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Me and My Big Data Report 2020

Understanding citizens' data literacies: thinking, doing & participating with our data



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About this report

‘Me and My Big Data’ is a Nuffield Foundation funded collaborative research project between the University of Liverpool, Glasgow University, and Sheffield Hallam University, in collaboration with Good Things Foundation. This project seeks to understand the levels of and variations in UK citizens' data literacy and develop policy and educational materials to support improving this.

The **preliminary** analysis presented here is based on a nationally representative survey of UK citizen data literacy carried out during August - September 2019, by ‘Me and My Big Data’ [1]. These are initial results based on the teams first assessment of the survey data. Percentile response rates to survey questions are accurate and weighted to ensure representativeness. The identification of Digital User types follows a methodology previously established and published by team members [5]. The scoring of users across the three dimensions of Data Citizenship is a novel approach under development by the team. The team will be undertaking further work to test the robustness of these measures. The scores across user types should therefore be taken as indicative rather than definitive. Though they are in strong correspondence with the theoretical expectations of the team.

For more details on the methods see note [1] and www.bit.ly/meandmybigdata

We hope that these initial findings will be useful to both academic and policy colleagues and provide a basis for further discussion, critique and engagement. The team welcomes any thoughts or comments on the results or methods so as to help develop the project and enhance the findings.

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This project is funded by the Nuffield Foundation

The Nuffield Foundation is an independent charitable trust with a mission to advance social well-being. It funds research that informs social policy, primarily in Education, Welfare, and Justice. It also funds student programmes that provide opportunities for young people to develop skills in quantitative and scientific methods. The Nuffield Foundation is the founder and co-funder of the Nuffield Council on Bioethics and the Ada Lovelace Institute. The Foundation has funded this project, but the views expressed are those of the authors and not necessarily the Foundation. Visit www.nuffieldfoundation.org



Project background

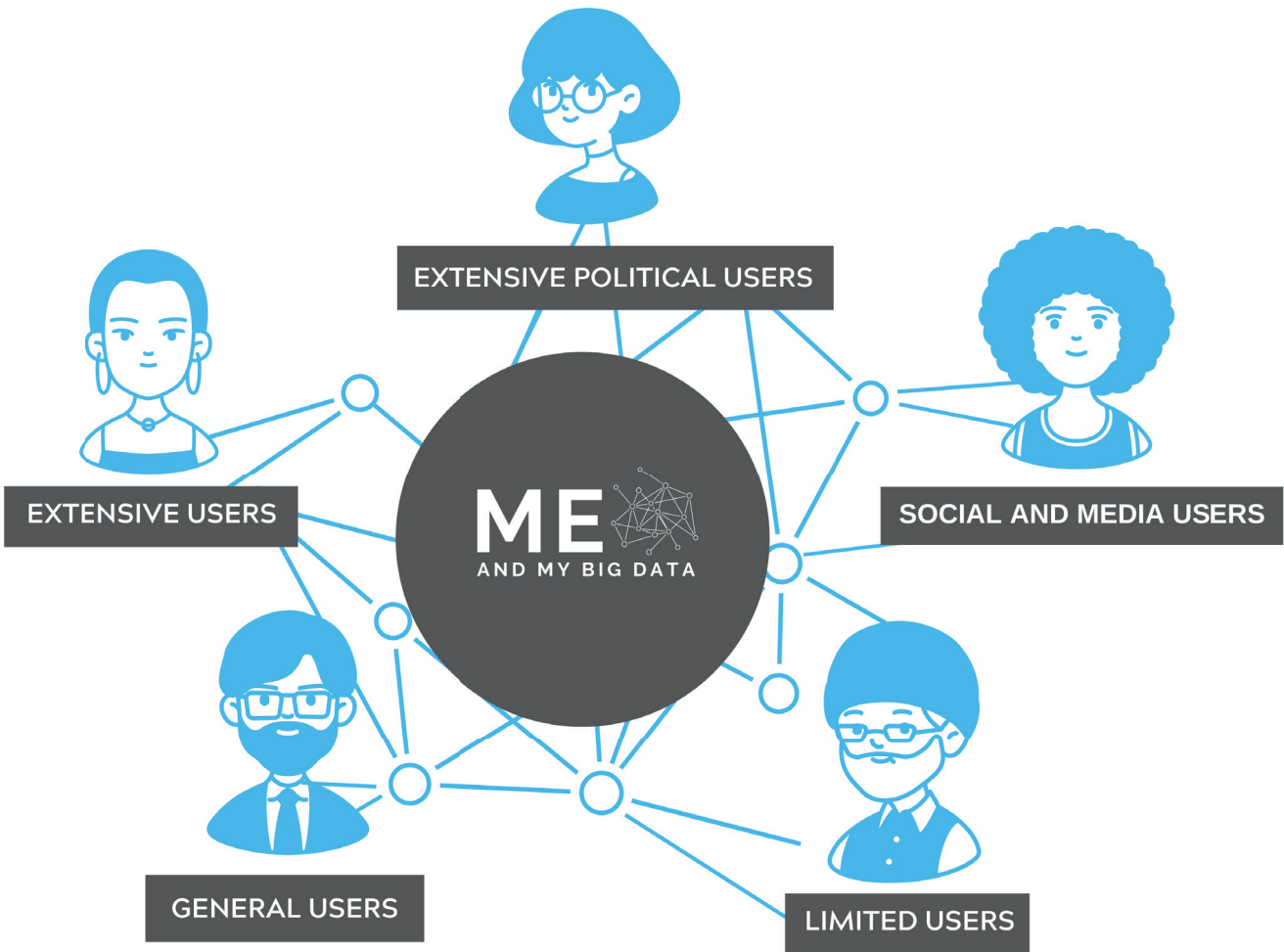
Welcome to our short overview of the preliminary results from our 2019 survey [1] of citizens data literacy. The survey is part of the Me & My Big Data project funded by the Nuffield Foundation. This project addresses the fact that many UK citizens' lack a robust understanding of the data they are sharing with digital platforms and the uses to which this is put. The recent (April 2018) Ofcom report [2] points out that most internet users are aware of at least one of the ways in which companies collect information about them; but that only 30% are aware of the breadth and depth of uses. In addition, many citizens do not have the knowledge and skills needed to use publicly available data as part of personal or civic action (Doteveryone, 2018) [3].

This lack of “data literacy” opens citizens up to risks – personal and financial – but also limits their ability to operate as active citizens with meaningful agency in a growingly digital society (Lloyds Bank, 2018)[4]. Importantly, initial deeper analyses of the Ofcom data indicate that differences in digital literacy appear to mirror other indices of inequality (Yates and Lockley, 2018) [5].

Current policy challenges also point to an urgent need to understand and address citizens' 'data literacy' (UNESCO 2018) [6]. These challenges include: regulatory changes (e.g. the new General Data Protection Regulation); public concern over the effects of social media (disinformation, Cambridge Analytica); repeated data breaches; and growing inequities in the uses of digital media. This issue has also been raised in UK government reports (DB1S4 & DCMS 2016) [7], in relation to benefits, risks and regulation of automation and AI for the economy, society, and citizens.

More recently, in April 2019 the Department for Digital, Culture, Media and Sport (DCMS) published the Online Harms White Paper [8], promoting user empowerment. DCMS argue that “Users want to be empowered to manage their online safety, and that of their children, but there is insufficient support in place and they currently feel vulnerable online”. Following these lines, in January 2020 the UK Centre for Data Ethics & Innovation published their review report [9] about online targeting and conclude that “regulators should increase coordination of their digital literacy campaigns”.

Digital media ‘user types’



Digital media ‘user types’

We have built on prior research [5] to identify 6 types of digital technology users based on the activity they undertake online. The first **five** of these groups form the focus of this report:

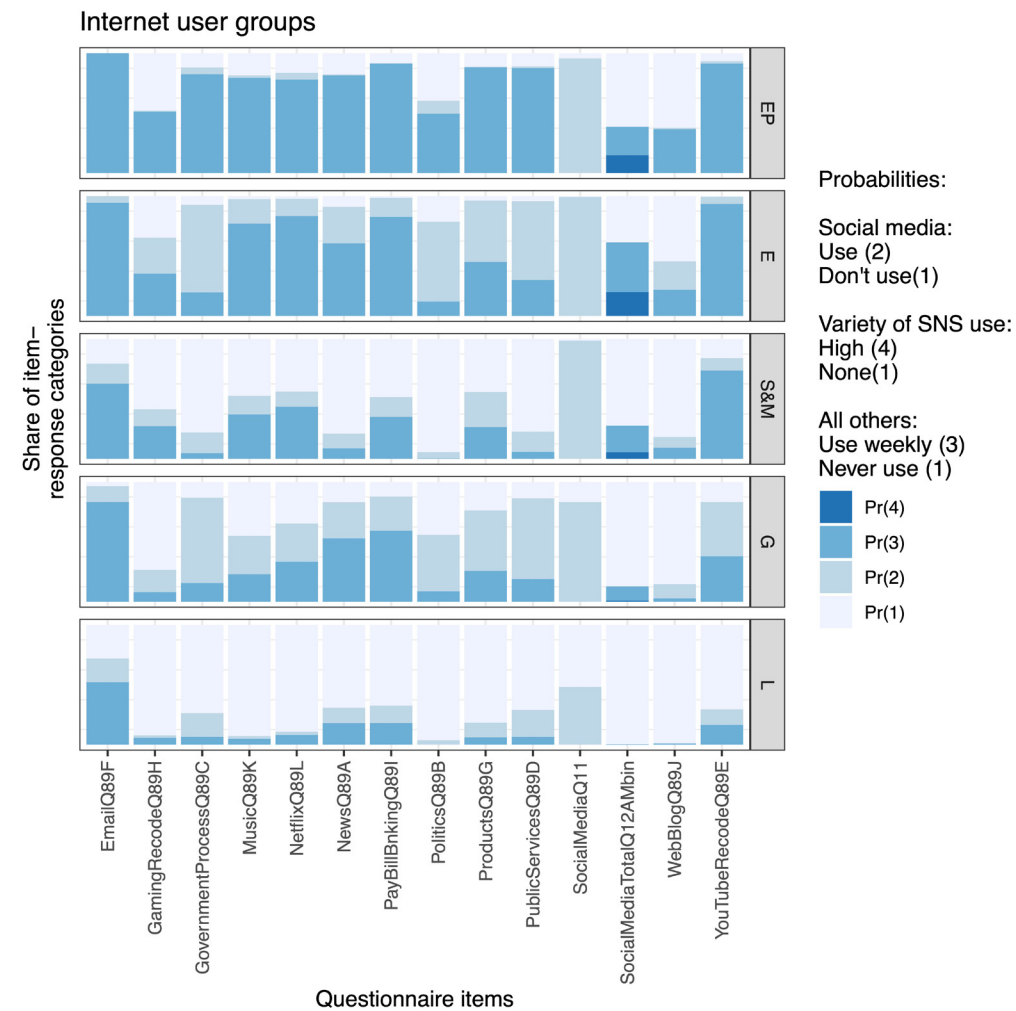
- 1. Extensive Political Users (10% of users)** – High probability of engaging in all forms of digital media use – including political action and communication
- 2. Extensive Users (20% of users)** – High probability of engaging in all forms of digital media use – except political action and communication
- 3. Social and Media Users (17% of users)**– High likelihood of engaging with social media (Social Networking Sites) and entertainments media (e.g. Netflix and YouTube)
- 4. General Users (no social media) (31% of users)** – Lower likelihoods of engaging in most digital media forms but not SNS
- 5. Limited Users (22% of users)** – Limited engagement with all forms of digital media
- 6. Non-users** – Currently non-internet users

Membership of our user types strongly corresponds to key demographics such as:

- Age
- Social class
- Education
- Household composition
- Home ownership

Our two types of extensive users are most likely to be from NRS (National Readership Survey) social Grades A&B, to hold a university level qualification, be a home-owner (mortgage) and under the age of 55. Our Limited users are much more likely to be older adults (55+), be from NRS social grades D&E and lack a university education. Our social and media only users are the youngest group overall, but again also lack a university education and are likely to be from NRS grades D&E.

Visual summary of ‘user types’



Graph of the probability (vertical axis) that each group will undertake (or not) the internet or digital media activity listed (horizontal axis). Probabilities range from 0% to 100% and were established via a Latent Class Analysis (see [1]) of all survey respondents who use the internet or digital media.

Digital media user types - demographics

| Type of User/ Demographic | Age | Education | Children | Home | NRS Social Grade |
|------------------------------|-------------------------------|--|--|--|--|
| Extensive Political | Likely to be between 35-44 | Very likely to have a first degree | Likely to have children in the home (1-2) | Buying a home on a mortgage | Likely to be social grade A or B |
| Extensive | Likely to be between 16-44 | Very likely to have a first degree or higher | Likely to have children in the home (1-2) | Buying a home on a mortgage or privately renting a property | Likely to be social grade A or B |
| Social and Media | Likely to be 16-24 | Likely to have GCSEs including Maths and English | Likely to have children in the home - or to be living at parents' home | Likely to live in rented accommodation (including renting from Local Authority, Social Housing and private landlord) | Likely to be social grade C2 and D&E |
| General | Likely to be aged 45-64 | Likely to have a first degree | Not likely to have children in the home | Buying a home on a mortgage | Likely to be social grade C2 and D&E |
| Limited | Likely to be aged 55 and over | May have GCSEs including Maths and English | Not likely to have children in the home | Likely to own outright or to be renting from Local Authority or Social Housing | Likely to be social grade C1, C2 and D&E |

Data Citizenship: A new data literacy framework

Data Citizenship

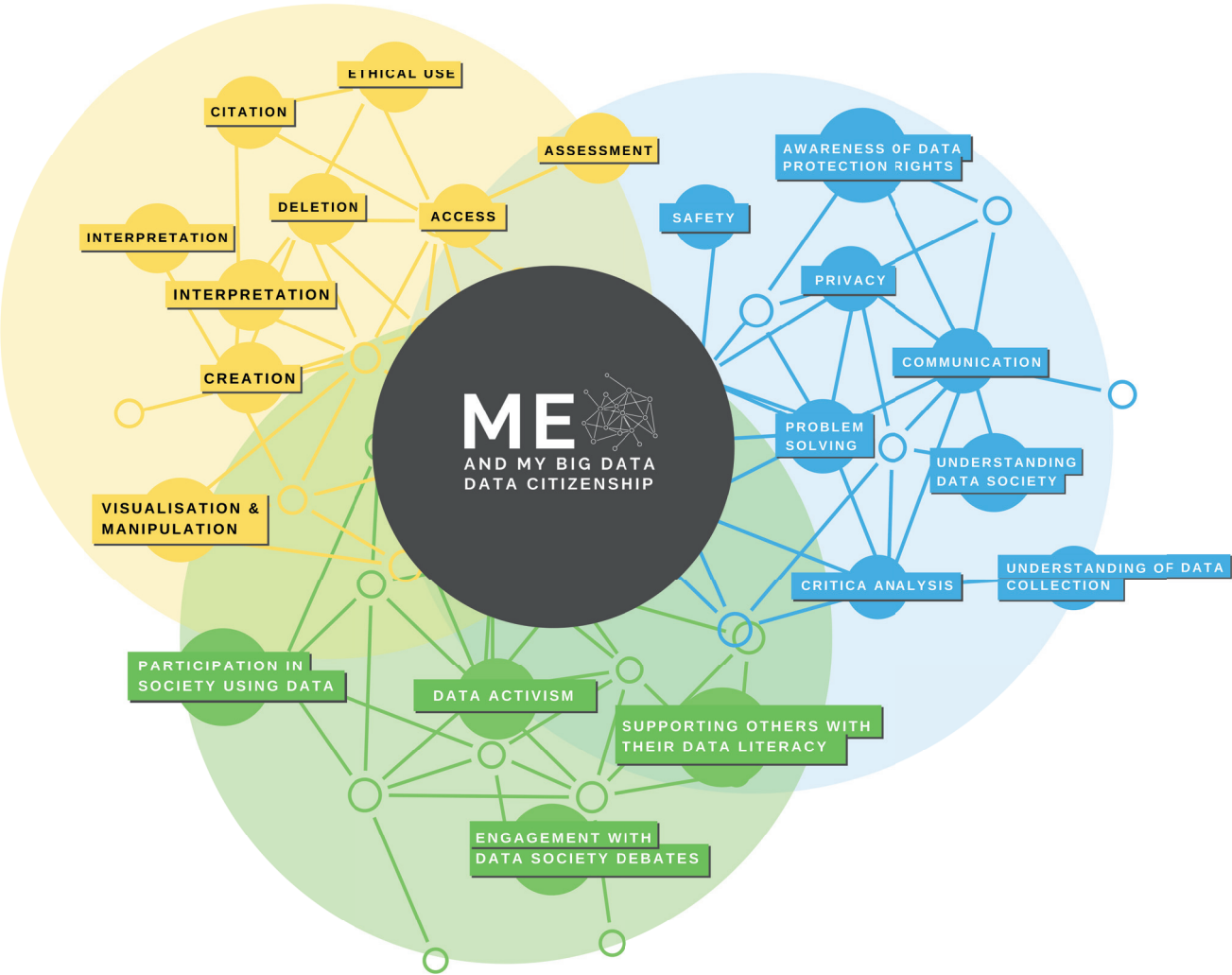
The survey data has been analysed through a new theoretical framework developed by the team. This ‘Data Citizenship’ framework was crafted following a broad literature analysis and the analysis of secondary survey data. The framework consists of three areas:

- **Data Thinking** - Citizens’ critical understanding of data.
- **Data Doing** - Citizens’ everyday engagements with data.
- **Data Participation** - Citizens’ proactive engagement with data and their networks of literacy.

Data Citizenship is a framework that outlines the importance of citizens having a critical and active stand, at the time when society’s datafication and algorithmically-driven decision making has become normalised. As data has become the core element of our cultural, social, political, and economic worlds, data citizenship aims to create a framework that explores links between “data, power, and positionality” [10]. Through data citizenship citizens are encouraged and supported to carry out an individual and collective critical inquiry in order to fully participate in their communities in a way that is meaningful and proactive. We consider these areas of Thinking, Doing and Participating as overlapping (page 11). The following tables (pages 12 to 14) list examples of behaviours and activities identified from prior literature under each these categories.

| Data Thinking | Data Doing | Data Participation |
|---|--|--|
| Data Thinking incorporates critical skills as they view and analyse the world through data. The process of data decoding [11] requires critical data literacy abilities such as understanding the online ecosystem, solving problems with data, communicate using data, development and evaluation data-based explanations. | Data Doing incorporates practical skills involving data handling and data management. Data Doing advocates that, for example, social media users should be provided with the abilities to identify and highlight the source of the information they share with others. | Data Participation examines the collective and interconnected nature of data society. Through Data Participation citizens seek opportunities to exercise their rights as well as to contribute to and shape their collective data experiences. Examples of Data Participation might include a person who actively contributes to online forums, uses open data for the benefits of their community, helps others to set up a secure password, engages in privacy or misinformation debates or takes steps to protect their personal information. |

The Data Citizenship Model



Data Thinking

| Data Thinking | Area of expertise | Description |
|---------------|--|--|
| | Awareness of data protection rights | Being aware of local (UK) or international data protection laws. For example, the European Union General Data Protection Regulation |
| | Communicating with data | The ability to refer to, contextualise and use data for communication (e.g. providing evidence to validate an argument, on social media, in research) |
| | Critical data analysis (e.g. data bias, cultural contexts) | The ability to consider, examine and discuss data bias, methodological errors, inaccurate data visualisation |
| | Data safety (e.g. skills to manage and control ‘digital traces’) | The ability to consider and implement data protective steps when using data (e.g. using private browsing features or more secure browsers and search engines, setting strong passwords) |
| | Privacy | The ability to consider and implement privacy-protective behaviour when using data (e.g. using avatars, deleting tweets every couple of weeks) |
| | Problem-solving using data | The ability to search for, identify and use data for solving problems (e.g. open data projects, local council related issues) |
| | Understanding Data Society (impact, procedures and power-dynamics) | The ability to understand the way data economy works (e.g. how platforms are funded, what are cookies, broadly what algorithms do) |
| | Understanding of data collection | The ability to understand the different data collection practices of different institutions (e.g. governments, advertising organizations, data brokers) as well as different databases (e.g. NHS, local government voters registers, data brokers) |
| | | |

Data Doing

| Data Doing | Area of expertise | Description |
|------------|-------------------------------------|--|
| | Accessing | The ability to search for, identify and access services, websites and data |
| | Assessing | The ability to evaluate data quality and credibility (e.g. fact-checking, checking sources of social media posts) |
| | Interpretation | The ability to interpret different data formats (e.g. graphs, infographics, interface features) |
| | Data creation | The ability to create data in different formats (e.g. creation of a blog post, social media post/ hashtag, presentation, spreadsheet) |
| | Data citation | The ability to cite data sources (e.g. text references, images sources) |
| | Data Management | The ability to store, encrypt and manage data in a safe and secure way |
| | Data Visualization and Manipulation | The ability to represent data in different ways (e.g. using infographics) |
| | Data Deletion | The ability to delete data (e.g. deletion of cookies, browsing history, remove data form old devices) |
| | Ethical use | The ability to use data ethically (e.g. not sharing someone else’s personal data, not manipulating or mis-quoting data, anonymising people’s identity) |

Data Participation

| Data Participation | Area of expertise | Description |
|--------------------|--|--|
| | Participating in society using data | The ability to utilise data for societal participation and civic action (e.g. citizen-led campaigns, using online government services such as the NHS, HMRC) |
| | Engagement with data society debates | The ability to engage in debates on data protection rights and/or Internet Governance (e.g. engagement in privacy and/or misinformation debates) |
| | Data Activism (pro-active engagement with data structures, including data hacking) | <div>The ability to take pro-active steps to protect ones and collective privacy and wellbeing in the data society (e.g. reporting inappropriate or ‘fake’ content online, blocking or mitigating data collection using apps such as Ad Blocker)</div> <div>The ability to collectively promote and exercise digital rights (e.g. collective group actions via social media accounts). The ability to object to, resist or modify through interventions the current ‘hegemonic’ practices of platforms and data services</div> |
| | Supporting others with their data literacy | The ability to help others with their data literacy (e.g. helping others with their privacy settings, explaining to people what clicking ‘consent’ means) |

Data Citizenship and ‘user types’

We propose that ‘Data Citizenship’ provides digital inclusion researchers, policy makers and practitioners with a useful and flexible framework to examine skills and critical thinking required by active digital citizens. We have therefore explored each area of our framework through a national survey. The survey sought to cover the breadth of issues identified in the framework. The survey questions clustered together in themes but also overlap in line with the framework. For example, practices of sharing information via social media, ethical data handling, helping others with their privacy settings or fact-checking. We also explored attitudes and concerns about citizens' data sharing practices. The survey also explored understanding of the economy and ecology of digital media. Importantly we asked if and how people engage with others in regard to data thinking and data doing – for example giving or asking for help. We call this ‘networks of literacy’ - how people engage with others, where and with which media to gain an understanding or skills to engage with digital media in a manner that fits their needs.

The survey has found that levels of data literacy vary across these three dimensions according to our user types. Though there are only a few respondents who score highly on all ‘positive’ measures:

- Our two types of ‘**Extensive users**’ are the most likely to show strong data thinking – especially about data security and to understand key aspects of how digital platforms work and share data.
- Our ‘**General users**’ show lower levels of data thinking but are the most sceptical and concerned about data sharing.
- Both our ‘**Social and media users**’ and our ‘**Limited users**’ show low levels of data thinking.

- Our ‘**Social and media users**’ show the least concern about sharing but also the lowest levels of awareness of the uses to which their data might be put.

A similar pattern holds for data doing and participation – with our ‘**Extensive users**’ being most likely gather and utilise data for personal, or civic use/ action. Interestingly our '**General users**' score more highly on participation potentially as a result of helping each other engage with digital media.

The following sections set out the key findings for each ‘user type’ and highlight some key characteristics of each group.

Extensive Political Users

User Profile: Extensive Political

Most likely to check privacy policies

61% find and read the privacy policy of a website/app

Least likely to trust the news

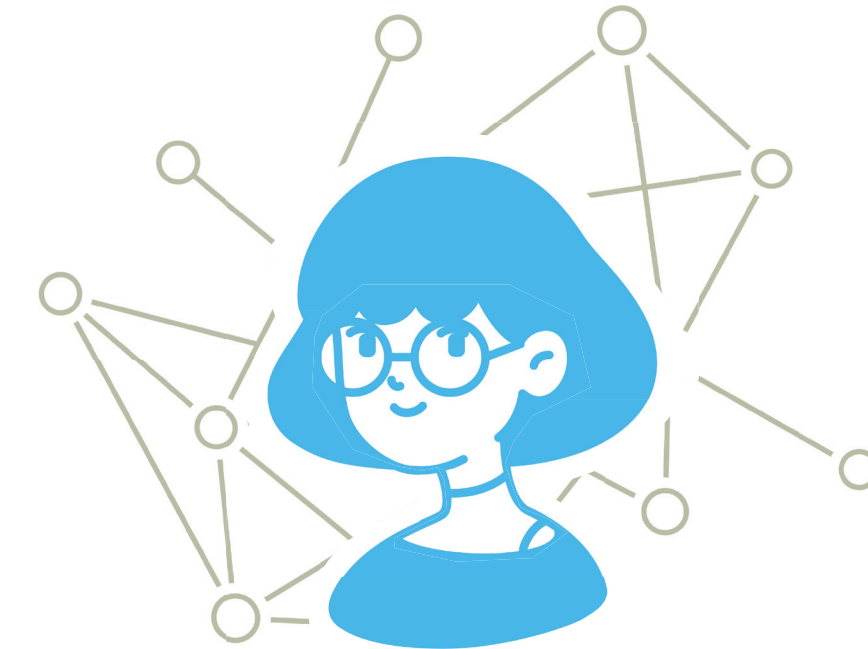
65% do not trust the news websites and apps they use regularly, 82% (approx) do not trust information they read offline (e.g. newspapers, magazines)

Likely to help others with their data literacy

45% have explained or shown others how to stay safe online, for example by showing them how to change their privacy settings; 60% have helped others with data or security in some way; 42% encouraged or shown others how to fact-check things online

Most likely to look up information during everyday conversations

70% have looked online to verify information during a conversation with friends or family



Least likely to trust tech companies to protect their personal information

90% do not trust social media companies to protect their personal information; 60% do not trust their Internet and phone network providers to protect their personal information

Most likely to proactively use data

24% have gathered information or data from more than one online source for community action or charity work; 38% gathered these for activities like sports clubs or religious groups; and 16% for political activity

Extensive Political Users

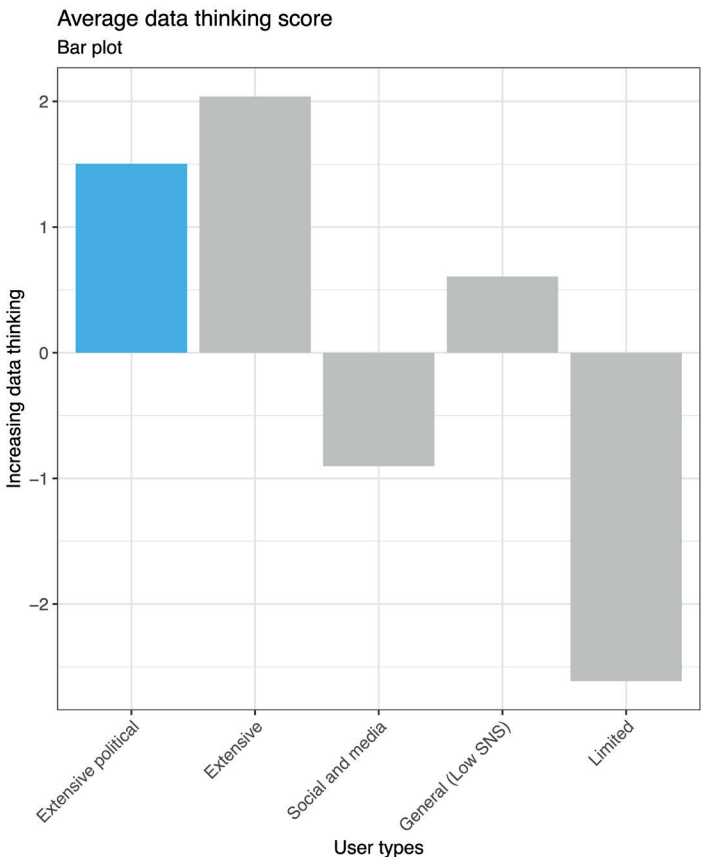
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User Profile: Extensive Political

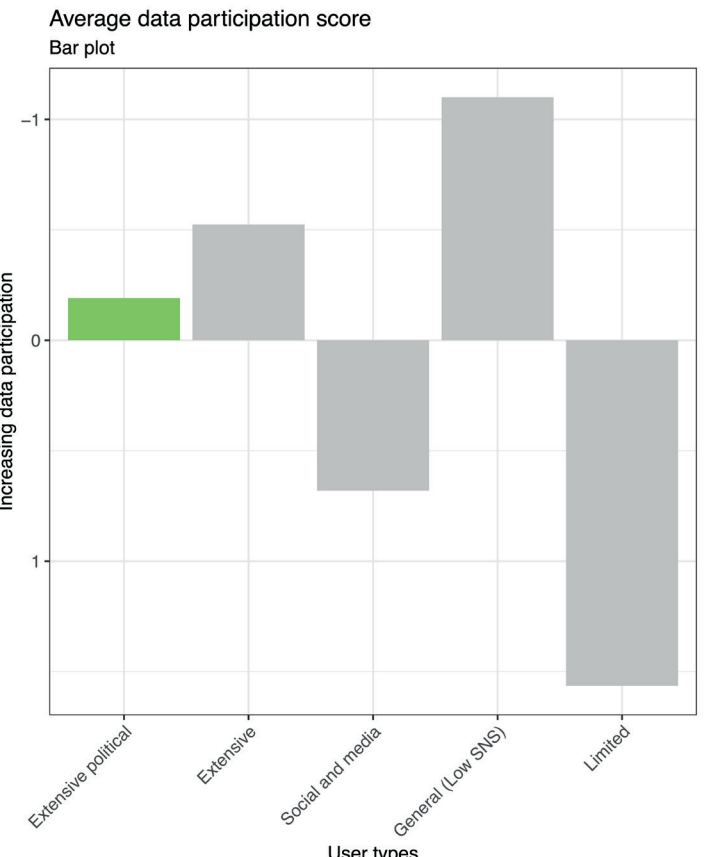
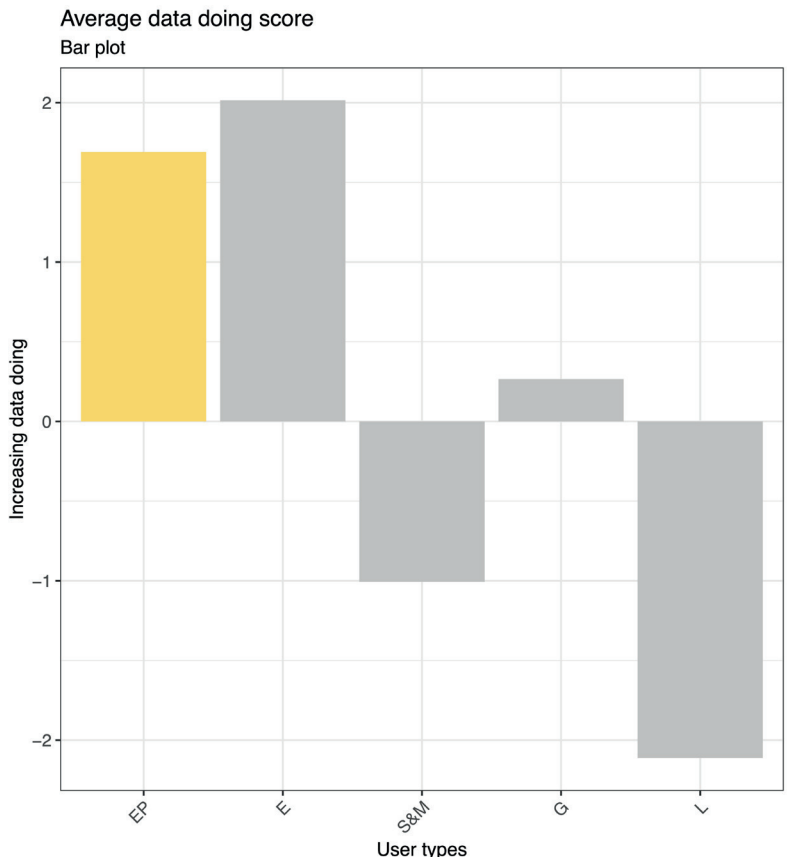


Extensive Political Users

| | |
|------------------|---|
| Age | Likely to be between 35-44 |
| Education | Very likely to have a first degree |
| Children | Likely to have children in the home (1-2) |
| Home | Buying a home on a mortgage |
| NRS Social Grade | Likely to be NRS social grade A or B |



User Profile: Extensive Political



Data Thinking

- 88% think that it is not acceptable for companies to sell their information to other companies, 61% think it's not acceptable for companies to build a profile of them as consumers and what they like or don't like
- 54% believe that it is acceptable for companies to use personal data to personalise their experience of apps and websites
- 75% believe it is not acceptable for companies to influence opinions and behaviours using personal data with around 83% indicating that it is not acceptable to track their online behaviour over time
- 75%-80% trust the UK government agencies, the police and the NHS to protect their data
- (but) only 28% trust broadcasters (e.g. the BBC and ITV) with their data
- 55% trust their employers to protect their personal data
- 60% do not trust their Internet and phone network providers to protect their personal information
- 90% do not trust social media companies to protect their personal information
- 65% do not trust news websites and apps they use regularly, 82% (approx) do not trust information they read offline (e.g. newspapers, magazines)
- 60% do not trust their friends posts on social media

Data Doing

- In terms of confidence in doing privacy related activities, they 61% find and read the privacy policy of a website/app
- 43% believe that there is no point in changing privacy settings because companies will be able to get around these settings anyway
- Approximately 35% agree that changing privacy settings online takes too much time and effort
- 70% believe that Internet providers do not make it easy for people to change their privacy settings
- Only 20% don't mind sharing their data with companies in return for free services (e.g. Facebook, Twitter)
- 60% don't want share their data, but feel they have no choice to access their services (e.g. Facebook, Twitter)

Data Participation

- 40% mainly read websites and apps that which seem to share their values and opinions with 40% reported to make an effort to view news website which are different political perspectives than their own
- Extensive users are most likely to (40%) try to make an effort to view social media posts with a different political perspective to their own
- 65% looked online to verify information during a conversation with friends or family
- 45% explained or shown others how to stay safe online, for example by showing them how to change their privacy settings. 60% Helped others with data or security in some way
- 42% encouraged or shown others how to fact-check things online, for example by conducting other searches
- 24% have gathered information or data from more than one online source for community action or charity work. While 38% gathered these for activities like sports clubs or religious groups. And 16% for political activity

Extensive Users

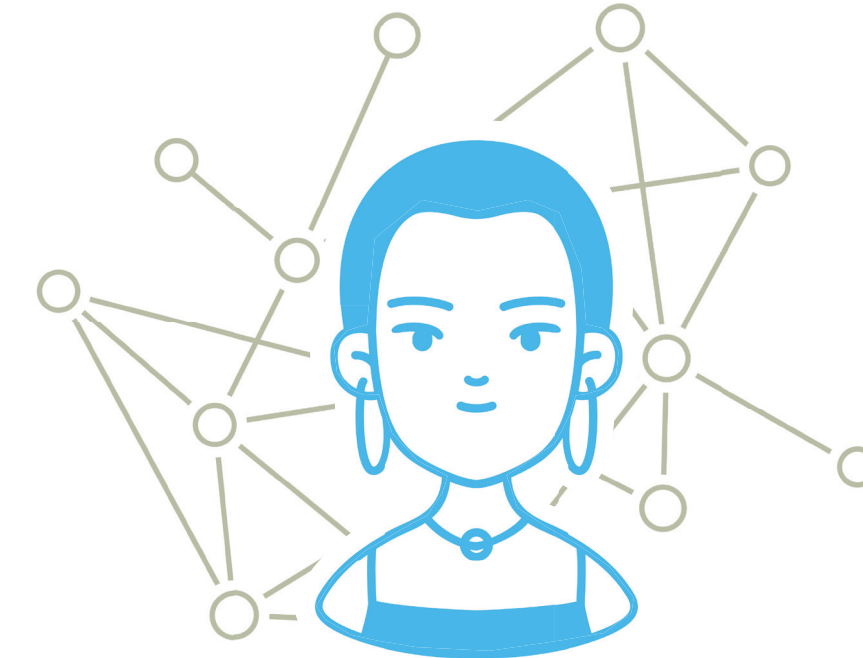
User Profile: Extensive

Most likely to fact-check and verify information
with nearly 60% having reported using various ways to verify information online

Most likely to make an effort to reach beyond their echo-chamber
40% try to view news websites with different political views, approx 38% try to make an effort to view social media post with different political perspective to their own

Most likely to help others with their data literacy
47% have explained or shown others how to stay safe online, for example by showing them how to change their privacy settings; 65% have helped others with data or security in some way; 43% have encouraged or shown others how to fact-check things online

Most likely to fact-check and verify information
with nearly 60% having reported using various ways to verify information online



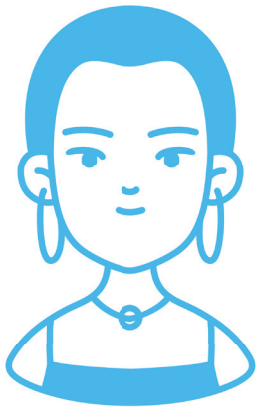
Most likely to understand privacy settings
80% disagree with the statement that changing privacy settings online takes too much time and effort

Most likely to look up information in everyday situations
70% have looked online to verify information during a conversation with friends or family

Extensive Users

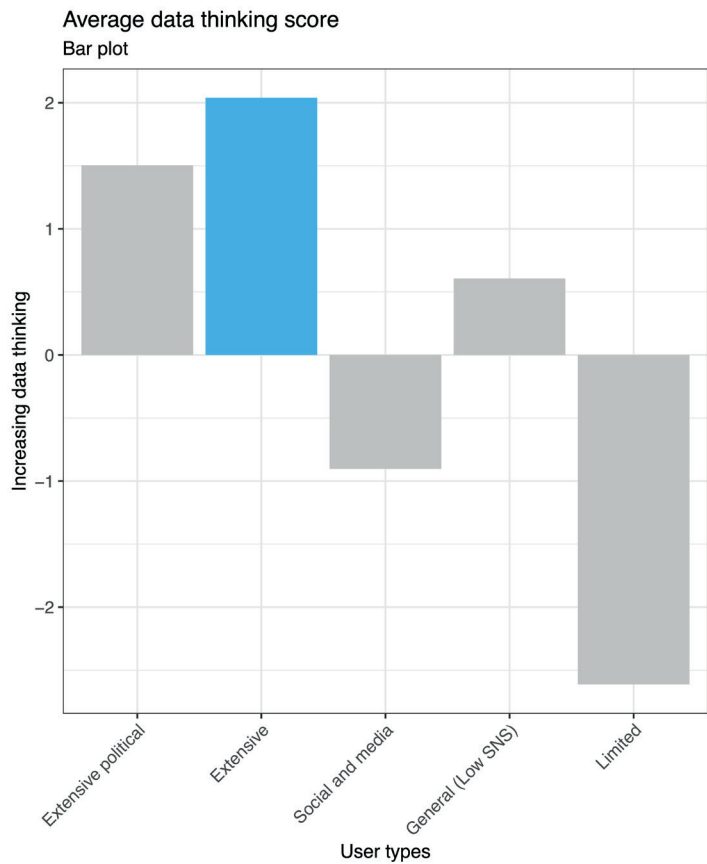
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User Profile: Extensive

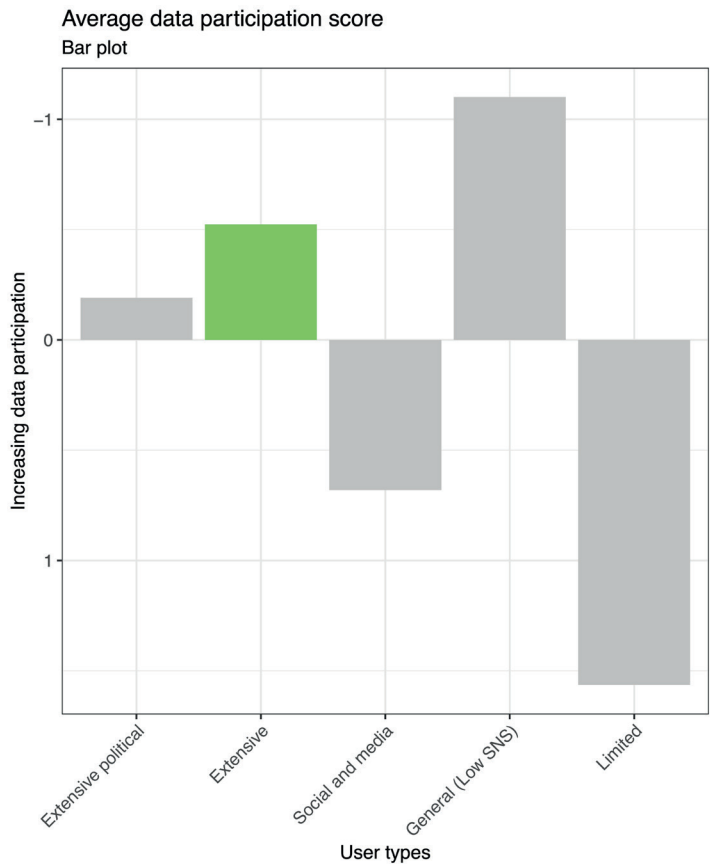
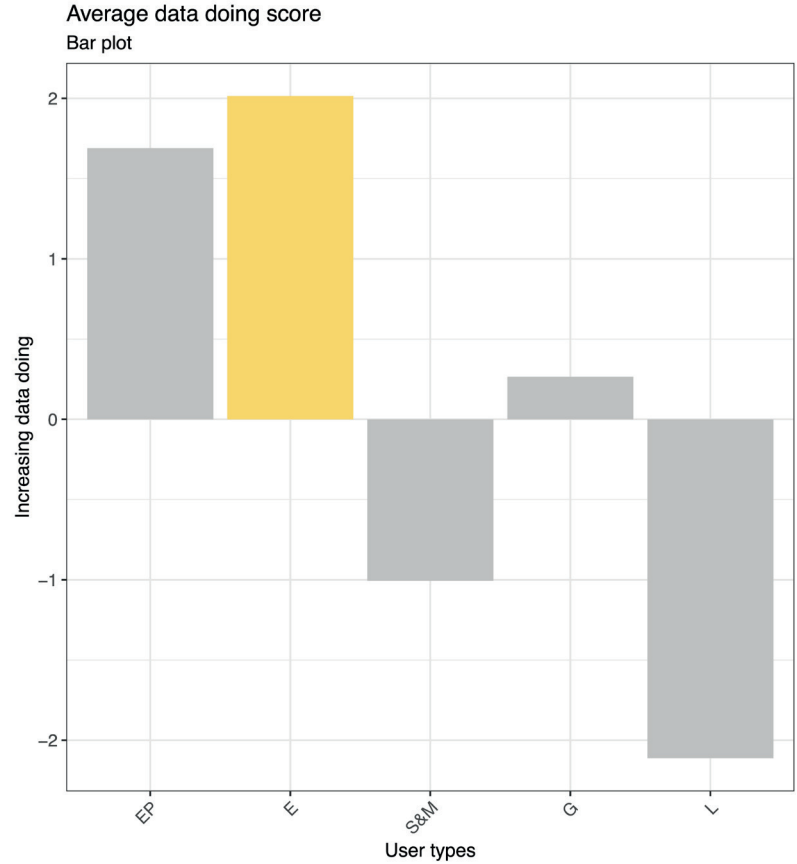


Extensive Users

| | |
|------------------|---|
| Age | Likely to be between 16-44 |
| Education | Very likely to have a first degree or higher |
| Children | Likely to have children in the home (1-2) |
| Home | Buying home on a mortgage or privately renting a property |
| NRS Social Grade | Likely to be NRS social grade A, B or C1 |



User Profile: Extensive



Data Thinking

- Around 85% indicate that it is not acceptable to track their online behaviour over time
 - As many as 95% believe it is not acceptable for companies to sell information or their data to other companies
 - 95% say that it is not acceptable for companies to influence your opinions using data
 - (BUT) Around 50% state that it is acceptable for companies to target them with advertising, information or other content
 - (with) approx. 45% indicating that is acceptable for companies to tailor prices for products and services; and to personalise experience of apps and websites
- 80% trust the UK government agencies (e.g HMRC. the Department of Work and Pension) the Police and th NHS to protect their personal information
 - (only) 40% trust the British broadcasters (e.g. the BBC or ITV) to protect their personal data
 - While as many as 65% trust their employers to protect their personal information
 - Only 5% trust their school, college and university to protect their data (95% do not trust)
 - 40% trust their mobile phone services to protect their personal information
 - 30% trust internet providers and online retailers with their personal information
 - 90% do not trust social media companies to protect their personal information
 - 50% do not trust the news websites and apps they use regularly, 80% do not trust information they read offline (e.g. newspapers, magazines)
 - 60% do no trust their friends posts on social media

Extensive

Data Doing

- Approx 40% believe that there is no point in changing privacy settings because companies will be able to get around these settings anyway
- 80% do not agree that changing privacy settings online takes too much time and effort
- 70% believe that Internet providers do not make it easy for people to change their privacy settings
- Only 18% don't mind sharing their data with companies in return for free services (e.g. Facebook, Twitter)
- Approx. 65% don't want share their data, but feel they have no choice to access their services (e.g. Facebook, Twitter)

Extensive

Data Participation

- 45% mainly read websites and apps that which seem to share their values and opinions with 60% reported to make no effort to view news website which are different political perspectives than their own
- However, extensive users are most likely to (40%) try to make an effort to view social media posts with a different political perspective to their own
- 70% looked online to verify information during a conversation with friends or family
- 47% explained or showed others how to stay safe online, for example by showing them how to change their privacy settings. 65% Helped others with data or security in some way
- 43% encouraged or showed others how to fact-check things online, for example by conducting other searches
- 18% have gathered information or data from more than one online source for community action or charity work. While 33% gathered these for activities like sports clubs or religious groups. And 13% for political activity

Social and Media Users

User Profile: Social and Media Users

Least likely to trust the news

90% do not trust news websites and apps; 95% do not trust offline news

Most likely to trust information their friends post on social media

55% state that they trust their friends posts on social media

Less like to fact-check

only 18% reports taking steps to verify information

Most likely to feel powerless when it comes to data management

70% feel that they have no choice but to share data in order to use online services



Most likely to trust tech companies

35% trust search engines; 18% trust social media companies to protect their personal information

Most sceptical about the usefulness of privacy settings

50% believe that there is no point in changing privacy settings with 40% saying that it takes too much effort to change privacy setting

Social and Media Users

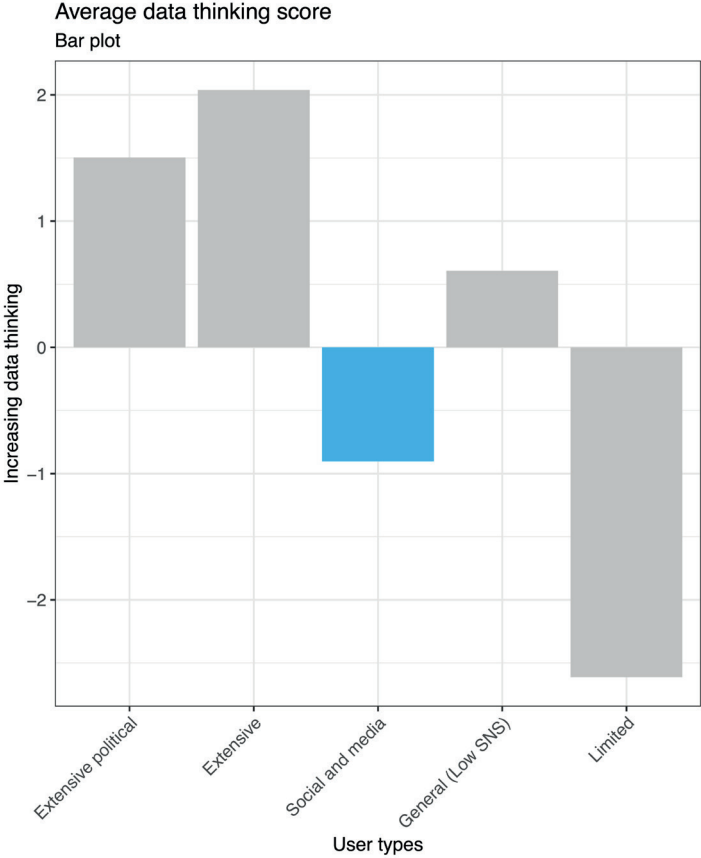
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User Profile: Social and Media Users

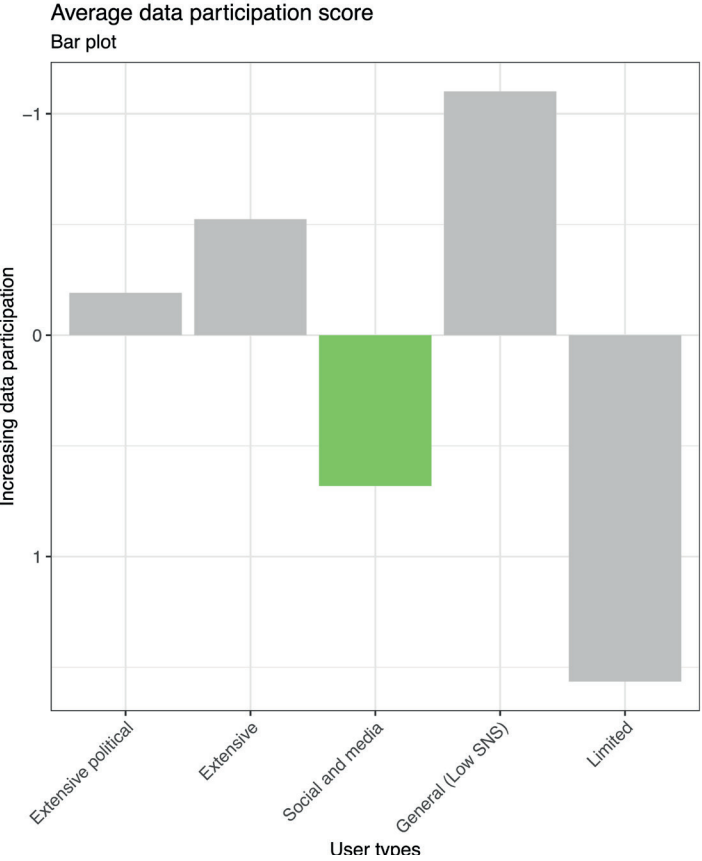
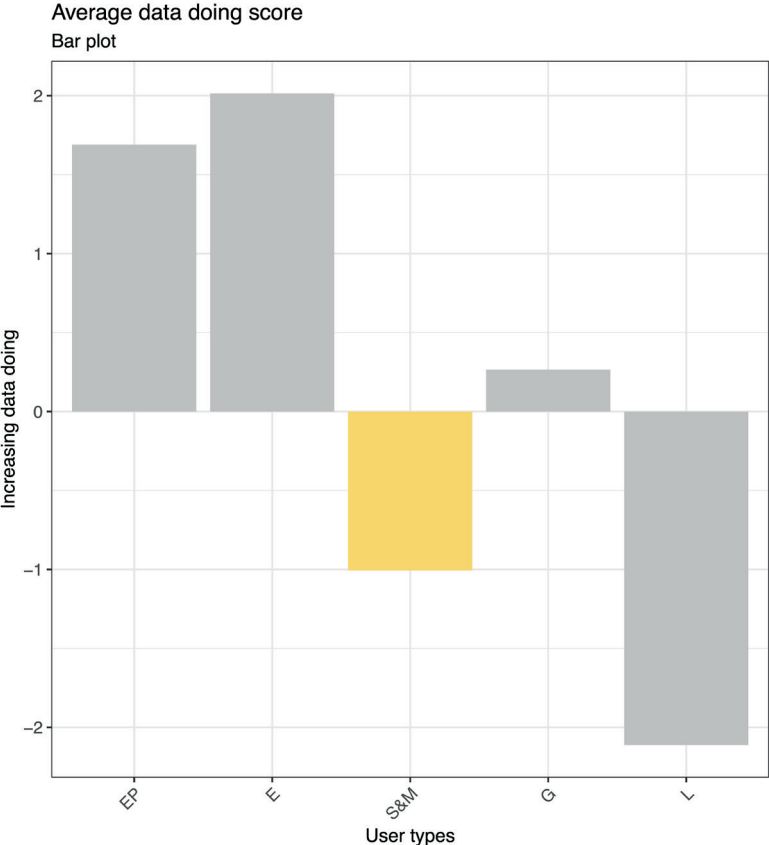


Social and Media Users

| | |
|------------------|--|
| Age | Likely to be 16-24 |
| Education | Likely to have GCSEs including Maths and English |
| Children | Likely to have children in the home - or to be living at parents' home |
| Home | Likely to live in rented accommodation (including renting from Local Authority, Social Housing and private landlord) |
| NRS Social Grade | Likely to be social grade C2, D or E |



User Profile: Social and Media Users



Data Thinking

- 85% indicate that it is not acceptable to track their online behaviour over time
 - 62% believe it is not acceptable for companies to sell information or their data to other companies
 - 70% believe it is not acceptable for companies to build profiles of them as consumers (of what they like and do not like)
 - 90% say that it is not acceptable for companies to sell their data to other companies or to influence their opinions using data
 - (BUT) around 38% state that it is acceptable for companies to target them with advertising, information or other content, and 40% indicate that it is acceptable to tailor prices and services, and to personalise your experience of apps and websites
- More likely to trust their friends’ content on social media (55%) than the news (do not trust online news 90%, offline news 95%)
 - 65% trust the UK government agencies (e.g HMRC. the Department of Work and Pension), nearly 75% trust the Police, and nearly 80% trust the NHS to protect their personal information
 - (only) 38% trust the British broadcasters (e.g. the BBC or ITV) to protect their personal data
 - 40% trust their employers to protect their personal information
 - Nearly 38% trust their mobile phone services to protect their personal information
 - 35% trust internet providers and online retailers with their personal information
 - 35% trust search engines to protect their personal information
 - 18% trust social media companies to protect their personal information
 - 90% do not trust the news websites and apps they use regularly, 95% do not trust information they read offline (e.g. newspapers, magazines)

Data Doing

- 50% believe that there is no point in changing privacy settings because companies will be able to get around these settings anyway
- 40% indicate that changing privacy settings online takes too much time and effort
- 70% believe that Internet providers do not make it easy for people to change their privacy settings
- 25% social and media users don’t mind sharing their data with companies in return for free services (e.g. Facebook, Twitter) (largest proportion among all groups)
- (but) also Approx. 70% don’t want share their data, but feel they have no choice to access their services (e.g. Facebook, Twitter)

Data Participation

- 10% mainly read websites and apps which share their values and opinions with 95% reported to make no effort to view news website which are different political perspectives than their own
- They are 30% likely to make an effort to view social media posts with a different political perspective to their own
- 30% looked online to verify information during a conversation with friends or family
- 10% explained or showed others how to stay safe online, for example by showing them how to change their privacy settings. 22% Helped others with data or security in some way
- 8% encouraged or showed others how to fact-check things online, for example by conducting other searches
- 5% have gathered information or data from more than one online source for community action or charity work. While 10% gathered these for activities like sports clubs or religious groups. And 3% for political activity

General (no social media) Users

User Profile: General (no social media)

Might fact check

50% looked online to verify information during a conversation with friends or family; 28% encouraged or showed others how to fact-check things online, for example by conducting other searches

More likely to be sceptical about the truthfulness of social media content

70% do not trust their friends posts on social media

Less to use data in their everyday lives

17% have gathered information or data from more than one online source for community action or charity work; 21% gathered these for activities like sports clubs or religious groups; 5% for political activity

Most likely to view online tracking as unacceptable

95% believe it is not acceptable for companies to influence opinions and behaviours using personal data with around 90% indicating that it is not acceptable to track their online behaviour over time



Likely to help others with their data literacy

42% helped others with data or security in some way; 28% explained or showed others how to stay safe online, for example by showing them how to change their privacy settings

Likely to be skeptical about the usefulness of privacy settings

70% believe that Internet providers do not make it easy for people to change their privacy settings; 38% believe that there is no point in changing privacy settings because companies will be able to get around these settings anyway

General (no social media) Users

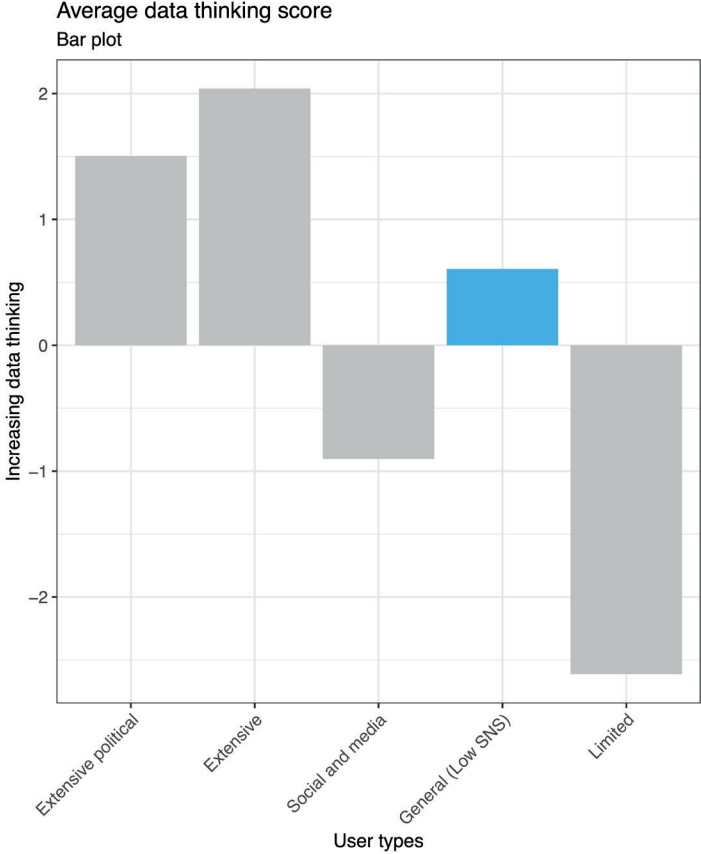
[@meandmybigdata](#) | bit.ly/meandmybigdata | [#meandmyBIGDATA](#)

User Profile: General (no social media)

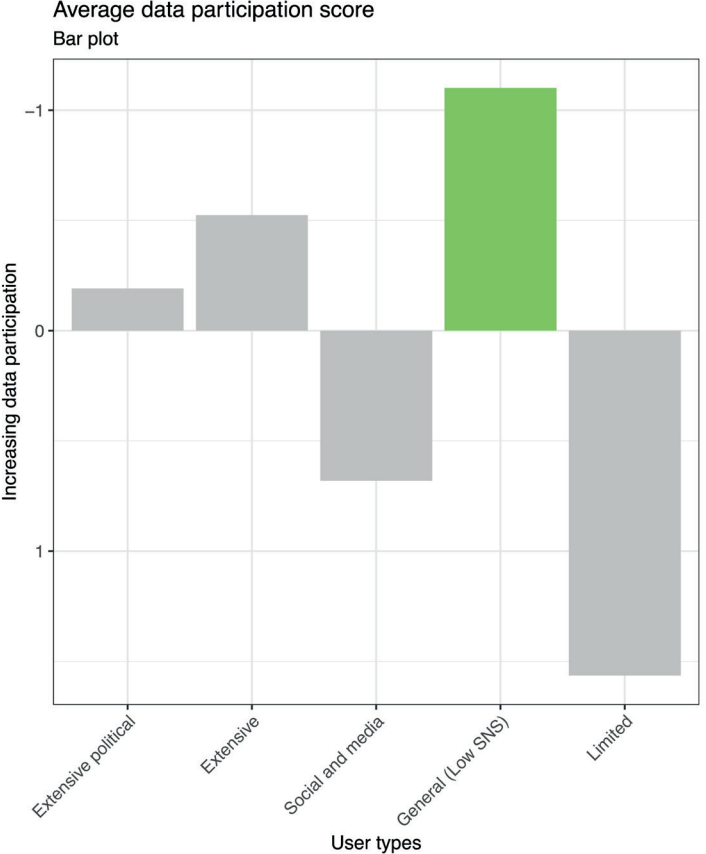
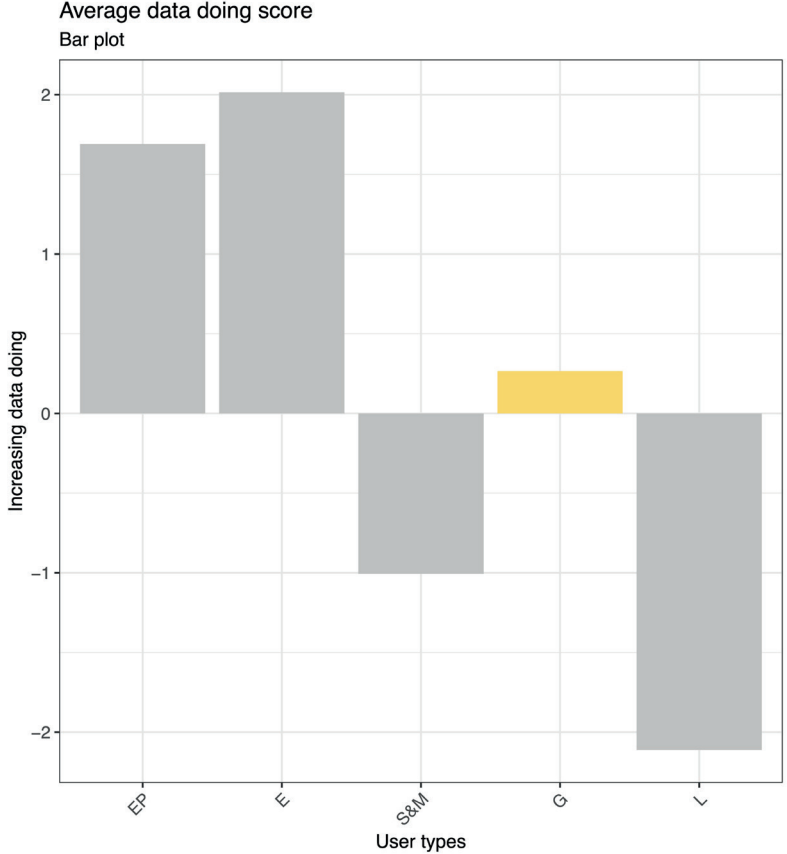


General
(no social
media)
Users

| | |
|------------------|--|
| Age | Likely to be aged 45-64 |
| Education | Likely to have a first degree |
| Children | Not likely to have children in the home |
| Home | Likely to be buying a home on a mortgage |
| NRS Social Grade | Likely to be social grade C2, D or E |



User Profile: General (no social media)



Data Thinking

- Around 97% think that it is not acceptable for companies to sell their information to other companies, 76% think it's not acceptable for companies to build a profile of them as consumers and what they like or don't like
- Only 38% believe that it is acceptable for companies to use personal data to personalise their experience of apps and website
- (but) 95% believe it is not acceptable for companies to influence opinions and behaviours using personal data with around 90% indicating that it is not acceptable to track their online behaviour over time
- 78% trust the UK government agencies, the police and the NHS to protect their data
- (but) only 35% (approx) trust the broadcasters (e.g. the BBC and ITV)
- 58% trust their employers to protect their personal data
- 75% do not trust their Internet and phone network providers to protect their personal information
- 90% do not trust social media companies to protect their personal information
- 58% do not trust the news websites and apps they use regularly, 78% (approx) do not trust information they read offline (e.g. newspapers, magazines)
- 70% do not trust their friends posts on social media

Data Doing

- 38% believe that there is no point in changing privacy settings because companies will be able to get around these settings anyway
- 30% indicate that changing privacy settings online takes too much time and effort
- 70% believe that Internet providers do not make it easy for people to change their privacy settings
- 18% don't mind sharing their data with companies in return for free services (e.g. Facebook, Twitter)
- but also Approx. 68% don't want share their data, but feel they have no choice to access their services (e.g. Facebook, Twitter)

Data Participation

- 37% mainly read websites and apps which share their values and opinions with 62% reported to make no effort to view news websites which have different political perspectives than their own
- They are 28% likely to make an effort to view social media posts with a different political perspective to their own
- 50% looked online to verify information during a conversation with friends or family
- 28% explained or shown others how to stay safe online, for example by showing them how to change their privacy settings. 42% helped others with data or security in some way
- 28% encouraged or shown others how to fact-check things online, for example by conducting other searches
- 17% have gathered information or data from more than one online source for community action or charity work. While 21% gathered these for activities like sports clubs or religious groups. And 5% for political activity

Limited Users

User Profile: Limited Users

More likely not to trust the news

85% do not trust the news websites and apps they use regularly, 90% (approx) do not trust information they read offline (e.g. newspapers, magazines)

Least likely to search for alternative news sources

90% reported to make no effort to view news websites which have different political perspectives than their own

Least likely to fact-check and verify information

only 5% report taking steps to verify information



Most likely to oppose to online tracking

97% think that it is not acceptable for companies to sell their information to other companies, 83% think it's not acceptable for companies to build a profile of them as consumers and what they like or don't like

Least likely to use data in their everyday lives

Only 3% have gathered information or data from more than one online source for community action or charity work; 5% gathered these for activities like sports clubs or religious groups; and 1% for political activity

Limited Users

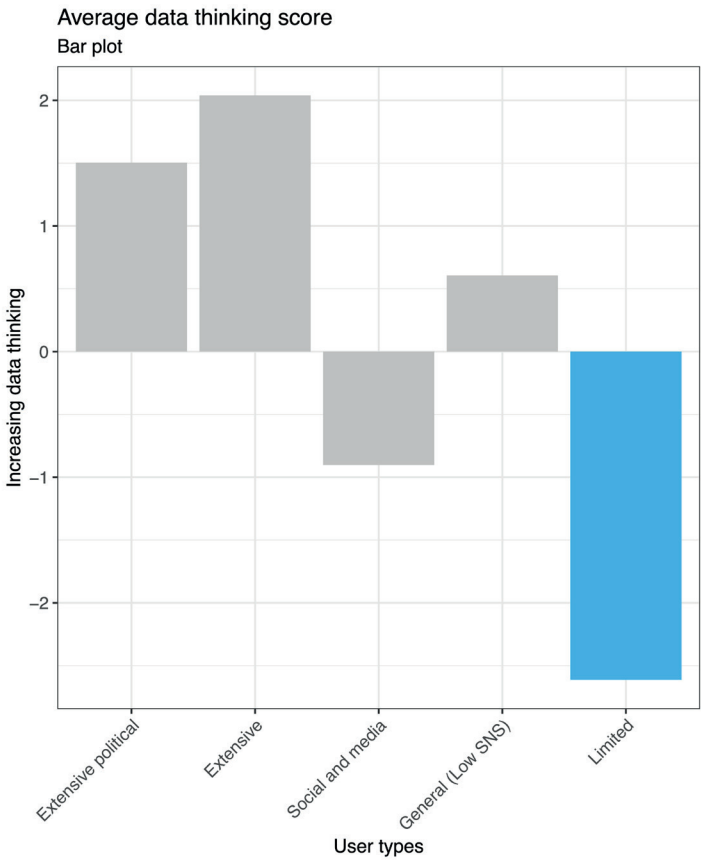
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User Profile: Limited Users



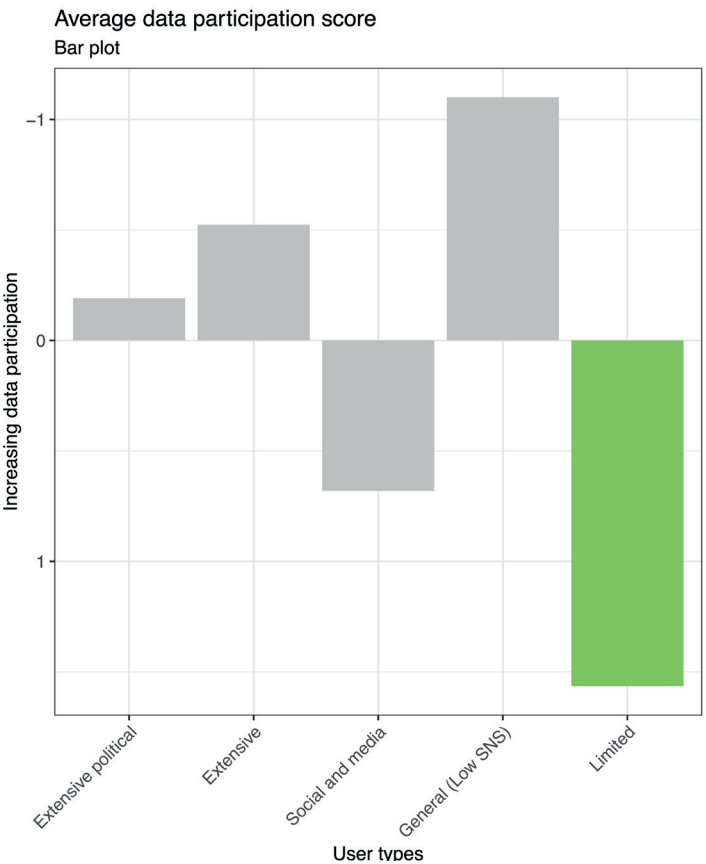
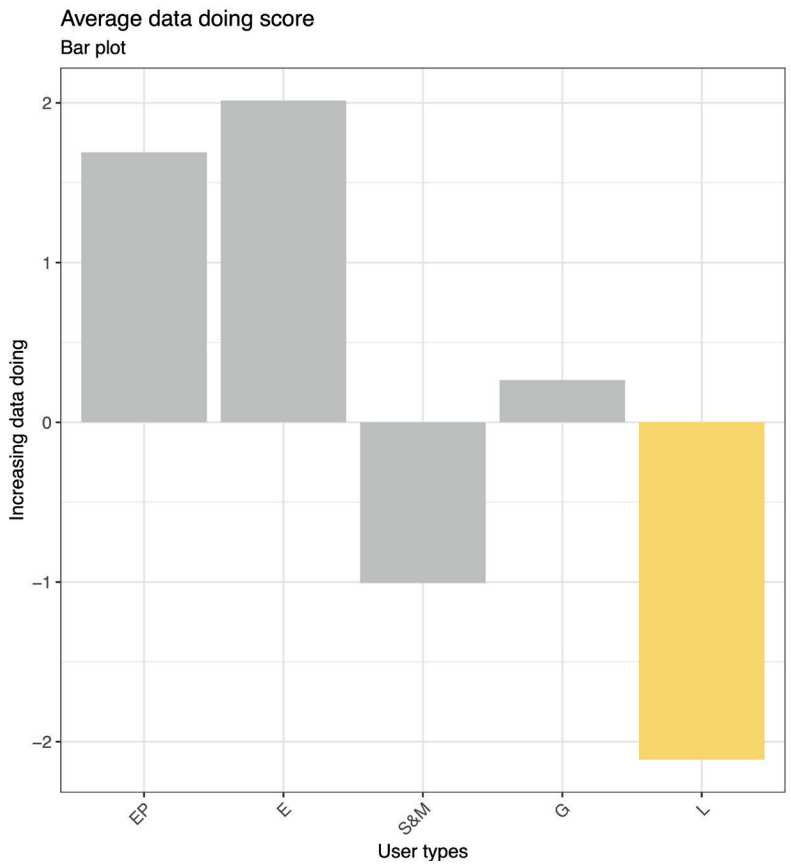
Limited
Users

| | |
|------------------|--|
| Age | Likely to be aged 55 and over |
| Education | May have GCSEs including Maths and English |
| Children | Not likely to have children in the home |
| Home | Likely to own outright or to be renting from Local Authority |
| NRS Social Grade | Likely to be social grade C1, C2, D or E |



Limited

User Profile: Limited Users



Limited

Data Thinking

- Around 97% think that it is not acceptable for companies to sell their information to other companies, 83% think it's not acceptable for companies to build a profile of them as consumers and what they like or don't like
- Only 20% believe that it is acceptable for companies to use personal data to personalise their experience of apps and website
- (but) 95% believe it is not acceptable for companies to influence opinions and behaviours using personal data with around 90% indicating that it is not acceptable to track their online behaviour over time
- 62% trust the UK government agencies, the police and the NHS to protect their data
- (but) only 35% (approx) trust broadcasters (e.g. the BBC and ITV)
- 25% trust their employers to protect their personal data
- 72% do not trust their Internet and phone network providers to protect their personal information
- 90% do not trust social media companies to protect their personal information
- 85% do not trust news websites and apps they use regularly, 90% (approx) do not trust information they read offline (e.g. newspapers, magazines)
- 70% do not trust their friends posts on social media

Data Doing

- 42% believe that there is no point in changing privacy settings because companies will be able to get around these settings anyway
- 38% indicate that changing privacy settings online takes too much time and effort
- 80% believe that Internet providers do not make it easy for people to change their privacy settings
- 18% don't mind sharing their data with companies in return for free services (e.g. Facebook, Twitter)
- but also Approx. 58% don't want to share their data, but feel they have no choice to access their services (e.g. Facebook, Twitter)

Data Participation

- 15% mainly read websites and apps which share their values and opinions with 90% reported to make no effort to view news websites which are different political perspectives than their own
- They are 13% likely to make an effort to view social media posts with a different political perspective to their own
- 18% looked online to verify information during a conversation with friends or family
- 5% explained or shown others how to stay safe online, for example by showing them how to change their privacy settings. 10% helped others with data or security in some way
- 3% encouraged or shown others how to fact-check things online, for example by conducting other searches
- 3% have gathered information or data from more than one online source for community action or charity work. While 5% gathered these for activities like sports clubs or religious groups. And 1% for political activity

Conclusion

What can be concluded from this preliminary analysis? We would note that although both our types of **‘Extensive users’** show relatively high levels of Data Thinking, and relatively high levels of Data Doing, even they show low absolute levels of data participation. None of our groups show evidence of deep engagement with data as part of their personal and civic lives. All but our **‘Social and media users’** are sceptical to a greater or lesser degree with social media platforms across a range of measures from trust of content to trusting them with citizens' data. More generally most users would prefer to limit sharing of data and have more control but either accept it as a “cost” of using platforms – or alternatively lack the confidence to manage privacy controls.

There are two groups that stand out to us and which we feel need further examination. **‘Social and media users’** have almost as limited an awareness of the use of data by platforms as Limited users. At the same time they have the least concern about data sharing and the least critical position on the data sharing practices of platforms. Ironically, they also still do not trust content they find in any media – but they are more likely than other groups to trust content shared by friends. Given that this group (17% of users) consists mainly of young people, with lower educational attainment from lower income households, we are concerned that they will remain disadvantaged in their data literacy into later life. This result – along with similar ones elsewhere in the literature – undermines the idea of the “digital native”. Our **‘General users’** form the largest group (33%) but show deep scepticism of digital media and considerable concern over the use of data by platforms. As a result they also do not deeply engage with key aspects data literacy. Though they appear more likely to seek or give help than some other groups. Again we have concerns over the impact of this deep scepticism and disengagement on their longer-term relationship with

digital media content. There are three further stages to our project work that will build on these initial findings:

- Deeper and broader analytic comparison of our survey data across our user types – including analysis of non-users attitudes to traditional media and external perceptions of digital media.
- We will be running focus groups based around the demographics of our user groups to explore the issues in greater qualitative depth.
- Design of educational materials and policy workshops to explore routes to developing citizens data literacy.

Focus group work will be complete in spring 2020 with a report following shortly after. Development of supporting educational materials will take place in summer and autumn of 2020.

Notes

1. Critical Research undertook the survey work. Critical have both specific and extensive experience of undertaking internet and digital media focused research having undertaken survey work for the Ofcom media literacy research programme. Critical utilised in-home survey work, using a computer-aided personal interview methodology. The survey quota sample was sourced from UK Geographics and broken into sampling points using Census 2011 Output Areas (OAs). 125 sampling points were used to achieve a maximum of n = 1,500 interviews. These points were selected to be a representative cross section of UK addresses. Quotas were set to be reflective of the UK internet using population by age, gender, and household socio-economic group, and urbanity.

2. OFCOM, (2018), “Adults digital media use and attitudes report”. Research Report. April 2018. Available at: https://www.ofcom.org.uk/__data/assets/pdf_file/0011/113222/Adults-Media-Use-and-Attitudes-Report-2018.pdf

3. Doteveryone, (2018), “People power and technology: the 2018 digital attitudes report”. Research Report. Available at <https://www.doteveryone.org.uk/report/digital-attitudes/>

4. Lloyds Bank, (2018), UK Consumer Digital Index 2018. Report. Available at: https://www.lloydsbank.com/assets/media/pdfs/banking_with_us/whats-happening/LB-Consumer-Digital-Index-2018-Report.pdf

5. Yates, S.J., Lockley, E., (2018), “Social media and social class”, American Behavioural Scientist, Vol. 62, Issue 9, pp.1291-1316 (ISSN: 0002-7642/1552-3381); Yates, S.J., Kirby, J., Lockley, E., (2015), “Digital media use: differences and inequalities in relation to class and age”, Sociological Research Online, Vol. 20, Issue 4, (ISSN: 1360-7804) (DOI: 10.5153/sro.3751); Yates, S.J., Carmi, E., Lockley, E., Pawluczuk, A., French, T., Vincent, S., (in press) “Who are the limited users of digital systems and media? An examination of UK evidence.

6. UNESCO, (2018), Guidelines for Digital Inclusion for Low- skilled and Low-literate People. Available at: https://en.unesco.org/sites/default/files/unesco-pearson_draft_guidelines_for_digital_inclusion.pdf.

7. DBIS & DCMS, (2016). Digital Skills for the UK economy. Available at <https://www.gov.uk/government/publications/digital-skills-for-the-uk-economy>.

8. DCMS, (2019), the Online Harms White Paper. Available at: <https://www.gov.uk/government/consultations/online-harms-white-paper>.

9. The Centre for Data Ethics and Innovation, (2019), Interim reports from the Centre for Data Ethics and Innovation. Available at: <https://www.gov.uk/government/publications/interim-reports-from-the-centre-for-data-ethics-and-innovation>

10. Philip, T. M., Olivares-Pasillas, M. C., & Rocha, J. (2016). Becoming racially literate about data and data-literate about race: Data visualizations in the classroom as a site of racial-ideological micro-contestations. Cognition and Instruction, 34(4), 361-388.

11. Hall, S. (1973), Encoding and decoding in the television discourse.

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