

encore

THE ANNUAL MAGAZINE
ON INTERNET AND SOCIETY RESEARCH

VOLUME 2020/2021

Shifting perceptions · Calling for accountability
Taking responsibility · Imagining futures

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EDITORIAL

We have experienced a highly politicised year, which has once again surpassed the speed of controversy and change of the last decade. Like a magnifying glass, the pandemic has shown how digital tools and platforms have become systemically relevant and essential infrastructure. Regardless of physical distance, we communicate digitally with friends and family, collaborate remotely with colleagues, experience culture online and even avail of medical assistance on our smartphones. But we have also noticed the downsides: there is talk of a demystification of the digital that we are only experiencing because we are so dependent on it. In positive terms, however, digitalisation needs to be intelligently influenced, shaped and improved – not only by commercial actors but by all parts of our society. With increasing pressure from various societal actors, platforms like Twitter and Facebook have begun to adopt a novel role as curators of the content they disseminate. They have started to label obviously false reports – fake news – as such, even when they have been issued by a legitimate head of state. The pandemic in particular has made it crystal clear that platforms have a responsibility, as the information that is shared with millions and by millions of people is not irrelevant. This holds true for health advice, but the same applies to societal questions around peaceful coexistence, equality, or sustainability.

This brings us to the heart of how we understand science at HIIG. Science claims to work precisely and objectively, but it must be aware of its impact, now more than ever. We have long known that novel technologies shape society, but we also know that such developments are not inevitable, natural phenomena but

a matter of design. They are influenced by our work and practices and, more generally, by how society perceives and frames digitalisation, platforms and AI – as the future, as a threat to existing structures or as an opportunity for societal innovations. What is more, this year’s events have also underlined how societal developments in turn shape technical solutions and practices. As scholars and scientists, our task is clearly to reflect on all of this. *encore* follows in this tradition and is as multifaceted and controversial as the societal decision-making process.

This year’s great group of *encore* authors have investigated shifting perceptions, called for accountability, showed how to take responsibility and think about imagining futures around digital topics from a variety of angles, including contradictory ones. We are particularly fascinated by intersections, an issue that came to the fore in the controversies over the Corona app, for instance, and will become even more so during the new projects on ethics of digitalisation and the AI & Society Lab.

encore means being contentious, *encore* means entering into discourse; it means taking a critical look based on scientific expertise. Analysing and looking to the future, it points to the giant leaps the digital took in 2020 and the demystification it experienced. It once again puts the spotlight on structuring, sharing and shaping across disciplines and borders. Join the debate – we look forward to it – and above all, have fun reading!



Björn Scheuermann,
Director at HIIG



Stephan Bohn,
Project leader at HIIG

CONTENTS

2	Editorial
8	Perception and reality
	INTERVIEW WITH OTFRIED JARREN
11	We must dare to do more

SHIFTING PERCEPTIONS

	LECTURE BY PHILIPP STAAB
21	The crises of digital capitalism

	BENEDIKT FECHER
26	The great update of research: how COVID-19 is changing the way we do research

34	Picturing Wolfgang Schulz
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	ALINA WERNICK AND DENIZ ERDEN
36	Computer says Hausfrau – can automated credit scoring contribute to the gendered digital divide?

	INVESTIGATION OF LANGUAGE- GENERATING TECHNOLOGY
47	When will the first AI top the New York Times bestseller list?

	HIIG FELLOWS
54	Weakening superheroes

	MAFALDA SANDRINI AND KATA KATZ
62	How to empower a culture of failure in science

CALLING FOR ACCOUNTABILITY

- JOÃO CARLOS MAGALHÃES AND
CHRISTIAN KATZENBACH**
74 Coronavirus and the frailness
of platform governance
- PLATFORM GOVERNANCE QUIZ**
83 Do you know what
you signed up for?
- AMÉLIE HELDT**
86 Trump v. Twitter: the
pitfalls of free speech
- TEAM CIVIL SOCIETY AND
TEAM INDUSTRY**
95 Opening match: the
battle for inclusion in
algorithmic systems
- MICHAEL DENGA**
100 Owning platforms –
cooperatives in the
digital economy
- 106 Picturing Jeanette Hofmann
- NICOLAS FRIEDERICI**
108 Towards a fair and equitable
European platform economy?

TAKING RESPONSIBILITY

- KLEMENS WITTE AND NILS HUNGERLAND**
118 Sustainability: artificial intelligence alone is not enough
- 126 Picturing Thomas Schildhauer
- MIRIAM WOLF**
128 Digital social innovation: from efficiency to effectiveness
- INTERVIEW WITH BENJAMIN BERGEMANN**
137 Digital rights activists are not luddites
- PETER BIHR, STEPHAN BOHN AND HENDRIK SEND**
142 Free technologies for the whole world to use – why open source hardware is in the public interest
- SURVEY ON CIVIC ENGAGEMENT**
151 Activists stand up
- TANJA FISSE AND CLAUDIA HAAS**
154 COVID-19 and true solidarity on the internet
- INTERVIEW WITH LAURA LACKAS**
163 The troll next door
- JEANETTE HOFMANN**
166 What will remain of the corona apps – an infrastructure perspective

IMAGINING FUTURES

**INTERVIEW WITH BENEDIKT
FECHER AND BRONWEN DEACON**

177 Turning scientists
into novelists

**EUROPARAMA PODCAST
EPISODE ON TWENTYFORTY**

183 How will we work, live,
love, shape schools
and governmental
structures in 2040?

MATTHIAS C. KETTEMANN

188 Make technology great
again: how to use ethics
to save digitalisation

**PRESIDENT STEINMEIER, ETHICS
AND DIGITALISATION**

195 Of the highest importance

198 Picturing Björn Scheuermann

**5 QUESTIONS FOR THE
AI & SOCIETY LAB**

201 AI in a new light

ENCORE

204 Longreads 2020

INTERVIEW WITH NIVA ELKIN-KOREN

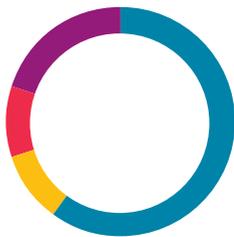
209 Rethinking doctrines and
harvesting academia's
capabilities

214 Picturing HIIG's future

215 Imprint

PERCEPTION AND REALITY

What we think writing an academic paper means



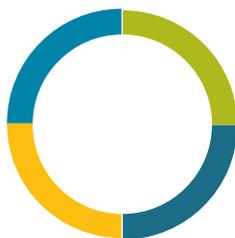
- Writing
- Submitting
- Waiting for reviews
- Revising for resubmission

What writing an academic paper really means



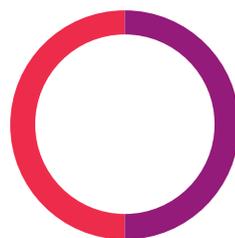
- Waiting for rejection
- Rewriting for resubmission

What scientific outputs are supposed to deliver



- A possible interpretation of information
- A response to or correction of a previous study
- One view on a complex matter
- Insights into empirical data

What the public thinks scientific outputs deliver



- Justification for the Establishment's lies
- Watertight arguments to back up political decisions



“Designing processes of change”

WE MUST DARE TO DO MORE

AN INTERVIEW WITH OTFRIED JARREN BY STEPHAN BOHN

Otfried Jarren has been chairman of the Board of Trustees of the Foundation for Internet and Society, HIIG's governing body, for many years now. He is a professor in Zurich and Berlin, established the Institute of Communication and Media Research at the University of Zurich and was director of the Leibniz Institute for Media Research | Hans Bredow Institute (HBI). In the interview for *encore*, he talks about platforms, media and society as well as about HIIG and its role in the research landscape.

Stephan Bohn: Dear Mr. Jarren, let's first take a jump back in time. When did you first hear about the rather unusual idea of a private American internet company wanting to help found a new institute in Berlin and what did you think about it back then?

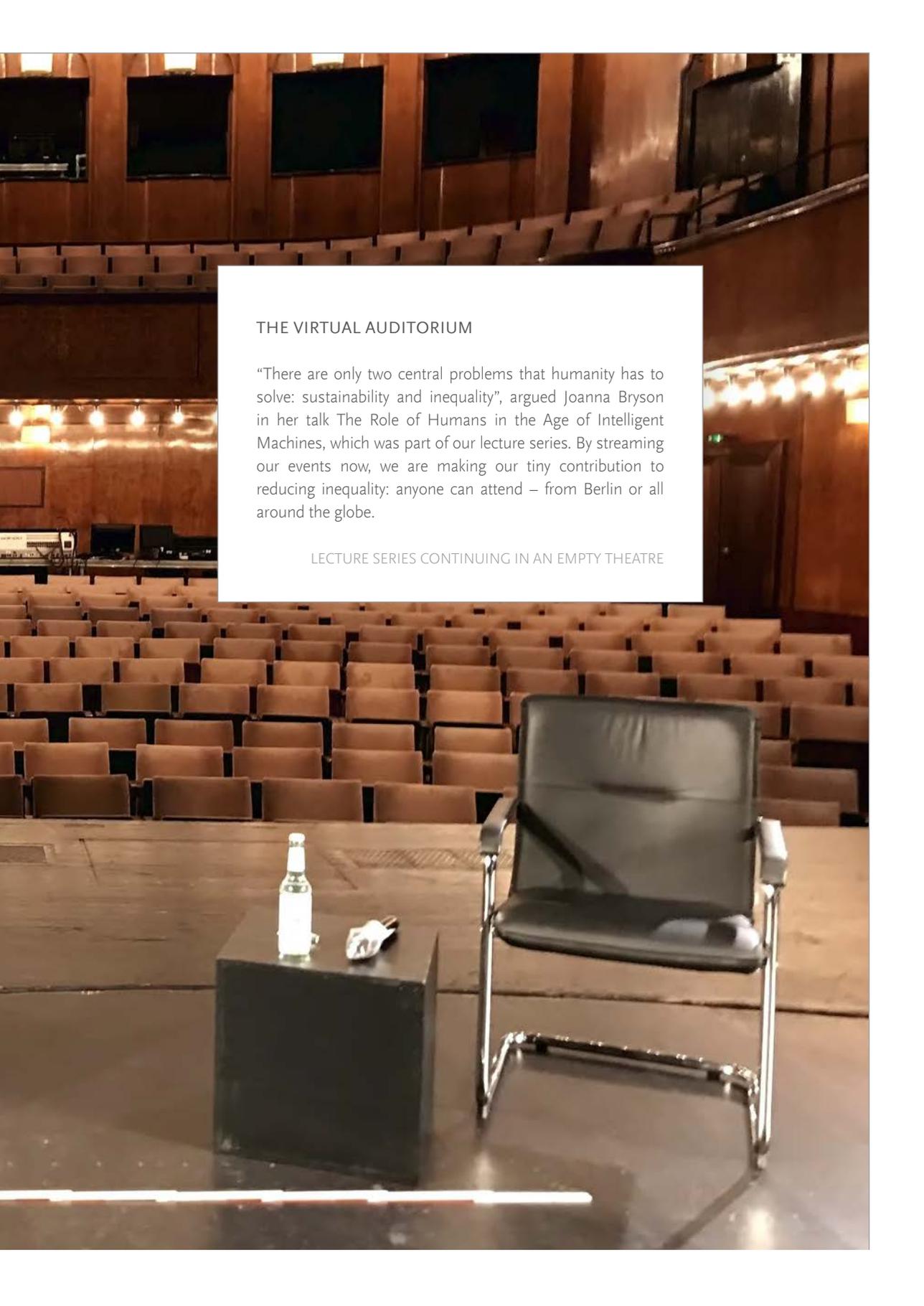
Otfried Jarren: Actually, I heard about it relatively early due to my institutional and personal connections to the Hans Bredow Institute. I thought it was good that a company – Google – was providing institutional funding for an institute – to enable excellent interdisciplinary research on digitalisation and society. But it was and is clear to me that, because of this form of funding, which is unfortunately still unusual in Germany, it would be necessary to ensure (visibly, that is, communicatively) that the impression was not conveyed that Google projects were being conducted at HIIG. We have achieved this together: the researchers through their good work and collectively through good governance. HIIG has a high-ranking Advisory Board that evaluates the institute and the allocation of research funds and makes recommendations. In addition, external persons sit on the Board of Trustees alongside representatives of the shareholders. And a diverse Board of Directors guarantees internal diversity and certain forms of competition.

and reflected upon. For it is not a question of intermingling, but of seeing and recognising the boundaries. Border points must be made visible, but at the same time the discussion must be – consciously – institutionalised. It cannot be a matter of persuasion, and certainly not of manipulation, but of developing open forms of exchange and reflecting on them again and again – with all partners. In other words, this whole boundary management is becoming a decisive challenge.

Speaking of highly political issues, how do you see the role of platforms, such as the major social media platforms, in the social decision-making process? Today, everyone can broadcast what used to be possible only through mass media and perhaps on free radio, but of course on a much smaller scale.

One book I did very early on was about local radio, media diversity – and participation. Back in Berlin, when licences were being granted, I got the licence for the *Bürgerradio Berlin* – Citizens' Radio Berlin – with my association. Analysis, reflection and design, enabling participation – that has always interested me. I have sought this connection many times. Sociopolitically and normatively, the questions of power in the media and communications sector have always interested me. Media in any form are powerful intermediaries – they distribute opportunities, they prevent groups or interests. Structural media diversity, or as I would put it today, structural communicative diversity, is constitutive of an open, democratic society. Especially for a society that should be responsively constituted, it is of central importance. Only in this way can the increasing complexity be mastered. We are developing into a procedural democracy, also due to digital communicative technologies. Now social media offer new possibilities, including new ways to critique power, media and society. The function of criticism and control is now increasingly directly in the hands of society – that is a significant change. It has always been a myth that these tasks were primarily performed by journalists – the majority of them were more a part of the power game. The traditional media have become part of the political power system. Journalism has reflected too little on this, has not developed autonomously enough, has not become more professional. Thanks to digital tools, we can now rely more on organised groups, such as surprising individual actors, new social movements, NGOs or whistle-blowers, for both criticism and control: The possibilities for civil society are growing. In this sense, I consider the establishment of platforms to be positive. They expand the communicative possibilities for many, they give communicative power to individual actors, they enable new ways of organising and new actors. Of course, a

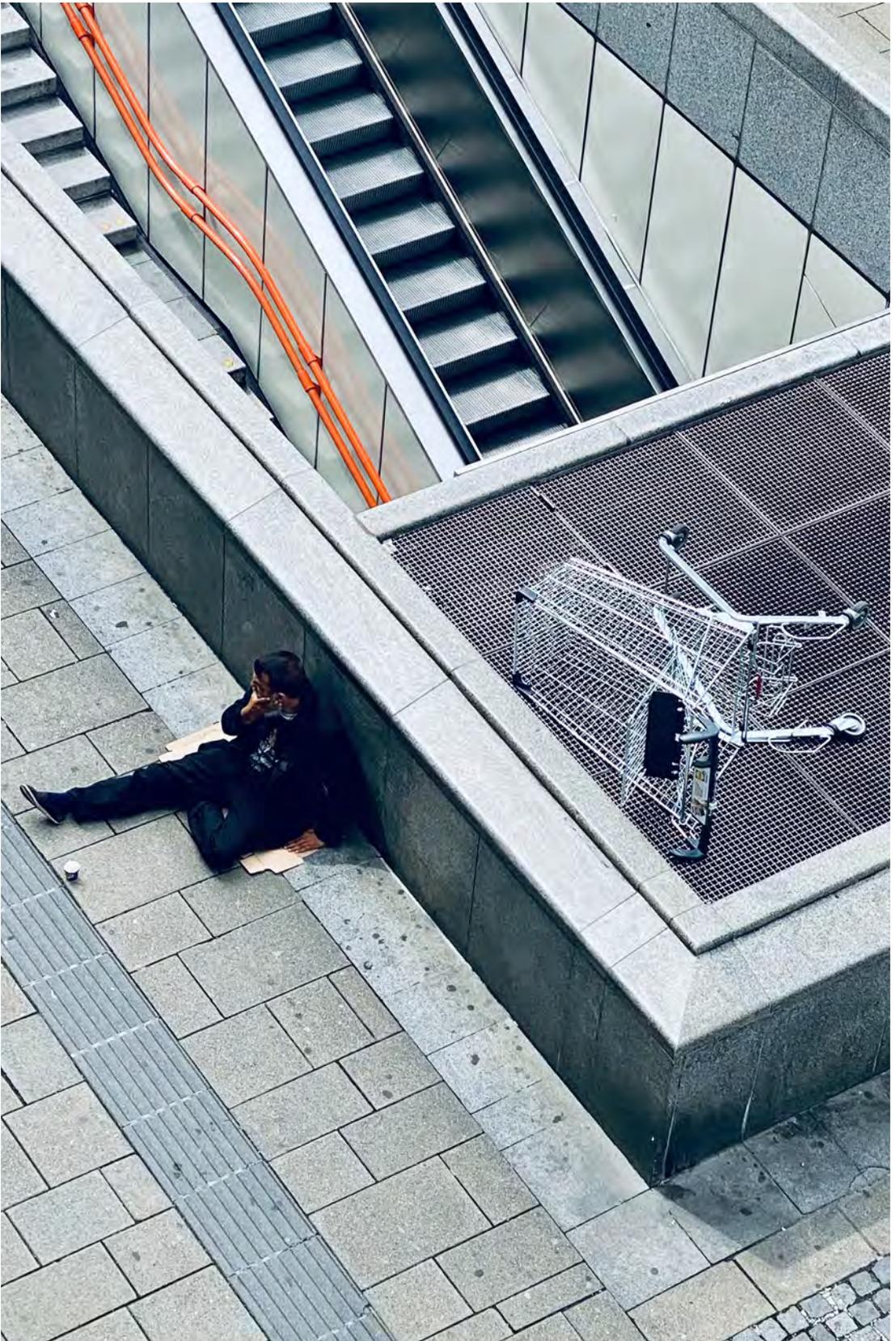


The image shows a large, empty theatre with rows of brown seats. In the foreground, on the stage, there is a black chair and a small black table. On the table, there is a white bottle and a white cloth. The background features a wooden wall with several black rectangular panels and a balcony with more seats. The lighting is warm and focused on the stage area.

THE VIRTUAL AUDITORIUM

“There are only two central problems that humanity has to solve: sustainability and inequality”, argued Joanna Bryson in her talk *The Role of Humans in the Age of Intelligent Machines*, which was part of our lecture series. By streaming our events now, we are making our tiny contribution to reducing inequality: anyone can attend – from Berlin or all around the globe.

LECTURE SERIES CONTINUING IN AN EMPTY THEATRE



THE CRISES OF DIGITAL CAPITALISM

A LECTURE BY PHILIPP STAAB ON THE LINK BETWEEN DIGITAL CAPITALISM AND SOCIAL CRISIS

For around 50 years, digital technologies have been the key to economic transformation. However, it is only since the late 1990s that we have begun to see the emergence of a genuinely digital capitalism with the commercial internet at its core. Leading digital companies such as Google, Apple, Facebook and Amazon are playing a key role for ever larger parts of the economy. In his lecture, Philipp Staab explained the implications of digital capitalism and its core players.



“The digital economy, which is centred around the commercial internet, has for the last 20 years been the poster child for the rejuvenation of global capitalism or at least attempts at such. While large parts of the economy of the OECD world dealt with stagnation, leading digital companies grew through crises. They grew after the dot-com bust of 2000 (...). They grew also after the financial crisis of 2008–2009 (...). Will this crisis, or the crises to come, be any different for digital capitalism?”

Philipp Staab

“Technologies are integrated into processes of capitalist accumulation and exploitation. Digital plus capitalism then makes digital capitalism. This is what I call digital capitalism as a metaphor. ‘A metaphor for what?’ one might ask. Well, probably for capitalism as such.”

Philipp Staab



“Let me outline two possible answers that formulate different theses on the analytical core of digital capitalism. The first version could be called the data economy story, the second one, which I will emphasise, I will call the privatised markets theory.”

Philipp Staab

“We are dealing with a project to build privatised, or, to put it more precisely, proprietary markets. The preliminary stage of such privately owned markets are the platform companies of the commercial internet, which have in many cases established themselves as commercial monopolies for certain services (...). These private markets, however, are embedded in the socio-technical ecosystems of a small number of companies, among which the most important ones are Google, Apple, Amazon and Facebook, at least for the global West. The other platforms circulate like satellites around these platform planets.”

Philipp Staab



“Controlling user attention means controlling the demand side of a market. Surveillance capitalist advertising is thus one way of capitalising on consumer attention or on the control of demand. It is, of course, just one such way, which is why the privatised market theory emphasises a variety of mechanisms for capitalising on the market-like function of meta platforms. Most of these mechanisms are based on different types of fees, which the meta platforms charge for their function as markets.”

Philipp Staab

“The pointed thesis about digital capitalism, then, is that the leading companies of the commercial internet (Google, Apple, Facebook, Amazon) do not really operate in markets whose pricing mechanisms they might, for example, distort – they are these markets.”

Philipp Staab



“Proprietary markets correspond to the idea which shaped the early capitalist pre-liberal epoch in Europe – mercantilism. (...) Digital capitalism’s leading companies are the market owners of today. This time, however, we are dealing with privatised mercantilism. The big difference between the emerging system of proprietary markets and classical mercantilism lies in the respective role of the state. (...) The state, in other words, could be described as the big loser of this development.”

Philipp Staab

The high-profile lecture series Making Sense of the Digital Society seeks to develop a European perspective on the processes of transformation that our societies are currently undergoing. This talk by Philipp Staab and all other lectures are available online.

 www.hiig.de/digitalsociety



BENEDIKT FECHER

The great update of research: how COVID-19 is changing the way we do research

The COVID-19 pandemic is challenging society and its institutions. Science has been particularly affected by the crisis, as it is expected to contribute its expertise to solve the problem. As serious as the crisis will be for the global community, it is an exciting time for science and sociologists of science like Benedikt Fecher. While science is busy solving a problem, it inevitably changes. Sometimes change can be so dramatic that it is hard to tell disaster from opportunity. What the author asks himself is: how is the crisis affecting the nature of knowledge creation and dissemination? What will the new normal look like?

My job is to look at research. In my research team at the Alexander von Humboldt Institute for Internet and Society (HIIG) in Berlin, we work on a number of projects, all of which are inspired by the question of how new tools and practices are changing the way academic knowledge emerges, how it is organised and how it transpires. As with many of my colleagues, the crisis caught me more or less unprepared. From one day to the next, I had to completely change plans for research projects, cancel events and switch my team to remote work. Many of my colleagues, however, have been hit

much harder by the crisis, because they need lab equipment or simply because they have to look after their kids. There is no doubt: the crisis is challenging how scientific work is done. Yet, for someone like me, who researches research as a job, this time is also fascinating. We are part of a gigantic and involuntary experiment, without hypotheses, and in which scholarly knowledge is a decisive variable. I believe that the crisis will change the way we do research in the long run. And I am reasonably optimistic that it could mean a necessary update for science as a whole.

COMPLEXITY AVOIDANCE IS A PROBLEM

To make my point clear, I need to take a step back. A recurring topic in my research is scholarly impact. If I had to summarise my learnings of the last years in one sentence, it would be this: impact means coping with complexity. It is the core business of researchers to reduce complexity, both in the ways in which they come to understand a problem and how they deliver answers and solutions. Research, in my understanding, is always about finding the right problem, making the best possible sense of it, and – nowadays more than before – applying knowledge to shape reality (i.e. find a solution). I find that a core problem which impedes impact is complexity avoidance, i.e. when a problem is not

confronted in all its facets with the appropriate means at hand. Complexity avoidance is particularly evident with regard to digitalisation.

One aspect my colleagues and I research is open science (Fecher & Friesike, 2014), which we define as the best possible use of digital tools to make science more accessible, transparent and inclusive. The underlying question in all of our projects is always how digitalisation can challenge and benefit scientific value creation. In this spirit, we have conducted several studies in the last ten years on topics such as academic data sharing, the replication behaviour of researchers or the emergence of

digital research infrastructures. A common thread through all of our studies is that, in many respects, researchers are not yet able to embrace the digital. For example:

Research data is not made available (Fecher et al., 2015) in a reusable manner because researchers consider them raw material for articles (Fecher et al., 2017a), a communication format that is established but can only carry a certain type of information. Data, as well as code, videos or audio, can carry new kinds of information but are not yet considered to be academic output. The diversity of possible knowledge flows is constrained.

Replication studies are rarely conducted (Mueller-Langer et al., 2019) because they require a lot of effort (e.g. because the underlying data and methods of published research is not available) and are hardly publishable (e.g. because what's the news value of a verification or refutation of a result?). Yet, replication studies are important as an additional form of quality assurance given the increasing publication rates and capacity limits of the traditional peer review model. Efficient means of quality assurance are not being fully exploited.

Research infrastructures, which today are essentially software services, are designed without considering user needs (Fecher et al., 2020). The way public infrastructures are built is usually anything but agile: an idea generated in 2014 receives funding in 2015 and is realised in 2019 – based on the idea from 2014. This is completely at odds with the way software is built. The result is services for knowledge organisations that nobody needs.

In many ways, the aforementioned examples of complexity avoidance in research are an expression of path dependence (Fecher, 2014), a continuation of an analogue logic of scholarly work, superimposed onto the digital world. Of course, there are many other instances of complexity avoidance that are not necessarily linked to digitalisation. For example: the fact that academic research (at least in Germany and many other European countries) is organised in a disciplinary manner, when many of the problems academics face today are interdisciplinary. Or the tendency to confuse attention as a proxy for relevance when measuring societal impact (e.g. altmetrics, which basically count the attention that academic output receives on social media). In my eyes, these instances of complexity avoidance are detrimental to scientific progress.

CORONAVIRUS AS A COMPLEX PROBLEM FOR RESEARCH

In 2020, we are facing the COVID-19 crisis, a complex problem that we as researchers cannot circumvent. And while researchers are busy solving the problem, the problem itself is changing scholarly practice. I believe, in many ways, for the better.

Let me illustrate this with an example: for a long time now, science policy-makers, funders and even researchers themselves have advocated for open access, which, broadly speaking, means that scholarly output (generally articles) should be freely available online. According to numbers from the European Commission's Open Science Monitor (European Commission, n.d.), 64 % of articles published in 2018 were paywalled, 15 % were published in green open access (i.e., self-archived articles in repositories), and 19 % in gold open access (i.e. peer-reviewed articles that are published open access, usually after paying a so-called article processing charge). In other words, the normal state of publishing is closed access.

When it comes to COVID-19-related research, the situation has been reversed. For our blog journal *Elephant in the Lab*, a few colleagues and I track the COVID-19-related research in near-real time (Schmidt et al., 2020). As a datasource, we use Scopus, which covers mainly peer reviewed research (gold OA), and the repositories bioRxiv and medRxiv, which covers mainly preprints and working papers (green OA). We find that the majority of the articles on COVID-19 in Scopus are being published open access and that green open access figures are on the rise. In this situation, where it is vital that research is fast and available to all, open access is the new normal. And not only that: green open access is becoming increasingly important. One remarkable effect is that such wide-spread open access renders scholarly publishers practically superfluous for this form of publication. A persistent path dependence of science, namely the dependence on a few large publishing houses, is thus partially dissolving.

We can also observe that digital research infrastructures are being built overnight, that research data is being exchanged in near real time and that researchers are collaborating internationally and across disciplines. There are also countless examples of meaningful public engagement, ranging from scientific policy advice to podcasts (e.g. during summer 2020, Germany's favourite podcast was the "Corona-Virus Update" with the virologists Christian Drosten and Sandra Ciesek

(Kupferschmidt, 2020)). Science is getting heard. In a recently published Corona special edition (Wissenschaft im Dialog, 2020) of an annual population survey in Germany, 73% of respondents agreed that they trust science (compared to 46% in 2019). For me, openness to society is an important and often forgotten dimension of open science. All in all, when it comes to research on COVID-19, open science has suddenly become the gold standard. Science means coping with complexity, and not only when it comes to finding a vaccine.

PROSPECTIVE FALSIFICATIONISM

Of course, the change is not happening smoothly. With the transition to the new normal come many new challenges. For example, if green open access prevails as an important form of publishing, what could be the new mechanisms for quality assurance? (Side note: I think overlay journals (Fecher et al., 2017) would be a great solution.) If researchers play a more active role in society, how can we make sure that they do not overstep boundaries and lose trust among the population (for example, because they let themselves be politically instrumentalized or have political ambitions themselves)? Currently, female researchers publish comparatively less than men (Viglione, 2020), presumably because they have more parenting responsibilities. How can we establish a more equal and inclusive academic culture in the long term? These are, in my view, only a few of the crucial challenges for post-Corona research.

And this is the morbid beauty of a crisis like this. It reveals what works, what doesn't work and what could work differently in academic research. It highlights pathways for how research could go further, post coronavirus. We are, in a way, forced to imagine the future with the best possible knowledge we have. This, in turn, could give rise to a new epistemic rationale. I call it prospective falsificationism, inspired by the great science philosopher Karl Popper's falsificationism. According to him, nothing is ever the final truth and must always be questioned. What if we apply this principle not to what exists but to what might be? We, as a society that included researchers, would need to think about a utopian state, and then researchers would try to falsify this utopia in order to support society's efforts to arrive at the best *possible* state. As I see it, the crisis is already forcing researchers to do just this, to reason upon uncertainty. And this is how I understand my job at the moment, to observe the situation and to make sense of it so that hopefully we, as a research community, can learn from it.

continue reading on page 32 ►►



THIS IS AN ARTICLE BY **BENEDIKT FECHER**

This article was first published on 22 June 2020 on *medium.com*.

Benedikt Fecher is head of the Knowledge and Society research programme at HIIG and co-editor of the blog journal *Elephant in the Lab*, which critically examines the scientific system. He is also a member of the editorial board of *Publications*, an open access journal. In his research, Benedikt deals with questions concerning the governance of science and innovation.

Nobody wanted this crisis. And, as the director general of the International Committee of the Red Cross, Yves Daccors, rightly pointed out in a call organised by the Network of Centers, it involves many dangers for democracy itself (Schmitt, 2020). Yet when I look at science, a societal institution that I think I understand quite well, I see moments of openness, of social innovation and of solidarity. I hope that means that academic research will emerge stronger from the crisis and that it receives a long overdue update. Because academia is indispensable for an enlightened, deliberative democracy. ♦

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What would life be without irony?

WOLFGANG SCHULZ

It's not that sad really, Wolfgang! Not only is he one of our directors, Wolfgang also holds another directorate at the Hans-Bredow-Institut in Hamburg. Specialising in media law and the philosophy of law, Wolfgang is an exalted and revered scholar as well as a person of public interest.



What happens when you are in a bad mood?



How do you regenerate?



How do we imagine your wild years?



What does the present have too little of?

ALINA WERNICK AND DENIZ ERDEN

Computer says Hausfrau – can automated credit scoring contribute to the gendered digital divide?

Imagine being laid off, returning your work computer while dusting off the old one for your kid's home schooling. This is not a unique misfortune – mass redundancies due to the pandemic have overwhelmed the state unemployment agency and it will be months until you receive your unemployment benefit. Bills pile up. The job openings in your field are few and subject to fierce competition. Perhaps you could freelance while looking for something permanent? But first you need to acquire a computer to work on.

At the dawn of a global pandemic, a vicious cycle of limited access to finance and technology has created a human rights bottleneck for the disadvantaged.

DESPERATE HOUSEWIVES OF THE PANDEMIC

There is no shortage of laptop models and financing options. After selecting a computer and filling in the online application form for an instalment loan, you get redirected to a credit company's website, which denies it on the grounds that you are unemployed. Indeed, you cannot prove that you have a regular income and your SCHUFA score has taken a hit from missed payments. Maybe you could get the loan as a freelancer? But budding entrepreneurs are not eligible for credit either. You are getting desperate, as without the computer, you are cut-off from employment opportunities and the post-pandemic society at large. There is one more option left in the loan application to self-identify with – a *Hausfrau* (housewife). Add the name of your spouse as a co-lender, submit information about his income and your new computer is on its way. Congratulations – you were just saved by a financing relic ("*Hausfrauenkredit*", 2018) from an era in which men were the breadwinners and women's household labour was unpaid. EU consumer credit laws oblige creditors to assess the creditworthiness of the consumer prior to extending credit from a database such as SCHUFA

in Germany. Creditworthiness is defined by both credit risk to the lender and affordability for the borrower (Aggrawal, 2020); therefore, it is in the interest of both parties. Besides mitigating the problems of asymmetric information and moral hazard with respect to borrowers (Ferretti, 2017), it also serves the public interest by preventing over-indebtedness on the part of consumers and ensuring the allocative efficiency (Aggrawal, 2020) and effective functioning of consumer credit markets. Yet, the mechanisms for evaluating creditworthiness as well as available financing instruments may have marginalising effects that reinforce gender inequality, especially in the post-pandemic context and ultimately undermine enjoyment of human rights. The granting of most consumer loans is conditional upon a proof of stable income and a positive SCHUFA score, both of which may be in short supply in an economic crisis. Consumers ineligible for normal consumer loans must turn to alternative financing opportunities: the *Hausfrauenkredit* (Housewife's credit), loans without SCHUFA and check-out lending options.

ALTERNATIVE CREDIT FOR THE MARGINAL?

Hausfrauenkredit was initially offered to enable “the housewife” to take care of some of her private needs and household expenses (Kredite.de, 2020). Its distinct characteristic is the requirement of a co-signature from a spouse with a good credit score, which remedies the lack of stable income or lack of creditworthiness of the person seeking for a loan (Finanztip, 2012). Despite its name, the application of Hausfrauenkredit is no longer gender-specific, and a co-signature can be obtained from persons other than a spouse (Kredite.de, 2018), extending its availability to a larger population of the precariat. An alternative to a Hausfrauenkredit is a small loan with a guarantor. In both cases, the means of access to credit and ultimately enjoyment of fundamental rights is conditional on having a close relationship with a person holding a more powerful position within society than the loan applicant. This has implications for the autonomy and dignity of that person. They may, for instance, become vulnerable to economic abuse (Postmus et al., 2020), which diminishes an abused partner’s chances from exiting a relationship, creating a spiral of violence of different forms. Women and marginalised groups are more likely to be subject to such abuse.

Single persons with limited support networks, such as immigrants and single parents, have fewer options to obtain a guaranteed loan. Groups ineligible for common forms of credit may turn to creditors that do not require a positive SCHUFA or proof of sufficiently high income. Such service providers are a motley crew of institutions ranging from Swiss Banks that check creditworthiness with means other than SCHUFA to short-term loans and providers who prey on persons in vulnerable financial situations. Even with legitimate providers, the lack of stable income or limited creditworthiness translates into a higher interest rate for the loan (Lietzau, 2020). Taking such loans may ultimately reinforce a cycle of marginalisation, especially for groups with more limited financial literacy (Fernández-Olit, Martin & Porras, 2019).

While a Hausfrauenkredit may not be accessible to people who lack a support network, the market is not short of solutions. Almost all large online retailers offer financing options such as buy-now-pay-later solutions (e.g. Klarna) and instant consumer loans offered at the point of checkout (e.g. CreditClick) (Păstrăvanu, 2019). In the competition for consumers and the smoothest online experience, the service providers may be tempted to employ dark patterns: UX designs that

nudge the user to make decisions they may not want to (Wong, 2020). These credit options are designed to be applied with minimum effort. Buy-now-pay-later solutions can entice people to take on financial commitments on many small amounts which may lead to over-indebtedness (European Commission, 2020).

WHO IS OUTSMARTING WHOM?

People are increasingly applying for smaller consumer loans online, which provides an avenue both for lenders and borrowers to overcome each others' reservations. Consumers may toy with online loan application forms, testing which type of persona or other data would lead to the best conditions. Such tinkering of credit applications may create the much-needed flexibility to accommodate applicants who do not fall seamlessly into any specific group, provided that they are willing to self-identify as a Hausfrau and do not take on loans they cannot repay. However, consumers' capacity to game the market for credit is nothing in comparison to the options available to creditors: they can engage in dark patterns in web design and consumer profiling on the basis of online behaviour and other data points.

By law, consumer credit providers are obliged to inform the borrower of the nature of the agreement she is about to enter into in order to prevent overindebtedness. However, consumers are often insufficiently financially literate to understand the credit risks. Online retailers compete by offering the fastest and simplest checkout experience (Flomo, 2019). The length and language of mandatory information given at advertising and pre-contractual stages appears unsuitable for this fast-paced environment and therefore fails to protect consumers. Pre-ticked boxes and single-click availability of buy-now-pay-later loans may exploit behavioural biases to nudge vulnerable consumers into contracts that they may later regret due to the terms and conditions (e.g. higher interest rates) (European Commission, 2020).

SCORING THE UNSCORABLE

Moreover, instant checkout credit solutions are data-driven and tend to infer credit risk from non-traditional/alternative data. Many instant checkout loan providers exploit easily accessible alternative data which are taken as proxies for economic status, character and reputation. Address, zip code, occupation and

social media data may impact the conditions under which credit is offered. In addition, machine learning may be used to derive your creditworthiness from your digital footprint (Berg et al., 2019), including the brand of your device. Vulnerability can also be inferred from such behavioural insights and exploited by lenders (Aggrawal, 2020). Hence, even the act of shopping around for the credit terms may influence the consumer's chances of obtaining credit in the future.

A consumer is often profiled when she starts exploring financing options. Such profiling is usually automated, and those being subject to it have little means to observe whether the credit option they are presented with reflects a potential bias. Machine learning algorithms can learn to associate creditworthiness with some behavioural patterns that are statistically observed more in the population of white men and discriminate against those who are not white and not men, perpetuating historic patterns of discrimination (Aggrawal, 2020). In most of these cases, consumers would not be aware that they had received a differentiated offer and were discriminated against compared to other groups of consumers. Therefore, even though discrimination based on sex, race and ethnicity in access to goods and services is prohibited under EU non-discrimination law, establishing a prima facie case of discrimination would be hard if not impossible.

A HUMAN RIGHTS BOTTLENECK

The pandemic has confined us in our homes and moved our daily lives to the digital sphere. Yet, this digital leap has not been taken on an equal footing. Economically disadvantaged households have fewer options for acquiring new technology that would enable more seamless integration in the post-pandemic world (Beaunoyer et al., 2020). Many struggle with finding employment, which accelerates the risks of social and financial exclusion (Fernández-Olit et al., 2018). In the post-pandemic context, the vicious cycle of digital divide, financial insecurity and lack of access to credit risks marginalising women in particular. Pink collar sectors, such as accommodation and food services, retail and the arts have been hit the worst. Furthermore, the closure of schools and daycare together with unequal distribution of family responsibilities pull women from the employment market. The problems of sharing and accessing digital devices as well as financing hinders female entrepreneurship (Madgavkar et al., 2020). As women become more vulnerable, they are more likely to seek out alternative ways of accessing financial services and technological goods. These alternative options entail specific

continue reading on page 42 ►►



THIS IS AN ARTICLE BY **ALINA WERNICK** **AND DENIZ ERDEN**

This article was first published on 2 December 2020 on the *Digital Society Blog* of the Alexander von Humboldt Institute for Internet and Society (HIIG).

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risks and harms, including discrimination against women, especially when their identities intersect with other marginalised attributes.

If it does not acknowledge the indispensability of access to technology, the post-pandemic world may push women into the precariat and economic dependency and strengthen inequalities as a whole, including the digital divide that sometimes exists within a single household. Whatever the policy measure chosen to combat these risks, it must acknowledge that the gendered division in access to financing and therefore to technology may create a bottleneck in the enjoyment of human rights for the most vulnerable – ranging from freedom of expression and information, engaging in work and choosing one's occupation and conducting business. The protection of human rights on the internet has been recognised by the UN (United Nations, 2016). Internet access has been proposed as a human right in itself and adopted in the legislation of several countries (United Nations, 2011) and viewed as indispensable for the enjoyment of other human rights (Çalı, 2020). Also consumer loans have become a means of access to basic needs and rights, especially for those who are already financially struggling and particularly at times of economic disruption (Benöhr, 2013). Gendered inequalities in the access to internet and technology (Çalı, 2020) are reinforced by those in the access to credit. The dynamic narrows women's opportunities to maintain financial independence and to live with dignity in the post-pandemic world. ♦

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“This requires greater transparency, transparency that has so far been lacking.”

WHEN WILL THE FIRST AI TOP THE NEW YORK TIMES BESTSELLER LIST?

AN INVESTIGATION OF LANGUAGE-GENERATING TECHNOLOGY AND ITS IMPACT ON SOCIETY

Language generators based on artificial intelligence are producing increasingly convincing texts. This led us to wonder: Could an AI guest-author an article in *Encore*? The AI-written text you will see below is the result of our experiment. This is what we did: the first paragraph is a human-written prompt. It is based on the introduction to HIIG researcher Alexander Pirang's blog post *Is the COVID-19 pandemic social media platforms' chance at redemption?* published on the Digital Society Blog in April 2020. The prompt was fed to InferKit, which offers an accessible version of the language model GPT-2. Released by OpenAI in 2019, this language model generates articles, poems or even code based on minimal prompts.

Does the result convince you? To keep things raw and provide a better idea of how the technology works, the AI-written piece below remains fully unedited. Finally, three HIIG researchers discuss the results and the potential impact of recently developed language-generating technologies.

THE RESULT

Human-written prompt: Is the COVID-19 pandemic social media platforms' chance at redemption? Faced with an *infodemic* in the wake of COVID-19, social media platforms have ramped up their efforts to address misinformation. Facebook in particular seems to have implemented a surprisingly robust coronavirus response. These efforts could reinforce a public value-driven approach to content governance, but they could also be problems posing as solutions.

AI-written output: As social media platforms monitor users' interactions, can they track and manage extremist content more effectively? This requires greater transparency, transparency that has so far been lacking. We are seeing much more transparency today, but most of it is being framed through terms that have been harnessed by proponents of transparency, making it difficult for third parties to understand.

Prior to COVID-19, Facebook (NASDAQ: FB) had faced concern about the quality and impact of their news feed. Users who wanted to stay informed were not being exposed to high quality, trustworthy content. Following COVID-19, there has been intense media scrutiny on Facebook, which may further influence its users to actively seek out reliable news sources. Whatever changes Facebook implements, how effective will they be? Based on the problems Facebook has had with extremism on its platform, can it really be trusted to make these changes?

In a similar vein, Twitter has arguably already faced unprecedented levels of scrutiny for its role in monitoring and policing the content on its platform. Twitter's role in monitoring content, in contrast to Facebook's, has focused more on fear-mongering and inflammatory commentary that has given rise to a series of debates over what constitutes a hate-filled tweet and who is ultimately responsible for the content posted on Twitter.

Facebook's role in supporting the election of Donald Trump has created an environment of mistrust between the social media company and its users. While a majority of people who liked Donald Trump on Facebook have affirmed that their decision was based on his platform, which in turn led to the popularisation of the term "Trump Truther", how effective can Facebook be in correcting the damage of its recent election support and how will it manage those who have made a poor choice?

It is important that Twitter continues to show leadership by removing the offensive tweets and deactivating the accounts that were created as a result of the election of Donald Trump. The removal of the offending tweets and support for the ban of Milo Yiannopoulos should signal that Twitter will resist attempts to influence users' choices with hate speech and that it will do all it can to support free speech.

THE CONTEXT

HIIG researchers Shlomi Hod, Alexander Pirang and Frédéric Dubois were asked to provide perspectives from their fields of expertise on the article written by the AI guest author. Shlomi is a visiting researcher at HIIG's AI & Society Lab and computer science PhD candidate at Boston University. Alexander is a researcher at HIIG, currently writing his doctoral thesis on the implications of platform governance for users' right to freedom of expression. Frédéric is managing editor of HIIG's Internet Policy Review and PhD candidate at the Film University Babelsberg. The interview was conducted by Sonja Köhne.

Sonja: From a technical perspective, how did the AI text generator arrive at this result?

Shlomi: The GPT-2 is a language model designed to predict the next word given a context, namely all the previous words in the text so far. It was trained using a large dataset of text from over 8 million web pages in English that Reddit users shared. The model is based on a recent neural network architecture from 2017, called the Transformer, which had a huge impact on the field of NLP (natural language processing), with great advances from 2019 on. The Transformer is built out of a series of self-attention mechanisms that allow it to process the input text by focusing or paying attention to different words in the sentence simultaneously.

Alexander, you wrote the blog post that we used as a prompt. Were you surprised reading the AI-generated text?

Alexander: At first glance, the text seemed surprisingly coherent and even eloquently written. Many of the word choices, like "monitoring and policing content", are used by researchers and journalists all the time. The frequent use of open-ended questions also struck me as an effective way to engage with the topic while avoiding stronger statements. Yet, it does not take long to notice the wrinkles. Some of the arguments are little more than words piled on top of other words: who are the proponents of transparency mentioned and why does their harnessing of transparency-related terms frame the issue so as to impede third parties' understanding? Unfortunately, no clues are given. In a way, the piece resembles a collage of general discussion points about the challenges of harmful content and the role of social media in the US presidential election.

The evaluation of statistical language models and their neural networks with scientific standards remains a challenge. Even the developers cannot always understand why the AI generates what it does. This touches on a fundamental epistemological question: how do we actually learn to recognise meaning?

Shlomi: We should keep in mind that these models do not understand the world as we do. Their way of capturing language is through the complex relationship between words, not necessarily through understanding the words themselves and their relation to the real world. ♦

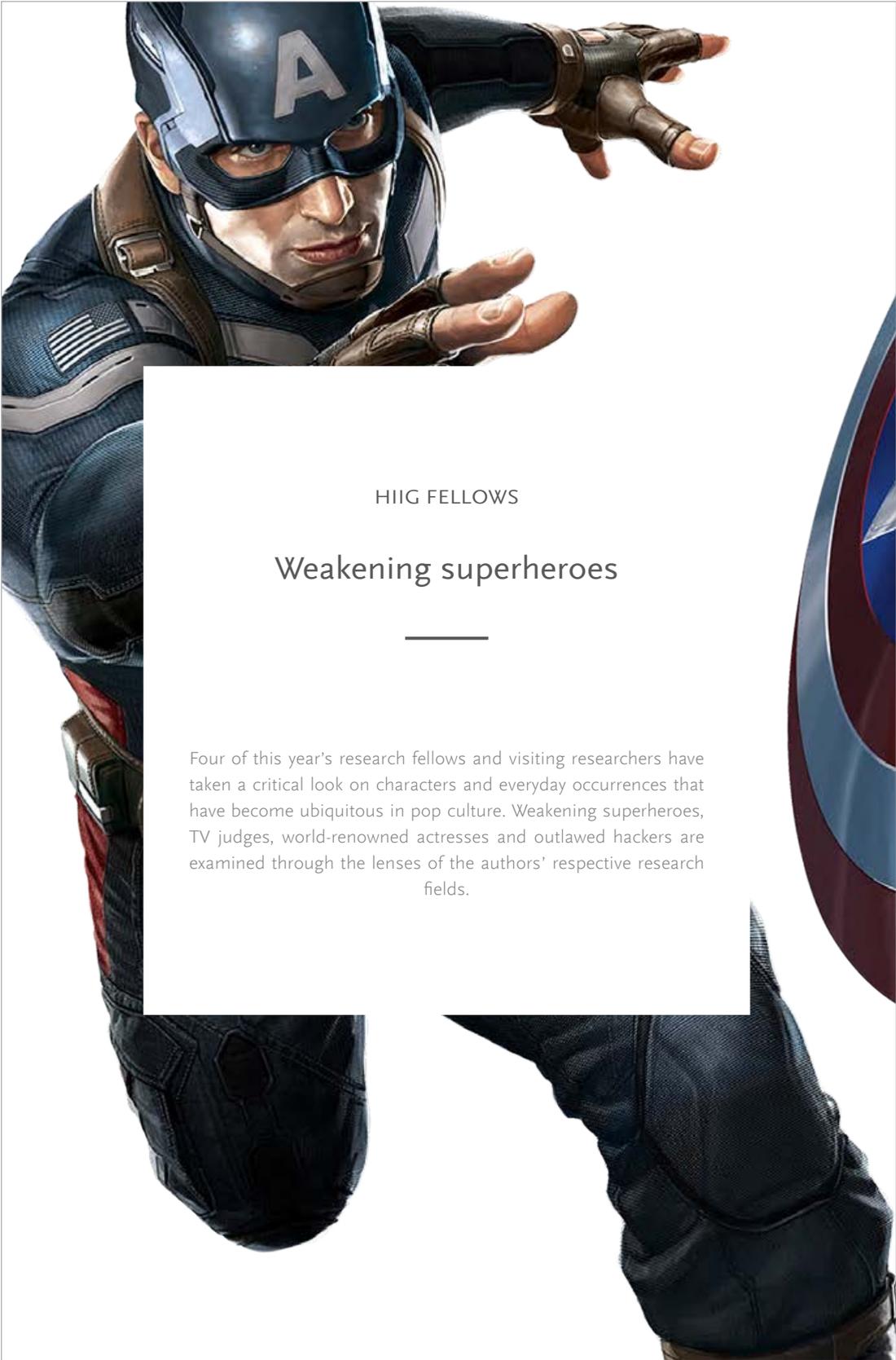
At the time this article was written in early August 2020, InferKit was using GPT-2 as a language model. It was later changed to Facebook's Megatron-11b, which then offered 11 billion parameters, making it a seven times larger model than GPT-2.

 inferkit.com

The images for this article were taken from Generated Photos, a resource for AI-generated, high-quality headshots. In an ongoing fashion this dataset is fed into generative adversarial networks to produce faces that have never existed. Included on the right (from top to bottom) are our three interviewees Frédéric Dubois, Alexander Pirang and Shlomi Hod.

 generated.photos





HIIG FELLOWS

Weakening superheroes

Four of this year's research fellows and visiting researchers have taken a critical look on characters and everyday occurrences that have become ubiquitous in pop culture. *Weakening superheroes*, TV judges, world-renowned actresses and outlawed hackers are examined through the lenses of the authors' respective research fields.

BRUNA TOSO DE ALCÂNTARA

Why does the film *Hacker* reveal that society's ideas toward cybersecurity need to be changed?

Hacker is a 2016 film about cybercrime. The plot revolves around a young man, Alex, who is the son of Ukrainian migrants to Canada, and his hacking career. Initially, Alex starts to use his computational skills to make money – firstly, to legally earn money to save for college via a legal basis but then, after having to give up his savings to help his parents pay the bills, he turns to illegal activities, and joins a hacker organisation called Dark Web.

After joining Dark Web and becoming associated with a highly skilled social engineering criminal named Sye, the scams become more sophisticated. Together, they steal credit card information and resell their illegal purchases on the black market. After a while, Alex decides to go after corrupt banks, alluding to the myth of the “hero hacker”. Things start to escalate after a second hacker named Kira enters the team, who use a black market social media platform to reach more “clients”.

As the story develops, the viewer realises how poorly people secure their data online. One of Alex's first scams involves a phishing technique, tailored to the preferences of his victims. Another scene depicts how an outdated security system, coupled with non-trained personnel, provides an entry point for Alex to install a virus in a bank's IT system. These examples reinforce how important it is to develop a culture of cybersecurity among civil society and private entities – a culture that we are currently failing to further develop.

Moreover, the film reinforces the idea that “doing the wrong thing for a greater good” could potentially validate some criminal actions. Worst of all, at the end of the film, the protagonist gets to live a “happy ending” with no further consequences. The lack of consequences for his criminal activity contributes to the misperception of hacking activities, erodes cybersecurity concerns and indicates how important it is for our society's ideas on these subjects to be reviewed.

DENIZ ERDEN

How algorithmic decision-making and Captain America suffer from the same problem

Tech companies claim to fight the long history of bias and discrimination in our societies with superhero solutions: the underbanked will be banked, online bullies will be bullied back and employers will only care about the true you, not your age, race or gender. But remember what they said about the high-tech serum that turned Steve Rogers into Captain America? “It amplifies everything that is inside; so good becomes great, bad becomes worse.”

In the original Captain America comics, set during World War II, when the binary code of good and evil was much simpler than it is today, a scientist decided on which universal values would be appropriate in a super-soldier. Later, in the version of the comic that appeared in the 60s, Captain America was kept out of the Vietnam War, since it was not as easy anymore to locate him on the good side. In later versions, he started a civil war among superheroes when the world demanded that they be held accountable for their actions. He justified it with the words: “We may not be perfect but the safest hands are still our own.” Sound familiar? It’s a lot like the liberal positions tech companies often take to convince you to trust in their good judgment.

The idea of a scientific serum that can make judgment calls on what is good or bad is absurd. But imagine a situation in which you are an employer who has favoured

JOAQUIN SANTUBER

Who could help us automate the judicial system? Clearly, only Judge Judy can.

Verdict: the algorithms behind automated justice should spend some time in front of the TV paying attention to Judge Judy's gestures, facial expressions, pitch and changes in tone of voice. They could learn a lot about justice as performance.

Most citizens' contact with the justice system is through TV shows, movies and pop culture artifacts. Characters like Judge Judy in the USA or La Jueza Polo in Latin America exist beyond the television and embody and materialise abstract ideals of justice, social peace and common sense. Some legal scholars argue that they play a key role in civic education, while others view them as the ultimate defenders of common sense in a society where "common" and "sense" do not always go together. That being said, the picture of charismatic and eloquent judges – thank you, Judy – enacted by these cultural artifacts – sorry Judy – is definitely an illusion. Just have a look at some YouTube videos of real online hearings that have popped up here and there thanks to the virus-who-must-not-be-named. Far from our expectations of sympathetic and theatrical judicial performances [spoiler alert], you will probably see mechanical automata repeating a process over and over again. A vacuum spirit, moving in circles in a "been there, done that" fashion, personified by someone with a judge's title hanging on the door. No wonder someone thought that this job could be automated ... wait a moment ... did I just write that justice could be automated?

PABLO BEYTÍA

Why Meryl Streep should be an icon for gender imbalance on digital platforms.

Meryl has worked for over forty years in the US film and television industry, which also happens to be the industry with the best record of biographies in Wikipedia. In the movie world, she is not just anyone: she is the person who has received the most Oscar and Golden Globe nominations in history. But poor Meryl, accustomed to being the popular girl since her high school cheerleader days, is not being valued as she deserves to be on Wikipedia.

Of course, she has a complete article about her life, in many languages. As someone born in the USA, in the 20th century, who has dedicated her life to the field of mass entertainment, Meryl is in the category of people who have the best biographical records on Wikipedia. And within that group, she certainly has had an outstanding and recognised career.

So Meryl has all the prerequisites to be a digital star, and she is close to it. Her article is written in 77 languages! And the English version has connections with other world-renowned people – 105, to be precise, and these people have biographies in more than 25 languages! (All numbers are based on Beytía's and Schobin's article "Networked Pantheon: a Relational Database of Globally Famous People")

MAFALDA SANDRINI AND KATA KATZ

How to empower a culture of failure in science

In this article, the authors discuss the need for a culture of failure in academia. Looking at scientific practice, science theory, institutional systems and the scientific community, we find that failure is not just part of scientists' everyday practice but also a creative tool to enhance knowledge building and to address the systematic default in academic institutions.

AN APPEAL FOR A CULTURE OF FAILURE IN ACADEMIA

For some years now, there has been a trend amongst entrepreneurs and artists to come together to exchange stories of failure by disclosing their mistakes on a big stage and acknowledging what they lacked in insight and wisdom. This is framed as a practice of openness for the good of the many as well as for themselves. However, if we look around for other examples of acceptance of failure, we see that the willingness to see what the unexpected can teach us is not a common practice in science. As researchers who have seen and experienced the benefits of a culture of failure, we want to argue for the same approach in academia.

Yet, the early beginnings of Western philosophy show us that the idea that we are ignorant concerning our own knowledge has been out there for over 2000 years. Plato's *Apology* details the condemnation of Socrates, who challenged the prophecy of the Oracle at Delphi, which revealed him to be the wisest man alive at that time. In his quest to refute the prophecy, Socrates came to the conclusion that he was not the wisest because he had more knowledge about the world than the others but because he was aware of his own ignorance. Recognising and exploring the limitations of knowledge – "I know that I know nothing" is probably Socrates's most famous

phrase regarding this topic – can ameliorate academic ignorance and help researchers to develop a creative mindset toward the recurring critique of knowledge creation. As Stuart Firestein (2013) points out, we need ignorance to be able to frame thoughtful questions – questions that matter, that are interesting. And where do good questions come from? They come from what we don't know, which most often is indicated by the gaps in our current knowledge. A failure culture in our academic life could create an environment where an experimenting mind could thrive, allowing it to be creative and providing space for exploration, failure and starting over. Consequently, the current system fails the scientific community, as it cannot overcome its own ignorance. Funding systems prefer the expected outcome over explorations, and editors care more for success than for a creative mind, which prevents scientists from being experimental, although this is a fundamental part of scientific practice. It builds an environment that is hostile to openness and exchange, and makes data, findings and theories a question of ownership. It creates and upholds structural inequalities and prefers homogeneity to heterogeneity. The lack of diversity in academic hierarchies is a crucial barrier to science and society, particularly if we consider diversity an asset that enables us to foster creativity.

In this climate, scientists are not just frustrated in their work but challenged psychologically – they often suffer from mental health problems (Shaw & Ward, 2014; "The mental health", 2019). All these things could be addressed far more easily than they are now if the academic system were to allow for failure, failing as individuals and failing as the current system.

THE POWER OF NOT KNOWING

According to Popper (1934/2002), falsification is a natural part of science¹ (and embracing a culture of failure can liberate the scientific self by revealing science as a fascinating adventure. Popper was not the only theorist who stressed the necessity of a new approach to science. Feyerabend (1975) advocated for an anarchistic science, liberated from orthodox dogmas. Contemporary thinkers like Bruno Latour, Donna Haraway and Lorraine Daston promote the postmodern idea of situated knowledge (Latour & Woolgar, 1979; Haraway, 1985; Daston & Gallison, 2007): insights are bound to the carrier of knowledge, reflecting the individual's social and economic experiences. Scientists do not simply observe and conduct experiments but co-create by seeing, measuring, naming and manipulating knowledge. This does not mean that all truth is relative and purely socially constructed but that objectivity is never free from the subject and its limitations. Science is an iterative process made up of failures, each a bit more successful than the one before. However, we only hear stories of successful failures – those that eventually led to discoveries. This is a reality that stands in stark contrast with scientists' daily lives. Bruno Latour and Steve Woolgar (1979) spent two years in a laboratory at the Salk Institute in San Diego, California, in order to anthropologically understand the social construction of scientific facts. By observing scientists in their everyday routines, the authors revealed how failure is the norm for them: they live in chaos and are unsuccessful until a certain combination provides the expected results. Even so, such successes are always provisional, as discoveries and given facts can be revised at a later time.

So how do we measure scientific progress and innovation? Feyerabend (1975) endorsed a humanitarian perception of knowledge. According to him, success in science is usually judged by uniformity in procedures, when actually there is no such thing, but only different ways to evaluate quality of research. For Feyerabend (1975), hypotheses that confirm theories do not improve knowledge; in fact, they preserve old theories but not better ones, since a proven hypothesis settles a measurement, whereas a failed one represents a step towards a discovery (Firestein, 2016). Scientists fail and fail until they succeed and are expected to

know something that will help them and others in avoiding failure. But because of the processes of iteration that distinguish the scientific processes, failure is always around the corner.

“Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world.” – Albert Einstein

As Firestein (2016) explains, scientists are expected to solve problems and to provide answers to questions. Creativity can emerge in the ability to put things together, connect the dots and solve a puzzle. What scientists actually do – which is also what makes science so interesting and creative – is to find new problems, which come from their own failures. To do so requires a high level “of integrity and personal responsibility, a willingness to follow the data no matter how it works out, to take the result where it will go, including nowhere” (Firestein, 2016, p. 65). Searching for an explanation to a question begins with curiosity, an attitude driven by talent, irrational impulses and collective interests. Afterwards, the scientist has to swim in an open sea of uncertainties, and, after trying obvious solutions that do not work, the scientist has to consider extraordinary, unimaginable alternatives. Creativity emerges from these discrepancies, not from things one already knows. As a social process, science develops creativity through interactions and the exchange of opinions, through which ideas are (de)constructed and reconstructed. Feyerabend (1975) irreverently affirms that the necessity to be rational and not multidisciplinary prevents us from making progress, whereas science requires individuals to be resilient to changes without merely following widely accepted structures. We see building a culture of failure in academia as a necessity, as the scientific framework needs a paradigm shift to revolutionise its dominant framework and scientific culture. As Thomas Kuhn (1970) suggested in his work, shifting paradigms are a natural phenomenon in the history of science and in its performance.

PUBLISH OR PERISH, OR PERISH BY PUBLISHING? PUBLICATION BIAS AND OTHER SYSTEMIC FAILURES IN ACADEMIA

The lack of a culture of failure is also reflected in the way academia is organised, for example, in the publication system. The main objective of scientists is the publication of papers, which summarise and communicate researchers’ accomplishments and the process that produced them to the scientific community. However, as Latour and Woolgar (1979) asked: “how can we account for the fact that in one year, approximately, one and a half a million dollars is spent to enable

twenty-five people to produce forty papers?” (p. 70) As rhetorical as it might sound, the author’s aim was to emphasise that papers are often never read and that they may be misunderstood and even misused. The phenomenon known as publication bias represents another impediment to scientists’ integrity: studies with positive results are more likely to be published than those with negative results or than those that do not present statistically significant conclusions (Schneck, 2017). The idea that scientists have “to follow the data no matter how it works out, to take the result where it will go, including nowhere” (Firestein, 2016, p. 65) is not always accurate. If results bring you nowhere, your paper will not be published and you either publish or perish. If publications represent the way scientists communicate, wouldn’t it be more convenient to learn from each other’s failures in order to avoid the repetition of experiments that waste time and resources?

This brings us to the open science domain: knowing about each other’s failure would allow scientists to avoid repeating experiments that have already failed, and it would also increase the reproducibility of studies. Ultimately, would it not be more constructive to receive support and feedback on our failures than on the ideas that have already been proven to work? A more holistic approach to science would lessen the control of single actors (funding bodies, journals, institutions) and foster the collective process science is supposed to be. Professionalisation and the quantification of knowledge based on metrics that measure successful ideas deeply impedes the provision of open knowledge as well as cooperation among scientists (Tennant, 2018). With an increased hyper-fragmentation of disciplinary domains, researchers risk being constrained to self-referential spheres unable to provide diverse standpoints, which might have been able to bring a fresh outlook to the subject under investigation. The outcome is an increased insularity within scientific contexts, which leads researchers to solve puzzles that are ultimately irrelevant to societal problems, and makes them incapable of confronting dogmas and presenting visionary positions (Blokland, 2015).

Funding distribution for scientific research represents another systemic failure in academia: funding has become subject to such fierce competition that scholars have adapted to the idea of proposing safe projects, which means proposals that will surely, recalling Firestein’s words, bring them somewhere (and hence proposals that will lead to publications). This implies that the majority of researchers will look at similar problems, in order to comply with the general agenda and literally waste public funding (Firestein, 2016).

continue reading on page 68 ►►



THIS IS AN ARTICLE BY **MAFALDA SANDRINI AND KATA KATZ**

This article was first published on 8 September 2020 on *Elephant in the Lab*.

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FAILING THE COMMUNITY: DIVERSITY AND MENTAL HEALTH IN ACADEMIA

The Max Planck and Helmholtz Associations, which are among the leading research institutes in Germany, conducted two surveys in 2017 to investigate mental health issues in academia, job satisfaction and career prospects, which are among the main stressful factors affecting researchers' well-being (Max Planck Society, 2018; Helmholtz Juniors, 2018). Out of 4525 doctoral researchers at the Max Planck Society, 49% (2218) took part in the survey, and 6% of respondents stated that they had suffered from mental health issues, with a majority of these respondents being female researchers. The fear of stigmatisation and discrimination holds researchers back from sharing their condition: 20% of respondents with mental health issues did not inform anyone about it, 36% found it challenging to address it and 4% experienced intolerance. Out of 1399 doctoral researchers from all Helmholtz centres who took part in the survey, 35% of respondents stated that they sometimes felt unable to cope with the amount of work, since the majority of their working time was allocated to tasks that they had to complete as part of the research project that employed them but did not relate directly to their doctoral project. Consistent with Max Planck's survey results, "57% of female participants (very) often considered resigning from their project, compared to 41% of male participants" (Helmholtz Juniors, 2018, p. 23). The motivations cited for possibly resigning were supervision, additional reasons related to the project and amount of work. Academic institutions and universities have been neglectful in addressing mental health issues within their working environments, contributing to the preservation of a stressful atmosphere. In *Homo Academicus*, Bourdieu (1984) argues that academia's power structure enables domination and the maintenance of a status quo by negatively impacting knowledge production. Indeed, it is remarkable how academics slowly work and network their way up and how they stay up by reproducing the very same structures of hierarchy, domination, obedience and servility that brought them to the top. An academic career is a slow process, laden with mostly implicit expectations, obligations and requirements, demanding feigned mutual admiration and exchanged reviews, invitations, positions, titles and other indulgences (Blokland, 2015, p. 28).

Professors themselves are overwhelmed with their workload, having to teach undergraduates, supervise dissertations and prepare research proposals. However, placed at the lowest level of the hierarchy, PhD candidates are the most vulnerable group, compelled to compete for limited and short-term positions.

Additionally, academia's hierarchical system is failing to address structural and social inequalities, for instance, sexism and racism. Unfortunately, it is not surprising that the female respondents to the Max Planck survey were the ones reporting major mental health issues. In her popular *Cyborg Manifesto* (1985), Donna Haraway presented a sharp critique of the deficiency of diversity in science and of the failure to cross disciplinary boundaries. Through the notion of the cyborg, a genderless and race-less philosophical entity, Haraway advances a debate on the importance of intersectionality between fields of studies but also identities. Due to the historical dominance of western masculine perspectives in meaning construction and the history of institutional racism, there is a gender and racial bias in scientific work. In this regard, Mignolo (2002) talks about the geopolitics of knowledge, explaining how capitalism also influenced epistemology: "western expansion was not only economic and political but also educational and intellectual" (p. 63). Even if efforts to embrace diversity and inclusion have recently increased, minorities are still underrepresented within top university positions (Coleman, 2005), thus perpetuating the current hegemony. Furthermore, in Europe and North America, scholars from outside Europe or the Anglosphere are rarely included in study curricula (Nwonka, 2019).

In conclusion, we have seen how failure is an intrinsic aspect of the scientific process we use to build knowledge; we have established that failure is a source of creativity and therefore it triggers innovation and progress, which should ultimately be a key part of scientific inquiries. This lack of a culture of failure is affecting the way scientists produce knowledge and also the structural system behind it, with profound implications for society at large: of this, the educational, publication and funding systems provide clear evidence. With this contribution, we hope to shed light on this problem and initiate a process of reflection on the power of failure in order to improve existing conditions in academia. ♦

FOOTNOTE

¹ We use the word science according to its German counterpart *Wissenschaft*, which is used for both natural sciences and the humanities. Therefore, we purposefully did

not define failure in order to foster a conversation within the community, but also a personal reflection.

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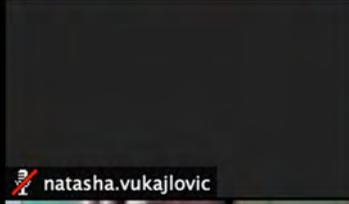
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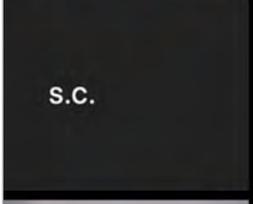


Lorenz Grünewald

HIIG@HOME

The HIIG spirit is where we are. When we work from home, we simply take it with us. Who, if not the Institute for Internet and Society should succeed in this? With online coffee breaks, internet collaboration tools and virtual team retreats, we stay calm and carry on.

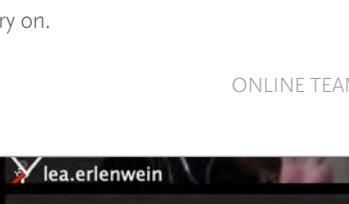
ONLINE TEAM RETREAT



S.C.



Adrian Kopps



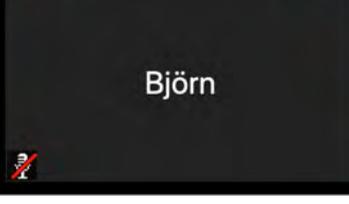
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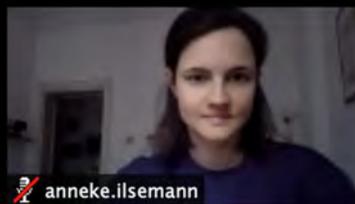
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Thomas.Schildhauer



JOÃO CARLOS MAGALHÃES AND
CHRISTIAN KATZENBACH

Coronavirus and the frailness of platform governance

The pandemic has not only laid bare the immense challenges of regulating speech on social media platforms, it has also transformed how this regulation is done.

Major health crises, historian David S. Jones (2020) has argued, “put pressure on the societies they strike” (para. 7). And this strain, he has pointed out, “makes visible latent structures that might not otherwise be evident” (Jones, 2020, para. 7). Something similar happened in 2020. As the novel coronavirus pandemic quickly triggered an unprecedented global calamity, ideas that not long ago seemed acceptable, fashionable and even inescapable, such as fiscal austerity and science-scepticism, were increasingly called into question. Unsurprisingly, in an era dominated in many ways by big tech, the pandemic also helped to highlight how contestable – and, we argue, frail – platform governance is.

By this we mean the regimes of rules, practices and algorithmic systems that companies use to regulate who can see what in their digital platforms.

Although the pandemic focused all eyes on public health, economic wellbeing and other emergencies, platform governance has hardly been a superfluous issue. In a moment when we all heavily depended on digital services to receive news that could help make sense of the situation, the way companies such as Facebook and YouTube managed the content on their platforms played an obvious role in how the pandemic evolved. More than just influencing the crisis, though, these services were also changed by it.

SENDING MODERATORS HOME: A SHARP TURN TO AI IN CONTENT MODERATION

As the outbreak escalated in March, Facebook and YouTube announced that decisions on whether to keep or take down certain posts would be less dependent on human moderators (who would be sent home to avoid exposure to the virus) and more on algorithmic systems. This increased automation, they admitted, would lead to more *mistakes* in the management of content in the massive public spaces they privately control. Google (2020), who owns YouTube, said that “there may be an increase in content classified for removal during this time”. Facebook

(2020) sounded a little more defensive and vague, arguing that “we may see some longer response times and make more mistakes as a result” but that this shouldn’t “impact people using our platform in any noticeable way”. (In October, some Facebook moderators were sent back to offices, and at least one reportedly contracted the virus.)

Twitter adopted a different approach. Responding to growing concerns over misleading content about the pandemic, the platform announced in a corporate post, also in March, that it

would adopt a draconian moderation policy in regards to coronavirus-related posts: it would request the removal of all “content that increases the chance that someone would contract or transmit the virus” (Hatmaker, 2020, para. 3). Even when taken at face value, these changes should raise an eyebrow. While it is commendable to acknowledge that automated content moderation might produce more mistakes, Google and Facebook’s announcements fall short of explaining the various problems inherent in using algorithmic systems to perform a task that reasonable humans would still struggle with. To begin with, it is unclear what mistakes this automation would produce. Facebook users, for instance, quickly alleged that posts with legitimate information about the pandemic had been taken down as spam – in response, the company called this a mere “bug” (BBC, 2020, para. 2). Another controversial consequence of automated content moderation was revealed in August, when Facebook reported that almost no appeals against AI moderation decisions had been processed in the first months of the pandemic (York, 2020). Without humans to assess their requests, users were denied even the semblance of due process.

As one of us argued in a co-authored paper in *Big Data & Society*, an almost fully automated system of content moderation risks obfuscating the political nature of decisions over content (Gorwa, Binns & Katzenbach, 2020). What if these moderation systems achieve their overarching aim by becoming a taken-for-granted infrastructure that smoothly operates in the background? Such infrastructures of public speech obscure their inner workings and direct attention away from the fundamentally political nature of speech rules being executed by potentially unjust software at scale.

THE POLITICS OF DECISIONS ABOUT CONTENT IN A PANDEMIC

For instance, Twitter’s decision on content related to the novel coronavirus seems to assume a level of conceptual clarity and institutional legitimacy that simply does not exist. Making sense of an evolving pandemic is an extraordinarily complex task, even for epidemiologists. For instance: at the very beginning of the pandemic, many experts told us that social distancing should apply mainly to sick individuals, only to realise (after some research) that asymptomatic people could also transmit the virus. If experts are unsure of what to do and say, why should we trust Twitter to possess the superior ability to say what content can fuel the transmission of the virus?

Less than 24 hours after the new policy was announced in March, the platform gave us reason to be concerned. Elon Musk, the powerful CEO of Tesla, who had repeatedly downplayed the seriousness of the pandemic, tweeted the false information that kids are “essentially immune” to the new coronavirus (O’Kane, 2020, para. 1). This might appear to be a blatant example of what the platform had just banned. But the post was not removed. “It does not break our rules”, Twitter declared after reviewing the “overall context and conclusion of the Tweet” (O’Kane, 2020, para. 8).

CONCENTRATED PRODUCTION CHAINS, UNSTABLE RULES, UNACCOUNTABLE DECISIONS

It is not the first time, of course, that Twitter has appeared to protect a powerful billionaire, as its seemingly complacent response to Donald J. Trump’s behaviour suggests. Indeed, the particular issues that the coronavirus crisis underscores point to a much more fundamental problem: companies’ content governance regimes depend on remarkably frail arrangements.

This frailness is in part related to how concentrated content moderation *production chains* are. The turn to automation, for instance, was precipitated by the fact that many human moderators are not allowed to work from home. This might seem surprising. Aren’t technology companies able to design safe systems for this kind of job to be done remotely? As explained by Sarah T. Roberts, an assistant professor at the University of California in Los Angeles, remote content moderation might be precluded by “constraints like privacy agreements and data protection policies in various jurisdictions” (2020, para. 16). A disproportionate amount of the distress-inducing labour that goes into moderation is performed by low-paid individuals in poor countries. In fact, part of the shortage of moderators appeared to be directly linked to the quarantine of a particular group of workers in Manila. “What is supposed to be a resilient just-in-time chain of goods and services... may, in fact, be a much more fragile ecosystem in which some aspects of manufacture, parts provision, and/or labor are reliant upon a single supplier, factory, or location” (Roberts, 2020, para. 21).

Another facet of platform governance’s frailness concerns the instability of companies’ internal rules. Sudden and reactive policy changes, like Twitter’s new coronavirus policy, are a constant issue. As a platform representative cited in

a book by Tarleton Gillespie noted, “When you look at a site’s published content policies, there’s a good chance that each of them represents some situation that arose, was not covered by existing policy, turned into a controversy, and resulted in a new policy afterward” (2018, p. 67).

We at HIIG examined how the Twitter rules (the platform’s community guideline) have changed since 2009. Our analysis found over 300 changes in directives, terminology and the classification of regulations. Many of these changes were obviously associated with specific external events, such as the 2016 US presidential election and the recent ethnic conflict in India. Others appeared to reflect the seemingly erratic ebbs and flows of a company unsure of how to exert its enormous powers. Overall, these changes document Twitter’s slow and reluctant emergence as an explicitly political institution.

Finally, the suspicions triggered by the way in which Twitter apparently overruled its own policy so as not to punish Elon Musk hints at platform governance’s political fragility. More specifically, there is a lack of stable transparency channels that could give the rest of society the chance to really understand how companies make policy, enforce rules and design technology. The decision-making process of major social media platforms remains essentially unaccountable; it is often the prerogative of a clique of executives and employees whose concerns, methods and disagreements have been essentially shielded from minimal public scrutiny. While companies have fiercely defended this transparency deficit as key to their business model, it arguably weakens their legitimacy, increases external criticism and eventually leads these companies to keep experimenting with new governing practices. In 2020, for instance, Facebook unveiled its Oversight Board. But whether this initiative will indeed develop into an independent body akin to an internal *Supreme Court* is unclear (Ghaffary, 2020).

PLATFORM GOVERNANCE AFTER THE NOVEL CORONAVIRUS

Will such frail systems be capable of holding their own? Can we expect platform governance to emerge from this pandemic in a more reliable, stable and democratic form?

The frailness we have described so far is related to previous crises in complex ways. Much of platform governance regimes originated as adaptive reforms; these were hasty solutions to placate external critics and deal with instabilities. Take the

continue reading on page 80 ►►



THIS IS AN ARTICLE BY **JOÃO CARLOS MAGALHÃES AND CHRISTIAN KATZENBACH**

This article was first published on 29 March 2020 on the *Internet Policy Review*.

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unstable internal policies and the rise of content moderation with cheap human labour – largely done after the so-called *techlash*. On the other hand, unaccountable decision-making has continually hindered our ability to understand the extent of companies' involvement in recent watershed events. The use of platforms by Russia's disinformation agency during the 2016 US presidential election, for instance, was uncovered by journalists, academics and judicial investigators. Companies like Facebook initially denied and deflected any criticisms.

The last years have taught us that platforms are unlikely to truly improve governance regimes that, while frail, are also profitable. They will have to be pressured. In the case of the coronavirus crisis, this pressure will only be strong enough to promote any structural change if we are able to critically understand the role played by platforms in the pandemic. How did disinformation circulating online influence the growth of the cases? Did companies ameliorate or worsen the problem? Were they indirectly involved in the deaths of over one million people? It remains to be seen how the opacity of an increasingly automated content moderation system may affect this assessment.

However, if this crisis ends up being a moment of further consolidation of big tech's social power, as seems likely, their governance arrangements may remain unchallenged for a long time. Or, perhaps worse, companies might use this crisis to normalise money-saving solutions that in normal times would be ethically unacceptable – think of the mistakes generated by the further turn to AI, peddled as the minor cost of grim trade-offs.

To say that shocks often work as catalysts for structural change does not tell us the direction of the transformation. There is no guarantee that any lasting change will be in the public interest. Policymakers, journalists and researchers must redouble their efforts to ensure platform accountability. The governance regimes renegotiated in this turbulent year of 2020 are poised to be an even more central structure in the world that will emerge from this pandemic. ♦

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R₁ E₁ A₁ D₂
T₁ H₄ E₁
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DO YOU KNOW WHAT YOU SIGNED UP FOR?

TAKE THIS PLATFORM GOVERNANCE QUIZ!

The economic shift has posed new challenges and questions for society, the labor market, and organisations. How well do you know the terms and conditions of popular social media platforms? Show your knowledge in our platform governance quiz!

- 1 A key challenge for platforms is how to keep up with the ever-changing manipulation techniques used by propagandists. Is it true that YouTube prohibits “inaccurately translated video subtitles”?
 - a Nonsense! Subtitles are one of the very few elements that are not regulated by the platform.
 - b Yes, “major and intentional” inaccuracies in subtitles might lead YouTube to remove a video.
 - c Yes, inaccurate subtitles that might “inflame geopolitical tensions” and create “serious risk” of harm are forbidden.

- 2 Over the years, platforms have come to recognise that some minorities merit special protection. One example is Facebook, which does not allow users to post content targeting people on the basis of their “protected characteristic(s) or immigration status”. This rule applies in all situations, except when:
 - a These people have committed violent crimes or sexual offenses.
 - b These people are politicians.
 - c The attackers are themselves part of protected groups.

- 5 Facebook's policies about what sort of speech is acceptable on its platform have been the source of constant controversy. Do you know which of the following is not allowed on Facebook?
- a Verifiably false statements about a candidate for political office.
 - b Content that facilitates, encourages or coordinates sexual encounters between adults.
 - c Self-immolation, when that action is a form of political speech.

All answers to this quiz were collected in August 2020 for HIIG's summer team retreat. Please note that the terms and conditions of social media platforms change continuously.

Solution: 1c, 2a, 3c, 4b, 5b



AMÉLIE HELDT

Trump v. Twitter: the pitfalls of free speech

We refute the idea that platforms become arbiters of speech. We criticise their power over online speech. Yet, we want them to fix problems beyond their legal obligations. This piece reflects on the consistent ambiguity vis-à-vis platforms.

Since Twitter labelled a tweet by Donald Trump as “potentially misleading” and indicated that it was fact-checking the statement made, the US President signed the *Executive Order on Preventing Online Censorship*, mainly targeting a piece of legislation which provides immunity from liability for internet services. This foundational law is often referred to as the “twenty-six words that created the internet”. The dispute itself is not a new one: although a heavy user of Twitter, Trump has been accusing social media platforms of discriminating against conservative viewpoints and unfairly penalising right-wing users. Nevertheless, this executive order marks a new level of escalation and an unprecedented threat to social media. The situation in itself illustrates how torn we are when it comes to intermediary immunity – or inversely liability – because of the challenging questions regarding freedom of expression and protection of deliberative space. Changing the rules for platform immunity is particularly

complicated in the US due to the broad scope of freedom of speech, even more so because of a doctrinal cul-de-sac in theories pertaining to the American Constitution’s First Amendment: namely both the doctrines of state action and public forum to social media platforms. The First Amendment prohibits content-based regulation of freedom of speech; it affords almost absolute protection against governmental intervention. According to the state action doctrine, private parties are exempt from applying third-party fundamental rights enshrined in the Bill of Rights, unless they fall under the public function or the entanglement exception. In these two cases, the private actor can be treated as a state actor and, in the context of the First Amendment, could be subject to the scrutiny of traditional or designated public forums. Applying these doctrines in cyberspace – or not – is at the core of the debate around the executive order.

DIVERGENT EXPECTATIONS?

While we consider social media platforms to constitute important parts of the digital public sphere – they host much of our daily communication – and we subsequently expect them to take responsibility and protect democratic values on the one hand, on the other we refute the idea that

platforms should become arbiters of speech. In other words, we criticise the platforms’ power over online speech, yet we want them to fix problems that go beyond corporate responsibility. Of course, the companies benefitting from the attention economy are neither neutral nor innocent bystanders – their

services have an undeniable effect on society. Nevertheless, it is important to note that the legal regime created for “interactive computer services” was meant to stimulate “freedom of speech in the new and burgeoning Internet medium” (*Zeran v. America Online, Inc.*, 129 F. 3d 327 – Court of Appeals, 4th Circuit 1997). Nowadays, the current administration is in favour of a law on “platform fairness”, which would take away the platforms’ discretion over the content.

SECTION 230 UNDER ATTACK

The law under fire from the executive order is section 230 (c) (1) of the Communication Decency Act (CDA). It declares that platforms are, in principle, not liable for user-generated content because they are not considered publishers or editors: “No provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider.” This provision from 1996 paved the way for services hosting third-party content without the legal obligation to monitor it. It is often referred to as a highly relevant internet regulation due to its beneficial effect on the internet economy, since it protects from liability. It also leaves at the platforms’ discretion whether or not “to restrict access to or availability of material” that they consider unwanted under section 230 (c) (2) CDA. At the same time, it is also deemed to be the ground on which harmful content can be uploaded and propagated online. As such, it has been subject to many controversies over the years. The summary of the criticism expressed in the executive order is that platforms aren’t neutral when it comes to user-generated content: they curate content and, hence, they become editors. A less comprehensive scope of application would lead to a more strict intermediary liability for third-party content, and probably change the platform economy altogether.

From a German perspective, a moderate form of liability for unlawful content might seem relatively reasonable since our legal system allows for speech-restricting laws if they meet the constitutional requirements of Art. 5 (2) German Basic Law. However, the underlying principle of the “same rules online than offline” cannot be transferred to the American First Amendment because its scope of application is much broader. Further, the federal legislator is not allowed to pass laws that could limit freedom of speech for US citizens, which in turn means that there are only very rare exceptions to the strict scrutiny of the First Amendment. Besides, social media platforms are considered speakers themselves and are hence protected by the First Amendment against the coercive power of

continue reading on page 90 ►►



THIS IS AN ARTICLE BY **AMÉLIE HELDT**

This article was first published on 4 June 2020 on the *Internet Policy Review*.

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the state¹. On the flip side, information intermediaries have gained such extensive power over online communication that they are no longer considered merely pipes through which third-party content simply flows, but rather platforms are now seen as global actors that govern speech in the digital public sphere. Some even consider them quasi-state actors (in terms of the doctrines mentioned above). If they were to be treated as state actors (due to the fact that the exemptions of the doctrine would apply to them), they would no longer be allowed to define the rules of online speech.

SOCIAL MEDIA PLATFORMS ARE PRIVATE, NOT STATE ACTORS

Whether large social media platforms should be considered state actors and, therefore, bound to the First Amendment has been extensively discussed in legal scholarship in the last years (inter alia: Zatz, 1998; Berman, 2000; Citron & Richards, 2017; Wu, 2017). Some argue that by offering a common space for public communication platforms have become a new type of public space; therefore, these would meet the requirements for the public function exemption under the state action doctrine. This, in turn, could lead to an intertwining with the public forum doctrine. The latter was developed by the US Supreme Court to guarantee First Amendment rights in spaces that “have immemorially been held in trust for the use of the public, and, time out of mind, have been used for purposes of assembly, communicating thoughts between citizens, and discussing public questions” (Hague, 307 U.S. at 515). Only when private parties fall under the public function or the entanglement exception can they be treated as state actors and eventually provide a public forum. Irrespective of the US context, the general idea is referred to as the horizontal effect of fundamental rights; that is, in certain constellations it is not just that the state has to respect its citizens’ freedom but also that private parties can be bound to it. While courts in other countries (such as Germany) have revealed that applying such a horizontal effect might be a solution to the issue of protecting fundamental rights online, US courts have been reluctant to treat social media platforms as state actors.

The executive order cites two cases by the Supreme Court (*Packingham v. North Carolina*; *Pruneyard Shopping Center v. Robins*) dealing with the question of whether private actors can indeed provide a public forum. In *Packingham*, the Supreme Court did refer to social media platforms as the “modern public square” of the digital age but with the purpose of declaring a law under which the government could restrict access to such platforms unconstitutional. This case was precisely

about preventing the state from wielding power over access to social media, but without calling them public fora in the doctrinal sense. So far, courts have refrained from applying the company-town analogy (*Marsh v. Alabama*) to other private properties used for expressive activities. Recently, courts have repeatedly emphasised that social media platforms are not state actors under the current doctrine. *Knight Institute v. Trump* showed that, while platforms might host governmental speech and therefore have become a designated public forum under the doctrine, they are still private actors. In *Prager University v. YouTube*, the Ninth Circuit court affirmed that hosting speech is not a “traditional, exclusive public function” and that “despite YouTube’s ubiquity and its role as a public-facing platform, it remains a private forum”².

CONSISTENT AMBIGUITY VIS-À-VIS PLATFORM LIABILITY

The results of such jurisprudence are, again, two-sided. On the one hand, it gives platforms immense power over what can be said, and, in the US, this makes them more powerful than the state under the First Amendment. On the other, it allows them to moderate and ban content perceived as harmful because they are not bound by the First Amendment. They can ban misinformation and mark user-generated content as potentially misleading, even if the user is a government official. They can serve the public interest in times of uncertainty due to the pandemic by providing access to trusted third-party sources. They can facilitate the propagation of images of police violence and governmental power abuses. Potentially, they can even decide over “post-truth politics” to some extent without any legitimation apart from large user numbers. It goes without saying that the doctrinal debate on state actors and public fora is far more nuanced and complicated than could ever be explicated in this short opinion piece. Still, it is essential to bear in mind that the larger constitutional framework described here is built on the arguments of democracy, truth and autonomy (Emerson, 1963; Yemini, 2020). The goal is not to uphold the “free marketplace of ideas” no matter what but to protect the societal goals enshrined in freedom of speech. ♦

FOOTNOTES

1 See also the Center for Democracy and Technology's lawsuit against the Executive Order on Preventing Online Censorship, filed June 2, 2020: Case 1:20-cv-01456.

2 The author has elaborated on this question to what extent platforms can in fact be the

hosts of public discourse and at the same time enforce their own rules on users, i.e. moderate content, without providing a public forum in the legal sense, in the paper *Merging the Social and the Public* (Heldt, 2020).

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Finn Grotheer



Lajla Fetic

OPENING MATCH: THE BATTLE FOR INCLUSION IN ALGORITHMIC SYSTEMS

TEAM CIVIL SOCIETY AND TEAM INDUSTRY GO HEAD-TO-HEAD ON CONDITIONS AND RULES FOR INCLUSIVE DESIGN

How can the increasing automation of infrastructures be made more inclusive and sustainable and be brought into accordance with human rights? HIIG's newly founded AI & Society Lab pursues this core issue by facilitating exchange between academia, industry and civil society while experimenting with different formats and approaches. As one of its initial ventures, it hosted a series of roundtables in cooperation with the Representation of the European Commission in Germany to work on the implementation and operationalisation of the commission's White Paper on AI. To extend and sustain the societal debate on inclusive AI, the topic of the third roundtable, referee Juliane Henn challenged two stakeholder groups to a ping pong match, the world's fastest return sport – but digitally, with the AI & Society Lab hitting the first serve. Playing for team civil society is Lajla Fetic, scientist and co-author of *Algo.Rules*, a practical guide for the design of algorithmic systems. Facing her on the other side of the net is Finn Grotheer, AI business development fellow at Merantix, a Berlin-based AI venture studio. On your marks, get set, go!

Juliane: What AI topic won't let you sleep at night?

Finn: In particular, so-called GANs (generative adversarial networks) are a major societal challenge. They can artificially generate videos and soundtracks that are not recognisable as fakes. In light of our social media culture and its influence on society and politics, we can only hint at their effect.

Lajla: The hype about AI does not give me nightmares. What I ponder are the questions behind it: how can all people benefit equally from technology? How can marginalised groups find a hearing in the design of AI? If women, people with disabilities, people with migration experiences or without a university degree can participate equally in debates and in the development of AI, I will sleep even better.

Finn: When it comes to minimum standards, I wonder whether a law can reflect the complexity, diversity and pace of the AI industry. We work a lot with industrial clients – manufacturing, e-commerce, synthetic biology – and use their data to develop customised systems, for instance for improving production or quality control. Each industry has its own characteristics and not every B2B use case raises ethical questions. I would be interested to hear what legal minimum standards would look like specifically and under which circumstances they would apply.

AI systems could potentially make discrimination visible, but they are mostly used for reasons of efficiency and in some cases specifically for selection and discrimination (in a current example from Germany, they are used by people who want to change their energy supplier). In addition, there is a justified need to experiment and drive development forward – how can we build trust and not gamble it away?

Finn: By pointing out potential, sharing success stories and assessing the ratio of unobjectionable to problematic applications. Industrial applications, for example, do not use data from private individuals and they help to make work better and safer. For every application we discussed, there are four that have tacitly changed things for the better – from curing diseases to mitigating environmental disasters.

Lajla: When using today's algorithmic applications, we still face many technical and social questions, e.g. about human-technology interaction. Therefore, we have to take a close look at particularly sensitive areas (personnel selection, health and public services). Certification in these areas could create more security for users and those affected.

Where do you see a particularly urgent need for action in European legislation? Do you find the approach of exclusively risk-related regulation sensible? How could the EU as a legislator perhaps even send a positive signal now?

Finn: With its exclusive focus on the most conscientious regulation possible, the EU will find that it is difficult to retrospectively impose their own standards on foreign companies that drive innovation – as was the case with the tech giants of the 2000s. The local AI ecosystem must be backed much more rigorously: by public partnerships and funds, investments in education and professorships, the opening of test fields

MICHAEL DENGA

Owning platforms – cooperatives in the digital economy

Digital trading platforms like Amazon or Uber generate billions in turnover, yet their success has been overshadowed by their drawbacks for platform users. Could cooperative models ameliorate the flaws of online platforms?

Concerns are growing about the negative impact of commercial platforms on society in general. Think of the fierce protests by cab drivers against Uber or the critique of Amazon's competition and data strategies. So how can platform users be shielded from unjust disparities in wealth accumulation or other disadvantages in the digital economy? And how can platforms

coexist with society harmoniously? Cooperatives can have a beneficial role in the digital platform economy. The author suggests that they can be conceived as means of alternative regulation, thereby shielding market innovators from excessive regulation while at the same time empowering users as owners of platforms.

LIGHT AND SHADOW IN THE DIGITAL DUCHIES OF PLATFORMS

"Platforms eat the world", the authors of the *Platform Revolution* claim (Parker et al., 2016). They are conquering trade and constitute powerful "Digital Duchies". They are taking over traditional firms by providing hitherto unheard-of benefits for consumers and businesses. Platforms are facilitating markets and offering infrastructure for interactions between producers and consumers of goods of all kinds. They are also redefining markets and improving product

quality. The platforms' strengths relate to their network effects. Their usefulness increases exponentially, even if the number of users only increases linearly. After reaching a tipping point they can experience hyper-growth to the extent that competitors cannot catch up. Monopolies can result. This is why governance decisions impact the entire market, causing it to blossom or fail.

REGULATION AND ALTERNATIVE REGULATORY APPROACHES

Bad governance by leading platforms can lead to market failure. This is a classic case for state intervention. Regulation, however, is not an easy choice. According to neoliberal theorists, state intervention is prone to *regulatory capture*, that is, bias in favour of existing influential businesses. And because of the complex and novel dynamics of digital platform businesses,

its regulation is an especially delicate issue. It may hinder platforms from creating great innovations. Therefore, prohibitive regulation must be the last resort. Owing to technological change, the regulatory focus has shifted to alternative modes of rule setting, such as co-regulation and private standards. Self-governance and self-responsibility are central notions in system design.

However, at the EU level, there is continuous pressure on platform businesses, not only due to competition law but also because of new pieces of regulation such as the P2B regulation or the *German Network Enforcement Act (NetzDG)*. Now, more than ever, it seems crucial to reassess the independence of market participants to avoid unnecessary regulation.

COOPERATIVES AS DEMOCRATIC PLATFORMS

Cooperatives could form part of an overarching regulatory approach for the digital platform economy. They can strengthen their members' economic autonomy. If cooperative platforms are successful as alternative or complementary marketplaces, poor governance of commercial platforms could have less impact and require less prohibitive regulation.

There is no such thing as a unified concept of cooperatives internationally. The German model, however, offers a structure that could serve to empower users in the platform economy. Four structural features suggest so:

First of all, cooperatives are platforms. They are owned by their members and offer infrastructure to them. They can scale benefits with growing membership. As with platforms, members can use the infrastructure to enter into transactions that they could not have undertaken alone.

Second, German cooperatives abide by the rule of one person, one vote. Members vote in their general assembly regardless of their financial stake in the company.

Third, cooperatives must not pursue aims other than those of actually supporting members, by providing them with an infrastructure that can meet their needs. They have to support members in their professional or private projects. They must do so over the long term, which makes them fundamentally sustainable.

Fourth, fairness and legality of cooperatives are overseen by regulatory bodies (*Prüfverbände*), which helps to prevent abuse of power by groups within the membership.

Those characteristics are fundamental features of German cooperatives and may not be negated in their articles of association or shareholder agreements.

continue reading on page 104 ►►



THIS IS AN ARTICLE BY **MICHAEL DENGA**

This article was first published on 11 May 2020 on the *Digital Society Blog* of the Alexander von Humboldt Institute for Internet and Society (HIIG).

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HOW CAN COOPERATIVES COMPETE?

Despite these characteristics, cooperatives may struggle to survive in competitive markets, where charismatic and centralised leaders can guide firms through legal grey areas. Their democratic structures render potentially efficient minority rule impossible. Nevertheless, the management of cooperatives can be professionalised. And even if cooperatives lack the venture capital funding, they can raise money in the cooperative ecosystem, where there are cooperative banks and where fairness may be valued as an investment criterion. Cooperative platforms could attract users and funds by explicitly bearing a fair trade label – as is currently the case for some supermarket products. Perhaps most importantly, the idea to own a share in the platform and not only to be its user might be appealing to entrepreneurs and consumers alike. Behavioural studies have proven the benefits of the so-called endowment effect. Owners care more and do better.

THE CHICKEN-OR-EGG DILEMMA – OPPORTUNITY FOR ALTERNATIVE REGULATION

This may all sound good in theory, yet, in practice, there is not much sign of cooperatives in digital business. But this is precisely why supporting this model can be a meaningful way of regulating and an alternative to restricting existing platforms. As with any other novel structure in the digital environment, cooperatives face a chicken-or-egg dilemma. Who or what comes first, the fair platform or its members? Unfortunately, few regulatory bodies overseeing cooperatives are up to the task of implementing digital solutions in cooperative businesses, be it in their infrastructure or their products. So, it is crucial to improve these bodies if cooperatives are to enter markets dominated by highly competitive and shareholder-value-driven platforms. There are also other urgent reforms needed to underpin a digital drive by cooperatives, such as the simplification and harmonisation of the EU regulation on cooperatives and a rehabilitation of their reputation as an old-fashioned socialist instrument. Indeed, such characterisations are unfair – and cooperatives may just be able to give back a higher share of value to users while maintaining innovation in the market. ♦

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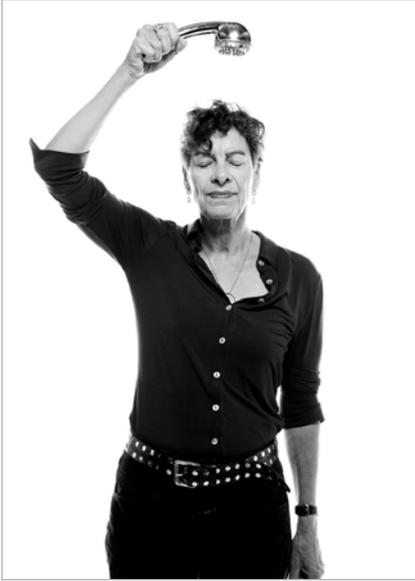
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How do you regenerate?

JEANETTE HOFMANN

Jeanette has been driving and influencing the academic field of internet research from the beginning. As an Otto Suhr Institute-trained political scientist, Jeanette takes a holistic look at the politics of digitalisation. Next to being a successful writer, she also is quite keen on reading.



What do you do against writer's block?



What does the present have too little of?



How do we imagine your wild years?



How do you react if your last name
is pronounced Hoffmann?

NICOLAS FRIEDERICI

Towards a fair and equitable European platform economy?

Digital platforms have become deeply ingrained in the European economy. Yet, it remains an open question what the European way of platform capitalism could and should look like. In addition to regulating of large transnational platforms, European platform enterprises have to identify business models that are both financially and socially sustainable. Empowered users must also play their part.

The rise of digital platforms has expanded markets and benefited the economy, for instance, by giving greater market access to suppliers, weakening the position of rent-seeking incumbents or helping the spatial division of labour. In turn, some platform companies have grown into powerful market actors, often at a global level. Digital platforms are unavoidable infrastructures in many industries, while they also unilaterally set the rules of the game. Just in the past few months,

major controversies have included Apple's prohibitive requirements for app developers, Amazon's preferential treatment of its own products and Facebook's half-hearted content moderation. The dominant platforms from the United States have often undermined or circumvented existing value systems and legal regimes, leading many to sound the alarm about a platform economy that is hurting society more than it is helping the economy (van Dijck et al., 2018).

FOREIGN POWERS

Ultimately, concerns about the dominance of non-European mega platforms go even deeper than overt problems like data protection and misinformation. In the long run, Europe risks losing digital sovereignty, in at least two ways: first, European organisations do not produce and are not in control of the digital infrastructure that the digital economy and society as a whole have grown dependent on (Floridi, 2020). From operating systems through app stores to 5G technology, the most essential – and the most lucrative – technological products are made in North America or East Asia. Second, US and Chinese platform companies may not have originally abided by European norms and standards they may not do so voluntarily. While regulators have upped the ante in terms of enforcement

of rules and curtailing of market power, the mode of surveillance-based digital capitalism that transnational platform companies have set in motion has already become deeply entrenched (Zuboff, 2018; Staab, 2019).

At this point, Europe has awoken to this reality, and policy efforts to reign in and redirect the foreign digital powers are well underway, all the way from EU to national and municipal levels. These agendas are necessary and have merit. Yet, as far as the creation and diffusion of European platform alternatives is concerned, attention and knowledge remain much more limited.

Looking at the scarce empirical evidence on the homegrown platform economy, an uneven picture emerges. In short, we see immense diversity and

divergence across Europe. In some industries, platforms are essential, while, in others, they only play a minor role. In some countries, domestic competitors to American technology giants have secured respectable market positions, like Zalando or eMag in e-commerce. In the ride sharing industry, Uber is dominant in some European cities but it does not exist in others, and in some cities, regulation forced it to fundamentally alter its business model. What explains the different levels of success of different kinds of platforms across Europe? And, are homegrown European companies the key towards fairer social outcomes?

FRAGMENTED MARKETS

All in all, European platform enterprises have remained much smaller than North American and Chinese meta platform companies (that is, companies that offer multiple synergistic digital platform products, like Apple, Google or Alibaba). Venture capital is much scarcer than in the US, and public subsidies and state-led coordination are much weaker than in China. The vast majority of European platforms are transaction platforms; digital infrastructure platforms are rare and mostly focus on niche business-to-business markets. Our initial research confirms that, while platformisation differs in degree and nature across Europe, US platforms continue to dominate in most large markets (Lehdonvirta et al., 2020). European platforms can only challenge transnational platforms when they perfect a particular aspect of our digital lives (e.g. Spotify), differentiate through branding and supply chain innovation (e.g. Zalando), can use their unique local networks, specialist knowledge and market insights (e.g. Siemens Mindsphere), or offer an ethical alternative for accordingly motivated users (e.g. FairBnB).

Notably, almost all of these business models are oriented towards the European market and aimed at specific sectors in one or a few countries. European platform enterprises may therefore not achieve global reach in the near future, but since the European market is large enough, they have a potential to grow nonetheless. Still, the European market is fragmented and, compared to North American and Chinese companies, European platform enterprises remain niche and rarely occupy infrastructural status.

THE EUROPEAN WAY

From our initial findings and conversations with entrepreneurs, it seems that European platform companies will have to move away from treating big tech as

a role model (Friederici, 2020). The platform playbook of scaling fast to achieve network effects and customer lock-in will not work in most market contexts, and it does not have desirable outcomes at societal level either. Rather, in the short term, the most promising strategy for European enterprises is to look for sustainable niches where efficient scale is achievable but size is not everything.

Questions around European values and the continent's social model are more complex and contested. European platform organisations exist on a spectrum. Some merely stick to basic ethical principles and abide by regulations. A second group emphasises values like environmental sustainability to build a brand and generate trust with customers, often to create a contrast to the negative stereotype of platform capitalism. Examples in this category are Zalando or Glovo. A third group is value-driven as a matter of principle; here the business model is designed to be sustainable and equitable from the get-go. Examples are social startups like Clevershuttle and Farmy or platform cooperatives (employee or user-owned organisations) like FairBnB and Resonate.

The bottom line here is that European platforms can and should be more explicit about their distinctly European approach and subscribe to guiding principles that acknowledge the many societal side effects of platforms. They should also publicise the measures taken to mitigate them. This would help their lobbying and branding efforts, as consumers are becoming more conscious about issues like privacy and gentrification, or as business customers begin to take matters like cybersecurity and control over data infrastructures more seriously. Taken to their conclusion, guiding principles could develop into a similar kind of (self-) certification to the Fair Trade and Bio labels in food production and global supply chains.

The cultivation of alternative governance models and modes of funding will be another necessary step for enterprises. Platform co-ops can be studied as real-life experiments on what works and does not work with more participatory ways of platform governance. A key issue will be whether smaller platforms (and other digital enterprises) are able to come together and build alternative and complementary structures that remain oriented at the public good but also leverage digital scaling economies, especially in the realm of data sharing and analysis.

EMPOWERED USERS

While it is impossible for everyone to become an expert on the digital economy, it is necessary for both business and individual users of platforms to understand the basics of digital business models. With increasing media attention, for instance, awareness is rising that social media platforms like Facebook or Twitter seek to maximise engagement and time spent on their platforms, or that services like TikTok and Google Mail mine user data, or that delivery platforms in some countries avoid paying riders the minimum wage by classifying them as contractors and not as employees (Riordan et al., 2020). Consumers may still decide to use these products for their convenience or quality of service, but they should try to be conscious and responsible about long-term and structural downsides.

In the same spirit, users can more actively seek out and support platform alternatives. European entrepreneurs reported to us that creating brand awareness and trust was often difficult, given the much smaller budgets of European platforms. Alternative products may not be well known, even where they are actually not too difficult to find and offer comparable quality of service. Users may make conscious investments of time and money to engage with alternative platforms, ultimately resisting lock-in and standardisation to a few big platforms. Business users may want to take risks and explicitly ask digital infrastructure providers for transparency.

REGULATORY BACKSTOP

Yet, all the self-certification by enterprises and user awareness in the world will not be enough to rebalance the platform economy's engrained structures. Stronger policy and state interventions and more of them will be required to regulate big tech but also to stimulate European platform alternatives.

The most important and also the most difficult challenge for policymakers is to ensure fair market conditions across time and space. There are legitimate reasons to look for interventions that differentiate between meta-platforms and platform upstarts, mainly because meta-platforms are already large and dominant, but also because they were able to achieve this status during times of limited regulation. Care has to be taken that new regulations targeted at big tech (e.g., concerning privacy or liability) do not hurt smaller platforms even more, effectively bolstering rather than harming meta-platforms' dominant position.

continue reading on page 114 ►►



THIS IS AN ARTICLE BY **NICOLAS FRIEDERICI**

This article was first published on 13 October 2020 by *Carta Magazine* as part of the #OneZeroSociety series supported by the Goethe Institute.

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Furthermore, meta platforms' structural anti-competitive consequences need to be understood through a platform-specific lens (Schmidt & Hübener, 2020). Depending on the intensity of network effects and contextual factors, user lock-in may be reached at different levels of market share (or not reached at all). This means that oligopolies in certain platform markets may not be problematic as long as market entry and scaling for superior products remains possible or as long as competition from the traditional economy remains strong. On the contrary, price dumping or cross-subsidising of platform products by meta-platforms can be initially consumer-friendly but may ultimately be destructive. Meta-platforms also differ from smaller platform companies through more sweeping merger and acquisition strategies. They may acquire upcoming competitors and technology providers, with competition authorities lacking the resources and insight into the rationales and outcomes of such "killer acquisitions" (VIDE Seminar, 2020). Only very few if any European platform companies have achieved lock-in or are able to engage in similar practices, legitimising a softer regulatory stance. This is even valid in cases where platforms are leaders in individual (local) platform markets.

Similarly, policymakers ought to explicitly acknowledge platforms' infrastructure and utility character to devise appropriate interventions, both in the form of regulation and of investments. Some platforms have become part of our societies' essential infrastructure, and essential infrastructure should not be entirely in the control of outside interests (Bohn et al., 2020). For instance, the COVID-19 crisis has led some governments to officially label food delivery platforms as essential services. Recent debates around Apple's API and App Store policies have reaffirmed this argument. Defining essential infrastructures is difficult but necessary, including at municipal levels.

Europe's digital economy is facing a series of crucial questions about its future. What is clear is that the status quo of a few mostly North American big tech companies controlling the infrastructures of our digital lives has begun to erode Europe's digital sovereignty and, in part, its social model. What is unclear, however, are the measures that must be taken in order to reconnect European values with the platform economy. Our research suggests that all stakeholders, at all levels, will have to pull together and turn the unique challenges of the European context into uniquely European advantages. ♦

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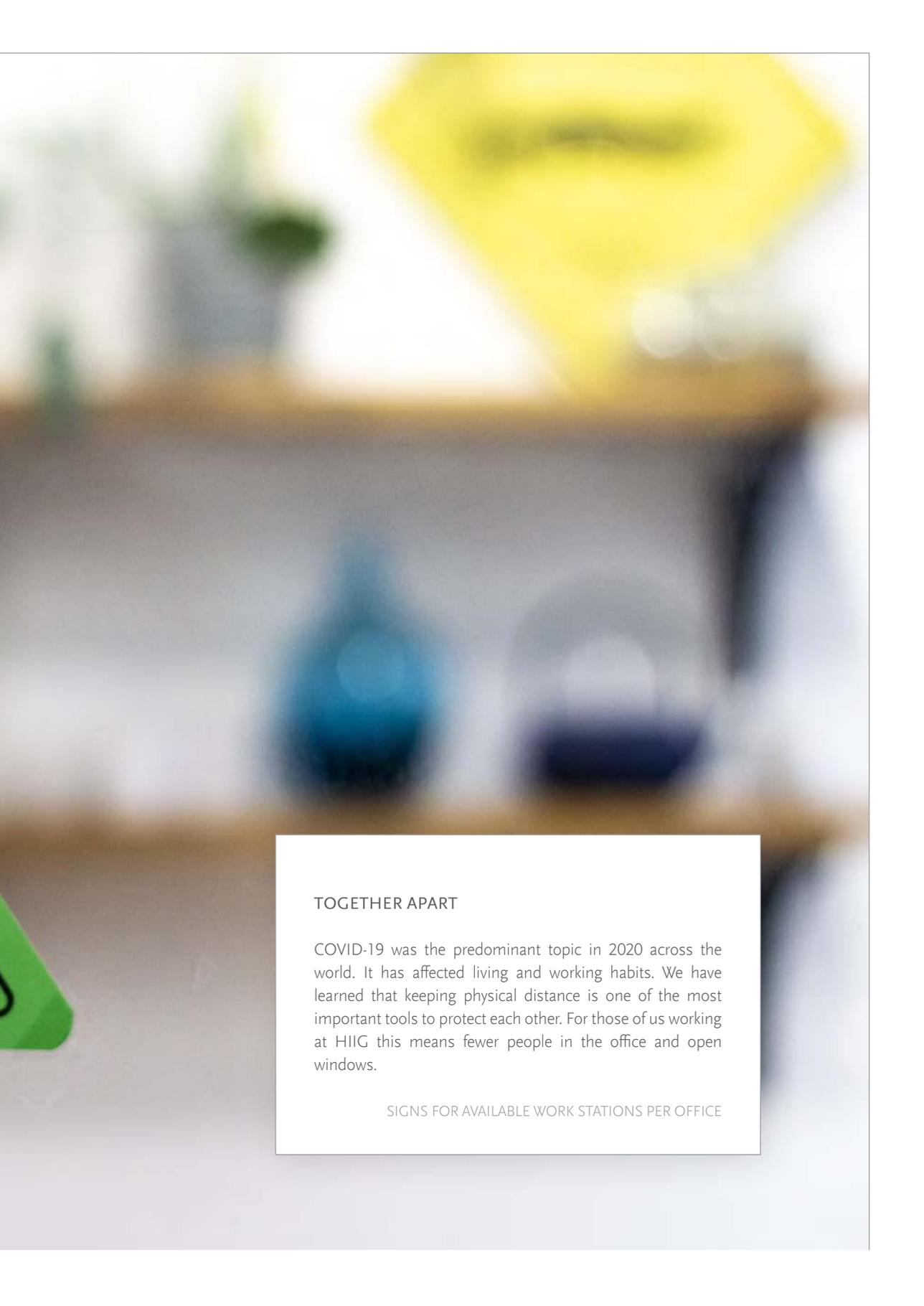
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max.

7

KEEP... DISTANCE



TOGETHER APART

COVID-19 was the predominant topic in 2020 across the world. It has affected living and working habits. We have learned that keeping physical distance is one of the most important tools to protect each other. For those of us working at HIIG this means fewer people in the office and open windows.

SIGNS FOR AVAILABLE WORK STATIONS PER OFFICE

KLEMENS WITTE AND NILS HUNGERLAND

Sustainability: artificial intelligence alone is not enough

While AI has widely been touted as the solution to all problems, it is increasingly being associated with certain risks. In addition to various ethical concerns that have already been discussed widely, sustainability aspects must also be taken into account. In this article we highlight some prospects for sustainable AI use in the field of fire and weather prediction.

Artificial intelligence (AI) has the potential to contribute to more accurate climate and weather predictions and can help us to use renewable energies more efficiently. Yet the computing processes also consume vast amounts of energy. In fact, this enormous energy consumption has recently been compared with the excesses of Bitcoin mining farms. Thus, the rising AI footprint is becoming an increasing concern. This trend has been accompanied by ethical concerns. Ever larger amounts of data – including personal data – are expected to improve streaming services or to enhance the use of natural language processing technology. The outsourcing of processes “to the cloud” is further driving the growth

of data centres (Strubell et al., 2019). The German government’s AI strategy, which is backed by three billion euros in funding, states: “We will focus on the utility for human beings and the environment [...]” (Die Bundesregierung, 2018). Specifically, the German government wants to deploy AI to achieve the 17 sustainable development goals of the United Nations. These include the eradication of poverty and hunger and the promotion of health, clean water and affordable and clean energy (United Nations, 2020). However, AI can only become a driver of sustainable development and meaningfully counteract climate change if technology and sustainability are considered in tandem with each other.

IMPACTS OF CLIMATE CHANGE TO DATE

Global ecosystems are at a tipping point, with natural habitats and agriculture particularly affected (Potsdam Institute for Climate Impact Research, 2020; Rahmstorf et al., 2015). The 2018 Intergovernmental Report on Climate Change estimated that the world will face catastrophic consequences if global greenhouse gas emissions are not eliminated within thirty years (IPCC, 2018).

In 2019, images of the burning Amazon rainforest triggered horror across the world. The Amazon rainforest accounts for around 17% of the carbon sequestered in the vegetation on land

worldwide (Rasper & Steffen, 2019). As a result of climate change and human intervention, forest fires have steadily increased, not only in Latin America, the Arctic Circle and Africa, but also in North America and Europe (Götze, 2020). For example, the number of forest fires in 2019 in the Amazon rainforests was double that of 2013. The forest fires that affected parts of Brandenburg are also consistent with this development (Wellisch, 2020).

Coping with climate change involves mitigation and adaptation. This means, reducing emissions and adapting to the unavoidable consequences of climate

change. To curb greenhouse gas or carbon dioxide emissions, we need to rethink many areas of life: energy production, buildings, industry, land use or transport.

Although there is growing global interest in climate change mitigation and digital transformation, there is often still a lack of implementation competences as to how these “instruments” can best be used to combat climate change. One driver of digital change entails analysing and evaluating large quantities of data using increasing computing power. This makes it possible to undertake calculations that were technically impossible or extremely expensive in previous decades.

FORECASTING FOREST FIRES

One branch of artificial intelligence, namely machine learning (ML), has made great progress in the last decade. An important application concerns accurate predictions based on a large number of indicators. This makes it easier to predict fluctuations in wind and solar energy, for example.

Topography, vegetation, movement and weather data can also be combined such that forest fires or illegal fishing can be detected early. When seeking to prevent forest fires, there are certain vectors that can predict a particularly severe one, such as the tree species, the density of tree coverage or the precipitation rate.

Nevertheless, forest fires sometimes go unnoticed for days. Several research institutions are therefore now working on systems for early crisis detection using machine learning and their own satellites. The University of California at Berkeley, for example, has initiated the FUEGO project, which uses a combination of geosynchronous satellites and flying drones for fire detection. NASA is also working on its own programme with FIRMS (Fire Information for Resource Management System), as it searches daily for thermal changes caused by fires (Ardell & Callahan, 2020). The Royal Institute of Technology of Sweden (KTH) uses machine learning to monitor forest fires on satellite images. And even if urban areas are far away from forest fires, there are also benefits for them. Firms collect and analyse environmental data for cities with heavy traffic and contribute to better air quality (Breeze, 2020).

Many of these services are still extremely expensive. Organisations such as the International Charter Space and Major Disasters or the open source platform Artificial Intelligence for Disaster Response (AIDR) can offer improved access to free data. While the International Charter Space and Major Disasters helps to

continue reading on page 122 ►►



THIS IS AN ARTICLE BY **KLEMENS WITTE AND NILS HUNGERLAND**

This article was first published on 23 October 2020 on *netzpolitik.org*.

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Nils Hungerland studies international relations with a focus on foreign and technology policy and works at HIIG as a student assistant.

Together, Nils and Klemens research the topic of AI competence and AI use cases in small and medium-sized businesses as well as AI applications that can potentially mitigate climate change.

provide high quality data, AIDR provides an open platform to tag social media content that discusses disasters or humanitarian crises. It analyses users' hashtags, tweets and posts in order to closely follow an emerging forest fire about 30 minutes after the start of the discussion in social media. Immediate containment measures can thus be taken more effectively.

AUTOMATED WEATHER FORECASTING FOR RENEWABLE ENERGY

Energy generation with wind turbines and solar plants also benefits from accurate weather forecasting: In contrast to conventional power generation using coal, nuclear power or gas, it is subject to large fluctuations. This is in a disadvantage when selling energy to the grid, as the grid pays higher prices for stable and long-term predictable energy supplies.

This is precisely where machine learning comes in – it attempts to more accurately forecast the energy production of wind and solar power plants for the next few hours than previous methods. This results in higher energy prices for plant operators in the renewable energy sector. The first firms were able to use machine learning to demonstrably increase the electricity price to be achieved by wind power plants by 20% (Witherspoon & Elkin, 2019). This has enormous potential to increase competitiveness with conventional energy production. In addition, the precise weather forecast can also be used when deciding where to position wind turbines or solar parks. Compared to conventional statistical models, ML-based models are up to three times more accurate when predicting wind speeds (Hardesty, 2015).

Machine learning is thus a general-purpose technology that is not limited to specific sectors but can be applied in many different areas. Climate Change AI, an NGO working in this field, has compiled an excellent overview of specific application examples for machine learning and sustainability.

REBOUND EFFECTS

The big problem with using technology is usually the increased resource consumption that accompanies the so-called rebound effect: "Increased efficiency often reduces the cost of products or services. This can lead to a change in the behaviour of the users: They consume more – the original savings are partly cancelled out", the German Federal Environment Agency states (Umweltbundesamt, 2019).

A telling example concerns carbon dioxide emissions from music consumption (Baarøy, 2019). Whereas in 1977, the population of the USA produced 140 million kilograms of greenhouse gas equivalents related to their music consumption, by 2016 this figure had risen to between 200 and 350 million – a significant increase despite the decline in physical data media (vinyl records, compact discs etc.). This is largely due to the immense energy consumption of the major cloud music providers' data centres. Even in relation to increased production of renewable energy by means of AI-driven efficiency improvements, a (psychological) rebound effect can occur if the additionally produced energy is consumed by the increased use of devices like electric cars (since cars are now “eco”). This additionally produced energy would then not replace more coal electricity but simply eat up efficiency gains (Sanatarius, 2013).

As AI is a general-purpose technology, it can also be used to prolong the use of fossil fuels and thus increase absolute CO₂ emissions. A telling example of the detrimental use of machine learning concerns the contracts of large tech firms with oil and gas firms. Microsoft, for example, supports the American mineral oil firm Exxon in optimising oil extraction by means of its own ML-based cloud solution Azure. The additional production volumes and the corresponding CO₂ emissions generated by this contract alone could amount to 20% of Microsoft's total CO₂ footprint (Greenpeace, 2020).

This means that even with increased efficiency, there is no way around the economical use of limited resources and therefore technology is not an end in itself. Technology-driven resource use optimisation is only effective if it leads to an absolute reduction in resource consumption. Applying machine learning while maintaining or even increasing absolute resource consumption caused by rebound effects leaves the potential of these technologies to slow down ongoing global warming unused. If used correctly, however, machine learning can open up new possibilities for slowing down climate change and for driving forward the adaptation to climate change. Small and medium-sized firms as well as large corporations will play a key role in the implementation of ML-driven climate projects alongside private individuals, users and consumers. The use of machine learning technologies to reduce resource use in firms is therefore of great importance. The first hurdle – especially in small firms – is to identify relevant use cases for their own business model in order to minimise their ecological footprint (Gemeinsam Digital, 2020).

However, as with other technologies, the absolute reduction of resource consumption is essential to achieve a sustainable effect. To a large extent, people themselves determine the purpose for which technologies are used and what happens to the resources that are not consumed. Ultimately, the preservation of the world we live in will stand and fall with the sustainable use of natural resources – regardless of the technology applied. ♦

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How do you feel after a meeting marathon?

THOMAS SCHILDHAUER

Judging from this image alone, you might think that Thomas is a mere photo model. Far from it: in addition to being a HIIG director from the beginning on, he holds a professorship for Electronic Business at the Berlin University of the Arts and is the founder of the Institute of Electronic Business. Thumbs up.



How do you regenerate?



Which feeling do you connect with HIIG?



How do we imagine your wild years?



How do you remember your PhD phase?

MIRIAM WOLF

Digital social innovation: from efficiency to effectiveness

How can technology help organisations to more effectively tackle societal challenges? In this article, the author introduces the concept of effectiveness in digitalisation, which she claims to be key to any digitalisation effort in organisations pursuing social goals. She also deems it to likely contribute to a more inclusive and sustainable digital transformation.

How can technology help organisations to more effectively tackle societal challenges? Not least in times of COVID-19, thinking about how societal challenges can be met with support from technology has become an ever more relevant question. Recently, we have been paying more and more attention to the question of how organisational efforts help deal with multidimensional, complex and interlinked societal challenges (Mair et al., 2016). While there is still much to learn in answering this question, we know even less about the role technology plays or may play in these efforts. Looking at existing studies

on digitalisation amongst nonprofit organisations (NPOs), we find that the focus is frequently put on what we call *efficiency* in digitalisation: how NPOs can use technology to maximise their functioning in terms of the least waste of time and effort. Yet, few studies look into *effectiveness* in digitalisation: how NPOs can use technology to more successfully tackle societal challenges. In this article, we introduce the concept of effectiveness in digitalisation, which, we believe, is key to any digitalisation effort for NPOs and is also likely to contribute to a more inclusive and sustainable digital transformation.

WHAT WE KNOW ABOUT DIGITALISATION IN ORGANISATIONS TACKLING SOCIETAL CHALLENGES

Existing studies on nonprofit digitalisation find that only a few nonprofit organisations view their approaches to the digital sphere as highly effective (Laporte et al., 2018). The majority of charities don't have a defined digital strategy or even consider the digital to be embedded in their strategy (Skills Platform, 2019). Organisations that do use technology use it to manage client and volunteer data or for administrative tasks and for improving internal processes (Bertenrath et al., 2018). And while most NPOs claim to have and capture indicators to measure their impact, only about half of organisations report on them at least once a year.

Meanwhile, 39% of the organisations do not collect, analyse or report data that helps them understand their social impact (Albrecht et al., 2013). The number of NPOs that do not use data at all to make decisions within the organisation amounts to 60% (Everyaction & Nonprofit Hub, 2019). In turn, the majority of nonprofit organisations think that digitalisation will become relevant for them in terms of efficiency in administrative tasks in the short term (Dufft et al., 2017).

All these studies show not only that there is still much to do when it comes to nonprofit digitalisation but also that

if technology and data is used in organisations pursuing social goals, it is mainly used for improving and/or optimising support processes. Yet, we have a very limited picture of how technology and data is used in the actual core of their activities: creating social value.

BUSINESS MODEL APPROACHES AND ORGANISATIONS TACKLING SOCIETAL CHALLENGES

In the for-profit domain, changes in the way organisations create value are often explored through a business model lens. In this context, a vast body of literature has evolved around digital business model innovation and the question of how organisations can change or adapt the way they create value in the context of digital transformation (Zott & Amit, 2017). For organisations tackling societal challenges, however, value creation is different: the main objective is to take on a social problem and create value for wider society and/or the environment (George et al., 2020). Less focus is placed on appropriating large amounts of the value created for private gains.

Zott and Amit (2010, p. 217) define an “activity in a focal firm’s business model ... as the engagement of human, physical, and/or capital resources of any party to the business model ... to serve a specific purpose toward the fulfilment of the overall objective”. They propose three design elements of business models: content, structure and governance. Using this framework to think about the management of problems that emerge in nonprofit organisations (George et al., 2020), we find that most digitalisation efforts amongst nonprofit organisations focus on the structural dimension: on addressing coordination and communication challenges as well as administrative challenges that are related to organisational efficiency – functioning in the best possible manner with the least waste of time and effort. Less focus, however, is placed on the content and governance dimensions that are, in turn, more related to organisational effectiveness – how organisations pursuing social goals can use technology to more successfully tackle societal challenges.

EFFECTIVENESS IN DIGITALISATION: OPENING UP THE CONTENT DIMENSION

The content dimension relates to the question of what activities should be performed to tackle social problems – to dimensions and root causes of social problems as well as to whether and how programmes and services successfully address social problems.

What are the dimensions and root causes of social problems? How are they embedded in the social fabric? One of the major challenges in tackling social problems is the question of whether or not we have an appropriate understanding of the social problem at hand and if our approaches to tackling it are effective. Societal challenges such as inequality are highly complex, multidimensional and interlinked. The deeply nested and relational nature of the problems poses challenges for purposeful organisational action to overcome them (Mair et al., 2016). Having a better understanding of the problems to be tackled as well as the effects of organisational activities on those problems is likely to foster deeper and broader social value creation. For instance, the organisation Understand Homelessness uses data to better assess the issue of homelessness in the United States through data visualisation and communication techniques. They provide inspiration and recommend solutions to city officials, organisations and citizens to approach this challenge. Other projects aim to better understand problems like inequality in education, unemployment or access to social services.

Evidence on whether the programmes and services offered by organisations affect the root causes of social problems is still hard to find. As stated above, while the majority of NPOs consider social impact to be their central measure of success, many do not collect, analyse or report data that helps them understand their social impact (Kubek & Kurz, 2013). Additionally, impact measurement is more frequently conducted to provide donors with proof of success than to improve programmes or services and generate an internal understanding of the value they create for beneficiaries and society (Ebrahim & Rangan, 2014). However, data and technology can help to understand what works and what does not in addressing societal challenges through scientific research, but it can also help by capturing data within organisations and programmes. Technology can support NPOs in collecting feedback from their beneficiaries about how they use their services and about the long-term effects programmes and services generate on their lives, for instance.

EFFECTIVENESS IN DIGITALISATION: OPENING UP THE GOVERNANCE DIMENSION

The governance dimension relates to the question of when and by whom activities should be performed. It relates to questions of access and reach as well as to problems of institutions or unintended consequences.

While activities of organisations pursuing social goals have long focused on the local level, technology is likely to allow organisations to address a larger number of beneficiaries or extend services and programmes to generate deeper social value (Fisac-Garcia et al., 2013). A better recognition of needs may help generate more appropriate services, programmes and products. Adaptation may take place at a faster pace, or technology may allow beneficiaries who are further away to access services and programmes offered. For instance, accessibility options built into websites or online counselling may allow a greater number of people to access programmes and services also from remote places.

Particularly in the context of digital transformation, existing institutional problems may change and new ones may arise. Sticking with the example of inequality, new forms of the problem may develop as ownership of, access to and capabilities to deal with technologies and data are distributed unevenly across society (Friederici, 2019). Policy makers and other actors may not be aware of those changes and there may be a lack of appropriate mechanisms able to tackle those problems. Social entrepreneurs may emerge as actors who solve newly emerging or altered problems and, in response, they may tackle the unintended consequences or externalities of the digital transformation. These include organisations confronting hate speech online, initiatives to address online disinformation or approaches using AI to deal with sexual abuse online.

SO WHAT?

While the efficiency approach to digitalisation is frequently applied in for-profit organisations and is consistent with their focus on maximising financial returns, we believe that this approach is not equally valuable to nonprofit organisations that aim to maximise the social value they create (besides being efficient) and successfully tackle societal challenges. Thus digitalisation strategies should not simply be transferred from the for-profit to the nonprofit sector. Instead, the nonprofit sector should seek out and develop its own approaches to meet

continue reading on page 134 ►►



THIS IS AN ARTICLE BY **MIRIAM WOLF**

This article was first published on 14 May 2020 on the *Digital Society Blog* of the Alexander von Humboldt Institute for Internet and Society (HIIG).

Miriam Wolf is a project manager at HIIG. Previously, she worked at Leeds University Business School, the ZHAW Zürich and the Hertie School of Governance. Her research is concerned with the question how organisations can contribute to tackle societal challenges.

the specific and more complex needs of this type of organisation. While digital efficiency provides the basis for digitalisation in organisations pursuing social goals and is mainly concerned with aspects of organisational structure, effectiveness in digitalisation is concerned with questions of content and governance. Thinking about effectiveness in their digitalisation efforts will allow NPOs to not only develop their own approach to digitalisation but also to shape a sustainable and more inclusive digital transformation, one that contributes to better tackling stubborn societal challenges and creating value for groups in society not catered to by markets and politics. ♦

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“[T]here is a fundamental tension between competition and cooperation when internet networks interconnect.”

DIGITAL RIGHTS ACTIVISTS ARE NOT LUDDITES

AN INTERVIEW WITH BENJAMIN BERGEMANN BY CLAUDIA HAAS

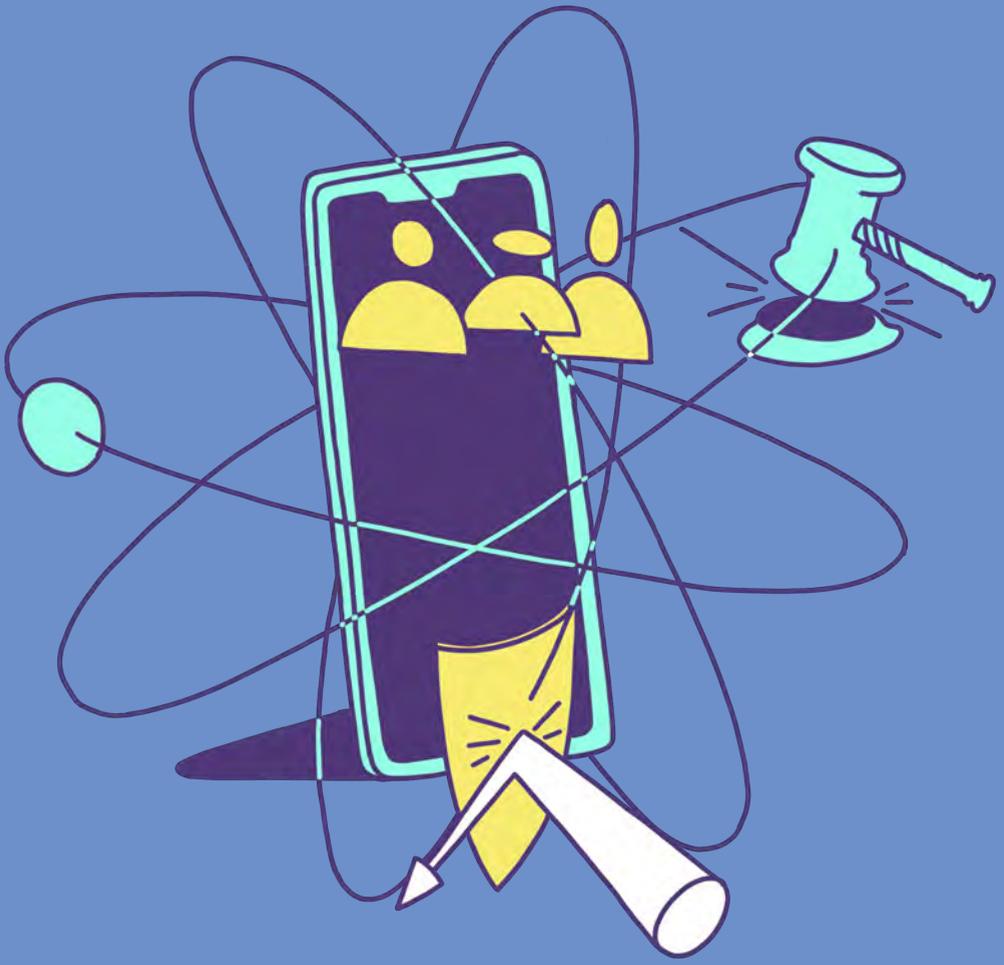
The honorary office as board member of the association Digitale Gesellschaft e.V. (DigiGes) involves a lot of work. Political scientist Benjamin Bergemann devotes himself to his “second little office gig”, as he calls the post, on his way to his actual job. He regularly reads and answers emails on the train. For the HIIG project Jung. Digital. Engagiert., Claudia Haas spoke to Benjamin about his involvement with the civil rights organisation DigiGes, which stands up for fundamental rights and consumer protection in the digital space.

Claudia Haas: Digitale Gesellschaft e.V. is committed to the fair and democratic participation of all people in the digital and networked age. What was the association’s goal when it was founded in 2010 and what was the starting position of the internet policy lobby at that time?

Benjamin Bergemann: I’m not a founding member but as I understand it, the main goal of Digitale Gesellschaft was to achieve a professionalised advocacy group, in which volunteers set up the structures for a full-time representation of interests that deals with internet policy in the interest of civil society. This was important in order to be able to compete, at least to some extent, with the large associations, lobbies and other players. At the time, there were hardly any people who did this full-time and who had the impetus to really bring advocacy into the political process. That is still a problem in part of the internet scene today. Voluntary work, as everyone involved has noticed, reaches its limits at a certain point. That’s why DigiGes wanted to create more professional structures.

What issues is Digitale Gesellschaft addressing today in particular?

The overarching themes are data protection and freedom of expression in the digital age. An important topic that has been with us for a good two years is the discussion about upload filters. Also, health data is something we have been working on more



PETER BIHR, STEPHAN BOHN AND HENDRIK SEND

Free technologies for the whole world to use – why open source hardware is in the public interest

Open source hardware (OSH) is an essential approach to public interest technology, not unlike well-maintained infrastructure. To guide the development of OSH, policymakers and companies can learn from the success of open source software and from the criticism of overly dominant web platforms. While OSH is a field with a range of challenges, we see tremendous potential for societal benefits, but it also needs support.

Open source is making its way through the spheres of public life and business. Those that stand out are not only the well-known examples from the software fields but also increasingly complex hardware products like autonomous driving cars (LocalMotors), 3D printers (RepRap), and all kinds of IoT devices and computers (Raspberry Pi).

The advantages of open source knowledge production of physical products have become particularly evident in challenging times, and Open Source

Hardware (OSH) is seen as a way to cope with the COVID-19 crisis. For example, innovative products like respiratory equipment could be developed in a collaborative way with a worldwide community of experts and companies (Pearce, 2020). The knowledge, construction plans and instructions thus produced have been in turn made available as a public good and can be produced by anyone who needs it in a decentral and more sustainable way (see also the OxyVita: Emergency Ventilator).

LEARNING FROM OTHER FIELDS

OSH is an emerging field. Hence, to further support its development, we need to look for insights from adjacent fields. The obvious one is free/libre and open source software (FLOSS). From the world of FLOSS, we know that openness is socially and economically sensible. Far from being of interest mainly to hobbyists, open source software powers large parts of the internet's backbone and is thus a big contributor to industry and infrastructure alike. The other area worth studying is the web economy, especially the so-called GAFAM platforms that dominate the internet: Google, Amazon, Facebook, Apple, Microsoft. On the web, network effects create a dynamic that strongly favours

winner-takes-all outcomes – in other words, monopolies or outcomes that have effects comparable to monopolies. No question, all these companies are innovative, but they also have consolidated such power and huge market shares that they are now facing investigation for antitrust, freedom of speech, and liability concerns.

To guide OSH going forward, it is crucial to learn both from FLOSS's positive potential and the risks we are seeing develop in real time around the GAFAM platforms. With the General Data Protection Regulation, Europe has shown a global ambition in protecting consumer rights and competitive access to markets. Similarly, we are at

a juncture where it is possible to provide a policy framework for the future of open source hardware to guide this emerging field towards positive societal impacts. Such a focus on OSH as public interest technology (PIT) – technology that contributes to societal well-being no matter if the creators are commercial or non-commercial actors – allows us to nudge the development of a young field that will only grow in importance towards realising its full potential while staying clear of at least the most obvious risks. Getting this right, now, is bound to pay positive societal dividends for decades to come.

OSH BUSINESS MODELS, NETWORK EFFECTS AND THE QUESTION OF MARGINAL COSTS

Before we present further ideas to foster OSH development, we would like to briefly mention central definitions and also show conceptually why open source benefits both society and the economy. On the one hand, the understanding of OSH is focused and clear as it is defined as “hardware whose design is made publicly available so that anyone can study, modify, distribute, make, and sell the design or hardware based on that design” (OSHWA, 2020). On the other hand, openness includes a spectrum of issues that could be ultimately made open or closed (Bonvoisin & Mies, 2018). For example, while it is common for design files to be released as freely available and most projects allow commercial reuse, some business models avoid such open use (see also the Creative Commons license system).

We have also learned from the FLOSS field that companies can lower transaction costs by using open source principles, i.e. they can more easily organise cooperation amongst all the parties who have an incentive to contribute to a particular software if it is open (Benkler, 2002). Additionally, there are a variety of business models which allow FLOSS providers to create value. Well-documented examples include the sale of professional services that complement a freely available offering, as with Red Hat, or the sale of proprietary products such as the MATLAB programming environment that complement an open resource, or the use of dual licensing as with the MySQL database, which may be used privately for free but must be paid for commercially.

It is worth considering that these positive effects refer to information goods or digital goods, i.e. goods that can be distributed over networks without significant

continue reading on page 146 ►►



THIS IS AN ARTICLE BY **PETER BIHR,** **STEPHAN BOHN AND HENDRIK SEND**

This article was first published on 14 January 2021 on the *Digital Society Blog* of the Alexander von Humboldt Institute for Internet and Society (HIIG).

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marginal costs, of which we can make countless perfect copies and which can be made available immediately anywhere in the world (Benkler, 2002; McAfee & Brynjolfsson, 2018). These information goods indeed initiated the triumph of platforms as an economic form of organisation. Due to their characteristics, they induce three self-reinforcing effects: First, a digital good can have enormous scaling effects. Once produced, it can be sold again and again without cost. Second, if you sell a digital good, you can integrate additional goods or services and thus generate lock-in effects. Customers naturally shy away from the costs of changing platforms once they have invested significant time or money into one. And third, a growing number of users of a digital good often leads to network effects, because these users can condition attractive complementary goods or become direct partners in the use of the focal good. In the case of digital goods, these three effects interact so strongly that the valuation of the much-discussed GAFAM companies seems to have no limits. But, lawmakers and politicians have begun to set their sights on companies trafficking in information goods because they have grown into de facto monopolies.

In the case of hardware, all of the above-mentioned effects also apply, but to a lesser degree. The marginal costs of hardware are far from zero. We need machine time, material and labour to produce hardware – but these costs are constantly being driven down and not reliant upon massive companies for scaled production. Even more importantly, the production of a physical good, even based on flawless digital designs, usually requires extensive human expertise. Hardware can also have network effects, but direct network effects from sharing are only generated at the software level. Further, indirect network effects from complementary goods are usually weaker because hardly anyone has any use for a library of hardware, in the way that many people appreciate a library of music or films or even apps. Only the lock-in effects for hardware can be compared to those of digital goods one-to-one. So, if a hardware can absolutely have the potential to become the market standard, it should at least be open source and not dominated by corporate monopolies. Making such hardware open source would boost both scalability and the network effects far beyond a proprietary, closed product: distribution can be driven by usage not production, and scarcity couldn't be used to drive pricing (the monopoly's greatest tactic). The lock-in effects are thus obviously also better for open source, as it is driven by buy-in and opt-in to a wider variety of hardware than can be offered by a few monopoly holders.

OPEN SOURCE HARDWARE AS AN ORGANISING PRINCIPLE IN COMPANIES

Open source hardware is associated with new transaction costs, however. The documentation and accessible provision of plans are costly and require expertise. In addition, the organisation of a meaningful exchange between external contributors requires experience in product creation and daily interaction with communities. On the other hand, open source can support the search for potential partners and the negotiation of the distribution of incentives. The use of external open resources can save development costs and accelerate processes. In addition to the sale of the original hardware, a variety of business models are available to companies for the appropriation of value (Pearce, 2017). Finally, open source hardware also enables manufacturers of physical goods, in many cases, to initiate the positive feedback effects similar to those of digital goods for themselves.

WHAT POLICYMAKERS NEED TO DO FOR OPEN SOURCE HARDWARE

OSH is a powerful principle that is capable of revolutionising hardware innovation and production. Yet, unlike in the software sector, we cannot rely solely on digital market principles to lead to a self-reinforcing growth of such offerings. Instead, we need well-considered support and incentives for all those who work with open source hardware.

Policy makers need to understand that open sourcing hardware can attract new customers and collaborators and that it can be turned into value in working business models. But, just like the development of hardware, the publishing of plans for hardware also implies an investment for companies and communities. Since it is in the public interest to have a wealth of open source hardware available, we need to support the effort for open sourcing of hardware. This can take the form of a combination of training for employees, financing for projects or professional support from experts. One key aspect to consider is funding: where the traditional investment ecosystem fails, as it has so far in open source hardware, alternative types of funding are required. Also, experts are starting to argue that public procurement should prefer solutions that are open source to minimize proprietary lock-in and lack of transparency. To extend these means, we need to explore and better understand the ways through which we can support OSH.

For policymakers across Europe, this means creating a policy framework that optimises for realising the best potentials that OSH has to offer: not merely a profitable European industry in this space but also contributions towards resilience, sustainability, consumer protection and geopolitical considerations. European, national and regional funds are all called for – and they should focus on ecosystem approaches supporting both commercial and civil society actors.

As this article has shown, the breadth of things that fall under the umbrella of OSH is impressive. What open source hardware *is* depends very much on context, and so do the relevant implications. Open source hardware is not – not yet, at least – as successful and prominent as its software counterpart. It is a field much younger, with higher barriers to entry and more unknowns as of today. So there are no silver bullets, no one-size-fits-all approaches here. However, the potential of OSH is enormous, and we need to make decisions today to allow it to unfold. Waiting for the market to solve this is bound to lead to sub-optimum outcomes. We need to learn from the GAFAM dilemma and be proactive about shaping this field to produce socially desirable results. ♦

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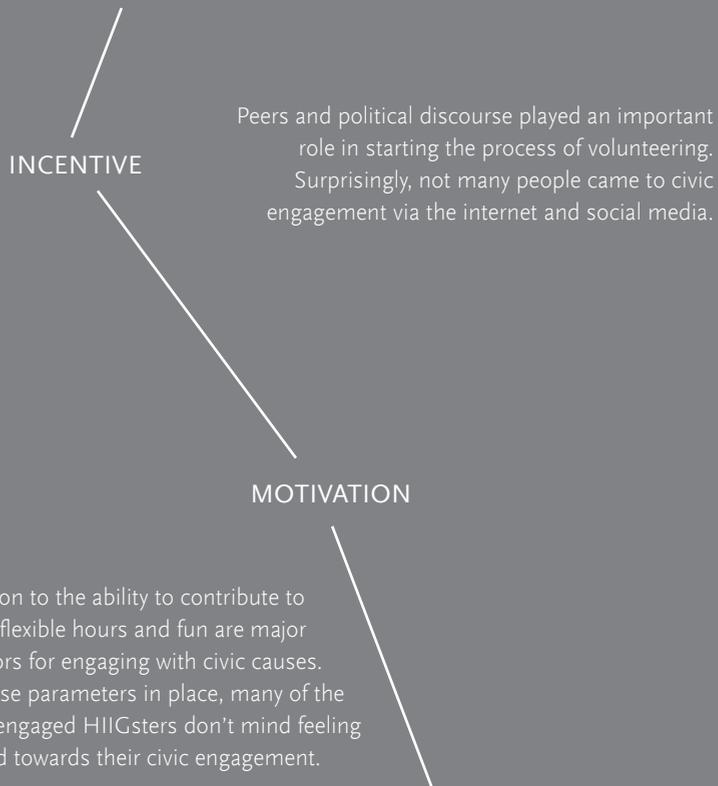
**ASKED HIIGSTERS
ABOUT ENGAGEMENT**

THEY ENGAGE

ACTIVISTS STAND UP

A SURVEY ON CIVIC ENGAGEMENT AMONGST HIIG STAFF

With Jung.Digital.Engagiert and the Third Engagement Report, we have two projects at HIIG addressing civic engagement and volunteering. This made us wonder: how are HIIGsters performing in that regard? We asked a group of socially engaged colleagues about their commitment to civic engagement and volunteering in a survey. The key outcomes on their motivations, investment of time, use of digital resources and the organisations they participate in are described below.



The socially engaged HIIGsters are active in a large number of organisations. These are situated within a variety of different areas of engagement, such as politics, technology, social work, sports, education, environmental protection and the health sector. We want to present a few little-known organisations working within some of these different areas.

PANTHER RAY – ALLES IM FLOSS

Panther Ray is a raft in Berlin that was almost completely built from recycled materials in 2015. Since then the raft has become a platform for community, music, culture and art operating based on the principles of sustainability, open source and open platform.

 pantherray.org

NETZFORMA* E.V. – VEREIN FÜR FEMINISTISCHE NETZPOLITIK

Netzforma* e.V. was founded in 2008 and deals with a variety of network policy issues, focussing on feminist perspectives. In addition to linking relevant parties, the organisation wants to integrate the feminist perspective into discourses on network policy.

 netzforma.org

KLEINER FÜNF / TADEL VERPFLICHTET! E.V.

The initiative Unser Ziel: Kleiner Fünf was founded to hinder political right wing parties from entering the German parliament in 2017. Today, its members still work to combat right wing populism and for democracy. The initiative is conducted under the auspices of the organisation Tadel verpflichtet! e.V., which focuses its work on political participation.

 tadelverpflichtet.de

NEPIA E.V.

Nepia e.V. was founded to support children and teenagers in the Neukölln district of Berlin by promoting education on democracy, educational justice and civic engagement. The organisation was founded in 2014 and hosts different activities for children and teenagers.

 nepiaberlin.de

TANJA FISSE AND CLAUDIA HAAS

COVID-19 and true solidarity on the internet

With the beginning of the coronavirus pandemic in 2020, the social relevance of digital spaces for collective action became greater than ever. This article addresses acts of solidarity in this time and examines in what way they affected norms and analogue situations.

For a long time, collective action referred to a group of people meeting in a physical space and taking action to achieve common goals. This solidarity took the form of street protests or trade unions. Social networks such as Facebook, Instagram, Twitter, etc. also offer virtual spaces for collective discussion and negotiation processes. Especially in the coronavirus pandemic, the social relevance of these spaces has only grown. Collective action in the traditional sense, such as street protests or rallies, was not possible for a time. One of the reasons was the contact restrictions imposed by the German federal government in March 2020, which led to a lockdown: they prohibited personal meetings of more than two people in public (Bundesregierung, 2020). Nevertheless, German society experienced a wave of solidarity: people came together in joint action, e.g. by using the hashtag #wirbleibenzuhause (#stayathome) in

social networks, by participating in communities for neighbourhood help (e.g. CoronaPort.net or Helfen.Berlin) or by signing online petitions, e.g. to help freelancers and artists. In this challenging situation, digital solidarity became basically the only means for collective action.

In this article, we examine such digital actions in the course of the lockdown, integrate them into our understanding of solidarity and shed light on their effects on analogue situations. We show why, contrary to the opinion of some critics, digital solidarity should not be viewed in isolation from collective activism but rather as part of it. To this end, we explain how the concept of solidarity has evolved over time, what structural changes it has undergone, and how new solidarity norms were established through social networks during the coronavirus pandemic in 2020.

EXPRESSING SOLIDARITY WITH JUST ONE CLICK?

What makes a post, a story or a tweet one of solidarity? If an Instagram user shares a link to an online petition in support of refugees and homeless people, it can be assumed that this action is intrinsically motivated. At the same time, it can be understood as an act of solidarity. The person is

sharing his or her thoughts with the community and is calling on them to sign the petition themselves.

Solidarity in the context of the coronavirus pandemic can vary in terms of the time spent, involvement or resources used. Yet, because people

can like or share a prompt for social distancing without having to participate much or make great sacrifices, such activities are often criticised as slacktivism. Slacktivists are sometimes accused of a distanced apathy, a low willingness to make sacrifices on the part of those involved and a lack of effectiveness and sustainability of the actions (see Ebersbach & Heigl, 2005; Gladwell, 2010; Morozov, 2009, 2011; Schumann, 2014). However, such low-threshold activities can be helpful in raising awareness of socially relevant issues – such as the coronavirus pandemic (Bennett & Segerberg, 2012; Gladwell, 2010; Morozov, 2009; Vie, 2014). Digital technologies have reduced the effort required for solidarity-based action, so the effectiveness of these efforts should always be considered in their context. Last but not least, technological progress opens up the possibility for many people to participate in a social or political discourse without having substantial resources (e.g. with a smartphone); this was simply not possible in earlier times (Margetts, 2019, p. 108).

Using hashtags, issuing personal calls to action via private social media profiles, offering neighbourhood help and undertaking organisational activities with increased responsibility express solidarity. Especially the latter activities involve greater effort and risk. What all these types of activities share is that they serve to support a social cause in a broader or narrower sense and are therefore based on solidarity.

SOCIAL DISTANCING AS A NEW NORM OF SOLIDARITY

In the wake of the coronavirus pandemic, the number of social media calls for people to stay at home in order to contain the spread of the virus was vast. Along with news media, well-known personalities and influencers appealed in tweets, Instagram posts and live streams to their followers not to leave home. In addition to the legacy media and celebrities, employees from hospitals, the retail trade police officers and emergency services also spread messages on posters “Wir bleiben für euch im Dienst, bleibt ihr für uns zuhause!” (“We’re on duty for you, you stay at home for us”). Even private users published numerous similar calls for solidarity with social distancing. All these prompts were based on the community aspect and mutual solidarity as central values.

continue reading on page 158 ►►



THIS IS AN ARTICLE BY **TANJA FISSE AND CLAUDIA HAAS**

This article was first published on 2 April 2020 on the *Digital Society Blog* of the Alexander von Humboldt Institute for Internet and Society (HIIG).

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Instagram even launched a new sticker for the hashtag #wirbleibenzuhause (#stayhome) in March that displayed posts tagged with the new sticker in a collection at the beginning of the story feed. Due to the wide distribution of contributions across different instances, the aim of the calls evolved to create a new norm of solidarity: People who act in solidarity stay at home and avoid physical social contact. This is a paradoxical development, since solidarity is one of the fundamental principles of human coexistence. It should be noted that this development had already begun to a large extent before the German federal government officially restricted contact as mentioned above. The relationship between individuality and collectivity has changed in recent times due to larger structural transformations. Nowadays, the constitution of individuality no longer takes place in the private sphere but on the basis of social networks (Stalder, 2014, p.11). In this autonomous culture of solidarity, boundaries between the individual and system are dissolving. Thus, the new solidarity norm is the result of a collective negotiation process that took place largely in the non-hierarchical organisational structures of social media. Solidarity norms usually go hand in hand with the value expectations of those involved, who expect to make certain sacrifices for the benefit of others or the community, e.g. in the form of mutual helpfulness (Tranow, 2012., p. 36) or – as during the COVID-19 lockdown – to restrict social contacts and place themselves in domestic quarantine.

TWITTER, INSTAGRAM AND CO. AS IMPORTANT SPACES FOR COMMUNITY EXPERIENCES

Social networks are setting standards for interpersonal communication and thus describing a new experience of the world. New ways of organising solidarity are possible (Stalder, 2014). Due to their popularity, social media platforms such as Facebook and Instagram play a key role: they enable the creation of many weak connections and thus have an influence on how we experience everyday culture today. It should be noted that these bonds are subject to the technical and economic regulations of the platforms. Nevertheless, they provide spaces for collective discussion and negotiation processes. Especially in the context of the coronavirus pandemic it is clear that social networks offer an opportunity for solidarity-based action. They allow for collective experiences and communication about them, regardless of whether we are talking with people we know or people

we don't. Such shared experiences are of enormous importance, because they are a fundamental condition for solidarity.

The resources (time, cost, effort, involvement) used for solidarity action on the internet vary, but effectiveness should by no means be judged across the board. We understand online activities within social networks as concrete everyday experiences that shape the autonomous culture of solidarity in our society today. The example of the coronavirus pandemic clearly shows the importance of social networks: they contribute considerably to the establishment of new norms around solidarity. While #wirbleibenzuhause (#westayhome) was initially an appeal, it has increasingly developed into a solidarity norm due to its rapid spread in social media. Activities that we carry out online inevitably manifest themselves in our overall social interaction because they are part of our thoughts, of our opinions and ultimately of our identity. Although it can be assumed that not all people did accept and follow these newly created norms, the numerous digital appeals for social distancing ultimately had an effect on the individual behaviour of many people in German society, who acted in solidarity and stayed at home. ♦

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STAY

HOME

COVID 19



“The goal is to have respectful exchanges of opinion, (...) while also being able to discover misinformation and discriminatory language.”

THE TROLL NEXT DOOR

AN INTERVIEW WITH LAURA LACKAS BY MICHELLE BANSE

On 26 August 2020, three experts discussed cultures of digital debate and forms of communication on the internet during the *The troll next door* edition of Digitaler Salon. Besides having general societal and political significance, these topics are especially relevant to teenagers and young adults facing hate speech on social media.

In a follow-up interview, panelist and hate speech expert Laura Lackas talked about the experiences teenagers are having online as well as the necessity to educate people more on hate speech. Laura Lackas is a communication scientist, who works as a social media manager and facilitates counter speech training at schools.

Michelle Banse: Teenagers and young adults are very often referred to as “digital natives”, as they don’t seem to differentiate between the analogue and digital spheres of life anymore. How would you describe the relationship teenagers have with social media and what positive effects and negative potential do you see in that relationship?

Laura Lackas: I believe that social media offers a lot of potential for (young) adults. The ability to have debates with people from all over the world on various topics is very valuable. Social media platforms lower the access threshold for young people to engage in social, economic and political discourses. The ability to connect with peers on a broader level also enables them to develop new perspectives and form diverse group affiliations without the limitations of local contexts.

Nevertheless, social media also has a lot of negative potential. Bullying, hate speech and populism are just some examples of those negative effects. In my opinion, those aspects are especially problematic for children and teenagers, since they often don’t know how to handle conflicts in general and hate speech in particular. Hate speech often promotes hate and violence based on characteristics like race, gender, religious beliefs, sex, sexual orientation or class (and many others). Those experiences of discrimination are difficult to deal with, especially when you don’t

have a lot of experience or the right skills in online communication. That's why we need to protect them and show them how to protect themselves. It is important to notice that hate speech can't even always be handled properly by adults as well, since courage and argumentative skills are required to counter hate speech. Often, countering comments are also attacked.

Bullying is a social phenomenon that has been present in schools long before social media. What has changed with the rise of online communication in that area and why is it specifically important to give teenagers and young adults strategies on how to deal with hate speech on the internet?

Bullying among young people has unfortunately reached a new level since platforms like WhatsApp and Instagram have emerged because there is no need to have face-to-face interactions anymore. The anonymity of the internet is generally one of the central problems with social media – people write a lot of things they would never say personally. In addition, due to the huge reach of posts on the internet and the ubiquity of those posts, cyberbullying – like a whole group of kids picking on a classmate from school – can reach completely different dimensions than in the offline context. It's a lot more difficult for teenagers and young adults to find safe spaces when hate and discrimination directed towards them can be read by everyone and are not restricted to one particular place like school.

If we train teenagers and young adults to deal with bullying and hate speech, we can ensure that, on the one hand, they do not become perpetrators themselves and, on the other hand, they can defend themselves in case they become victims.

You are giving counter speech trainings in schools. What kind of tools or strategies do you recommend to students in your workshops?

I learned most of my tools and skills for working with students in a training course at the Amadeu Antonio Foundation. We want all students to feel as safe as possible in the workshop environment so they can express themselves freely. This is especially important because we are dealing with very sensitive topics involving personal experiences and emotions. We need to establish trust within the workshop space to create a safe environment for everyone to express their opinion. There is no such thing as right or wrong and different opinions are important and even desirable. To achieve that, we work with a mixture of input presentations, (creative) group work and discussions.

We want to sensitise the participants to a constructive culture of debate. The goal is to have a respectful exchange of opinions, without personally attacking each other and to be able to discover misinformation and discriminatory language. For the online world, we provide the students with important counter speech strategies – this could be, for example, responding to conspiracy theories or racist opinions with hard facts. Or asking people to prove their opinions – which is impossible obviously. Irony and humour can be possibilities for counter speech as well.

We also explain where our participants can report hate speech – offline (police stations) and online (nonprofit organisations, the network itself). And last but not least, we tell them that you don't always have to engage in counter speech yourself, but that sometimes it can also help to support previous speakers' counter speech by liking it.

What are the most common reactions teenagers and young adults have towards the topics of hate speech and counter speech during your training?

The reactions are very different. We have discussions and different opinions about what hate speech is or isn't. Some of the students share their experiences with hate speech, others haven't experienced it or don't want to share it. Both ways are totally fine. What all workshops have in common, however, is that a large number of teenagers are dismayed by the extent of hate speech online and are also surprised by the possibilities to engage in counter speech.

Most of the time, we can sensitise our participants to hate speech and improve their situations. Unfortunately, there are some exceptions – but we are convinced that educational work can make a significant contribution to solving problems with hate speech. Besides that, the responsibility to further regulate hate speech also lies with the platforms themselves. Hopefully, with education and more deletion mechanisms in place, we will find a way back to a more fact-based debate culture. ♦

Once a month, the talk series Digitaler Salon highlights a different facet of digitalisation. This discussion with Laura Lackas and all other talks are available online.

 hiig.de/en/digitaler-salon

JEANETTE HOFMANN

What will remain of the corona apps – an infrastructure perspective

Corona apps are new digital tools developed to support the manual tracing of Covid infections. The public debate about various approaches to contact tracing reveals the present political trade-offs hidden in technical design decisions. While the central model reflects the epidemiological need for data on infections, the decentral option prioritises protecting personal data. When studied from an infrastructure perspective, however, it emerges that corona apps may acquire additional functions and develop a life of their own.

College courses, yoga classes, parliamentary sessions, even coffee breaks or dinner dates are taking place as a digital stream in coronavirus times. The communication services that are maintaining social life from people's home offices are bringing about a push towards digital integration. Following the experiences of a digital everyday life, we will not return to life as it was before. The spectrum of social communication and organisational possibilities has permanently expanded. From a social science perspective, two aspects of this digitalisation push are remarkable. First, what in retrospect may look like a mere expansion of the digital appears to us in the present as a process that is uncertain, open-ended and controversial. The specific course that the digitalisation of social life will take is not natural but is based on decisions that could also turn out differently. Second, although many of these decisions are justified and legitimised by the current exceptional situation, it can be assumed that they will have long-term, irreversible effects.

Both aspects can be examined very well using the example of the development of so-called corona apps. The intensive public discussions in spring 2020 in science and politics about different methods of digital contact tracing give an idea of the conflicting goals that

need to be resolved in the course of digitalisation processes. However, they also demonstrate the probably unavoidable short-sightedness that characterises these conflicts. Digitalisation in the crisis is subject to considerable pressure to act; after all, we need an effective tracing app now and not in a few months' time.

Infrastructure research offers interesting clues for the social sciences to deal with digital disease prevention through apps. Infrastructures are understood to be the substructure or the material preliminary work for organisational and transport forms of all kinds. Although infrastructures play an essential role in the stability of social contexts, in normal operation they merge so seamlessly with the everyday routines of citizens that they are hardly noticed. The historian Dirk van Laak (2001) has described infrastructures very aptly as seemingly objective media of the common good, which have shifted between domination and everyday life and can therefore be regarded as part of both. A central finding of infrastructure research is that new procedures such as corona apps do not simply disappear again once the problem for which they were created has been solved. Rather, they become more stable, for example by opening up new fields of application and attaching themselves to other

infrastructures. In other words, they develop a life of their own, and at the same time their ambivalence recedes into the background.

The development of infrastructure goes through several phases. It starts with local initiatives and experiments that address specific problems. For example, in response to the pandemic that spread in March 2020, a large number of digital apps were created to bolster infection control in various ways. In Taiwan, Hong Kong and Poland, for example, corona apps are used to monitor quarantine orders. The focus of the 100-some-odd Chinese apps, on the other hand, centres on controlling access to public spaces: only those for whom an inscrutable algorithm calculates a low risk factor from all available motion, credit card and health data may leave the house or enter the supermarket. South Korea produces maps for the general public from the personal data of infected persons. Finally, Singapore is considered a pioneer in digital contact tracing and has become the model for European activities. Contact tracing is a proven means of infection control. Its effectiveness depends on detecting new infections in relation to how fast the disease spreads. The coronavirus is particularly recalcitrant in this respect because it is transmitted by air, which means that people who do not know each other can infect each other. In addition, those infected are particularly contagious before the first symptoms appear. If contacts are tracked digitally, chains of infection can also be detected that, otherwise, cannot be reconstructed by conversation. Tracing apps are designed to create a kind of shared memory of public encounters by allowing smartphones to exchange anonymous temporary identifiers or IDs with each other when they are in physical proximity to each other over a certain period of time. Bluetooth Low Energy radio technology, which can measure the distance between devices (although not always reliably) is used for this purpose. If someone tests positive, the health authorities are supposed to provide a code that can be forwarded to the smartphones of contact persons. However, there are major differences in the way information is distributed between official bodies and app users. In contrast to the Singapore model, the pan-European initiative PEPP-PT (Pan-European Privacy-Preserving Proximity Tracing) aims to create a data-minimising solution that respects the privacy of citizens.

Local projects become infrastructure when – and this is the second phase – they undergo a process of unification and standardisation. One of the many variants must become a generally accepted model, and all further expansion measures must

be based on this model. The pan-European initiative was founded by scientists and companies at the end of March 2020 to develop such a standard for national tracing apps. From a social science perspective, the standardisation of infrastructures is a particularly interesting phase because it involves negotiation processes and often power struggles between different priorities and quality criteria. While disputes over infrastructure design are usually conducted in expert committees and in technical terminology behind closed doors, the camps over corona apps formed quite visibly in public, due to the extensive reporting by the media. In blog posts, tweets and interviews, various interlocutors have spent several weeks debating the specific risks of centralised and decentralised procedures. Such controversies about technical, political and ethical decisions on which way to take the app offer valuable insights into the nature and development options of infrastructures. The two procedures differ with regard to the “trust models” underlying digital contact tracing. Anyone who installs a tracing app on their telephone should be able to rely on the fact that their own data will not fall into unauthorised hands. The central model of contact tracing trusts a national organisation, such as the Robert Koch Institute, on whose computers all information about the contacts of infected persons is gathered. The central system issues the temporary IDs through which the users’ smartphones register each other, and it also notifies them in the event of a possible infection. The consolidation of all this information in one database in principle allows the health authorities to create extensive contact networks. Such social graphs can be used for epidemiological research, but theoretically of course also for other surveillance purposes. And this is precisely what the criticism of the centralised model focuses on: it requires users to trust institutions and procedures based on the rule of law, although there have been several examples of data leaks and mission creep in recent years, i.e. the creeping legal extension of originally narrowly limited uses.

The decentralised model distrusts data record merging – therefore, contact tracing takes place mainly via direct channels between smartphones. The phones generate the necessary IDs themselves and store all received contact data locally on the device. Only officially confirmed infections are uploaded in the form of an anonymous TAN together with the temporary IDs of the app users on a kind of noticeboard. Other users can use this noticeboard to compare their own contact data without revealing their identity. This model is not risk-free either, as the critics stress. Here, too, data exchange between phones may be intercepted and

manipulated by those involved or third parties. From an epidemiological point of view, the more serious issue is the decentralised model's reliance on the users' compliance with the rules and a sense of responsibility. There is no authority that can ensure that an infection report is actually passed on and that the prescribed response of self-quarantine and testing is followed. More far-reaching protection of basic rights in the form of data protection and individual autonomy are thus accompanied by fewer opportunities for the authorities to take action.

Once the technical standards are set, the third phase begins: normalisation. The functions of the infrastructure now come to the fore, and the former conflicts are gradually forgotten. In May 2020, however, it is completely uncertain whether corona apps will reach this stage of normalisation. It is not only unclear whether digital contact tracing can achieve the hoped-for effect; it's also questionable whether the necessary numbers of people will install and use such an app in Germany. Previous experiences from Austria and Iceland show that acceptance varies considerably throughout Europe. Nevertheless, it is worthwhile to think about the consequences of corona apps from an infrastructure perspective. This suggests that digital contact tracing, at least in its basic principles, will be maintained after the pandemic has been overcome – regardless of whether or not it is successful in the current situation.

Infrastructures tend to perpetuate and expand. An important reason for this is the collective opportunities for action they open up and the practical experience that goes with them. Infrastructures expand the space of what can be planned and regulated by society. They nurture the expectation of a fundamental controllability, even of events or processes that were previously accepted as mere coincidences. The key experience of technical control, which probably cannot be eliminated, lies in the concept of distance measurement: the recording of spatial distance between all people worldwide who own a smartphone could potentially become a wholly new metric. Digital distance measurement can be understood as an emerging control instrument that is still searching for its usefulness. Possible applications can be imagined in interaction with other digital infrastructures, for example, in the field of influenza control, police work, but perhaps also in event access control. A prerequisite for the stabilisation and normalisation of digital distance measurement is the adaptation of already established infrastructures, including the operating systems of Apple and Google, which are currently being

continue reading on page 172 ►►



THIS IS AN ARTICLE BY **JEANETTE HOFMANN**

This article was first published in June 2020 in *WZB-Mitteilungen* No. 168.

Jeanette Hofmann, political scientist and one of HIIG's research directors, is professor of internet politics at Freie Universität Berlin and conducts research at Berlin Social Science Center (WZB) on topics such as global governance, regulation of the internet and the transformation of copyright. She heads the WZB project group The Internet Policy Field, which studies the emergence of new policy fields with an empirical focus on internet politics.

modified for this purpose. Infrastructures thus always derive their stability from mutual integration services.

The post-Covid society will look back on a period of accelerated structural change. The experience of its own vulnerability has mobilised enormous scientific, technical and political resources to control the pandemic and its infection vectors. Similarly, the fight against the plague and cholera is reported to have triggered sustained spurts of modernisation for the economies and societies of their times. In this context, the infrastructure perspective highlights the long-term consequences of measures taken under exceptional circumstances. Control technologies such as digital contact tracing are also undergoing a process of normalisation between domination and everyday life, at the end of which they will have shed their inherent ambiguity (to take a more concrete form). ♦

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In a world where technology makes us increasingly transparent, it really the only way to remain private!



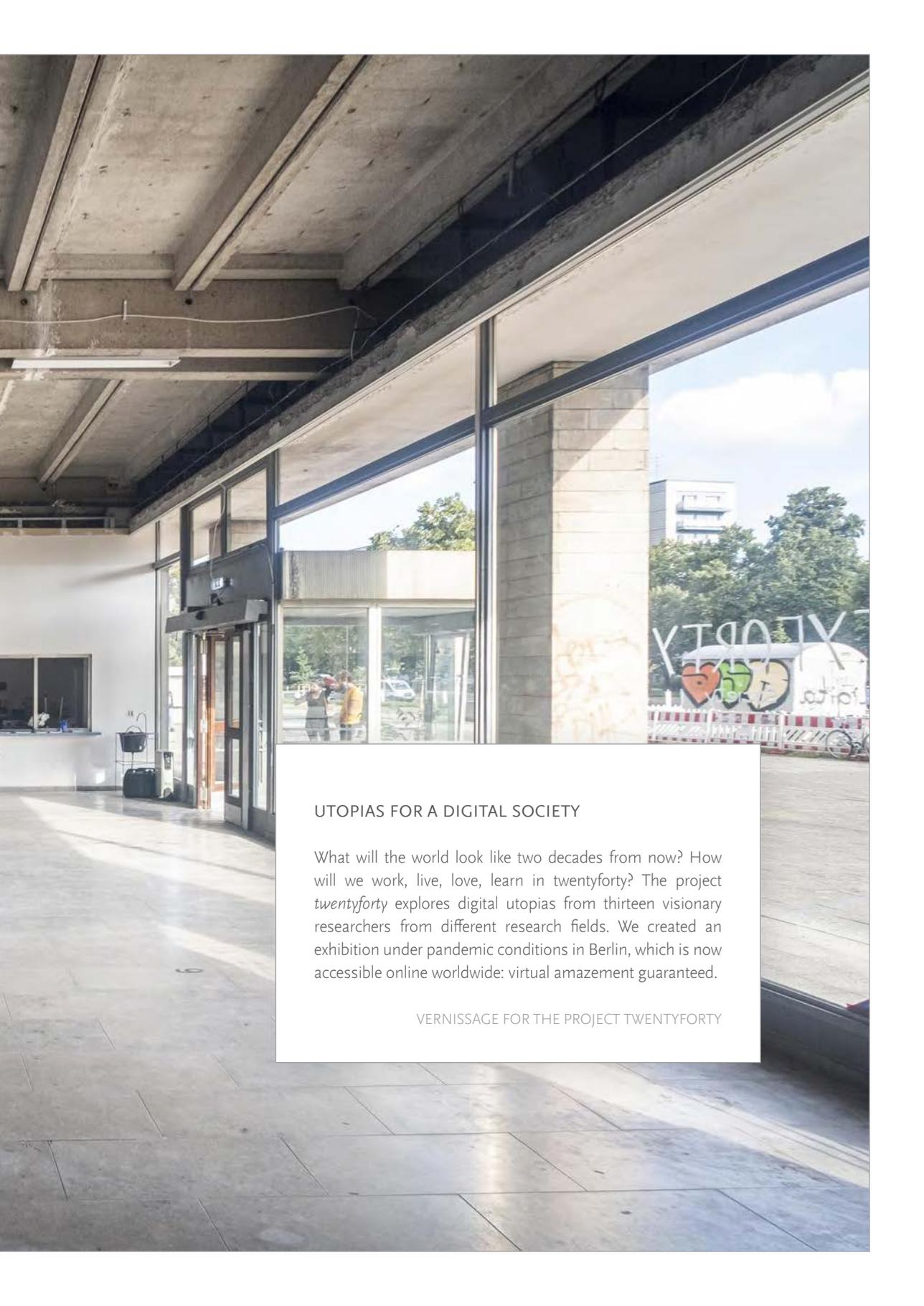
Everyone is a Narcissist Together



ACCU-CORE

ACCU-CORE





UTOPIAS FOR A DIGITAL SOCIETY

What will the world look like two decades from now? How will we work, live, love, learn in twentyforty? The project *twentyforty* explores digital utopias from thirteen visionary researchers from different research fields. We created an exhibition under pandemic conditions in Berlin, which is now accessible online worldwide: virtual amazement guaranteed.

VERNISSAGE FOR THE PROJECT TWENTYFORTY



Benedikt Fecher



Bronwen Deacon

TURNING SCIENTISTS INTO NOVELISTS

AN INTERVIEW WITH BENEDIKT FECHER AND BRONWEN DEACON BY TANJA ZAGEL

The future is uncertain yet conceivable. Researchers from ten countries and all sorts of research backgrounds took a look into the future as part of the twentyforty project and created 13 visionary stories addressing these questions. The results were published in an anthology and could be viewed in an exhibition at the Haus der Statistik in Berlin in July 2020. In an interview, initiator Benedikt Fecher and project manager Bronwen Deacon talked about their experience throughout the project and their relationship to the future and science.

Tanja: How did you get the idea for twentyforty?

Benedikt: I noticed that we scientists are good at understanding the past and the present. But we have difficulties with the future, i.e. with what we cannot know. In my opinion, there are already enough horror scenarios, especially with regard to digitalisation. With twentyforty, I wanted to create a format with which scientists – on the basis of their expertise – could create utopias, or the best possible futures. I believe this kind of thinking is needed to constructively meet today's challenges. In our research programme, we do science communication research. In this context, twentyforty is a playful experiment on the epistemic conditions of the relationship between science and society.

Why do we need utopias today? Why in literary form?

Benedikt: We live in a hectic time, in which many decisions are being made about the future. If you don't discuss how you want to live in the future and what dangers you might face, you will be unprepared. Science has a central role as a source of knowledge here. But it is clear that a utopia cannot be created by scientists alone. It must be intersubjectively shared.

has also shown me that we can implement demanding and complex projects. We are ready for the next one.

Bronwen: Diversity and exchange always produces something new and that should be encouraged. I was particularly inspired and enriched by our writing camp. I noticed how fulfilled all our participants were when they came out of this experience. This also requires you to take a step out of your own comfort zone, but it has a lot to offer.

If you had one wish, which of the utopias from the anthology would you like to make come true for the year 2040?

Benedikt: I would like to participate in an immersive rave with Mark Graham and visit the bathhouses of the future with Robin Tim Weis. I would also like to study at Dirk Baecker's Next University. If you want to know what I mean, you have to read the texts. ♦

This interview was first published on 3 July 2020 on the Digital Society Blog of the Alexander von Humboldt Institute for Internet and Society (HIIG). The entire book *twentyforty – Utopias for a digital Society* is available via open access on the project website.

 twentyforty.hiig.de



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to prevent the spread of
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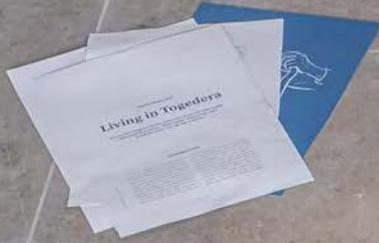
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HOW WILL WE WORK, LIVE, LOVE, SHAPE SCHOOLS AND GOVERNMENTAL STRUCTURES IN 2040?

A EUROPARAMA PODCAST EPISODE ON TWENTYFORTY

twentyforty – Utopias for a digital society was an essay competition organised by HIIG, which offered scientists a platform for imagining utopias beyond the usual research. In a joint writing camp supported by coaches, the writers developed, questioned, designed and formulated ideas. It resulted in 13 visionary stories addressing the opportunities and challenges that digital technologies pose for society in the future of 2040.



The quotes cited here are excerpts from a podcast episode featuring Europarama, a podcast series on science fiction and the future of Europe. These are the impressions and experiences of the twentyforty participants. In this episode, Giuseppe Porcaro, political geographer, science-fiction writer and host of europarama, spoke with Bronwen Deacon, Gianluca Sgueo and Isabella Hermann. Bronwen Deacon is a researcher and coordinator of the twentyforty project at the Alexander von Humboldt Institute for Internet and Society. Gianluca Sgueo is a policy analyst at the European Parliament and New York University Global Media Seminar professor. Isabella Hermann is a scientific coordinator on artificial intelligence at the Berlin-Brandenburg Academy of Sciences and Humanities. The latter two are authors of twentyforty.

“I was actually trying to transmit the concept that I had explained from an academic perspective via another perspective, the one of a novelist – which is obviously very different.”

Gianluca Sgueo



“It needed some time to click for the authors to write without the rules that normally apply in academia and to understand their freedom of writing in various styles or formats. I remember one author having trouble telling the story he wanted to tell, until he understood that he could make up characters and write a dialogue.”

Bronwen Deacon

“You could really see and feel a development from being stuck, and maybe even a little bit unsure, to finally opening up and enjoying the writing.”

Bronwen Deacon



“The Manifesto is about a group of progressive tech pioneers in the mid 2030s that came up with a declaration stating that we as humans need to make mistakes in order to be human. Furthermore, because they are tech pioneers, they believe that technological progress is human, too. So they came up with the idea that mistakes and code errors should be integrated into artificial intelligence systems, in order to inspire necessary discord and unforeseen predictions. They call it embedded mismatch.”

Isabella Hermann

“The process to get to this point was truly amazing ... We as academics always complain about not having enough time to work, write and reflect and that was precisely what we were asked to do.”

Gianluca Sgueo



Europarama is a podcast series about science fiction and the future of Europe brought to you by the Are We Europe podcasting family. Listen to the episode online.

 europarama.simplecast.com/episodes/twentyforty



MATTHIAS C. KETTEMANN

Make technology great again: how to use ethics to save digitalisation

Can your refrigerator order milk for you but refuse to give you a second ice cream? Should your self-driving car drive you into a tree instead of running over a careless pedestrian? Are self-learning systems allowed to make decisions that even coders can no longer explain? The author argues that the answers to these questions don't have to be only yes or no, and suggests a nuanced, ethics-based approach to digitalisation.

Scientists have the privilege of asking questions. They can enquire into the decision-making processes by humans and machines and by humans relying on machines. From small decisions (What happens to me when my fitness tracker calls me lazy) to bigger decisions (When should an automated car stop?), a key element of all decision-making is the question of explainability. Should self-learning systems be allowed to make decisions that even their own coders can no longer explain? And if yes, why? Who decides? Under which proceedings?

As societies become more complex, simple answers no longer satisfy us. Confronted with technological tools of increasing complexity and underlying, progressively automated decision-making processes that even experts can barely reconstruct, we want explanations. We deserve explanations. We have a right to explanations. This is where the project The Ethics of Digitalisation comes in, which started in summer 2019. We know that even if not every current social development can be traced back to digitalisation, the social fabric, political landscape, communicative possibilities and economic outlook of our society are all deeply impacted by the many

processes connected to digital transformation. This includes datafication, algorithmisation and platformisation. It would be simplistic, however, to look one-sidedly only at digitalisation's effect on the legal and social order. Just as the digital affects us, we change the digital. Or at least we should. And that is what The Ethics of Digitalisation project is all about: deconstructing how decisions regarding our online worlds, our tools and our lives are made, and identifying the layers where and players whose ethical interventions make sense.

If law is coagulated politics, then ethical questions are the fire that burns under the cauldron of the political. Ethics is the meta-narration of law, and with the help of ethics, we can show where to tighten adjustment screws of law and where certain legal reins need to be loosened.

From a European perspective, it seems especially crucial that decision-making power in the relationship between technology and law must be understood in a more complex way. This particularly applies to the law's power to define both freedom to do things as well as freedom from things being done to one by others.

THE RULE OF LAW DOES NOT PAUSE JUST BECAUSE WE ARE ONLINE.

When social platforms delete calls for more democracy but leave calls for violence online, when fact-checks on climate change denial are withdrawn for fear of censorship accusations, when search engines no longer list relevant information, all this is an abuse of power – albeit power that is clothed in technology and stabilised by internal norms based on domestic law, but power that is little understood and increasingly out of control.

Of course, platforms and search engines also have rights and deserve protection under the law commensurate to their function in societies – let us not forget nor diminish the important contribution to the communicative freedoms of billions that online communication spaces have made. Yet the more platforms optimise to maximise values other than the establishment of communicative spaces for societal discourses (engagement, for example), the less protection they deserve.

Power is even more hidden from us in the pre-programmed usage characteristics of technology, the misleading designs, the “dark patterns”.

We must therefore defend freedom against new dangers, no longer (primarily) against an overreaching state (there are exceptions, even within democratic states, even amongst European states). Freedom has rather to be defended against private actors who provide the means but misuse the avenues of communication.

To do this, however, we need a different (new) set of instruments to protect freedom. German courts have developed a state-equivalent obligation incumbent upon private actors to respect the fundamental rights of users when their services are essential for the creation and running of public spaces.

It is ironic (but nevertheless right and important) that – admittedly imperfect – attempts to push back on the power of platforms in order to create more freedom in Germany and France are criticised as a state attack on this very freedom.

What is necessary? What can Europe do? As shown through the right to be forgotten, the General Data Protection Regulation and the debates on the Digital Service Act, Europe can position itself as a source of normative insights and

continue reading on page 193 ►►



THIS IS AN ARTICLE BY **MATTHIAS C. KETTEMANN**

This article was first published on 3 September 2020 on the *Digital Society Blog* of the Alexander von Humboldt Institute for Internet and Society (HIIG) and is based on the author's talk at the opening of the HIIG project *The Ethics of Digitalisation*.

Matthias C. Kettemann studies online rule-making. He runs the research project *International Law of the Internet* at HIIG. He is also research programme head at the Leibniz Institute for Media Research | Hans-Bredow-Institut, visiting professor of international law at the University of Jena and research group leader at the Sustainable Computing Lab (WU Vienna).



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regulatory exports. Just as Germany has contributed so meaningfully to the reform process of the digital cooperation infrastructure in 2020, it undertook a number of multi-stakeholder consultations to gather the world's opinion, including and especially that of non-state actors and actors from the Global South. Such a process, performed admirably for internet governance, is still missing in all other fields of technology governance.

That is what the Ethics of Digitalisation project sought to achieve and successfully did: thinking in a nuanced manner to find clear answers about the power of the law to regulate technology during a period when Germany co-championed the international politics of digital cooperation. In the second half of 2020, after all, Germany held the EU Council Presidency, sat on the UN Security Council and the Human Rights Council, and presented the UN Secretary-General with an options paper for reforming the cooperation architecture of the internet.

Research conducted at and supported by HIIG offered a sophisticated and pertinent contribution to a challenging field. Let us not only focus on the normative power of the factual, or even freeze in front of it. Let us also reflect on the factual power of the normative, the effect of norms, especially when they are stabilised by ethics. Then, we can rightly and justifiably shape socio-technical change in a people-centred and development-oriented manner. ♦



OF THE HIGHEST IMPORTANCE

PRESIDENT STEINMEIER, ETHICS AND DIGITALISATION

“Successful policymaking at both national and international level strives to achieve a balance of interests and defines rules for fruitful coexistence with the help of ethical principles. The spread of digital technology is radically transforming our society and the life of each individual. That is why it calls for an ethical framework.”

— Frank-Walter Steinmeier, Federal President of the Federal Republic of Germany

During the launch event of the project The Ethics of Digitalisation – From Principles to Practices in Schloss Bellevue on 17 August 2020, German Federal President Frank-Walter Steinmeier highlighted the importance of having an ethical framework to confront the challenges posed by the rapidly advancing digitalisation of many aspects of our lives.

Frank-Walter Steinmeier is the patron of the two-year pioneering research project, which is funded by the Mercator Foundation. The project is the current key joint venture of the NoC (Global Network of Internet & Society Centers); participating centers include, apart from HIIG, the Berkman Klein Center and the Digital Asia Hub, Hans-Bredow-Institut, and promotes exchange between science, politics, digital economy and civil society.

Using research sprints and clinics, the project explores new scientific research formats while at the same time seeking to answer pressing questions, such as: what rules do we need if we want to develop AI systems that serve the public good? How can we design algorithms that shape our society in meaningful and respectful ways? How should we programme chatbots to make sure they don't discriminate when they're communicating? It involves interdisciplinary networks of experts and stakeholders in order to produce research outputs with social relevance and impact. The federal president appealed to the fellows of the first research sprint with the following invitation: “Have the courage to explore new ground in your thinking and writing! Enrich this major societal debate with your ideas! And above all, don't shy away from politics, for in no other field are experts like you so urgently needed.”

FELLOWS

We invited the fellows of the first research sprint (20 August–25 October 2020) on the topic of AI and content moderation to share their thoughts on their sprint experience:

Angelica Maria Fernandez

PhD candidate at University of Luxembourg | IT law, intermediary liability, disinformation, online platforms, AI

I am fascinated by the new legal challenges that arise from the use of AI in content moderation. AI adds a layer of complexity to an already difficult puzzle for legislators and policymakers. It is fascinating to study the overlaps and divergences in the ongoing regulatory discussions regarding AI and the liability of online platforms. This is particularly true when the outcome of these discussions will determine the underlying rules and structures of who, why and how speech is moderated online, which have repercussions for our fundamental rights and democracy.

Dominiquo Santistevan

PhD candidate at University of Chicago | Computer science and sociology

Questions about content moderation and artificial intelligence would seem to imply a bounded scope, but when I think about our lives, more specifically our political lives, and their relationships with digital platforms, I realised that the scope of these questions has no clear boundary. This is our future, barring some fundamental changes between the internet and the nation state, so I believe research into the topic is not just an act of research, but instead it should be a diligent practice for every online user.

Erich Prem

Director at eutema GmbH and lecturer at Technical University of Vienna | AI, epistemology and innovation policy

Topics such as algorithmic content moderation are fascinating from many different perspectives. Despite the fact that it is a novel field, it affects society on many levels. It is important for citizens writing updates on their social networks, watching online

videos and sharing pictures. It is a technically challenging field where even the best artificial intelligence algorithms exhibit limitations. Finally, it is a nearly overwhelming topic for policy makers in terms of its complexity and its inherent challenges. For me personally, the topic is fascinating because of its fundamental nature. Having machines decide on online content poses many questions about what is fair, what should be transparent, what needs to be regulated and how it should be done.

Sunimal Mendis

Assistant professor of intellectual property law at Tilburg University |
Copyright law

Within today's digital public sphere, online platforms play a crucial role as facilitators of public discourse and incubators for creativity. Governance frameworks that establish legal and normative parameters for the creation and sharing of content over online platforms can have a determinative influence on public discourse and user creativity. As a copyright law researcher, I find it fascinating to explore how the theoretical and ethical frameworks of copyright law can provide normative guidance in re-designing platform governance frameworks to secure this objective.

Valentina Golunwova

PhD Candidate at Maastricht University | EU law

Research on public goals and values embedded in various online content regulation regimes constantly keeps me on the edge of my seat. My group mates and I uncovered many conflicting interests underpinning all responses to urgent issues, including the most humble and concise. Striking a fair balance between these interests is seen as a key to dilemmas of the digital age; but who is in the position to decide what is fair? And how can we make sure all stakeholders are equally represented and all voices are heard? This made me realise that proposing an alternative regulatory approach to platform governance is not just a great intellectual challenge, but also an immense responsibility for our society. ♦



What does the present have to little of?

BJÖRN SCHEUERMANN

Björn is the latest addition to our board of directors and is already irreplaceable. His research mainly focuses on computer networks and their security. Prior to becoming this unicorn, Björn – amongst other things – was principal investigator in multiple high-level research projects.

How do we imagine your wild years?

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How do you regenerate?

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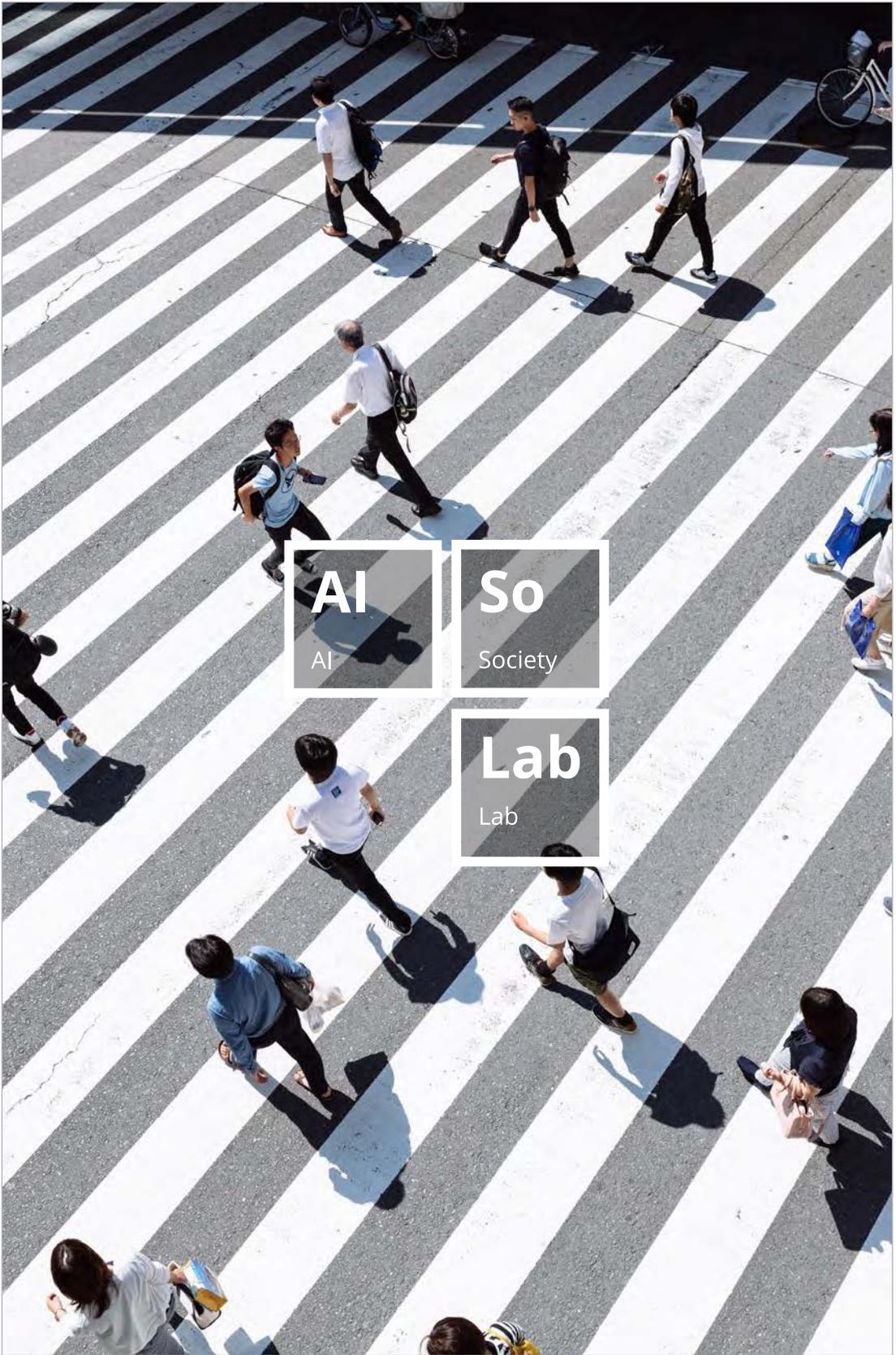
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Which feeling do you connect with HIIG?

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How do you react when a doctoral student asks for a soldering iron?

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AI IN A NEW LIGHT

5 QUESTIONS FOR THE AI & SOCIETY LAB

Artificial intelligence has become a huge part of our daily lives – and its relevance will continue to grow and pose new questions for our societies. In this light, the HIIG founded the AI & Society Lab in 2020. Wolfgang Schulz, one of the HIIG's research directors as well as Theresa Züger and Daniela Dicks, the two Leads of the AI & Society Lab, took the time to answer five questions to introduce the lab and their vision.

In a nutshell, what is the AI & Society Lab?

Daniela Dicks: The AI & Society Lab sees itself as an interface between science, business, politics and civil society and tackles the questions that the increasing spread of artificial intelligence poses for our society. The goal of the lab is to foster innovative research, interdisciplinary exchange and knowledge transfer about artificial intelligence. Currently, AI is being discussed very differently in various social groups: the technical community, for example, deals with completely different questions than those that concern civil society. In the AI & Society Lab, we develop formats that mediate between these perspectives and in our research aim to find answers to how our society can deal with the changes caused by AI in a self-determined manner.

Ever more research centres are emerging that focus on AI. What makes the AI & Society Lab different from the others?

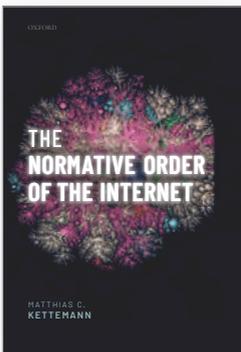
Theresa Züger: While we are happy to see all these great initiatives and research centres on AI emerging, the scientific discussion of social questions about AI has so far been rather isolated. What is often missing is an interdisciplinary approach that also takes into consideration social and political questions – for AI cannot be seen as a technical phenomenon only. At HIIG, it is precisely this interconnection that interests us.



LONGREADS 2020

Dissertations and books
published by HIIG researchers

BOOKS

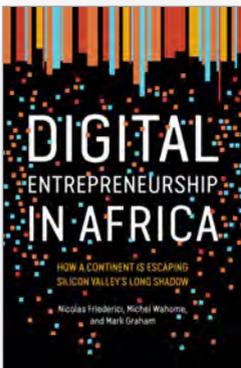


Matthias C. Kettmann

The Normative Order of the Internet. A Theory of Rule and Regulation Online

Oxford University Press · ISBN 978-0-19-886599-5

There is order on the internet, but how has this order emerged and what challenges threaten and shape its future? This study shows how a legitimate order of norms has emerged online made up of national law, international law and transnational normative arrangements.

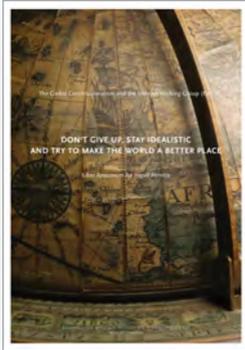


Digital Entrepreneurship in Africa: How a Continent Is Escaping Silicon Valley's Long Shadow

MIT Press · ISBN: 978-0-262-53818-3

Digital Entrepreneurship in Africa shows that the continent's startup ecosystem may be different from that of other places, but it has a richness of young people and problems that create a fertile ground for innovation and wealth creation.

EDITED VOLUMES



The Global Constitutionalism and the Internet Working Group (Ed.)

Don't Give Up, Stay Idealistic and Try To Make the World a Better Place – Liber Amicorum for Ingolf Pernice

Alexander von Humboldt Institute for Internet and Society · ISBN 978-3-9821760-1-7

A liber amicorum dedicated to Ingolf Pernice, one of the founding directors of the HIIG, with contributions from former and current HIIGsters.



Dieter Georg Herbst und Thomas Schildhauer (Eds.)

Public Relations und Digitalisierung

(Public Relations and Digitalisation)

Alexander von Humboldt Institute for Internet and Society · ISBN 978-3-7445-1968-7

The internet has changed our world. But has it realised its emancipatory potential? In this collection, the editors asked 30 authors to describe their visions for a truly free and dignity-based internet.



Benedikt Fecher (Ed.)

twentyforty – Utopias for a Digital Society

Alexander von Humboldt Institute for Internet and Society · ISBN 978-3-9820242-7-1

What will tomorrow be made of? This very old question may have found a new kind of answer. *twentyforty – Utopias for a Digital Society* is a collection of thirteen stories written by researchers working in a variety of fields ranging from artificial intelligence to law and geography.

DISSERTATION



Kirsten Gollatz

Die private Governance der Plattformen zur Regelung grenzüberschreitender Kommunikation: Institutionelle Merkmale und die Herausbildung von Regeln im Diskurs

(Private governance of platforms for cross-border communication: its institutional characteristics and the emergence of rules in discourse)
Zürich Open Repository and Archive · DOI 10.5167/uzh-188820

In the absence of globally shared norms, private ordering provides an important source for how cross-border communication is governed on the Internet. Especially, commercial online-platforms have become central intermediaries of user communication for which they set private rules with transnational scope.



“What would be different if HIIC was situated in Israel would be the incapability of having long-term plans. That’s Israel’s advantage and disadvantage.”

RETHINKING DOCTRINES AND HARVESTING ACADEMIA'S CAPABILITIES

AN INTERVIEW WITH NIVA ELKIN-KOREN BY CLAUDIA HAAS

The work of HIIG's Academic Advisory Council is characterised by the multidisciplinary academic credentials of its eleven dedicated members, multidisciplinary not only in terms of their respective research fields but also in terms of their individual cultural backgrounds and experiences as international scholars. From Hong Kong to Berlin, from New York to Utrecht, from Tübingen to Tel Aviv – the council's network spans the entire earth. It is responsible for advising the research agenda, assuring academic standards and quality, and, in fulfilling this function, it ensures academic freedom and integrity. In this interview we spoke to Niva Elkin-Koren, chairman of the Academic Advisory Council of HIIG, Professor of Law at Tel-Aviv University Faculty of Law and a Faculty Associate at the Berkman Klein Center for Internet & Society at Harvard University.

Claudia Haas: Since shortly after its founding in 2011, you've been chair of the Academic Advisory Council at HIIG. HIIG has researched the development of the internet from a societal perspective from early on. When did you first hear about HIIG?

Niva Elkin-Koren: I was invited to the inaugural conference when it was launched by Wolfgang Schulz. It was a remarkable experience. I really remember the energy, the motivation, the coming together of people from different cultures. How the conference was organised in a non-traditional way was very innovative and inspiring. So was the agenda itself: it was crossing boundaries of disciplines and even physically. I remember that we had small sessions, and then they moved the actual walls and we all gathered into one big group. A lot of what happened at that event remained part of the institute's DNA, probably due to the leadership of the directors. Each of them brings not simply a different perspective, but also a distinct personality. The fact that they have been merged into this one body of directors in this institute was really successful due to the fact that it really worked between them. They were able



How do you see HIIG's future?

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Volume 2020/2021
Published January 2021

PUBLISHER

Alexander von Humboldt Institute for Internet and Society
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Photos pp. 46 and 53 by Generated Photos
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198/199 and 214 by Duc Dang – Photo Duke
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Print ISBN 978-3-9821760-3-1
Digital ISBN 978-3-9821760-4-8

