

THE HUMAN ERROR PROJECT

Research Report

Civil Society's Struggle Against
Algorithmic Injustice in Europe

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Preface: The Human Error Project

We are living in a historical time when every little detail of our experience is turned into a data point that is used by AI systems to profile and make automated decisions about our lives. These technologies are increasingly used worldwide. Health and education practitioners use them to ‘track risk factors’ or to find personalized solutions. Employers, banks, and insurers use them to judge clients or potential candidates. Even governments, the police and immigration officials use these technologies to make decisions about individual lives, from one’s right to asylum to one’s likelihood to commit a crime. The COVID-19 pandemic has only intensified and exacerbated these practices of technological surveillance, algorithmic profiling and automated decision making.

In different sections of society algorithmic profiling is often understood as holding the key to human nature and behavior; it is used to make the process of decision making more efficient, and to ‘avoid the human error’. Paradoxically, however - as recent research has shown - these technologies are filled with systemic ‘errors’, ‘biases’ and ‘inaccuracies’ when it comes to human profiling.

Of course, AI systems can bring many positive outcomes. This is clear if we consider their use in tackling specific issues such as diseases or climate change. Yet, when it comes to **human profiling** these technologies cannot grasp the complexity of human experience and behaviors, and their errors can have a real impact on individual lives and human rights.

In 2020, we launched **The Human Error Project: AI, Human Rights, and the Conflict Over Algorithmic Profiling**, because we believed that - in a world where algorithmic profiling of humans is so widespread - critical attention needs to be paid on how institutions, businesses, and individuals **coexist, negotiate and construct meaning out of AI errors**.

In our research we use the term ‘the human error of AI’ as an umbrella concept to shed light on different aspects of algorithmic fallacy when it comes to human profiling:

Bias – AI systems are human made and will always be shaped by the cultural values and beliefs of the humans and societies that created them.

Inaccuracy – AI systems process data. Yet the data processed by algorithms is often the product of everyday human practices, which are messy, contradictory, and taken out of context, hence algorithmic predictions are filled with inaccuracies, partial truths, and misrepresentations.

Un-accountability – AI systems lead to specific predictions that are often unexplainable, and unaccountable. How can we trust or challenge their decisions if we cannot explain or verify them?

The combination of bias, inaccuracy, and lack of transparency in algorithmic predictions, we believe, implies that AI systems are often (if not always) somehow fallacious in reading humans. The Human Error Project thus shares much of the same understandings as current research in the field of critical AI and data studies which has shown that AI systems are often shaped by

systemic inequalities (Eubanks, 2018; Amoore, 2020; Crawford, 2021), by racial biases (Noble, 2018; Benjamin, 2019; Richardson et al., 2019; Atanasoski and Vora, 2019) and by inaccurate and reductionist analyses of human practices and intentions (Barassi, 2020; Milan, 2020).

Yet we also want to push the debate further, and ask: **What next?** We want to question what happens when different actors in society realize that AI systems can be fallacious and biased in reading humans; when they discover that AI systems can be racist, sexist, ageist, ableist and so on? How are different sections of society understanding and shaping the political debate on the Human Error of AI? How are they negotiating and coexisting with the human rights implications of AI? What solutions and AI futures are different actors envisaging?

We launched The Human Error Project because we believe that one of the most fundamental questions of our times has become that of mapping, studying, and analyzing the emerging debates and conflicts over AI errors and algorithmic profiling. With this project we position ourselves amongst those scholars that have called for an analysis of the ‘political life of technological errors’ (Aradau and Blanke, 2021) and for a qualitative approach to the understanding of algorithmic failures (Munk et al., 2022; Rettberg, 2022).

Our aim is to **map the discourses and listen to the human stories** of different sections of society, to try and understand **how AI errors - when it comes to the profiling of humans - are experienced, understood and negotiated**. Our methodological approach is based on the understanding that whilst most of current research and influential journalism in the field of critical AI studies comes from the U.S. and focuses on algorithmic injustice with reference mostly to U.S.-centric systems of inequality, European countries (within and outside the E.U.) and their cultural specificities can be crucial in shedding light on how debate on AI errors, algorithmic profiling and human rights is being shaped.

To achieve our goals, The Human Error Project team researched three different areas of society where these conflicts over algorithmic profiling are being played out in Europe: the *media and journalists*; *civil society organizations* and *critical tech entrepreneurs*. This report is the product of **a 2 years long qualitative research** on civil society’s engagement with the question of AI errors, algorithmic profiling and digital rights in Europe.



Over the course of three years (2020 – 2023), in all these sections of society, we gathered data primarily through three main methodologies: critical discourse analysis, organizational mapping, and the collection of 105 in-depth interviews. This report is the second research report published so far. In December 2022 we published the report on media and journalists, titled **“AI Errors and the Profiling of Humans: Mapping the Debate in European News Media”**, (Barassi et al., 2022). A third report on Critical Tech Entrepreneurs is forthcoming.

Introduction: The Civil Society Report

Over the last five years we witnessed the emergence of multiple debates about the human rights implications of AI and algorithmic profiling. These debates were often initiated and reinforced by the work of civil society organizations, who focused their energies and actions on raising awareness towards algorithmic injustice amongst the public opinion, policy makers and the media. The Human Error Project team, hence, decided to map and give voice to civil society organizations, initiatives and individuals, who are addressing the human rights implications of AI technologies, and looking for possible alternatives and solutions. Over the course of two years (2020-2022) we collected data from civil society organizations based on two qualitative research methods: (1) **organizational mapping and a discourse analysis** of the websites of some of the key European civil society organizations and campaigns resisting algorithmic injustices, and (2) **35 in-depth qualitative interviews** with respective European civil society representatives.

The findings in this report contribute to a wider and ongoing academic debate on how civil society actors, activists and social movements struggle with AI technologies and how algorithms, processes of datafication and surveillance have impacted on the work, strategies and imaginaries of activists and social movements (Milan, 2015a,b, 2018; Dencik et al., 2016, 2018; Etter and Albu, 2021; Heemsbergen et al., 2022; Scharenberg and Barassi, 2024). The literature in the field has shown that the relationship between social movements, algorithmic logics, and processes of datafication is particularly complex because algorithmic logics offer both challenges and opportunities for social movement actors on the ground (see, for instance, Treré, 2019; Etter and Albu, 2021). The debate has also produced several theoretical concepts used to understand the injustices produced by and ways of negotiating with algorithms and processes of datafication, such as the idea of **“data justice”** (Dencik, et al., 2016; Taylor, 2017; Dencik et al., 2022), **“data politics”** or **“contentious politics of data”** (Beraldo and Milan, 2019). Moreover, most recent scholarship has also focused both on the idea of **“algorithmic violence”** (Bellanova, 2019; Safransky, 2020; Barassi, 2023) as well as concepts addressing how these may be resisted, including the idea of **“algorithmic resistance”** (Velkova and Kaun, 2021; Bonini and Treré, 2024), **“algorithmic antagonisms”** (Heemsbergen et al., 2022) and **“algorithmic sovereignty”** (Reviglio and Agosti, 2020).

This report contributes to these ongoing debates by focusing on the negotiations and challenges of civil society actors resisting various forms of algorithmic injustice and by analyzing **how they address and frame issues with AI errors and algorithmic profiling**.

Overall, the findings presented here respond to three research questions: a) who are some of the key civil society actors in the struggle against algorithmic injustice in Europe; b) what are the main issues around AI errors and algorithmic profiling from the perspective of these actors; and c) how do they act and what solutions they envisage against algorithmic injustices? Each of these research questions is discussed in a dedicated section of this report.

Methodology

As mentioned above, our methodological approach, is based on the understanding that whilst most of current research and influential journalism in the field of critical AI studies comes from the U.S. and focuses on algorithmic injustice with reference mostly to U.S.-centric systems of inequality, European countries (within and outside the E.U.) and their cultural specificities can be crucial in shedding light on how the debate on AI errors, algorithmic profiling and human rights is being shaped.

Our research started by identifying some of the key civil society actors operating in the field of digital rights and resistance to algorithmic profiling in Europe. In total, we conducted a textual analysis of the website “About” pages of **30 organizations** located in **18 different countries** (see table below) as well as **7 selected campaign websites**.

One key source to identify organizations to analyze has been the European Digital Rights network (EDRI), which provides an infrastructure for different digital rights organizations in Europe to come together in shared campaigns as well as to exchange knowledge and resources. Other organizations have been identified via interviewee recommendation or desk research, as well as via the critical discourse analysis conducted in our project’s first stage, where organizations were mentioned or quoted in our selected news media coverage (Barassi et al., 2022).

Our overall aim, here, was not to develop a comprehensive list of all digital rights initiatives in Europe, but to select a mix of longer standing and more established organizations (such as Privacy International) and smaller, grassroots groups (such as Superrr). Additionally, we wanted to select organizations from bigger as well as smaller European countries and ensure that we analyze organizations from all geographic regions.

The purpose of this exercise was to explore three research questions in particular. Firstly, **who are some of the key actors fighting against algorithmic injustice in Europe?** Here, we were interested in getting a sense of and mapping some of the main actors in this field as well as how they work together across the borders of nation-states. In our second question - **what is their mission?** - we wanted to explore their ‘raison d’être’, that is what their key concerns are when it comes to contemporary digital and algorithmic technologies. Finally, one of our key fields of interest was **how they act**, that is which avenues for exercising agency they pursued in this field. Here, we were looking both at how the organizations explain this on their website “About” pages, as well as at selected campaign websites, which we identified either via mentions on the respective websites or via mentions during the interviews conducted.

Following the organizational mapping, we collected a total of **35 qualitative semi-structured interviews** with participants from **15 European countries**, which were conducted between July 2021 and July 2022. All interviews were conducted via video calls and lasted between **30 and 45 minutes**. Interviews took place in English (n=21), German (n=13) and French (n=1).

To gather the sample of interviewees, we began by contacting organizations through their

official channels. We also chose potential interviewees thanks to our research on media and journalists, which led us to identify key civil society organizations and NGOs, individual actors like activist-researchers as well as foundations working in this area, such as the Bertelsmann Foundation's Ethics of Algorithm Project in Germany. Additionally, we also used snowball sampling to further extend our group of interviewees.

Through this approach, we were able to interview civil society actors from the UK and Ireland as well as all from across the European continent, such as from Germany, Austria, Switzerland, France and the Netherlands, Italy and Spain, Slovenia, Czechia and Poland.

Interviews were structured around four thematic areas, following the same track that we used for the interviews with other sectors (journalists and tech entrepreneurs):

1. The first set of questions invited interviewees to share and reflect on their **personal experiences and everyday life with algorithmic technologies**. Here, we were interested in interviewees' biographical background as well as their daily negotiations with algorithms: What was it that first got them interested in this field? What role do digital technologies play in their everyday life? Have they ever experienced algorithmic errors or discrimination themselves?
2. In the second set of questions, we wanted to find out what our interviewees see as the **key problems of algorithmic technologies today**. Here, we asked them about their mission as well as their beliefs regarding algorithmic profiling of humans: What did they think are the key challenges and implications today when it comes to algorithmic technologies? What motivates them to act? What kind of change is needed from their perspective?
3. Thirdly, we asked them about their **strategies and challenges of resistance**. Here, we wanted to understand how they see change coming about: What does their work look like on a daily basis? Where do they see the biggest potential to enact agency? What are examples of campaigns and initiatives that worked particularly well and why?
4. Finally, in our fourth set of questions, we asked our interviewees **to imagine the future life with algorithmic technologies**. Here, we were interested in both their utopian and dystopian visions of the future: How did they think algorithmic technologies would change our future human-AI relationships? What are their hopes and fears when thinking about our future life with AI? How did they see current innovations or legislative developments, such as the Metaverse or the European AI Act, evolving?

All interviewees were granted full **anonymity**. As such, they are quoted in this report with **pseudonyms**. At the same time, to avoid potential identification, also organizations' names have been anonymized in this report where necessary when quoted in interview transcripts.

PART 1:

Civil Society Organizations for Algorithmic Justice in Europe

1.1 Who are the actors against algorithmic injustice in Europe?

Who, then, are some of the key civil society actors against algorithmic profiling in Europe? During our research we identified and focused on the following 30 organizations from across Europe who work in the areas of digital rights, anti-surveillance, algorithmic discrimination or on other techno-political issues:

No	Organization	Country	Website
1	Cracked Lab	Austria	https://crackedlabs.org/
2	epicenter.works	Austria	https://epicenter.works/
3	noyb	Austria	https://noyb.eu/en
4	iure	Czechia	https://digitalnisvobody.cz/digital-freedom/
5	EDRI	EU/ Brussels	www.edri.org/
6	Access Now	EU/ Brussels	https://www.accessnow.org
7	Effi	Finland	https://effi.org
8	La Quadrature du Net	France	https://www.laquadrature.net
9	Algorithm Watch	Germany/ CH	https://algorithmwatch.org
10	Ethics of Algorithms	Germany	https://algorithmenethik.de/
11	Netzforma e.V.	Germany	https://netzforma.org
12	Netzpolitik	Germany	https://netzpolitik.org/
13	Superrr	Germany/ UK	https://superrr.net/
14	Homo Digitalis	Greece	https://www.homodigitalis.gr
15	Digital Rights Ireland	Ireland	https://www.digitalrights.ie/
16	ALCEI	Italy	https://www.alcei.it/
17	Hermes	Italy	https://www.hermescenter.org/
18	Privacy Network	Italy	https://www.privacy-network.it/
19	Bits of Freedom	Netherlands	https://www.bitsoffreedom.nl/
20	EFN	Norway	https://efn.no/
21	Panoptikon	Poland	https://en.panoptikon.org
22	Hiljade Kamera	Serbia	https://hiljade.kamera.rs/en/home/
23	Citizen D	Slovenia	https://www.drzavljan.si/en/
24	X-Net	Spain	https://xnet-x.net/en/
25	DFRI	Sweden	https://www.dfri.se/

26	Digitale Gesellschaft	Switzerland	https://www.digitale-gesellschaft.ch
27	Big Brother Watch	UK	https://bigbrotherwatch.org.uk
28	Defend Digital Me	UK	https://defenddigitalme.org/
29	Open Rights Group	UK	https://www.openrightsgroup.org/
30	Privacy International	UK	https://www.privacyinternational.org/

The organizations selected **differ in size and scope**. For instance, some of them, like Privacy International, which was founded in 1990, or Access Now, founded in 2009, have existed for some time and can be considered as more established players in this field. Others, like the transnational grassroots feminist collective Superrr or the Slovenian NGO Citizen D have been founded more recently and operate on a comparatively smaller scale and with less resources.

Moreover, the **range of themes organizations address also varies**. For instance, some – notably the bigger ones – deal with a range of issues related to digital rights (such as EDRi or Open Rights Group) or surveillance (such as Big Brother Watch), while some of the smaller ones have been founded to address rather specific purposes. For instance, the Serbian campaign group Hiljade Kamera was founded with the purpose of mapping the use of biometric surveillance technologies in Serbia, while the Austrian initiative noyb came into being following the introduction of the GDPR in 2018 with the purpose of enforcing certain rights granted by the legislation.

In terms of the **geographic spread** of organizations across Europe, we noticed that some countries – notably Germany, but also the UK and Italy – seem to have a very active landscape of different types of actors working in this field, compared to other countries (such as Slovenia) where significantly fewer actors are located. Despite this imbalance, our research suggests that there is at least one major actor operating in the overlapping fields of digital rights, anti-surveillance or pro-privacy in each EU country.

One interesting finding was that in countries where there are several organizations active in the same field, some organizations make an explicit point about **joining forces on the national level** in the fight for digital rights. Take the French organization *La Quadrature du Net*:

“In this web of French digital activism, La Quadrature du Net has joined the ranks of pioneer associations which, as soon as 1990, specialised in the defense of fundamental freedoms on the Internet, like the Association des Utilisateurs d’Internet or IRIS (Imaginons un Réseau Internet Solidaire). As such, it has established numerous contacts with other human rights organisations, such as its partners in the Observatoire des Libertés et du Numérique (Freedoms and Digital Observatory): Amnesty International France, CECIL, Creis -Terminal, the Ligue des Droits de l’Homme (Human Rights League), the Syndicat de la magistrature and the Syndicat des Avocats de France. At an international level, we are also working with associations like EDRi, the Electronic

Frontier Foundation, but also NGOs like Amnesty International or international organisations dedicated to defense of fundamental freedoms (UN, Council of Europe).”

Besides national collaborations, civil society organizations thus also **collaborate on an international level**, both across and beyond Europe. The Dutch organization Bits of Freedom, for instance, has even been actively seeking out international collaborations since its beginnings more than 20 years ago:

“We work in the Netherlands and Europe and collaborate where possible. As one of the founding members of European Digital Rights (EDRI), we support EDRI’s work in Brussels and contribute to the long-term strategy and resilience of our digital rights network.”

One way in which this international collaboration is expressed is through **pan-European alliances and shared campaigns** such as the “Reclaim Your Face” campaign for a ban on biometric profiling or campaigns to enact and enforce rights granted through the GDPR (see section 1.3 for further details).

The **international outlook** of many organizations is also visible in the fact that several of the bigger ones have offices in different places across Europe, such as Access Now, which has European offices in Berlin, London and Brussels; Algorithm Watch, which has offices in Switzerland and Germany; or Superrr, a feminist tech community with local groups in Berlin and London.

Beyond Europe, these organizations are also involved in **global solidarity** by networking with US-based campaigns and organizations. For instance, the Scandinavian organizations *Electronic Frontier Finland* (Effi) in Finland or *Elektronisk Forepost Norge* (EFN) clearly take inspiration from the US-based *Electronic Frontiers Foundation*, which has existed since 1990. As the EFN explicitly states:

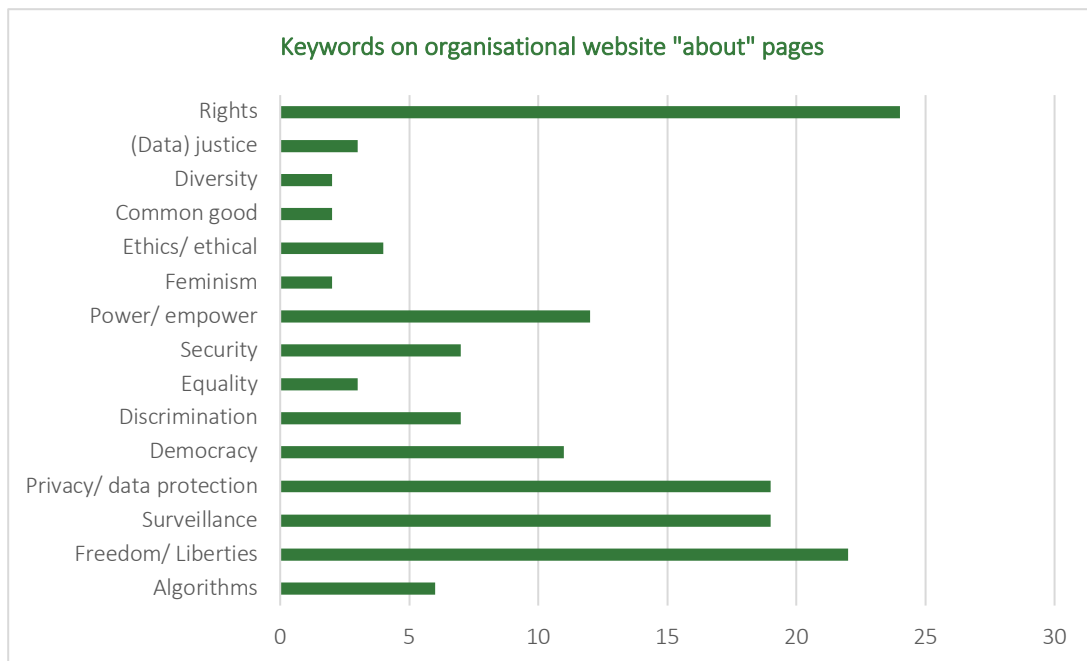
“EFN is inspired by the American organization Electronic Frontier Foundation (EFF), www.eff.org. EFF is our American counterpart and is currently strongly involved in e.g. in the fight against online censorship, surveillance and abuse of copyright law. EDRI (European Digital Rights Initiative) is doing important work in Europe, and EFN has been part of EDRI since 2007.”

At the same time, while many organizations clearly have an interest in transnational alliances, some organizations linguistically restrict their actions to a national audience, although the majority has at least an “About Us” page available in English. For instance, the websites of the organization Effi in Finland and EFN in Norway hardly offered any English content, and the websites of Privacy Network and ALCEI in Italy are only available in Italian. A national focus may also be strategic, where organizations are, for instance, seeking to **influence change and legislation on the national level** or demand accountability from national authorities. For instance, Algorithm Watch’s campaign “Unding”, which seeks to report algorithmic

discrimination to local and national authorities, amongst other actors, is currently only available in German (see next section 1.3 for detailed information about this campaign).

1.2 What is their mission?

In our qualitative discourse analysis of 30 organizational “about” pages “**privacy**” (19 mentions), “**freedom**” (22 mentions) and “**surveillance**” (19 mentions) are perhaps unsurprisingly amongst the most frequently used keywords and were often mentioned together in the same sentence or paragraph.



It is important to mention that **the overall discourse of the organizations that we analyzed was not anti-technological**. On the contrary, many of the actors emphasize the “empowering” or “emancipatory potential” of digital technologies. Yet they also believe that society should be wary of the risks related to issues of privacy, freedom and surveillance when it comes to developments in data technologies and machine learning. The below quotes are illustrative examples in this regard:

“The datafication of our societies comes with great risks. New technologies are far too often used to limit people's freedoms and their ability to shape their lives. We're surveilled by our governments. Big corporations abuse our vulnerabilities and manipulate our view of the world. The careless use of data leads to a codification, concealment and recurrence of discrimination. Two rights play a key role in protecting us from these threats: privacy and the freedom of communication. They can also enable us to make full use of the internet's emancipatory potential. That's why Bits of Freedom fights to advance these rights.” (Bits of Freedom)

“La Quadrature du Net (LQDN) promotes and defends fundamental freedoms in the digital world. We fight against censorship and surveillance, both from States or private companies. We question how the digital world and society influence each other. We work for a free, decentralised and empowering Internet.” (La Quadrature du Net)

The issue of “Rights” is also particularly important for the organizations studied which clearly emphasized that in our societies it is essential to **link the issue of digital rights to the idea of human rights**. In this regard, we found an interesting quote on the Homo Digitalis website, which clearly highlights the relationship between the digital person and individual freedoms and rights.

“The digital world has become part of our reality and influences our way of thinking, our choices and our acts. It reforms our society as a whole, but also the human existence in itself, by creating a new, digital representation of ourselves; a digital personality, which is not necessarily identical to our real personality, but enjoys the same freedoms and rights. Homo Digitalis focuses on the protection of Internet users in Greece.”

The need to protect digital rights was seen by many of the analyzed organizations as critical for the good **functioning of democracy**. This is especially related not only to the issue of surveillance (which was the concern for most) but also to **the issue of automated decision making**. Algorithm Watch, for instance, act on the basis of a manifesto in which they outline why algorithmic decisions need to be held accountable:

"Algorithmic decision making (ADM) is a fact of life today; it will be a much bigger fact of life tomorrow. It carries enormous dangers; it holds enormous promise. The fact that most ADM procedures are black boxes to the people affected by them is not a law of nature. It must end.

- ADM is never neutral.
- The creator of ADM is responsible for its results. ADM is created not only by its designer.
- ADM has to be intelligible in order to be held accountable to democratic control.
- Democratic societies have the duty to achieve intelligibility of ADM with a mix of technologies, regulation, and suitable oversight institutions.
- We have to decide how much of our freedom we allow ADM to preempt."

Similarly, the Italian organization Privacy Network stated that:

“The future holds a world of digital identity, digital currency, artificial intelligence and automated decision-making processes that will subtly and covertly shape many aspects of our lives. All these new technologies create real dangers to privacy, freedom and the inviolable rights of individuals. However, we believe that the human being must always remain at the centre, and that technology must be at the service of humanity, not a tool to exercise power, repress or discriminate against people.”

Once again, these organizations are **not against automated decision making technologies (ADM) as such**, but call for a more responsible use.

1.3 How do they act?

Our organizational mapping revealed 4 different key modes of action, which is a finding that was also supported by the data we collected through our 35 interviews. These modes of action include: a) *Education and awareness*, b) *Technological monitoring*, c) *Development of technological tools to empower citizens*, and d) *Policy work and legal actions*.

a) Education and awareness

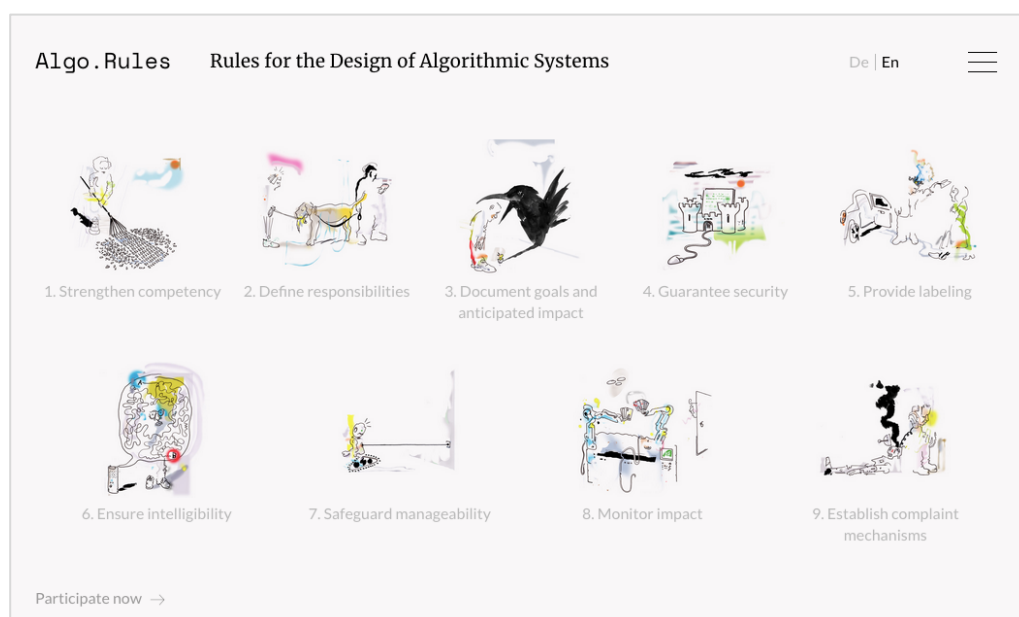
Firstly, a key way of acting that many of the organizations pursue is to **create awareness and educate** people about digital rights issues and algorithmic processes – a strategy we refer to elsewhere as the development of “algorithmic literacy” (Scharenberg and Barassi, 2024). Organizations like Digital Rights Ireland, Panoptykon Foundation in Poland, or Privacy Network Italy use different media and a mix of different methods **to educate and inform people about digital rights and algorithmic decision making**, from information material and online tools to public events. The Slovenian organization Državljan D (“Citizen D”) even offers different **public education programmes** on digital rights, including a course on media literacy, as well as digital security training.

Besides educating the lay public about their data rights and the issues with algorithmic profiling and decision making, certain organizations also aim to educate selected audiences about specific aspects of data driven technologies. For instance, the campaign Algo.Rules for ethical algorithms by the German Bertelsmann Foundation is **directed specifically at developers** (see p.15). Another audience is addressed by the UK-based children’s digital rights organization Defend Digital Me, which specifically **works with parents, schools and teachers** for this purpose.

Furthermore, some organizations even see specific educational needs and an implied lack of knowledge amongst **legislators and governmental actors** when it comes to issues relating to digital rights. Another common way in which organizations seek to educate and deepen different audiences’ knowledge about issues related to data and algorithms is through **research and policy reports**. For instance, in 2020, Big Brother Watch published a report about facial recognition technologies in the UK, which highlighted issues such as discrimination, lack of oversight and overpolicing, urging Members of Parliament to “call on police to immediately stop using live facial recognition surveillance” and “call on the Home Office to make a firm commitment to automatically remove the thousands of images of unconvicted individuals from the custody image database” (<https://bigbrotherwatch.org.uk/wp-content/uploads/2020/06/Big-Brother-Watch-briefing-on-Facial-recognition-surveillance-June-2020.pdf>).

Another example is a detailed report by Algorithm Watch, which mapped the use of automated decision making technologies (ADM) across Europe throughout the Covid-19 pandemic. The report was published in September 2020 together with the Bertelsmann Foundation, which runs the *Ethics of Algorithms* project, and provides a country-by-country analysis as well as a discussion of technologies such as thermal scanners, face recognition, immunity passports as well as geolocated selfies and bracelets (<https://algorithmwatch.org/en/wp-content/uploads/2020/08/ADM-systems-in-the-Covid-19-pandemic-Report-by-AW-BSt-Sept-2020.pdf>).

Besides such reports, another type of publication issued by our analyzed organizations are **guidelines and manifestos**. One prominent example, here, is the Bertelsmann Foundation's "Algo.Rules – Rules for the Design of Algorithmic Systems" report, which is specifically addressed at "everyone who significantly influences the creation, development, programming, implementation or the effects of an algorithmic system, as well as everyone who has commissioned the development or integration of such a system" (<https://algorules.org/en/home>) and is based around 9 rules (see image below).



A similar manifesto, entitled "Ethics in an App" has been developed by the Austrian organization epicentre.works. This manifesto is organized around 21 principles, based on the logic that "the human perspective and fundamental rights are center stage for the design and evaluation of technological systems – following the ideas of 'Digital Humanism'" (<https://www.ethicsinapps.eu/index.html>).

Other organizations' manifestos start not from the technologies themselves, but from a specific perspective such as a **feminist point of view**. Superrr, for instance, published a proposal for a "Feminist Tech Policy" (<https://superrr.net/feministtech/>), which argues that:

“To build just and inclusive digital futures it needs a holistic view of digitalization. A Feminist Tech Policy sheds light on power structures, injustices and the environmental aspects of technology. It questions current innovation narratives and examines the value of maintenance, accessibility, openness and care for the digital societies of the future. A feminist approach helps to think and see beyond existing stories and structures.”

Similarly, the organization netzforma* e.V. has released the publication “If AI, then feminist” in January 2021, which brings together feminist perspectives from activists and academics on issues such as surveillance, digital violence, algorithmic decision making systems and robotics, and raises the question what a **feminist future of AI** may look like (<https://netzforma.org/publikation-wenn-ki-dann-feministisch-impulse-aus-wissenschaft-und-aktivismus>).

b) Technological monitoring

Secondly, several organizations mention the need to spend time and efforts in **understanding and monitoring the exact workings and uses of the latest digital and algorithmic technologies**, as well as in checking whether they comply with legal frameworks. The Panoptikon Foundation in Poland, for instance, describes this as follows:

“We gather knowledge on contemporary forms of surveillance, we try to understand the manner of their functioning and the consequences for the society and the individual. We analyze available publications, research results, news. We actively use our right to access public information (FOIA requests). We cooperate with experts, academics and initiate our own surveys.

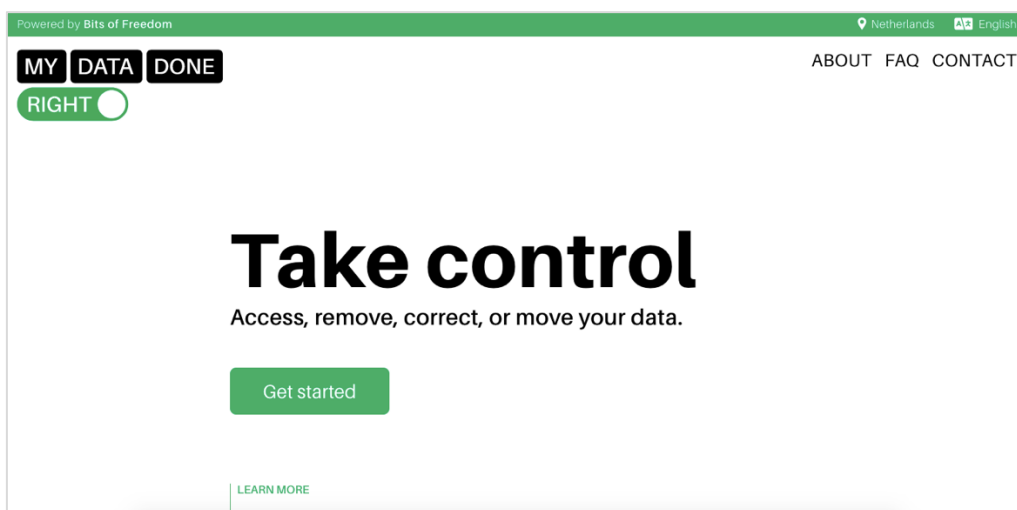
In cooperation with experts from the domains of law and new technologies, we have prepared a series of analyses concerning Internet regulation. We also conducted the research concerning the attitude of the Polish society to surveillance. Our current research projects include the topic of video monitoring (CCTV), making use of telecommunications data by public institutions and the ways of dealing with "unwanted" content online by state authorities and private companies.”

One concrete example is the Serbian campaign group Hiljade Kamera’s mission to map all the biometric surveillance cameras that have been installed in Belgrade – a kind of move to ‘surveille the surveillors’:

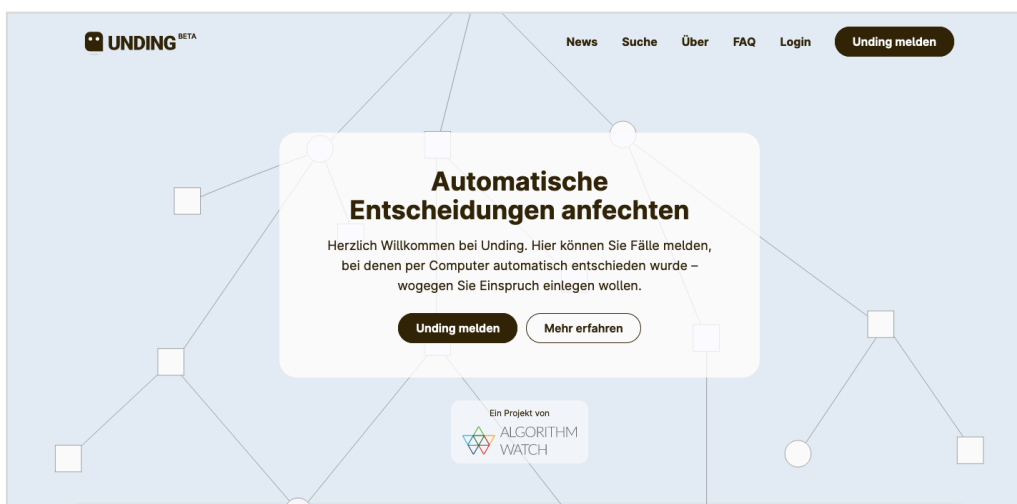
“Take pictures of cameras in your neighbourhood and tweet them with the location using the hashtag #hiljadekamera, or email them to us at hiljadekamera@protonmail.com. The ideal confirmation contains a clear photo of a camera and its location or coordinates. Verified cameras are listed in this spreadsheet. You can check the models of smart cameras for facial recognition here.”

c) *Developing technological tools to empower citizens*

Thirdly, several organizations run campaigns that seek to **provide technological solutions to empower citizens with a sense of data sovereignty** and knowledge about the inferences made about them through algorithms. One example is the campaign “My Data Done Right” (<https://www.mydatadoneright.eu/>). The campaign is powered by the Dutch organization Bits of Freedom and supported by various members of the EDRi network and other key organizations analyzed here, including Austria’s noyb and epicenter.works, the Spanish X-Net, Italy’s Hermes Center, Greece’s Homo Digitalis, Sweden’s DFRI and the UK’s Open Rights Group. Based on the belief that “having legal rights is not the same as exercising them in practice” the campaign enables individuals to enact their GDPR rights to access, remove, correct and move their data and find out how it is being used through an online template.



A second campaign that works along similar lines is the campaign Unding (<https://unding.de/>), literally meaning “unthing”, meaning a thing that should not happen, which has been initiated by Algorithm Watch with funding from the Bertelsmann Foundation and in collaboration with their Ethics of Algorithms project team, amongst others, and which currently only exists as a German Beta Version.



The campaign's idea is to empower citizens with **a tool to report and contest algorithmic decisions**. Users can fill in a template reporting unfair algorithmic decisions in five areas (racist discrimination through photo machines, credit scoring decisions, car navigation errors, errors in automated vaccine allocation, questionable Google Search result suggestions), which will then be forwarded to the responsible authorities or companies. While the campaign is still in its early stages, it is a promising attempt to collectivize individual cases of algorithmic discrimination and systematically demand accountability for algorithmic decisions.

d) Policy work and legal actions

A fourth key avenue for exercising agency is through **regulation and legal avenues**. One of the most prominent examples, here, is the "Reclaim Your Face" (<https://reclaimyourface.eu/>) campaign by the EDRi network, which **advocates for a new law** by uniting several of its members into a transnational alliance around the call for a ban on facial recognition technologies in public spaces. The campaign organizes around a European Citizens Initiative (ECI) – a transnational petitioning tool through which citizens can propose new laws at EU level.



Besides pushing for new laws, some organizations (such as Digital Rights Ireland and Homo Digitalis), also highlight their use of **legal actions and litigation**. Indeed, the need to enforce existing laws is one of the key problems when it comes to data protection and privacy today from the perspective of the Austrian organization noyb. The initiative was founded precisely for the purpose of collectively enforcing privacy laws through litigation and actually making use of the laws that already exist:

"Many companies ignore the stringent privacy laws in Europe. This is possible, because it is too complicated and expensive for individual users to claim their rights. noyb closes the gap between law and the reality by collectively enforcing your rights, so that your rights become reality."

For the French organization La Quadrature du Net, policy work is one of their three key avenues of action besides awareness raising actions and discussion formats:

“La Quadrature pursues its action...through political and legal advocacy, to bring these analyses to people in position of power. In addition to parliamentarians, the courts, the government, the European Commission or independent administrative authorities, it is also important to make this advocacy and these strategies of influence known to everyone, so that they can be understood and inspire others to go in the same direction.”

PART 2:

Civil society organizations in Europe and the Human Error of AI

2.1 How Civil Society Actors Understand The Human Error of AI

In the work of civil society organizations the issue of algorithmic profiling emerges in various ways, especially when they work on issues of surveillance and governance, marketing and data broking, and automated decision making. With our organizational mapping and interviews, we were particularly interested in understanding how civil society actors negotiate the issue of algorithmic profiling and the human error of AI. One of the key understandings shared by the interviewees was that **algorithmic technologies often misread and misunderstand humans**. For instance, one interviewee discussed how “profiling doesn't look at you as a person, it looks at numbers and it makes assumptions, and it makes decisions.” The interviewee explained that **AI systems often do not take into consideration the complexity of human contexts and intentions** when trying to understand human identities, behaviors, and peculiarities.

The misreading of humans through algorithmic profiling was not only understood as being connected to a lack of context or understanding of human intentions, but was also discussed with reference to *what it means to be humans*. In fact, another point that emerged clearly from the interviews was that humans change not only from context to context - they also develop through time and come to negotiate with different identities. Yet, this flow of becoming as well as the many contested identities of humans seem to be somehow belittled by AI systems. In the words of Tobias:

“...predicting human behaviour based on data that is based on the past [...] somehow limits the possibilities to change in a certain way. From a human perspective, I would always say that people can change and that people are more than what they have done in the past. [...] free will and the belief in people's autonomy and the free development of personality are less valuable at that point than efficiency and that systems work better.” (Tobias)

In reflecting upon the errors of AI when it comes to reading humans, most civil society actors would engage with critical questions about justice and fairness. Bouke, for instance, believed that

“it's fundamentally problematic to be always assessing people for risk and sort of having a society predicated on risk assessments. Secondly, it also changes fundamental processes of fairness and justice. Judgments are being made no longer based on what you've actually done, or at the current state, but on what an algorithmic model thinks you're going to do.” (Bouke)

Algorithmic error in profiling was seen by civil society actors as something that was very far from trivial and very much connected to critical questions about freedom and justice. Civil society actors were preoccupied with different democratic implications of AI systems. They were particularly concerned about how surveillance technologies could lead to individual self-censoring and limit individual freedom. They were also especially concerned about the fact that these technologies reinforced systemic inequalities **against specific groups in society, in particular (1) the poor, (2) women, and (3) ethnic minorities and migrants**. Interviewees would

refer to **predictive policing** as a key example of reinforcement of AI inequalities. Sandra for instance argued that:

“The problem is simply that the system itself is based on data from the past, where of course there is already existing discrimination. It is no secret that the police have not acted totally objectively in the past, that there are certain distortions in there, that is clear. The system will simply take that on board and build it into its prognosis. Then, on the one hand, there is this self-reinforcing loop, where the prognosis will naturally be that something is more likely to happen in certain regions where perhaps certain people live who have been subject to increased controls. But the problem is not only that, but that the police will patrol more intensively and thus also recognize more crimes, which then reinforces the self-reinforcing loop.” (Sandra)

Another fundamental example that has been raised to stress this point was the case of **automated public administration**. For instance, a French activist discussed how un-informed the public is about the ways in which algorithms are being deployed in public administration. He explained that he:

“was working on how social care institutions in France, the CAF or Pôle-Emploi, the agency for unemployed people, were using more and more algorithms to give people a grade basically. And this grade is not accessible to people and certain people could have unexpected and unsolicited effects on their lives and they could end up getting less money because the algorithm found out that sometimes, at some point, their behavior was suspicious or considered suspicious. That’s also a whole area where technology could be dangerous to people in need, who are already in precarious situations.” (Jacques)

A similar argument about the lack of public transparency and awareness in the implementation of these technologies for public administration emerged in an interview from the UK:

“Another issue is the lack of transparency. A lot of the time, we don't know when and how algorithms are being used. For example, with the UK Department of Work and Pensions, we know that they're using an algorithm to decide whether people should be placed under investigations and whether they might be committing benefit fraud. And when we sent them a request to tell us what this algorithm is, whether they can reveal it to us, they said “no”.” (Florence)

According to the civil society actors that we interviewed, the problem with these systems is not only that they are largely unknown to the public but also that when they fail the **implications for human rights can be staggering**. One interviewee, for instance pointed to the well-known Dutch case where a public administration software for assigning benefits had wrongly detected fraudulent behaviors:

“What happened is that they were using a software for over ten years in order to assign public benefits to poor families in order to raise children. And over the years, of course,

many families applied, and they received the benefits. And at some point, there was this huge scandal in January 2021 in the Parliament because we're working on this report that basically showed that during those ten years many families were asked [to give] back those benefits because they were flagged as fraudulent by this software. We're talking about 30,000 families that were flagged during ten years. [...] It was a tragedy because many people went bankrupt, lost their jobs, lost their houses, lost their children. I mean families completely broke down. It was huge and they had basically no justification to ask the money back because of this, because they had no reason, no explanation.” (Michelle)

One of the main problems of AI errors for our research participants was that these errors were **particularly difficult to flag, let alone to challenge and resist**. According to Martin for instance:

“If harm was done, we are not going to be able to bring the perpetrators to justice, because the institutions in Europe which are responsible for this, in this case it might be the DPA, data protection authorities for instance or the consumer protection authorities are absolutely unable to even start thinking about taking such a case.” (Martin)

“We also notice that anti-discrimination offices, which are a classic authority or contact point, are not yet sufficiently informed about how their work can be transferred to the digital. They often lack the know-how, knowledge, and resources to address algorithmic discrimination.” (Asja)

In understanding the ways in which civil society actors that we interviewed related to the question about algorithmic bias and systemic inequalities, it is important to highlight the fact that many interviewees underlined that their concerns about algorithmic and AI technologies originated from a theoretical understanding and analysis rather than personal experiences. Michelle, for instance, explained this as follows:

“there's nothing that happened to me or to my friends or to my family that got me really angry and convinced me to act. But at the same time, I was reading about these things and they really convinced me. And then I was seeing what was happening around the world. I mean it all started in the United States with the most famous cases of biases in AI. I was just reading those examples and I was studying and I was really, really angry and that's it.” (Michelle)

Concretely, interviewees mentioned several scholars who informed and influenced their thinking on these issues, including **critical technology scholars** such as Kate Crawford and dana boyd, Evgeny Morozov, Cathy O'Neil, Virginia Eubanks or Shoshana Zuboff's work on surveillance capitalism amongst others. In this context they often relied on **US-centric academic debates in the field of critical data and AI** rather than to the work of European scholars or context-specific examples. Across our interviews, a handful of examples (e.g. the flawed public administration software used in The Netherlands) stood out and were repeatedly mentioned to prove the human rights implications of these technologies.

2.2 Civil Society and the Symbolic Conflict over AI

In responding to questions about algorithmic profiling and injustice, our interviewees seemed to be supporting much of the findings of critical data and AI research of the last years and adding their voices to a growing group of actors concerned with the democratic implications of AI technologies. One particularly enriching perspective which our participants' responses contribute to these ongoing debates was the ways in which they questioned (1) **how algorithms are socially and discursively constructed as trustworthy** and (2) **the social narratives in which they are embedded**. In other words, they engaged in a symbolic conflict over naming and definitions (Melucci, 1986).

Interviewees pointed to societal **expectations** placed in algorithms when it comes to their **efficiency** and **trustworthiness** and to how our technologies are shaped by mythical and ideological understandings that are clearly impacting on how we use and organize around them. According to Conor, for instance:

“One problem is the expectation people have of these technologies for accuracy. There's just an unrealistic expectation of how well all these profiling things work.”
(Conor)

Whereas for Tobias:

“Ultimately, it's about our social understanding of such systems and that this belief - or this myth, this ideology - that these systems make neutral or objective decisions based on data and that what such systems say is always right, is wrong. There must be a basic understanding that such systems are also not neutral, are not objective, but actually have preprogrammed ideas, ideologies, etc. on very different levels. Be it in the database, be it in the assumptions that programmers have made, be it in the target functions that are somehow set, or also the question of who is involved in the production of such systems?” (Tobias)

Among the social actors responsible for pushing these narratives, some interviewees specifically highlighted the role of the **media** in this context:

“I have this problem with the way information society is represented in the media. You have this techno-deterministic position that everything that is connected to the Internet is wonderful and great and we should have technology all over the place. It bothered me even before I knew the works of Evgeny Morozov, who's a very strict critic of this type of techno determinism.” (Tomaš)

The civil society organizations that we studied, clearly aimed at challenging these techno-deterministic or solutionist ideologies, and critically engaged in a complex symbolic conflict (Melucci, 1986) over naming. Key examples of this symbolic conflict could be found in their **reluctance to use the terms “AI” or “AI Ethics”**, for instance. Many of our interviewees believed

that the term artificial intelligence is just a buzzword which does not reflect the actual functioning of our machines. Ulrike, who was based in Germany, for instance, argued that:

“What is now called AI - it's a buzzword, it's like innovation was the buzzword in the 90s - what does that mean? I mean, at the end of the day, artificial intelligence is something that is fed by something...” (Ulrike)

Others pointed out that more clarity and more specific terms are required in order to better understand what is really at stake with AI systems and algorithms:

“I wouldn't refer to them as AI technologies, because it's way too vague. Again, I think you need to split the debate between on the one hand automated systems, which have been there for quite a long time but are enjoying a kind of renaissance through the enthusiasm for what people call AI on the one hand. And on the other hand, you have platform monopolies which also claim to use AI but present a much newer set of issues.” (Martin)

Consequently, some interviewees preferred to not speak of “AI” at all, but instead mobilized other terms, such as **“advanced statistics”**, **“Automated Decision Making”**, or **“ADM system”**. They understood this choice as a deliberate strategy for making it clearer where the actual problem lies, especially when it comes to the actual powers of current artificial intelligence:

“This myth of artificial intelligence that does what it wants, and we can no longer understand (even as a company that uses artificial intelligence) what is happening and therefore we bear no responsibility. This is a rhetorical strategy that enables the diffusion of responsibility. As if this is an autonomous system, as if these systems don't function in such a way that they are optimized according to certain parameters that are decided by companies or people at that point. That's why I always have a hard time with the term AI and prefer to speak of algorithmic systems or algorithmic decision making, especially when it comes to the public or scoring of data and big data evaluations.” (Tobias)

Another term that some interviewees contested or were wary of was **the concept and meaning of “AI ethics”**. Here, interviewees criticized the ubiquitous use of the term and suggested what it may mean from their perspective:

“...we realized that it is almost impossible to find an answer and that it depends very much on the context [...] That means that one of our options at this point was to make it a bit more concrete, to define it and to show "hey, it's great when you talk about AI ethics, but try to make it a bit more tangible", because it's only worth as much as the definition is concretized at the end of the day, because otherwise it will remain a piece of paper and a document that is displayed somewhere in the compliance departments of the large companies and hangs on the wall, but basically doesn't represent any instructions for action.” (Asja)

2.3 From Legal to Political Action

If symbolic conflict was at the heart of the struggle for algorithmic justice, so were other forms of collective organizing such as legal and political action. Many of our participants were involved in campaigning and lobbying over the making of the European Union's Artificial Intelligence Act (AI Act). Several interviewees believed that it had the potential of becoming a kind of "gold standard" for the regulation of algorithmic technologies.

"I think Europe has a possibility with the AI Act and other pending legislation [...] GDPR has become the global standard for privacy [...] I think the trying to label certain types of AI as high risk is quite important because we need to separate medical applications and facial recognition and biometric surveillance as two that are very common sense and should be labelled as high risk." (Ben)

Yet our participants also showed an **ambiguous attitude towards AI legislations and regulations** and discussed the many reservations and challenges regarding their implementation and actual impact of such regulations:

"The problem with the GDPR is that it's not sufficiently implemented now. I would say there's a focus on some of the big tech companies that are also receiving large fines. But what about all the companies that are escaping the scrutiny of data protection authorities?" (Florence)

"The AI Act could have formulated even more blatant fundamental rights perspectives directly as bans, for example the possibilities for mass surveillance. The EU says that mass surveillance should be explicitly prohibited, but at the same time logical possibilities are excluded. For example, real-time facial recognition in public spaces – the fact that this is not simply banned per se is simply a disappointment, because it leaves room for blatant surveillance." (Christoph)

Another interesting example of the difficulty to implement regulation are **data subject access requests in the context of the GDPR framework**:

"One tool to get at least a little clarity or to fight back is to go via the diversions of data protection. There is the possibility to make data requests. According to Article 15 of the General Data Protection Regulation, data subjects may ask data processors what they know about them, where the data comes from, how it is passed on and actually what classification processes take place. When you make such a request for profiling, they usually don't do it in such a way that you can understand it, then there is simply a category, or a number or a letter that you can't do anything with. But actually, there would be this right." (Tobias)

Hence whilst the civil society actors we interviewed were in favor of some aspects of the new regulations, they were also aware of the fact that much more work is needed to make AI systems more accountable. It is for this reason that they explicitly organize collective campaigns **around specific issues**. One of the most frequently mentioned examples in this area

was the aforementioned **“Reclaim Your Face”** campaign, which has called for a **ban of face recognition technologies** in public spaces. According to one of the interviewees, a ban is necessary here:

“We also need red lines where we as a society say these are systems that are so prone to abuse or simply so inherently unjust or dangerous that we don't want to use them, such as biometric facial recognition, where there are also campaigns that politicize the issue well and bring it into the public eye, “Reclaim Your Face” for example. I am also a fan of working with bans in various places.” (Tobias)

Two other examples of this kind are (1) the **collective mobilizations around algorithmic issues at schools in France and the UK** and (2) the cooperation **with trade unions for mobilizing workers around algorithmic and digital issues**. Interviewees mentioned a case of students, teachers and civil society mobilizing against the introduction of biometrics in high schools in the South of France, where students of color would have been negatively affected in particular, as Jacques explained:

“Two and a half years ago, definitely before Covid, the region in the South, La Région Sud, decided to have a small experiment in two high-schools in Marseille and Nice with facial recognition in these schools, mostly poor neighborhoods with kids of color. So Cisco, the American company, approached them, saying “it’s just a test, just an experiment, it’s not a proper contract, just a gift”. What happened is that the teachers, the teachers’ unions, the parents [...] decided to unite and work together and what happened is that the court ruled that the system was illegal and should not be deployed. It was a small victory, but it was very symbolic. I think it could be copied in other areas and other fields.” (Jacques)

Similarly, in the UK, there has been **a campaign against the algorithmic prediction of A-Level results, where the use of an algorithmic decision was successfully contested and then revised through collective mobilization**:

“In the UK there was a particularly interesting case when an algorithm was used to decide high school students’ A level results in their final exams during COVID. Essentially the algorithm said that people who were in poorer schools, to put it in very simple terms, their grade was downgraded compared to people who went to sort of more elite schools, wealthier schools. They were able to dispute that decision. They were able to claim reparation because we have laws that protect them.” (Florence)

Secondly, some interviewees mentioned that they were **working together with trade unions to organize workers** around issues of algorithmic injustices or referred to the potential collective organization of Uber drivers as a positive example in this context:

“My hope is that if civil society, if academics, if journalists, if community grassroots organizations can ignite that discussion, I do have some faith that actually some of these systems may be rolled back, or that at the very least there may be more transparency and more thought that goes into it before deploying them.” (Bouke)

The importance of collective organizing against specific forms of technological injustice emerged clearly from the interviews. Yet, it is also important to point out that many of the civil society actors that we analyzed were convinced that the problems they were tackling were not of technological nature. For instance, interviewees pointed out how **algorithmic technologies may “distract from” the actual problems** at hand which sometimes have **“absolutely nothing to do with technology”** (Florence). Interviewee Robin explained this as follows:

“For me, the central challenges are first of all social challenges. The technology is secondary. My approach would be that technology can help to make social processes more just, for example, to dismantle racist structures or to smash patriarchy. But for that, we have to create the foundations from the social perspective, so to speak, and not the other way around. We can't assume that technology will do it all; we have to do it as a society. Society can take technology to help it, but it cannot get around the actual process of what needs to be done. The most important task for me on all issues of technology is to acknowledge that, pathetically speaking. So not technology first and society second. But society first, technology second. That is really the greatest challenge for me.” (Robin)

Conclusions

Concerns with errors, mistakes, and inaccuracies have shaped political debates about what technologies do, where and how certain technologies can be used, and for which purposes (Aradau and Blanke, 2021). When we think about machine learning and error there is much to gain if we develop a “history of the present” approach. Such an approach can enable us to understand how technological error “becomes a problem, raises discussion and debate, incites new reactions, and induces a crisis in the previously silent behavior, habits, practices, and institutions.” (Foucault cited in Aradau and Blanke, 2021, p.2). During our research we found out that news media (see Barassi et al., 2022) are very much part of this “history of the present”, and so are civil society organizations. The purpose of this report was to explore **who some of the key actors fighting against algorithmic injustice in Europe are, what their mission is, as well as how they act**. In particular, we were interested in how these actors related to the question of AI errors in algorithmic profiling and their human rights implications.

As this report has shown there are a variety of organizations that are engaged in the struggle for algorithmic justice in Europe, and at heart of their missions lies the question of algorithmic profiling and whether our AI systems can actually read humans in just ways. Our research also show that their struggle is articulated in at least three different, yet interconnected dimensions. Firstly, there is **a symbolic conflict over our technological imagination**. This part of the struggle regards basic aspects, such as the terms used to talk about the problems at hand, the awareness that a problem exists in the first place and that algorithmic decision making takes place daily. It is also about convincing people that **being critical of technology does not equal wanting to go back to a pre-technological era**, but that alternative imaginations of technology are indeed possible: from feminist futures to an Internet run by decentralized, locally organized networks, rather than centralizing technological power in a few big companies.

Secondly, then, there is a **regulatory struggle against the power of Big Tech**. Indeed, both our analysis of the websites and the interview data demonstrated that a big part of this struggle is **currently fought in legal lingo and expert circles** – even from the perspective of our interviewees. This is also illustrated by how the issues at stake are often being framed by the organizations themselves as **“rights”-based issues**, thus requiring a degree of legislative skills and understanding to combat. Consequently, legal and regulatory avenues such as the call for new laws, observatories and audits, or the use of litigation and access requests are frequently mentioned as key ways in which the power of Big Tech may be negotiated and kept at bay, and as a way in which a sense of algorithmic accountability may be installed – albeit with numerous limitations.

Finally, this is a **political struggle against systemic, rather than purely technological issues**. As both our organizational mapping and the interview results reveal, while we may be dealing here, at first glance, with specific issues around privacy, surveillance, and digital rights, what lies behind these keywords are **deeper systemic and epistemological issues**. As several of our participants have pointed out: **we are dealing here with issues that are not purely technological, but political in nature**. As such, from the perspective of the organizations

analyzed, the issues at the core of these struggles must not be fixed with an engineer's mind. Rather issues of algorithmic injustices should be addressed by a diverse crowd of people from different parts of society – being tackled collectively, and not individually.

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