

## UCD Centre for Digital Policy Ionad um Bheartas Digiteach UCD

# PUBLIC PERCEPTIONS of Data, Artificial Intelligence Use and Regulation

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# Executive Summary

Democratic policy making relies on a knowledgeable and well informed public. It requires the ability to both understand and actively participate in shaping and following policies. New digital technologies have centralised data and datafication processes in our lives. However, presupposing public knowledge of these processes is not straightforward.

The UCD Centre for Digital Policy has set out to understand public knowledge, attitudes to, and perceptions of personal data sharing, data rights, and artificial intelligence. In 2022, we commissioned a survey of people living in Ireland. Our questions were designed to help us better understand public perceptions and to learn about hopes and fears respondents have for the future of personal data use, AI, and advanced technologies.

The survey had a dual objective: To map and understand public perceptions and attitudes towards data, datafication and AI; and to provide a baseline which can then be used to evaluate media and algorithmic literacy efforts. We further looked at how gender, age and political party support intersect with knowledge and attitudes towards data and AI. The main findings are noted below.

#### **PERSONAL INFORMATION**

Our survey revealed that the respondents are in general willing to share personal information but not with everyone. Sharing personal information with public authorities is acceptable to most respondents. Conversely, most respondents are reluctant to share personal information with digital advertisers, digital media companies, and political campaigners. The most significant variations in the responses are on the basis of political party support and age. In particular, Fine Gael supporters indicate more willingness to share information with the Government compared to Sinn Féin supporters. Respondents in the 65+ category are more likely to be comfortable with sharing personal information.

#### ALGORITHMIC DECISION MAKING

Respondents report relatively high levels of awareness of the use of algorithmic profiling in areas such as advertising and social media, but are less aware of algorithmic decision making in the public sector, banking and recruitment. Those reporting the most awareness are those in the 25-34 age bracket and the least aware are the 65+ category.

#### SOURCES OF INFORMATION

The respondents' main sources of information on algorithmic systems and new technologies remain the national and international media and social media, with government reports and academic publications being among the least used sources.

#### ATTITUDES TO REGULATION AND RIGHTS

Responses indicate important concerns and gaps in knowledge on the use of personal information by digital media corporations. There are also important gaps in knowledge on hacking and safeguarding personal information. While respondents find that current regulation is insufficient, there is nonetheless trust in the regulatory approach of the European Union.

#### **HOPES AND FEARS**

Respondents are concerned about misinformation, cybercrime and bullying. Their main hopes are in technology-aided advances in medicine, prevention of harm, and improvement of everyday life.

#### **DEMOGRAPHIC FACTORS**

Demographic factors played a role in three areas:

- **Knowledge:** Age is relevant, with younger people indicating higher levels of knowledge and confidence around new technologies
- **Trust:** Political belief is a significant factor, with those supporting the parties in government indicating higher levels of trust
- Personal safety and concerns about information misuse: In general there are not many differences, however responses to some questions reflect some higher concerns among women around being targeted in digital media.



# Introduction

Artificial intelligence is at the forefront of Ireland's technological evolution and there have been substantial developments in the regulation of data collection and use.

Over the past six years, the European Union and the Irish Government have introduced or updated a range of rules, regulations and procedures to protect personal data. This includes the EU GDPR and the Data Protection Commission, the Online Social Media Regulation Act 2022, and the Media Commission. This also includes other legislation, such as the Digital Services Act Package 2022 and the EU's AI Act. In conjunction with regulations that address large platform activities, there are initiatives to support citizens, such as data transparency and media literacy initiatives. There are also initiatives to support the development and uptake of new technologies, such as the Digital Innovation Programme, initiated by the Irish Department of Rural and Community Development, that promotes local authority led projects that support digital development. More recently, initiatives such as Ireland's National AI Strategy and the European AI Strategy seek to shape the development of AI to ensure it is a force for good in our societies.

Such initiatives are underpinned by the desire to embrace the technological disruption created by new AI technologies, to integrate them into many aspects of our lives, and to maximise their market contributions. A parallel desire is to protect people and communities from the potential and established harms associated with the further proliferation of AI technologies. It is important to ensure new technologies are researched, developed, deployed, vetted, adopted, audited and effectively monitored using methods that centre ethics, lawfulness and the well-being of everyone in society. This holistic approach is sometimes described as 'human-centred'.

Both the Irish and EU strategies describe a humancentred approach, and recognise the need for equitable integration strategies for AI technologies in our societies. They identify the key hallmarks of the success of these strategies as public trust and buy-in. Consultation processes were part of the development of national and EU strategies. In Ireland, perspectives from industry and academia were overrepresented, in comparison with civil society organisations and community interest groups. These latter groups provide important inputs, given that they speak on behalf of public interests and have a recognised role in the EU as instruments of accountability to government processes. If public trust and buy-in is to be achieved as part of the democratic uptake of new technologies, a clearer and more comprehensive understanding of public knowledge and public perceptions of data collection, AI and regulation is essential.

There is, however, a lack of research into what the public in Ireland in general knows about AI and data, what their sources of information are, and what the public's key critical concerns are.

Furthermore, the conceptualisation of citizen-users in regulation has taken two conflicting approaches. One sees citizen-users as passive consumers of information in need of protection, while the second conceptualises citizen-users as active consumers in need of enhanced access to information. In regulation, both Irish and EU, users tend to be conceptualised as homogenous with little recognition of diversity and differential experiences of the online environment.

To address this gap in knowledge, the UCD Centre for Digital Policy set out to learn what people living in Ireland think about big data, artificial intelligence, and the regulatory framework overseeing these processes. The Centre recruited IrelandThinks to survey people in Ireland between June and July 2022 about their understanding and attitudes. We asked a representative sample about their knowledge of data collection and AI use by various institutions, including government bodies, political parties, marketing companies, and security agencies, as well as their main sources of information about these issues. We also asked about their attitudes to regulation, how effective they think regulation is, and what they think the government should prioritise. Finally, we asked respondents about their hopes and fears for the future of Al in our society.



# Methodology

UCD Centre for Digital Policy commissioned this study. From June to July 2022 IrelandThinks surveyed a representative sample of 1031 people in Ireland.

The dataset is open access and can be retrieved from digitalpolicy.ie/category/insights

Our Centre's research was designed to better understand public perceptions on regulating personal data and its use by artificial intelligence. The results here reflect broad understandings, perceptions and attitudes of those surveyed, as well as their hopes and fears.

Our Centre developed a questionnaire to focus on key questions of sharing of personal data, knowledge of how artificial intelligence and algorithms use personal data, and attitudes to data rights and regulation.

IrelandThinks conducted our survey online. The sample therefore reflects a respondent population with internet access.

The demographics of the respondents were weighted to be representative of the population across age, gender, regions, and education.

We provided the following definitions of personal data, algorithms, and artificial intelligence to ensure a common understanding of terms and issues among respondents.

**Personal Data/Personal Information:** Any information about an individual person, where that person either is identified or could be identified. Examples include date of birth, address, and employment.

**Big Data:** This is a large database with various types of information about individuals.

Artificial Intelligence: A process in which computer systems perform complex calculations based on data and provide answers. This is also known as a process of algorithmic decision making. Examples include search results and automated facial recognition.

**Big Tech:** The most dominant and largest technology companies in their respective sectors including Meta (formerly Facebook), Alphabet (formally Google), Apple, Twitter, Microsoft, ByteDance (TikTok), etc. Main Hopes and Fears: We asked respondents about their hopes and fears for the future of personal data, AI, and advanced technologies. We asked respondents to provide three short answers. Most respondents answered at least one question. Their responses were imported into SketchEngine and we deployed simple content analyses using word frequencies for single words and multi-word terms. We thematised the most frequently mentioned words (for example, we categorised online bullying and cyberbullying as 'bullying') with the most frequent hopes and fears that emerged listed below on pages 17 - 21.

#### LIMITATION

**Internet Access.** This survey was conducted online, which may demonstrate an urban and middle class bias. In 2020, 92 percent of households in Ireland had internet access (CSO); this is concentrated more in urban than rural spaces. The sample may also be biased to middle class respondents, as they are more likely to have fixed broadband connection in comparison to working class or lower income households (INOU).

**Gender.** We asked for data across gender categories of male, female and other. The sample size was too small for the other category as we only had a respondent size of n = 15. There is a need to explore gender variances to acknowledge nonbinary, genderqueer, transgender populations, etc, to avoid heterosexist findings. However, this was beyond the capacity of our study.

## Sharing Personal Information

This section describes public attitudes in Ireland towards sharing personal data and personal information with different institutions and organisations. We asked respondents specific questions in relation to government and Gardai, digital media companies and digital advertisers, political campaigners and political parties.

As much as necessary

Personal records (location, social media)

Basics (age, gender, education)

None

## Social Services (e.g. Department of Social Protection) Gardaí **Government Organisations** Employers Schools **Banks or financial institutions** Public interest research (e.g. academic civil society research) Insurance companies **Recruiters or recruitment agencies** International security surveillance (e.g. Mi5, CIA etc) **Public utilities** (e.g. Gas, electricity) Travel companies and airlines Communications companies (e.g. Eir, Vodafone)

Digital media companies (e.g. Facebook, Google) Political campaigners or parties

Online advertising companies

## Q1: Perceptions of Personal Data and Big Data

In this question, we wanted to understand respondents' levels of concern about different types of public organisations collecting information about people in Ireland. We asked them to indicate how much personal information they were comfortable with public institutions and organisations collecting about people. We share here significant findings in relation to the following entities: Government, Gardai, digital media companies and digital advertisers, political campaigners and political parties.

The representative sample suggests that people in Ireland are very comfortable with sharing their personal information with public authorities such as social services, Gardai, and government organisations. More than 85% of the respondents are happy to share some type of information. Further, 35% of the respondents say they are happy to give Gardai a lot of information. 32% and 23% of respondents replied that they are happy to give lots of information to social services and government organisations respectively. In contrast, there is a high percentage of people who are reluctant to provide personal information to online advertisers, digital media companies, and political campaigners. 64% of respondents stated they did not want to share any personal information with online advertising companies and 34% with digital media companies, like Facebook and Google. Similarly, 61% of respondents did not want personal information shared with political parties or campaigners. There were very few discrepancies between certain respondent categories including schools, employees, banks or financial institutes and public interest research.

32	2% 12%			49%	8%
	35% 11%		41	%	14%
23% 89	%			60%	14%
18% 9%			6	3%	10%
16% 9%			6	4%	12%
18% 8%			55%		19%
18% 7%			54%		21%
17% <mark>6%</mark>			58%		18%
13% <mark>7%</mark>			63%		18%
23% 6%		28%			43%
11% <mark>7%</mark>		50%			33%
10% <mark>5%</mark>		54%			31%
9% <mark>5%</mark>		52%			34%
% <mark>6%</mark>		50%			38%
% <mark>3%</mark>	32%				61%
6 <mark>3%</mark>	28%				64%
20%	40%	60%	80%		100

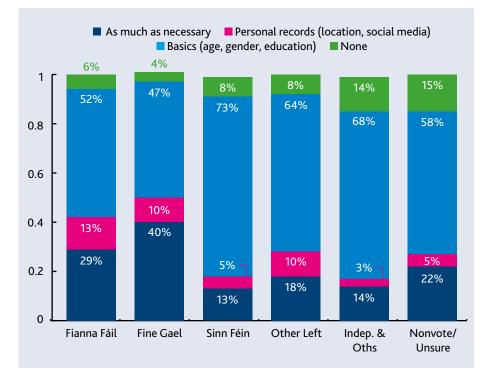
**Concerns about public organisations** 

## Sharing Personal Information

#### GOVERNMENT

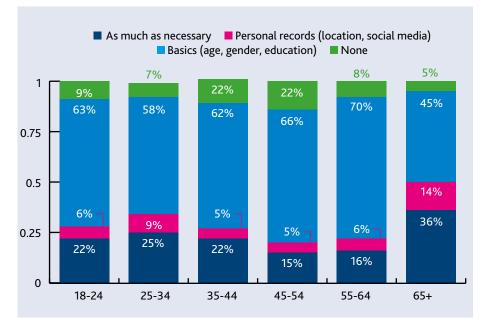
#### Q1.1: Perceptions of Personal Data and Big Data

This graph represents respondents' comfort level by political party affiliation with sharing personal information with government organisations.



The results indicate a relatively high level of comfort in Fine Gael supporters, with 40% comfortable with sharing a much personal information as necessary, in comparison with Sinn Féin supporters (13%). However, Sinn Féin supporters are comfortable with sharing personal information (73%) that we identified as basic, for example, their age, gender, and education.

**Q1.1:** This graph shows respondents' comfort level by age with sharing personal information with government organisations.

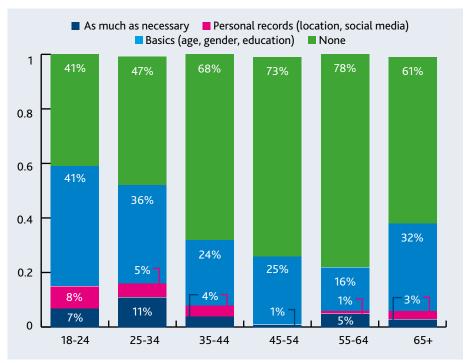


Here, we see the highest levels of support for sharing just basic personal information in the age group 55-64, with 70% of respondents being comfortable with this limited practice. The age group that is most comfortable with sharing as much as necessary is 65+, and they are followed by respondents aged 25-34.

Sharing Personal Information

#### **DIGITAL ADVERTISERS**

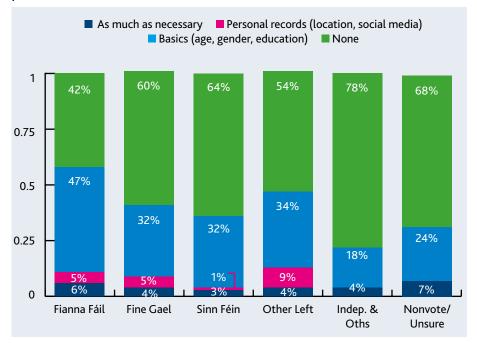
**Q1.12:** This graph shows respondents' comfort levels by age with sharing personal information with digital advertisers.



Results show that respondents in age categories 18-24 and 25-34 report being more willing to share information than older age groups. However, few people across any age group are willing to share as much information as advertisers would like to collect.

#### POLITICAL CAMPAIGNERS AND PARTIES

**Q1.13:** This graph shows respondents' comfort levels by political party support with sharing personal information with political campaigners and parties.



There is a marked difference depending on respondents' party support. Fianna Fáil supporters are happy to share more information overall, and particularly in comparison with Fine Gael and Sinn Féin supporters. Respondents of the Independent & Other category are the most reluctant to provide personal information to political organisations.

#### Awareness of Algorithmic Decision Making

Through this survey, we sought to understand respondents thoughts regarding how big data processes and artificial intelligence, such as algorithmic processing and machine learning, shape people's lives. In this section, we asked what respondents know or perceive about a range of issues related to this broad topic.

#### Q2: Understanding Algorithmic Decision Making

In this question, we asked respondents about their knowledge of where and how algorithms are used to make key decisions about people's everyday lives. We introduced a wide range of issues, including product advertising, online costs, what information people see, policing, profiling, banking loans, insurance rates, etc. We asked whether respondents knew about these activities prior to starting the survey, if they were aware but didn't know the details, or they had not any idea at all.

While the responses show that most people say they are aware that algorithms operate in the digital world, they know less about algorithmic use in private industries such as banking, insurance, education and public activity, including policing. For example, most respondents state they know about how algorithms affect which online adverts (69%) and what content (65%) are shown to people. However, most respondents do not know that algorithms can affect bank loan rates (47%), insurance premiums (42%), and how communities are policed (53%).

L							
				6	9%	17%	14%
				65%		19%	16%
				64%		19%	17%
			50%		24%		26%
			49%		21%		30%
		44%	6		30%		27%
		42%		22%			36%
		39%		20%			40%
	3	7%		24%			38%
	3	6%		24%			39%
		38%		20%			42%
	34	%	209	%			47%
	29%		23%				48%
	27%		21%				53%
	25%	18%					57%
0	20%	40	%	60%	)	80%	100%

Yes, I know about % Aware but don't know the details % No, I had no idea %

**Knowledge on Algorithmic Decision Making** 

Build a profile of people's personalities How much something will cost me online Identify suspected illegal behaviours Optimizing getting around travel What words people can use to express themselves online People's suitability for jobs Identify suspected criminals in public places Affects insurance premiums Affects bank loan rates People's ability to travel internationally How communities are policed

What products and services are

What content people see online

What information people see online

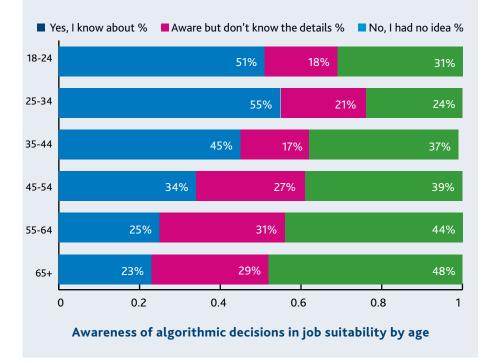
advertised to people

Grades in state exams

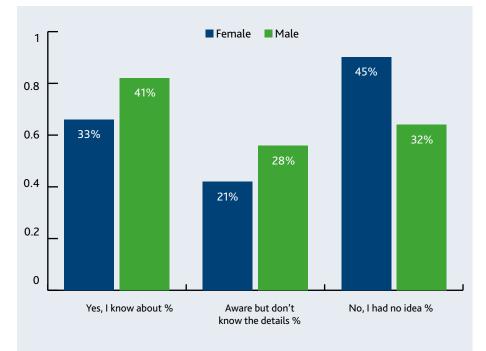
#### Awareness of Algorithmic Decision Making

This graph shows the respondents' awareness, aggregated according to age and gender, of algorithmic decisions in job suitability.

The trends are consistent here with other results that relate to age and gender. Looking at age, we see that the 25-34 years group claims the most awareness (55%), while age group 65+ years claims the least awareness (23%).



Looking at gender, male respondents claim more awareness at 41%, compared to 33% awareness for female respondents.



Awareness of algorithmic decisions in job suitability by gender

#### Sources of Information

This section is concerned with identifying respondents main sources of information for learning about data, algorithms and new technologies.

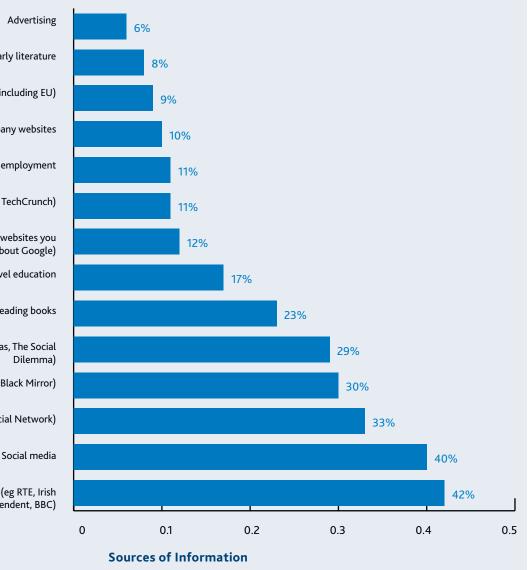
#### **Q3: Sources of Information**

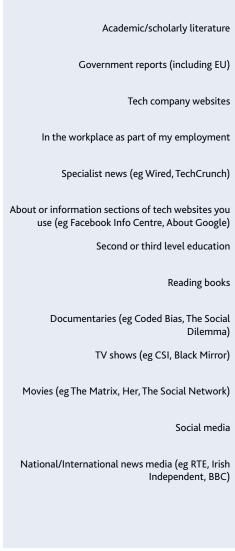
In this question, we wanted to understand where respondents learned (or heard about or came across) information about big technologies, big data, algorithms and artificial intelligence. We provided categories of knowledge sources, including national/international news media (RTE, Irish Independent, BBC), social media, movies, TV shows, documentaries, etc. We asked them to select the five most common categories that apply.

Most respondents reply that they gained knowledge through what we classify as more reliable and accurate sources, such as the national and international news media (42%) and documentaries (29%). However, fewer respondents gain knowledge directly from tech companies who deploy these technologies through or dedicated information support services, such as tech company websites (10%), specialist news (11%), or information portals to support users (12%).

A significant proportion of the respondents gain information about data and AI from less reliable sources. For example, 40% gain information on social media, 33% from movies, and 30% from TV shows.

Some of the media that shape how respondents engage knowledge sources are illustrated in the responses to our questions on Hopes and Fears for the future (detailed in section 5, below). In Hopes for the Future, respondents name two sources of Hope: Star Trek and Fully Automated Luxury Communism. For Fears, there are more sources mentioned, including Orwell's 1984, and Brave New World, The Matrix, and The Tinder Swindler.





Attitudes to Regulation and Rights

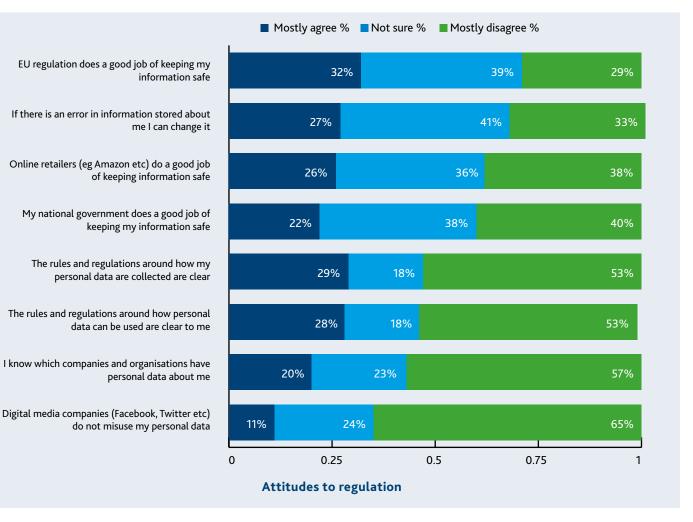
This section focuses on public attitudes towards regulation of new technologies and rights.

## **Q4: Understanding Big Data Regulation**

In this question, we wanted to learn respondents' views on the rules and regulations about technologies companies that collect or use respondents' data. We presented a number of statements, for example, 'The rules and regulations around how my personal data are collected are clear'. Respondents indicated the extent to which they agreed or disagreed with them.

There is a low level of knowledge about what companies or organisations have information on individuals. More than half of respondents (57%) say they do not know who has personal information about them. There are also low levels of confidence on social media companies' use of personal information.

Comparing attitudes to personal data and safety, respondents display more faith in the EU than in the national government or digital media companies.



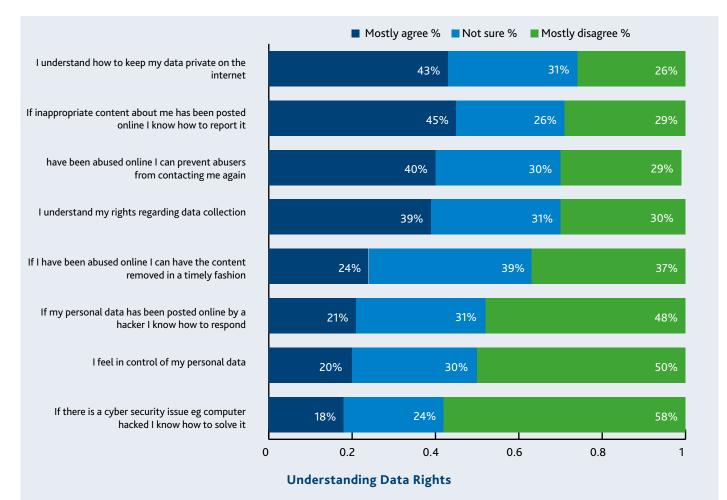
Attitudes to Regulation and Rights

## **Q5: Perceptions of Data Rights**

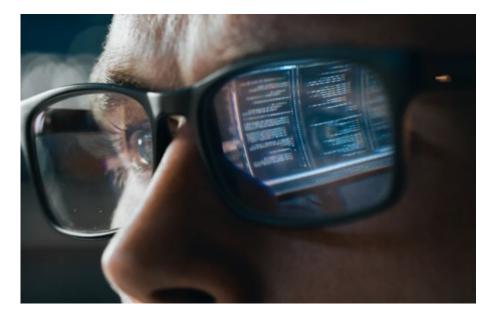
In this question, we wanted to understand respondents' attitudes to regulation and rights. When it comes to understanding how to respond to problems regarding personal data or accessing data rights, while 43% of respondents say they understand how to keep their data private while online, 31% are unsure and 26% say they do not know.

If an issue does arise, most people state they do not know what to do. 58% of the respondents state they do not know how to respond if their data was hacked and 24% are unsure. Only 18% of the people stated that they are confident in knowing how to respond to a personal data breach.

29% of people stated that they do not know how to report inappropriate content and 28% are unsure. Furthermore, in the event that inappropriate content is posted, only 21% of people think it will be removed in a timely manner, 31% are unsure and 48% don't think it will be.

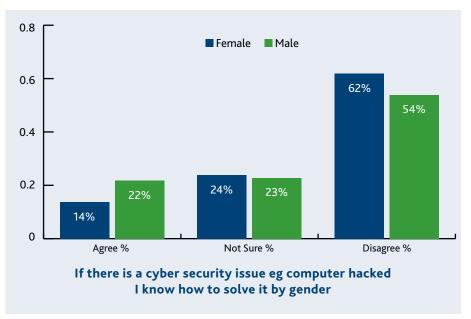


Attitudes to Regulation and Rights



#### ADDRESSING HACKING

**Q5.3:** This graph shows the respondents' claimed knowledge, by gender, about hacking.



There are notable differences here. Females report feeling less knowledgeable about issues including hacking than males. To some extent this can be attributed to a heightened awareness of gender related threat online.

Attitudes to Regulation and Rights

## **Q6: Attitudes to Regulatory Efficiency**

In this section, we wanted to understand respondents' views on responsibility and accountability in digital technologies. We asked respondents about their attitudes to how efficient regulation is across a range of criteria, including protecting people's personal data from criminals, protecting personal data from exploitation by commercial interests, preventing abuse of ethnic or religious communities, etc. We presented 15 categories.

Fewer than a fifth of the respondents think regulation is sufficient across each of the 15 categories. While the most confidence is in preventing abuses of ethnic or religious communities, this was still very low: 9% somewhat efficient and 8% efficient. This was followed by ensuring companies are transparent with users (11% somewhat sufficient, 6% sufficient), and in holding companies accountable (11% somewhat sufficient and 5% sufficient).

Respondents say they think regulation is least sufficient around protecting children from abuse, with 53% saying it is insufficient, while 15% say somewhat. Nearly half of respondents think regulation is insufficient in addressing crime, with 49% on hacking and other cybercrime and 48% on criminal activities organised online.

Lastly, 47% of respondents think hate speech regulation is insufficient and 15% think it is somewhat insufficient.

Regulat	tion is insuffi	cient 2	3 Unsu	ire 🔳 4 🔳 5 Reg	ulation is suffic	ient	
			53	% 15%	18%	8%	6%
			49%	16%	23%	7%	5%
			48%	13%	27%	7%	5%
		43	3%	19%	26%	8%	59
			45%	17%	25%	7%	6%
			46%	16%	22%	11%	5%
		4	4%	16%	27%	8%	69
			47%	15%	22% 7	<b>%</b>	9%
		4	4%	15%	27%	8%	6%
		40%	•	18%	26%	11%	6%
		40%	14	4%	31%	8%	6%
		34%	13%		31%	8%	5 4
		35%	13%		39%	8%	69
		34%	17%		34%	9%	5%
		36%	13%		35%	9%	8%
	0.2	(	).4	0.6	0.8		

**Attitudes to Regulatory Efficiency** 

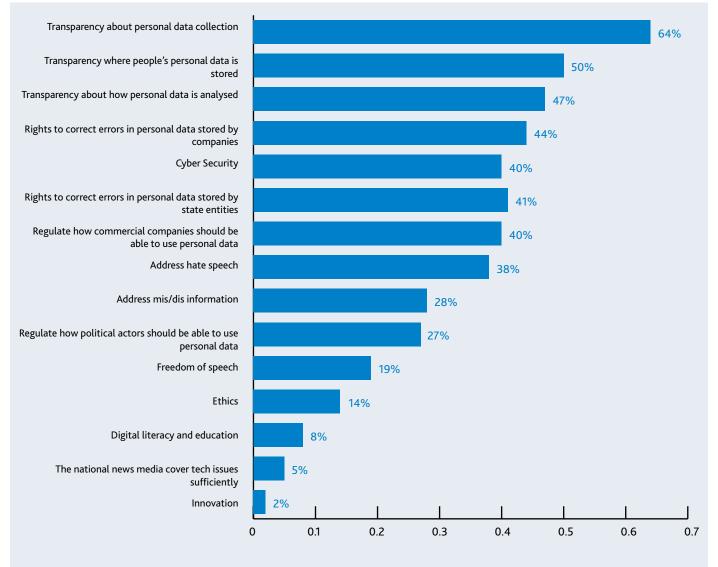
Protect children from abuse Address hacking and other cyber crime Address criminal activities organised online Protect personal data from commercial interests Tackle interpersonal threats and bullying Hold companies accountable Hold individual users accountable Prevent hate speech online Address mis- and disinformation Ensure companies are transparent with users Protect people's personal data from criminals Ensure algorithms operate as stated Ensure fair electoral campaigning online Prevent abuse of ethnic or religious communities

Attitudes to Regulation and Rights

# Q7: Public perceptions of regulation for digital empowerment and enablement

In this question, we wanted to identify what people think is most important for digital policy and regulation to consider. We asked respondents: What are the most important issues regulation can address? We asked them to rank the top five issues they thought were most important.

Transparency issues emerge as the most important for respondents, in data collection (64%), in storage (50%), and in analysis (47%). The message is clear, people at the very least want to know more. The second most important issue shows that people also want to be able to take action, by having the right to correct errors in data about them, by companies (44%) and by state entities (41%).



Attitudes to Responsibility and Accountability in Digital Technologies

#### Hopes and Fears for the Future

In this section we asked respondents to express in their own words some of their fears and hopes about the influence of technologies on society. We invited them to share up to three sentences.



**2** Cybercrime





**Overreliance on Tech** 

# Main Fears for the Future



# **Democracy and Polarisation**



Social Impact



**Cashless Society** 



Auvaliceu A



**Erasure of Privacy** 

#### Hopes and Fears for the Future

#### **Main Fears**

#### **MIS-AND DISINFORMATION**

One of the most frequent themes is respondents' concern about the quality of the information environment. Responses highlight concerns that mis- and disinformation will get harder to recognise as technologies advance. Some of the key concerns that were discussed in this area include Deep Fakes and AI generated content. Respondents also discuss how mis- and disinformation contribute to the exacerbation of wider issues such as socio-political polarisation.

#### CYBERCRIME

Cybercrime is another pervasive theme, both in reference to individual safety and the safety of the state. Some of the concerns associated with personal safety include the potential for personal data to be used to harm individuals (such as exposing private information or blackmail), identity theft (where a person is impersonated online) and vulnerability of financial information or accounts, as well as concerns around hacking of home networks. Respondents also referenced broader concerns about threats that might effect the state; these include cyber-attacks to state infrastructure such as electricity grids and ransomware.

#### BULLYING

Respondents express concerns about how harassment and bullying on the internet might evolve. Concerns vary from issues like 'cancel culture' and how debates develops into aggression, to the normalisation of public humiliation. Additionally, respondents express concerns about the ease with which individuals can be tracked in real life using digital media and access to people's personal data, profiles and other online accounts.

#### **OVERRELIANCE ON TECH**

Several subthemes emerge in reference to concerns about the overreliance or increased dependence on digital technologies. In particular, respondents question the human impact of increasing pervasiveness of digital communications, the evolution of the political economy and the potential for tech company dominance in our societies.

The impact of digital technologies on humanity is a common theme. Respondents discuss a range of ideas, such as the loss of social skills, individuals - particularly vulnerable individuals - becoming isolated, and the loss of autonomy as algorithms and AI increasingly make decisions about our lives. The monopolisation of life by private technology companies is another key concern: Too much power is ceded in too few companies, and government dependence on big tech companies such as Google to deploy services is discussed. Associated with this is the idea that governments will not keep up with digital technologies and will become subservient to 'Big Tech'. The inability to hold technology companies to account is another concern in this theme. A minor subtheme regarding access emerged, with respondents discussing their concern that not everyone will be able to afford to engage with advancements in digital technologies and become excluded from social, cultural and democratic life.

#### Hopes and Fears for the Future

5

#### **Main Fears**

#### **DEMOCRACY AND POLARISATION**

The destabilisation of democracy and the increased polarisation of society is a distinct issue for respondents to our survey. Analysis of this theme reveals concerns about two key relationships: people's relationship with each other and people's relationship with democratic processes and political life. Respondents express concerns about increased social and political division and increased hateful language and vitriolic ways in which people treat each other during political debates online. Regarding people's relationships with democratic processes, politics and government, respondents express concerns about the level of control that technology companies and state institutions will have over people's personal information, the use of political advertising and the potential for more sophisticated tools that can manipulate the information environment. There is evidence of concern around the political economy of 'Big Tech' and the role of private, forprofit companies' involvement in democratic processes as key information providers. More broadly, the potential for data and digital technologies to enable authoritarianism in governments is also present.

#### **NEGATIVE SOCIETY**

Respondents reference a range of potential negative impacts on society. One of the main subthemes is the idea that people will suffer a loss of choices and reduced freedoms due to algorithmic decision making and the drive to predict behaviour. There is also a concern around the idea of 'youth capture' or the intensification of the relationship between young people and technology, resulting in the entrenching of digital technologies in lives from a young age. Some respondents raise concerns about children being raised in partially virtual worlds where parents have little insight or control.

Concerns about the affordability of technologies is also a key issue. Respondents discuss concerns about the development of new hierarchies depending on access to and ownership of new technologies.

In terms of the impact of labour and the workforce, respondents express concerns about the potential loss of jobs to machines, as well as the loss of skillsets and knowledge, as tasks are ceded to robots. Other concerns that appear somewhat frequently include employer surveillance and control over employees, limitations of cashless societies and social scoring or credit systems.

The potential dominance of advanced AI is a pervasive fear for the future. Many respondents discuss the idea that advancements in AI would lead to a loss of choices as algorithms select what we can choose from. Respondents also describe concerns that AI will increasingly act as a filter between people and the online tools systems and resources they may want to use as well as use in predicting human behaviour. People also view AI as having potential to reduce flexibility in systems and processes with public institutions. The idea that there will be a lack of human oversight and a lack of humanity or recognition that the people using the systems are humans is clear.

#### **ERASURE OF PRIVACY**

Respondents also discuss concerns about the erasure of privacy. The idea of surveillance capitalism is referenced multiple times, and respondents express worries of having to 'live in public' as photographing and videoing people is increasingly normalised. There are also concerns about the inability of people to address, fix or erase their digital footprints from childhood. In general, the loss of privacy is frequently associated with the idea of loss of personal control, reduction in choice and increased state control.



social harms



Medical advances



to day life

Main Hopes for the Future

Better Education access



# Stop corruption with increased transparency



Increase global unity



**Freedom of Speech** 



#### Hopes and Fears for the Future

5

#### **Main Hopes**

Respondents were not as detailed in responses to hopes for the future. However, there is still some insight to be gained.

#### MEDICAL ADVANCES

The potential for medical advances to cure or mitigate ailment is by far the most pervasive hope. Respondents listed a wide range of ailments and illnesses that advances in digital technologies and data analysis may help address. A more minor but present subtheme, that future technologies will better enable personal monitoring of health and prevent illness, is also discussed.

#### PERSONAL AND SOCIAL HARMS

Respondents reference a range of areas where they see the potential for future tech to help society through protection and preventing social harms. Issues in this area include addressing bullying, harassment and hate speech; developing technology that enables and protects democracy; supporting the spread of good information; enabling better interpersonal and intercommunity understanding; and reducing labour inequalities.

#### **IMPROVING DAY TO DAY LIFE**

Respondents discuss the idea that advanced technologies will help with ease of everyday life, for example in work life balance and help with chores. This is particularly so for those who are differently abled and elderly. Some of the areas respondents reference include help with chores and tasks; day to day access to financial, health and personal data; improve friendships; and enable better work life balance, in particular through remote working. Some respondents also see hope in it helping us get about by better managing public infrastructure.

# INCREASED TRANSPARENCY FOR STATES AND INCREASED PRIVACY FOR PEOPLE

The idea of privacy is thematically grouped with two clear ideas emerging: future technologies increasing state transparency and better access to information on one hand, and better enabling personal privacy on the other. Respondents express the idea that more transparency among the state and businesses could reduce corruption, inequality, and lead to a more open government. Increased privacy for the individuals from the state and digital businesses is an associated hope for future technologies.

#### **CLIMATE ACTION**

The potential for society to develop technologies that can address climate change is a common theme. Many respondents, however, add a caveat noting that digital technologies can be harmful themselves and consume significant energy. Therefore, the solutions themselves need to be energy efficient.

#### IMPROVING INFORMATION AND COMMUNICATION

Digital technologies have already transformed communications and respondents are hopeful that it will continue to have a significant impact. Some of the areas respondents reference include enhanced access to information and better quality information, freedom of speech, and an enhanced voice to the underrepresented.

#### **INCREASE GLOBAL COOPERATION**

The idea of enhancing different types of global networks is a common theme. These include friendship and family networks, inter-state cooperation and problem solving, and the potential to globalise small to medium businesses.

#### **BETTER EDUCATION ACCESS**

The role of digital technologies in education is often described as a vehicle for social mobility or an opportunity to overcome economic disadvantages. The potential for wider access to higher education by the public through online classes, courses and resources is a subtheme.



# Conclusion

This survey sought to understand the attitudes and perceptions of Irish people towards what we may call the algorithmic turn and datafication: the extraction and use of data to train algorithms for recommendations and decision making.

In summary, our findings indicate:

- (i) important gaps in public knowledge in areas such as the use of personal data in the public sector, hacking and misuse of information, and regulatory protections and rights.
- (ii) lack of trust in digital corporations, advertisers and political campaigners, and to a lesser extent in the government and its use of personal data.
- (iii) fears and concerns around misinformation, cybercrime and bullying and hopes around medical advances and improvements in quality of life.

The findings further revealed some variations in the responses in terms of age, with older people in general feeling less knowledgeable and confident around new technologies. Political belief was also an important mediating factor, with those supporting parties currently in government indicating more trust than those supporting parties in opposition. Finally, gender emerged as a relevant factor in areas such as hacking and the misuse of personal information, indicating women's perception of greater vulnerability to cyberattacks and harassment.

These findings will help provide a baseline for subsequent research and policy interventions, including media literacy, that seek to improve gaps in knowledge and address citizen concerns around areas such as misuse of personal data, hacking and misinformation.



## UCD Centre for Digital Policy Ionad um Bheartas Digiteach UCD

This report was prepared by Niamh Kirk, Elizabeth Farries, Eugenia Siapera and Jet Klokgieters with the UCD Centre for Digital Policy.

Directed by Eugenia Siapera and Elizabeth Farries, our Centre seeks to build digital policy capable amongst the private and public sector in Ireland and the EU. We deliver research, insights and educational programmes.

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