DOI: 10.24425/academiaPAS.2024.151187

Digital Anthropology

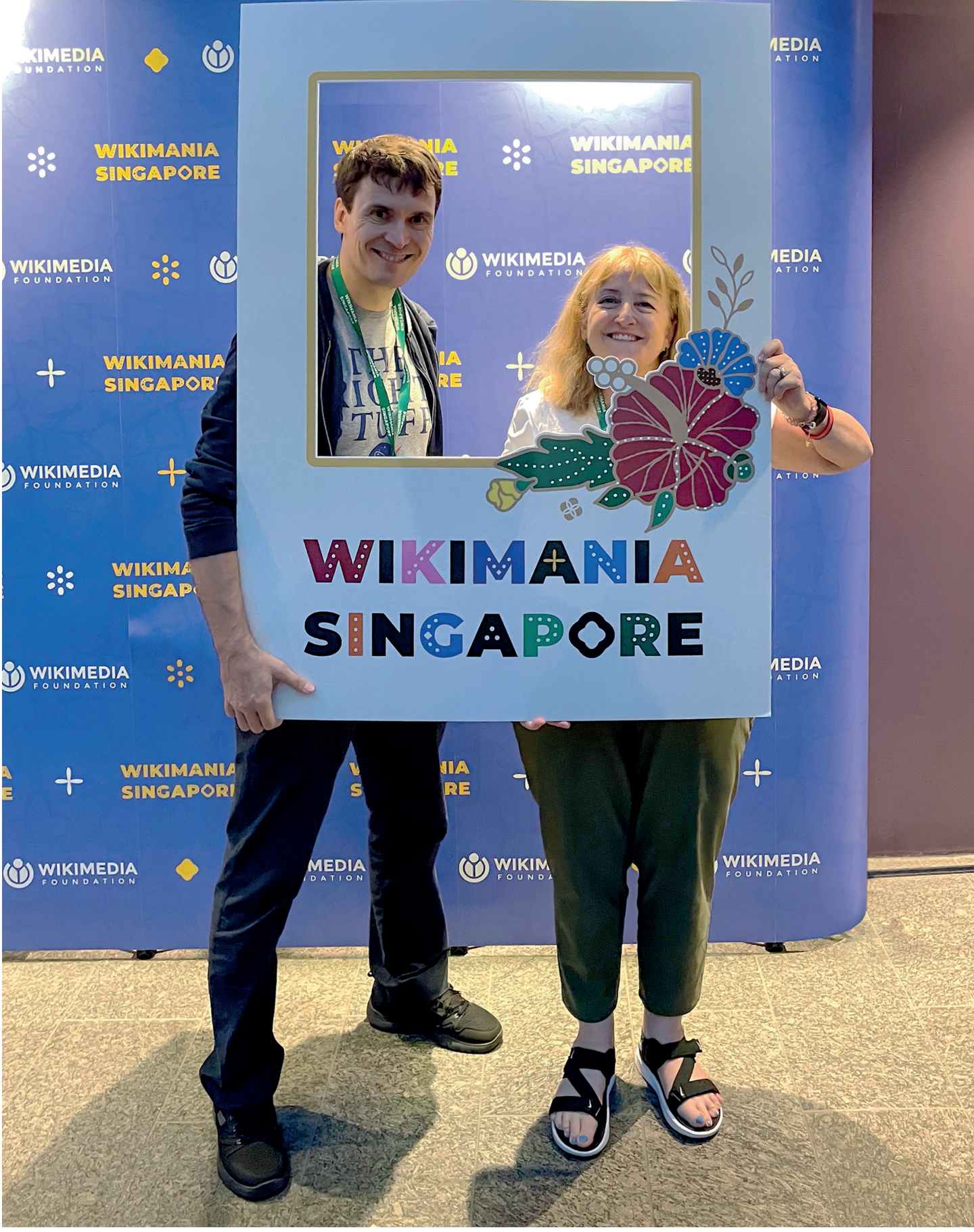
Prof. Dariusz Jemielniak, Vice President of the Polish Academy of Sciences, discusses the dynamics of online communities and the study of digital interactions.

Poland's system of academic degrees has two levels of doctorate. You hold a doctorate (PhD) as well as two higher-doctorate degrees (known as DSc or "habilitation"). Earning two of the latter, within a relatively short time, is quite an achievement. The first was in management, the second in sociology, is that right?
DARIUSZ JEMIELNIAK: That's right. I got my doctorate in 2004 and earned my first habilitation in 2009, both in management, and became a professor of management in 2014. After another 4–5 years, I decided it would be useful to earn another degree in a completely different field, hence the habilitation in sociology. Next, being selected to become a member of the Polish Academy of Sciences was, of course, the highest honor.

What first prompted you to study management, and how did your academic career get started?
I took an interest in management because I wanted to study something that combines various fields and disciplines. I studied journalism a bit and for some time I even thought I would become a journalist. I wrote a lot in high school, and while at college I worked for the computer magazine *Enter*, where I ran a daily news service. I wrote software reviews and articles dealing with education and IT for *Gazeta Wyborcza*, *Enter*, and *PC Kurier*. But after a while I found journalism too simple and uninteresting, so I began studying as an undergraduate at the Faculty of Management at the University of Warsaw, and got drawn into the field. After graduating, I aspired to work in academia and explored various universities. Kozminski University in Warsaw stood out because, unlike many public universities in Poland, this private school offered its PhD students not only scholarships but also regular employment – something I consider a standard of civilization that is unfortunately still uncommon at Polish public universities,

You incorporate various fields of science in your work, combining specific knowledge and skills. Which field would you say your research is focused on?
Unfortunately, I think such labels are often problematic. My work spans what could be called sociology, management, communication sciences, information science, anthropology, and even health sciences. All these fields, to some extent, focus on studying people and communities on the internet, analyzing how they self-organize using information technology, and often considering the actions they take. For example, whether a given community organizes in order to share knowledge or to deny the climate consensus. Depending on one's perspective, such work can fall within the scope of management, sociology, or communication science. Ultimately, how a particular research article is classified will depend on the journal to which it is submitted and the choice of literature cited.

A famous quote attributed to the renowned economist and Nobel laureate Paul Samuelson suggests that economics eventually boils down to psychology. Can we say by analogy that management eventually boils down to sociology?
There's a joke in the United States: What's the difference between a management studies scholar and an organizational sociologist? The answer is: $30,000 a year. Of course, sociologists tend to think that everything boils down to sociology. My colleagues in management would likely beg to differ. Management is a distinct scientific discipline that incorporates insights from sociology, psychology, philosophy, anthropology, economics, and finance to better understand organizations and how people self-organize. It operates at a higher level of organization than psychology but at a lower level than sociology. Sociology focuses on analyzing society as a whole – although

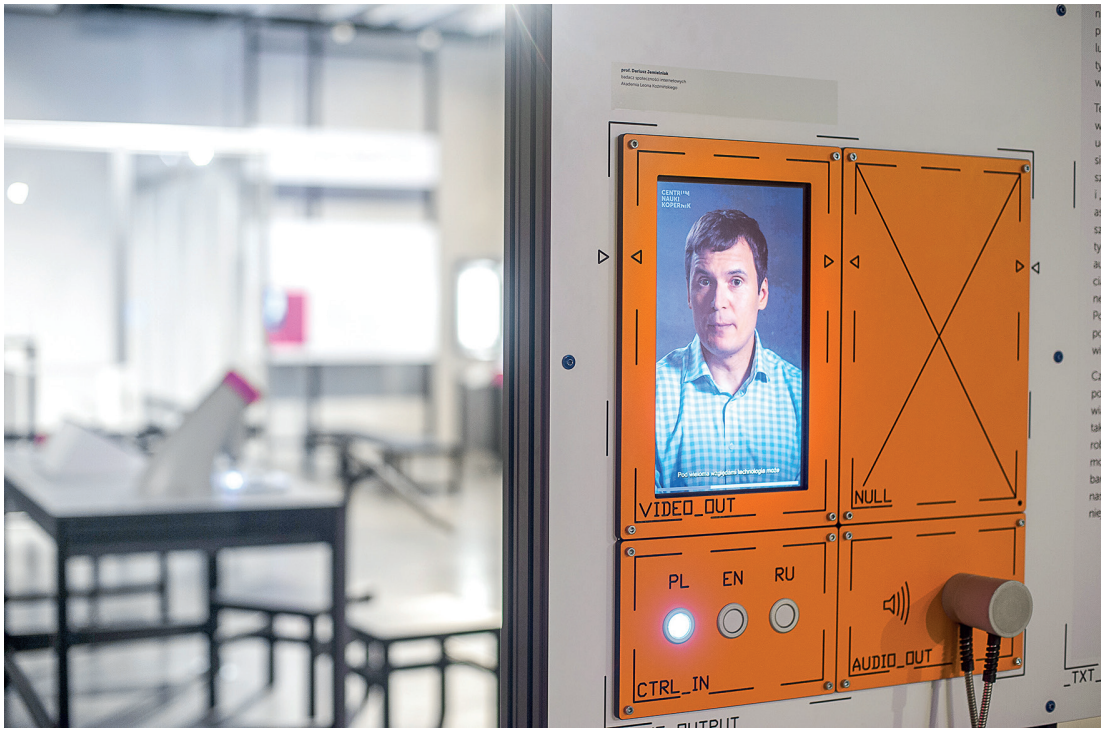


MIKE PEEL (WWW.MIKEPEEL.NET), CC-BY-SA-4.0, VIA WIKIMEDIA COMMONS

there are sociologists who specialize in the sociology of labor, the sociology of organizations, and related issues, much like scholars of management.

One of the problems with science in Poland is that we place too much emphasis on subdividing it into disciplines. However, these labels are not really important. For example, at the Berkman-Klein Center at Harvard, where I work, there are law professors like Yochai Benkler who study the Internet and primarily publish papers on its regulation, rather than traditional legal analysis. This demonstrates that labels are merely conventions.

Prof. Jemielniak is a member of the Board of Trustees of the Wikimedia Foundation



Interactive exhibit at the Copernicus Science Centre in Warsaw, in which Prof. Dariusz Jemielniak appears as an expert (he is also a member of Copernicus' Programme Council)

SYLWIA PIWOWAR

That's pretty much the norm at Berkman-Klein? It started as a legal center, but now it's hard to classify straightforwardly.

Yes, for many years, Berkman-Klein was associated with Harvard Law School, and now it is an independent unit at the university. It is a distinctive place, attracting people interested in regulation and policy, as well as hacking, social understanding of technology, anthropology, and other fields. Pigeonholes like "management" or "sociology" are ultimately unimportant to me. What matters is whether we can inspire each other and if we have something valuable to contribute.

Terms like "digital anthropology" or "sociology of the Internet" may strike readers as quite exotic. What do they entail?

Digital anthropology applies anthropological techniques – mainly observations and field research – to explore online human interactions and how people use the Internet. A similar term, *virtual anthropology*, focuses more on research conducted via the internet, whereas digital anthropology may also include traditional face-to-face interviews in addition to online research. In essence, the *sociology of the Internet* and *anthropology of the Internet* refer to when researchers harness the methodologies and insights that have been developed in these fields to study how people engage with and participate in the digital world.

Can you tell us more about your career path?

I started out as an organizational anthropologist. My PhD dissertation focused on the anthropology of organizations, examining the professional culture of IT specialists. I explored how IT specialists behave in a corporate environment, why, for example, they adhere to a specific dress code (avoiding suits and ties) and what motivates them to stay at work well beyond regular hours. I was also interested in such issues as their perception of time and the practice of being rewarded for exceptional dedication, rather than for performing routine duties. These areas intersect with the sociology of professions, occupations, and management.

Later, while at the Department of Anthropology at Cornell University on a Fulbright scholarship in 2004, I studied IT specialists working in various organizations. Gradually, I began to be interested in research beyond traditional frameworks. While working at Berkeley around 2008, I realized it was worth studying other online communities. My interest in Wikipedia led me to the idea of applying anthropological methods to study the culture of Wikipedians and the process of online knowledge creation. This resulted in my book *Common Knowledge?*, the world's first ethnography of Wikipedia, published by Stanford University Press.

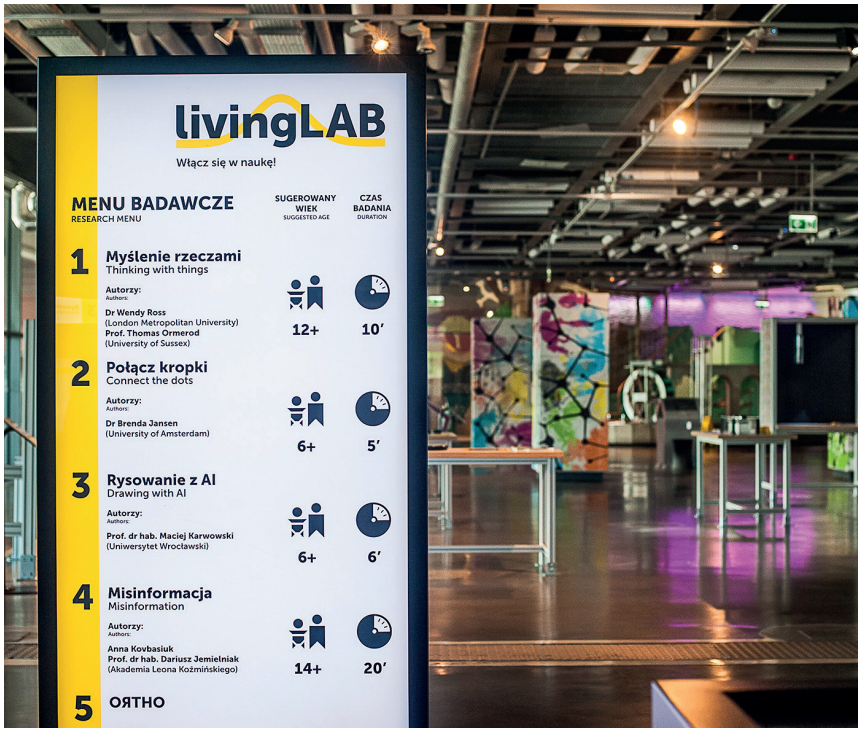
Since then, my research has continued to evolve, encompassing not only Wikipedia but also other areas. I have analyzed the open-source software community, which ultimately led me to the realization that while anthropology provides valuable insights, combining it with data science can help validate results and offer a broader perspective. This integration of qualitative and quantitative research is discussed in

my book, *Thick Big Data: Doing Digital Social Sciences*, published by Oxford University Press. I argue that anthropology complements data science well by adding context to its findings, whereas data science can significantly expedite preliminary field research in anthropology, together leading to a deeper understanding of selected phenomena.

Still, it would seem that these are two fields that are hard to combine.

One of the current challenges in anthropology is that its findings are often not given much credence. Anthropological research outcomes are essentially narratives or stories: someone goes somewhere, observes things for a while, talks to a few people – but why should we ultimately believe their conclusions? Data science faces a similar, though perhaps less apparent, crisis. We frequently encounter false correlations or random connections, and while we can extract results from large data sets, we often lack the context to understand them fully.

For example, research on the dating site OkCupid revealed that many common beliefs about racism in the United States need to be significantly revised. Traditional studies on racism often rely on surveys and interviews, but analyzing data from OkCupid, which shows who people actually want to date and under what conditions, brings us to different conclusions. This data confirms that racism does still exist in American society, and quantitative studies can prove it. However, understanding *why* racism occurs and where it stems from requires qualitative analysis.



SYLWIA PIWOWAR

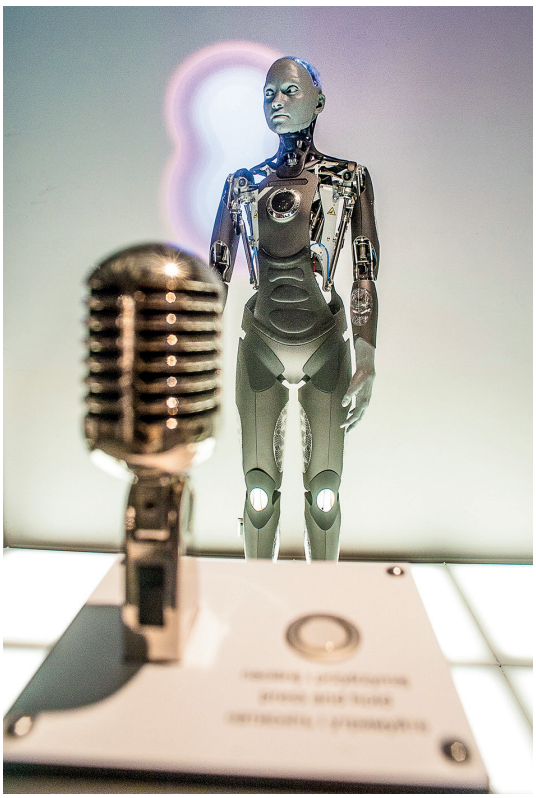
The "LivingLab" zone at the Copernicus Science Centre houses exhibits allowing visitors can particpate in real research projects. One of them, dealing with "Misinformation," was designed by Prof. Dariusz Jemielniak together with Anna Kovbasiuk

How is research in the field of digital anthropology actually done, what practical benefits does it offer?

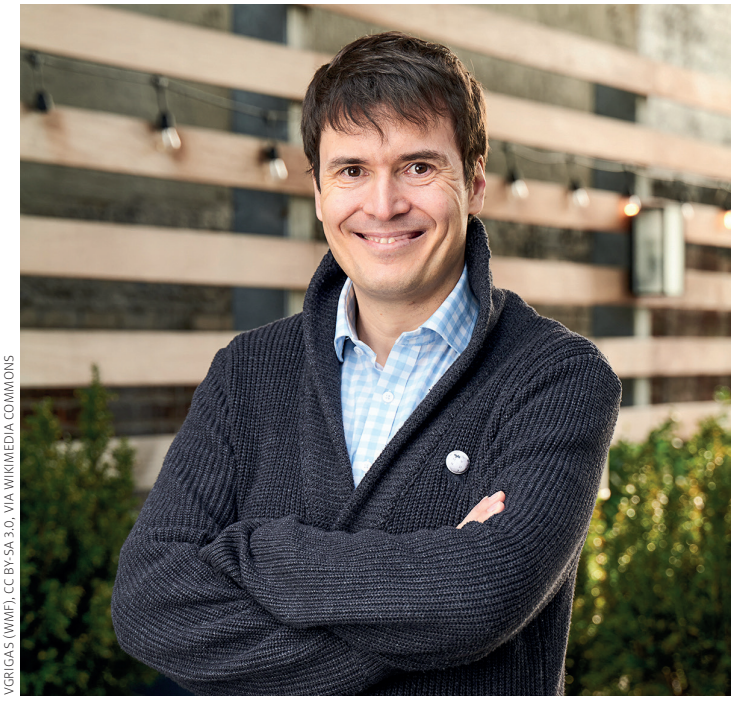
For example, by analyzing a million tweets with a specific hashtag, we can first select the thousand most popular ones and focus on analyzing them qualitatively. Another example is social network analysis, where we examine how accounts are interconnected and who interacts with whom – essentially, who boosts each other's popularity. This method helps identify various types of networks. These include emergent networks where we can detect potential paid disinformation campaigns, as well as more authentic networks that nevertheless use automated popularity boosting.

For instance, in a study on publications about the AstraZeneca vaccine, a doctoral student of mine and I discovered certain patterns of misinformation. We also noticed that European Commission institutions were using automated tools to like each other's public health information. Despite their noble goals, they too were using tools associated with disinformation to boost their reach. And so their objective was the same as with disinformation, though their intentions were entirely opposite. The method of increasing reach was identical in both cases.

Qualitative analysis is tedious and time-consuming, which is why quantitative analysis is done first. This approach shortens the path, allowing us to identify what is then worth studying in-depth.


SYLWIA PIWOWAR

At the Copernicus Science Centre



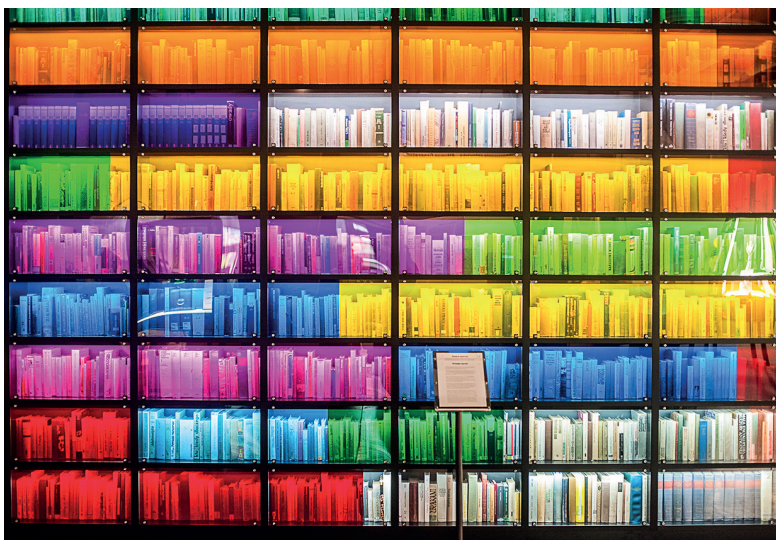
VGRIGAS (WMF), CC BY-SA 3.0, VIA WIKIMEDIA COMMONS

Prof. Dariusz Jemielniak

is a Professor of Management and a sociologist analyzing online disinformation and anti-science movements (including anti-vaccination), specializing in open collaboration organizations and online communities. Head of the Management in Networked and Digital Societies (MINDS) Department at Kozminski University in Warsaw. Corresponding member of the Polish Academy of Sciences since 2019. Vice President of the Polish Academy of Sciences for the 2023–2026 term. Member of the Board of Trustees of the Wikimedia Foundation since 2015. Faculty associate at the Berkman Klein Center for Internet & Society at Harvard University since 2016. Author of books such as *Common Knowledge? An Ethnography of Wikipedia* (2014), *Thick Big Data: Doing Digital Social Sciences* (2020), and *Collaborative Society* (2020, with A. Przegalińska).

dariusz.jemielniak@pan.pl
djemielniak@cyber.harvard.edu

At the Copernicus Science Centre



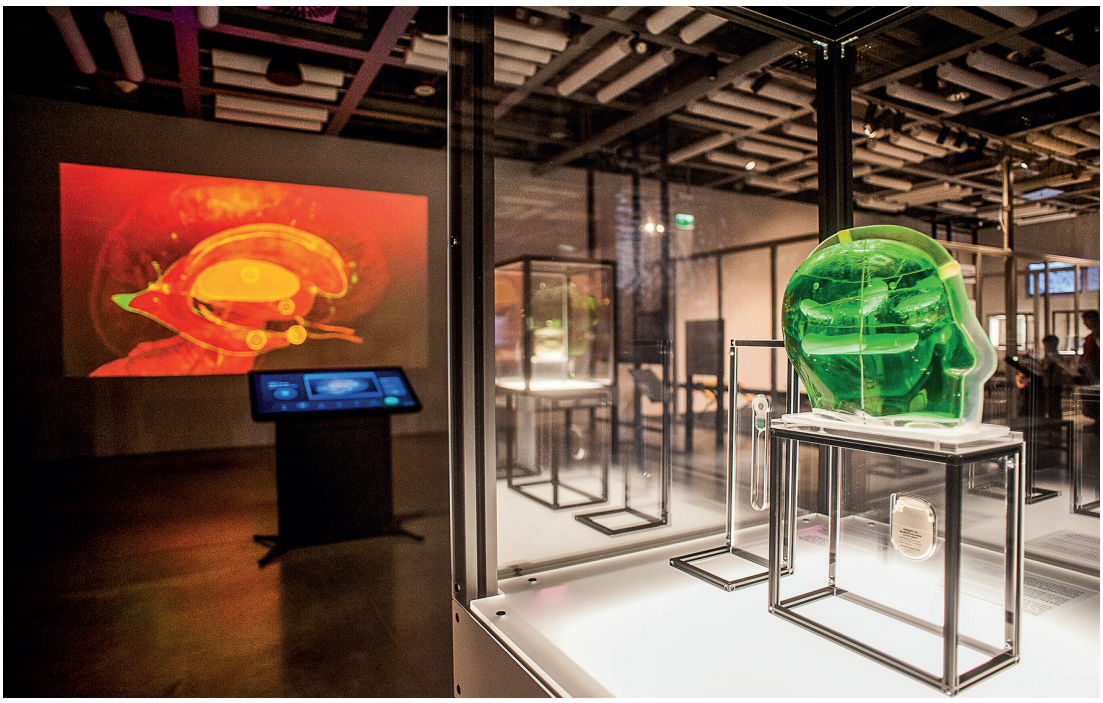
SYLWIA PIWOWAR

It sounds like statistics, just on large-scale data.
Statistics involves performing mathematical operations to detect sometimes subtle relationships. Data science, however, doesn't always require advanced statistics. For instance, analyzing the kind of language used in tweets can be insightful. Studies on the Men Going Their Own Way (MGTOW) movement and tweets with the hashtag #feminism show that MGTOW tweets use the language of "they" and "them" much more frequently than "we," whereas the reverse is true for #feminism tweets. This isn't advanced statistical analysis but a simple quantitative analysis of word frequency, revealing significant differences in rhetoric.

Have there been any situations during your research that surprised you?
One surprising example concerns Wikipedia. It's often said that people edit Wikipedia out of altruistic motives. However, my research shows that conflicts and disagreements are often great driving forces for creating valuable content. People frequently edit Wikipedia to prove their own point in a discussion. The structure of Wikipedia, however, forces one to use skilled argumentation and source-citation, leading to increasingly better entries. The best-written entries are some of the most controversial, such as those on abortion, George W. Bush, or homeopathy, because they provoke intense debate.

How did your work in anthropology lead to your research on Wikipedia and online communities? Did your anthropology background bring you to Wikipedia, or did your Wikipedia involvement inspire your research?
A: I focused on organizational anthropology for 10 years, studying people in their workplaces. Later, I looked for a new research field and started editing Wikipedia, initially without research intentions. After a while, I realized I was spending enough time on it to turn it into a research project. So, my research interest in Wikipedia arose out of my hobby as a Wikipedian, not the other way around.

Would it be right to summarize this approach like this: when communities operate and communicate online, that opens up new opportunities to study these communities because we can capture, process, and analyze the electronic traces these people leave behind?
Yes, partially. But there's a caveat: collecting electronic traces never gives us the full picture of interactions between people, as if we were there observing them in person. The pace and sequence of interactions are essential, and it's often hard to reconstruct them from archives. Ethnographic research based on real-time



SYLWIA PIWOWAR

At the Copernicus Science Centre

participation is more valuable. Archival research is less precise.

It's often said that online collaboration is more egalitarian, but research shows that it's not always the case, as in your studies on Wikipedia and the open source software community. Is there truly a rise in collaborativity, or is this perhaps just a reflection of our ability to study these phenomena better?

Modern capitalism promotes individual achievements, but collaborative society has always existed. A collaborative society isn't just about striving for individual success, but also about enjoying joint activities. And we are indeed observing an increase in this tendency to collaborate, especially thanks to technology. In the book I co-wrote with Aleksandra Przegalińska on *Collaborative Society*, we show that technology has given collaboration a new dimension. On the one hand, the Internet allows people to organize themselves into new, often informal structures, such as anti-vaccine communities. Such groups can effectively self-organize, confirming their beliefs. On the other hand, the Internet allows for knowledge sharing and creating valuable resources like Wikipedia.

What have you been working on lately?

I am currently managing three large grants. The first is MedFake, funded by the Polish Ministry of Health via the National Center for Research and Development (NCBR), which examines people's reasons for refusing mandatory vaccinations and considers how to combat anti-vaccine disinformation. The second project, an Opus grant from Poland's National Science Center (NCN), deals with climate change disinformation, investigating why people deny human-caused climate change. The third project, a Maestro grant from the NCN, focuses on disinformation networks, studying both amateur and professional disinformers.

In the future, I want to strive to better understand how people create knowledge and anti-knowledge on the Internet. I plan to study the differences between people creating valuable resources, like Wikipedians, and those promoting conspiracy theories, like flat-earthers. This will help us understand their motivations and justifications.

Pseudo-scientific theories are a fascinating topic. It seems astounding to us that people still believe, for instance, in a flat Earth or creationism. How can we protect ourselves from this?

The creationist and flat-Earth movements are radical examples of misinformation, but similar mechanisms operate in other fields. People often trust information from friends or the Internet more than from experts, whether it concerns health or sports. This is a common phenomenon that I also study. Critical thinking and the ability to detect misinformation are crucial. We need to learn to distinguish between reliable knowledge and falsehoods. This is a vast topic that will become increasingly important for us as a society.

Interview by
Jolanta Iwańczuk, Daniel J. Sax