, we'd like to hear from Volker Stollorz now directly.

[Christina Sartori] If you'd like to start now, Volker.

[Volker Stollorz] Can you see my presentation?

[Christina Sartori] Yes, we do. Well, I do at least.

[Volker Stollorz] Thank you for the invitation. I wanted to say a few words about who we are. So, the Science Media Center is basically a nonprofit and editorially completely independent intermediary institution. We were actually founded out of the German Association of Science Journalists, so WPK, who's also kind of hosting this whole project. So that's a very productive relationship between the community and science journalists and the Science Media Center. And our aim is to support

journalists from all beats when reporting on topics where scientific expertise can make a difference. As a general rule, we have several products, we produce rapid reaction, research in context on embargoed science. So, we collect independent expert comments on papers that are still under embargo, published in major science journals. We do fact sheets and we do also virtual press briefings where scientists can directly receive questions from the registered journalists with us. And at the moment we have around two thousand, er, one thousand three hundred journalists registered with our center. And we are also – very important – is that we don't produce finished journalistic reports. So, we try to help the journalists to make the reporting better or including scientific experts and expertise. But we don't write finished reports. And what we also have as an innovation lab, is the science media lab, where we kind of develop tools to kind of stem the scientific information overload. So how can you scan and evaluate scientific publications? Can you develop tools for non-expert journalists to find experts in a certain area of knowledge and these kind of things. So that's our innovation lab.

The funding concept, basically, it came about when I personally met the founder of the Klaus Tschira Foundation. He's one of the founders of the European software company SAP. And I got to know him personally and was able to present him, like Thomas was saying, basically the concept of a science journalist-run science media center. There are other science media centers in the world, but we are the one that was basically founded out of science journalism itself. And so the model was that the Klaus Tschira Foundation would fund an experimental period up to five years, and then we would seek additional funders and create kind of a balanced structure that would get as many sponsors as possible from different areas – science, businesses, media. Contributions should be limited. And then we have two ways where you can fund us, and one is a membership fee and our Association of Friends of the SMC, or you can make a donation. And we also with our SMC lab will get additional research funding with scientists together and work on new projects and get third-party funding.

And we publish all the sponsors and everything we get on our website. I will come to the amount of money later, but with any new funder we take on board, or any new sponsor, we kind of do a risk analysis because, of course, as you heard already, as I see it, we have basically three risks if we get funded by a foundation or a sponsor or by anybody. And one is we can lose our independence and we can lose our reputation, which is a different thing. So, if I take a sponsor which has no credibility in our audience – being the journalists – then we get a problem even if you are totally independent. And so we have to distinguish between independence risks and reputational risks. And we have also organizational risks, meaning that if an editor in our foundation, in our institution, does not like a donor, he may not work or not work as we like to do and probably leave the institution. So we have an organizational risk and therefore we kind of check these three different risks for each potential donor in our team and we evaluate every new funder according to this risk analysis.

So here, just a little chart about our budget so far. So, as I said, the Tschira Foundation funded us for five years and decided last year that they will continue the funding for our institution.

So it will not stop. I think it's a little bit like in your two cases. So they committed in giving us the funding so that our other funders at the moment, it's one quarter of our total budget is given by all the other funders, which we have. And it's now 56 different sponsors besides the Foundation. And you can see the amount of money we get from different types of organization. At the moment, we just have 16 full-time employees and we have guest scientists and students doing lab and research and innovation in the SNC lab. So that is basically the structure.

And I wanted to say a few words about what kind of funders do pioneers need? That is my lesson a little bit, maybe for some people, too.

So I think you need somebody who really gives you the chance to experiment and test what you are trying to achieve and take the time to do it.

And of course, you need the resources to do it. So you cannot just with a small amount of things, you cannot start a big, huge and successful organization. We also started very small with three or four people starting and now increasing every year.

I think the donor and, in our case, the Klaus Tschira Foundation, as you both told us, we are totally independent. There is no influence whatsoever on any editorial decisions we do. And they have great confidence in what we are doing. And I also like it like a gardener who tries to grow his plants in his garden, and I think you can only create impact if you have the time that you can prove the impact. So, if you expect an impact too early, then you cannot build an institution. And maybe the last slide I can show is from Beate Spiegel, she's now the CEO of the Klaus Tschira Foundation, and these are the three lessons she said she learned by funding institutions like our own. So, the most important is to attract people who are committed to the realization of a good idea. So, invest in people and not just structures. And inside the foundation that they decided very quickly, so when we offered our proposal, it just took I think not more than four months before they decided that they would do it, and then we could really start fast after that decision. So that was also quite, very important to start. And then if the organization comes into being, they help us with all these things, which for example, for science journalists in an organizational way it's not that easy to cover, and they are very helpful in this respect. And then they are very patient in looking for the development of the organization. And I didn't show, you know, our impact data. But you can see that after five years of operation, we are, and especially now as the corona pandemic, we get a lot of credibility from the news organizations who work with us and work with our experts. And so I would say after five years, I can see at least the experiment shows that the Science Journalism Association-driven and science journalism editorial office trying to get experts into the media system, wherever it is, is a sensible undertaking. So that's for now.

[Christina Sartori] Thank you, thank you Volker, so thanks for those three presentations I saw that some of you answered some more some questions already in the chat.

But since we are recording this to have a reservoir of knowledge, I will ask you now two or three questions just to have a complete picture. And that would be the staff,

for example. Could everybody, if you just briefly tell us, how many people do you have on your staff?

Deborah, would you like to start?

[Deborah Blum] Sure. [Coughs] Sorry, dust.

KFJ has a staff of seven people, and that includes both the full-time Undark staffers, the part-time Undark staffers and the full-time KFJ staffers. In addition, we have a dedicated freelance editorial staff of about six people. We have about four full-time fact checkers and we have two contributing writers. That's our staff in place.

[Christina Sartori] OK, and you did answer on the chat, but could you tell us again about your budget? Just a rough idea?

[Deborah Blum] Well, if you look at our whole budget at Undark at a baseline of a million a year US and we are usually over that.

But, you know, we'll never go under that.

And I think I mentioned also in the chat that our freelance budget had more than doubled since we started the magazine, and it's probably closer to tripled.

We try to pay a good entry-level, dollar-per-word payment to freelancers because we know that people who are working as freelancers actually have to make a living. And so we try to increase our freelance budget for writers every year.

[Christina Sartori] Thank you. And Thomas, could you also add how many? I think I counted twelve people, but maybe this is not the right number.

And the budget

[Thomas Lin] Yes, it's twelve full-time staff on my team, but we also have dozens of freelancers. We have a few that are very regular freelance writers and then many more who write less frequently for us. We have a main freelance copy editor. We have fact checkers that we work with, as well as many, many freelance artists, illustrators, photographers, animators and so it takes a lot of people. I like to say that the publication is only as good as the people who produce it. I very much appreciate what Volker just said about the importance of finding the right people to work on projects like this. I think that is a very critical point there. And in terms of funding, I think in general for the... early on it was just, you know, we started very small so there's only a few hundred thousand dollars for the budget. And then the past few years we've been between the two to three million level for our annual budget.

[Christina Sartori] So this is how you could expand your staff, and did you have to apply again and again at the Simons Foundation or how did this work?

[Thomas Lin] Yeah, I saw a good question there in the chat. So, the nice thing about being a foundation-based publication is that I can talk directly with the leadership

and we can plan that out. And so early on, because it was still just a very new idea, weren't sure it was going to work. And I think the foundation wasn't sure if they're as committed to it yet until we sort of proved ourselves. Early on, it was more of a year-by-year. But then after the first couple of years, it became OK, if things are going well. Now we have a three-year plan and another three-year plan. And currently I'm working on a five-year plan.

[Christina Sartori] OK, thank you. And Volker, you told us about your budget, but how many people are working at [indistinct]?

[Volker Stollorz] So we have at the moment 16 people, full staff. It is eight editors, so eight science editors and eight people in the lab and then two people, assistant and all this office stuff going on.

So that's 16.

[Christina Sartori] Yeah. And you showed that you got again the money from the Klaus Tschira Foundation for another five years, right?

[Volker Stollorz] No, that's basically, now it's a permanent model. So we will get permanent funding. It's not restricted. [CS] OK. [VS] So far, so I think a little bit like Deborah said, as long as I'm the chief editor, it will remain the same. If I'm no longer the chief editor, the new chief editor would have to manage, of course, to propose a perspective for the future.

But for now, it's a kind of a permanent commitment.

[Christina Sartori] OK, OK. Well, Thomas is looking a bit, "nice, that would be nice".

Could you three please tell me when you are planning to grow, or to expand, do you have to discuss this or are you anyway any how are you planning, Thomas, as you said, you believe in sustainability. You don't want to grow at all costs.

And what would you make to get to the decision? What we have to grow. We have to get more for the staff. And just tell us briefly.

[Thomas Lin] Sure, I'm happy to just, I guess, continue that thought, because I personally believe that, you know, as the person who's talking with the funders and making sure that, you know, we're able to show a level of impact for the input, you know, I feel it's important to be able to make that case at any given time. And I think it's easier to make that case and to ensure sustainability when you grow with an actual, well, first of all, to be able to make an accurate assessment of where you are and then decide what you really need, what opportunities there are in the current media landscape for you to further impact and then decide, OK, do we need to grow? Because, you know, I think also, you know, the challenges of getting to a point where you grow too fast are that you could potentially lose sight of some of that. I like to think of it as a ratio between sort of impact versus funding.

[Christina Sartori] You're in a good position because you are the one who can... it seems to be easy for you. You can just say, well, we do need two more people on the staff. I will pay it, right, right?

[Deborah Blum] I mean, Tom Zeller, the editor, and I have a discussion every year about what we think the smartest way to grow Undark is. And we do want to continue to grow it. And so, I mean, we have something of a limit, which is: what does the KSJ endowment provide us every year and how am I going to allocate those resources, right? And so, one of the things that I've learned since I took this job is that, you know, I'm sort of a budget bean counter in ways that I wasn't before. Thinking about, well, you know, how am I going to move this money around so that I can free up money here? And so, I do a lot of that. And one of the things I have done is that I've raised money from foundations for other KSJ projects that then frees up additional money for Undark. And I should emphasize that, you know, we are, we publish this magazine, but we also run a fellowship program.

This year, we gave almost half a million dollars in grants to American science writers, you know, in a kind of remote fellowship project that we're doing during the COVID year – we hope it's one year.

And so, you know, I'm also always looking at it in the terms of all the things that I think are important that we want to do and Undark, we do it.

It's one of the most important. But it's also important for us to support science journalism around the world in many other ways.

[Christina Sartori] Volker, are you thinking of growing, would you like to expand? Do you think it's important to expand?

[Volker Stollorz] Yeah, well, in our case, one is the issue of the number of editors who are permanent staff, and that is basically the question of how many topics can be juggled.

So we only go into topics where we have a good editor who is kind of serious in the domain of expertise. So, we will not help people with stuff we are not really familiar with. So that is one way to grow, to go on to new scientific domains of expertise. So that's one. And then we have the other, which is a little bit unusual. Maybe that's the SMC lab and that we have a strategy to try to cooperate with researchers at universities and develop these tools together in third-party funding projects. And these can be kind of three-year projects which we kind of in competition with others trying to get at and then work on the tools we are wanting to work together with other scientists, research institutions. So that's what the lab, the growth strategy, is a little bit to get project-based funding to develop prototypes of new tools. And for the editorial office, it's more important to have the kind of remote and permanent staff to work on the topics we want to work on. So it's basically that is the two things. And actually, we started with €500,000 from the foundation and then we had two stages where I proposed basically extensions into these lab activities and also new topics. And therefore, we grew a little bit. And I agree with Quanta that growth in itself, it doesn't mean anything. So, we have to focus and look where

you're going. And I think innovation and science journalism is also an interesting way to try to develop these new tools to do better science journalism in the future.

So that is one area I'm interested in personally besides doing this service-oriented, topic-related stuff.

[Christina Sartori] Well, I guess it's interesting for our audience, if you have a recommendation, one of you, or all three of you, how to find, or how to find money, how to find a foundation or other means of money, are there ideas that you tried in the beginning but it didn't work out or all the ideas you just didn't have the time to follow or you didn't have to, Deborah, like, for example. Could you say just a few brief sentences to this. Maybe Deborah, you would like to start.

[Deborah Blum] Yes. And so one of the things I would say, because I, we, I have raised money from a number of foundations: the Moore Foundation, the Cavalli Foundation, HHMI, the Rita Allen Foundation for different projects that we're doing.

I mean, just to give you an example, we're going to put online this month a free guide to editing science. It's a handbook for science editors and that was funded by the Cavalli Foundation and HHMI. And so one of the things I've learned as I've worked with different foundations is how important it is to understand what the sweet spot is with that foundation, what they're hoping to accomplish, what they see as their primary mission, and not just to take your, you know, your wonderful idea to a foundation thinking, you know, OK, they've never done this before. This is not in their normal ballpark. But I'm sure they'll love this. You really have to research the foundations and understand the directions that they're taking. I mean, you can encourage them in new directions if you have a good working relationship. And that's the other thing that I've learned from working with foundations is, you know, personal relationships matter, right? And you really have to respect the fact that many foundations these days are investing in good science journalism and to think about the ways that they want to do it. I mean, I will tell you, when I saw that the Knowable had gotten, you know, a very supportive grant from the Gordon and Betty Moore Foundation, I thought, oh, why didn't I ask them if they would do that?

And I, you know, you have to pay attention.

[Christina Sartori] OK, I saw you nodding when Deborah said that it's important to have a personal relationship or you have to research before the sweet spot of a foundation.

What do you think?

[Thomas Lin] All of that. And even though I haven't had to go to multiple sources to get funding in that way, it was really my pitch to one foundation. And I was already there, working there, so I had access to all the people to talk to and could sort of and I had a sense of the, and honestly, it was an exchange. So even though I said before that, you know, scientists don't really know how journalism works, I didn't know how foundations work. I mean, I had never worked at a foundation before. I hadn't even, I had never heard of the Simons Foundation before they reached out to me. And so, you know, this is all new to me. But understanding what their concerns

were and also given the ability to do independent journalism, but still aligning your vision and your mission in a way that makes sense for them is critical, right? Because you have to think, why would somebody fund something – especially something they can't control – unless there was something that they felt was benefiting their mission as well. And so, I think that that's critical. And then also there was a good question, follow-up question about funding expansion, like how do you get people to then fund an expansion as well? Like when we... it wasn't five, I think [indistinct] six, it was like doubled our staff at one point. I think one thing is that once you've already built something that's doing well, that you've done the initial startup work. Actually, you can get a lot more bang for the buck by adding a certain amount of staff to fill that out. Like we were understaffed, I should say, for many years. So, it's not that, you know, five or six really wasn't it. You know, we had people wearing multiple hats, something like about the startup environment. And so, but once you've built something that you can then say: this is successful, but we need to build it out further. And actually, the amount of investment for filling out the rest of that staffing will actually get you a big boost in terms of reach and impact. That is actually, much more cost effective than that initial startup period.

[Christina Sartori] OK, Volker, what would you recommend?

[Volker Stollorz] In my case, it was a little bit unusual because it was very personal. So, I met Klaus Tschira who was basically the founder of the Klaus Tschira Foundation personally, and he was a very avid consumer of journalism and he had many concerns about the way it's going and whether it's right.

And therefore, he was involved in science communication and I could convince him that investing in good science journalism is a good way of giving science a more profound role in the public debates.

And I think the most crucial point was that he had to understand that to be successful, that such an organization had to be independent. And that's the point he got. So, he understood that it could not work if he every day comes into office and said, well, do this, do that, can you do this? He really deeply understood that this editorial independence is kind of the only way to generate trust in our organization by, with our journalists or the audience. I think that was very important. So you have a way to, yeah, like Deborah said, you have to come into contact, you have to present not just say, well, do what I want, but you have to be in a very interesting conversation. And people have strong opinions, and you have to discuss and find the common ground, but not giving up your principles. I mean, that's what I did. And that succeeded in this case. And then now there was a question about fundraising. Yeah, well, that's a problem. We have these 56 donors and basically, it's also kind of a personal thing. So, it's now a real structure so far behind it because it's also kind of personal. You have to convince every new donor basically by explaining what you do, why you do it, why it's necessary, why it's important.

And basically that is done on certain occasions. But we don't have a fundraiser for that at the moment. So basically, that's why I'm doing it in a way when I have the time to do it. But it is just an addition. And as we have this main foundation giving us the basic funding, we can basically grow organically with the rest of the funding

and write competitive grants for research funding, of course, yeah. That's another area where we can make a difference.

[Christina Sartori] So you all three really emphasize the point, or stress the point that you have, it's a personal thing to find the right foundation, the right founder. And, also, that for you all three, it's very important to be editorially independent. We don't have a lot of time. But briefly, I'd like to mention one point because there Volker Stollorz differs a bit from Deborah Blum and Thomas Lin, which is that Volker Stollorz is not creating stories himself, but he helps journalists to write stories which they can sell. I put it bluntly now, and the model of Quanta Magazine and Undark are different because you do cooperate, you say. But doesn't it mean that journalists get paid by you and, well, which is fine, but thereby The New York Times, The Washington Post, the Science Magazine, whatever, they don't have to pay for this kind of journalism. Don't you think that in the future this will, well, not destroy science journalism, but it will diminish it?

Maybe you guys want to start.

[Deborah Blum] Are you asking, Christina, if it's a problem that we allow people to republish our stuff for free?

[Christina Sartori] Yes.

[Deborah Blum] OK.

[Christina Sartori] Because they could get used to getting free stories.

[Deborah Blum] Yes. I mean, I will say that I haven't seen The New York Times pick up any of our stuff to my sorrow, right?

You know, I think that that's a legitimate point. It's one of the reasons that we pay our writers as well as we can. And we also allow them to keep the copyright so that if they want to sell it elsewhere after a certain period of time, they can do that as well. But not every nonprofit is a steal-our-stuff model. I don't think Quanta is, probably not, right?

[Thomas Lin] No we're not. Right. We do syndicate, but we do it on a more of an exclusive basis where we work specifically with other partner publications to syndicate and we don't, not everything gets syndicated necessarily. I don't think we, I think in the early years it was more important in terms of getting the word out. But we also like, we pay writers quite well, often better than some of the newspapers especially, and maybe some magazines as well. And so it's really one piece that's being written and it's just being shared. So, it's not necessarily, it's not that anybody is working for free.

[Christina Sartori] So, you know, OK, so you don't fear that they could get well used to it and they just pick up your stories and they don't have to hire any science journalists anymore?

[Deborah Blum] No, I mean, it's interesting because some of the publications, we've had this conversation about a few of the national publications that have picked up a lot of our stuff, like, are we giving them too much free stuff and should we set limits on how much you can republish? But that undermines what I think is the other thing we're trying to accomplish with this, which is that if you go across the landscape of the United States and if you look in particular at what people tend to call the red states, you know, the more conservative rural states, they don't have science journals. They don't have science journalism, and often they can't afford to do it. So, we feel that it's in our best interests, and the best interests of, you know, a science-literate American public, to try to make this as available to those. And we, actually our marketing director will reach out directly to small newspapers or regional newspapers if we're doing a story that we think has some implications in that area and say, we just want to let you know that this is available if you want to publish it, because we see that one of the things we want Undark to do is try to get good science journalism into these underserved markets.

[Christina Sartori] OK, we are nearly at the end. I'm sorry, but we have one more really important, interesting question. So, if each of you would just answer in a very brief manner and the question is, what's your recommendation for ensuring journalistic independence when you are foundation-based and financed?

Well, Deborah, just go ahead. You're just in the middle of the screen.

[Deborah Blum] Yes, well, I mean, I'm a long-time science journalist and Undark is, you know, my... one of the things I started, the KSJ, and I see it as my mission to protect it and keep it independent.

And when we have had occasional times where MIT, you know, has wanted, has wondered why we don't cover MIT, say, and I've just blocked all of that, right? So, I think it's important for the person at the foundation that's themselves... I'm going to describe myself briefly as a foundation funder. I think it's important to understand that from the beginning and to have your foundation understand, you know, that you, that the value of your publication is that it's independent and they support that.

[Christina Sartori] Thank you. Volker?

[Volker Stollorz] Yeah, actually, my point would be that: look at our products. So, if you see any hint of 'not independent' from some donor or funders or whatever, please tell us. So please judge us from our products we sell. And that is not to say we don't sell them, but we just give it away. But please look at it and look for spots and tell us so we get feedback by the people. But the other thing was we were basically funded and organized outside of the science journalism community and there was a lot of concern about this independence. Of course, people were concerned, are we going to be independent? So for me, that's written in my DNA. I'm a science journalist, so as long as I'm the head of that center, it couldn't be otherwise. And I totally agree with Deborah. And if you want to get funding, you have to make that completely clear that you will not do it. I mean, the funder has to understand that this is a sine qua non to do it. I mean, I wouldn't do it. So basically,

that is a problem, of course. But you have to be very clear on what you want to achieve.

[Christina Sartori] Thomas, would you like to add something?

[Thomas Lin] Yeah, no, I think this goes right back to sort of who you choose to lead an enterprise like this, because if you do get somebody who is a journalist who understands the importance of this, they're going to stick by their principles and to, you know, sort of these journalistic standards, because that's ultimately what the public needs to be able to trust what you're reporting and producing. And that's ultimately what will allow the project to succeed.

And so, you know, ultimately, if, and I'll say that there are foundation-funded publications that may be sort of more of a hybrid, right?

That aren't as fully independent as maybe, you know, some of us are trying to keep our [indistinct]. And so, it really does depend who I think the leadership is and how they're able to sort of maintain that independence.

[Christina Sartori] OK, so now we really have to close. I want to thank you very, very much, Deborah Blum, Thomas Lin, and Volker Stollorz for your presentations, for all the answers and the discussion. Thank you very much. And thanks for all the people in the audience who gave input in the chat and as we told you before, there will be a reservoir of knowledge and where you will, maybe not tomorrow but in a few days, you can see the session and all the other sessions that have taken place already.

So thank you very much. And greetings wherever you are.

[Deborah Blum] Thank you.

[Thomas Lin] Thank you.