Improving users' understanding of where and how their data is used by social media platforms.

Report prepared by the Behavioural Insights Team for Ofcom

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THE BEHAVIOURAL INSIGHTS TEAM

Contents

Foreword by Ofcom

This is the latest in a programme of online trials[1] that Ofcom has run over the last two years which have looked at different aspects of users' online behaviour and their interaction with different types of platform interventions as part of our work on Online Safety and Media Literacy.

Ofcom has statutory duties to promote and research media literacy under the Communications Act 2003. One of the ways we fulfil this duty is through our Making Sense of Media programme, which aims to help improve the online skills, knowledge and understanding of children and adults in the UK.

The research conducted via our Making Sense of Media programme provides Ofcom and its stakeholders with a robust and innovative evidence base across the many facets of media literacy. Our tracker studies – our Adults' and Children's Media Lives qualitative projects, and our Media Use and Attitudes quantitative surveys – are long established and provide rich insights into the ways in which people's media use and literacy has changed over time.

To complement this work, we also commission stand-alone research projects such as this one which deepen our knowledge in specific areas.

The Online Safety Act 2023 has clarified and added specificity to our media literacy duties, including a requirement to support public awareness and understanding of how their personal information may be protected when using regulated services.

Our aim was to understand how different ways of presenting information about data sharing on social media platforms affects users' comprehension of what data they are sharing, with whom, and for what purpose. This research also gives us valuable insights into the effect of giving users greater control over which data they choose to share, and with whom.

The research in this project uses a Randomised Controlled Trial (RCT) on a synthetic platform to provide insight into the ways in which differential presentation of information about data sharing can influence understanding. It examines the effect of making messaging more salient and of setting out the implications of data sharing. Additionally, it tests the effect of giving participants a choice about which information to share and provides insights into participants' feelings around the various ways of setting out the information, particularly around trust and feelings of control.

The findings in this report are an important addition to our evidence base on 'what works' to improve the public's online skills, knowledge and understanding, specifically in relation to protecting personal information[2] when using regulated services. For more information on how we take forward our research to convene and amplify best practice, see our three-year media literacy strategy.

[1] Ofcom *Behavioural Insights*
[2] What is personal information: a guide | ICO

Executive summary

Anyone who has signed up to a social media platform has been invited to share various types of data with the platform. This may be used to personalise their experience or tailor the advertisements they see. Typically, this choice is offered to users signing up in the form of 'take it or leave it'; they are required to share various data types, such as personal information and location data, or forgo accessing the platform[3]. While the majority of people who use the internet understand social media companies collect their data,[4,5] the evidence suggests that most people do not understand the type of data collected,[6,7] who it is shared with and how this data is used.[8, 9] There is also limited evidence on how to improve people's understanding of their data sharing choices.[10, 11, 12]

As part of their statutory duty to promote media literacy[13] (as added by the Online Safety Act 2023) Ofcom is required to support public awareness and understanding of how their personal information may be protected when using regulated services, Ofcom commissioned the Behavioural Insights Team (BIT) to undertake a research project focused on improving user understanding of data usage by social media platforms. Ofcom's objective is to improve users' awareness and understanding of data sharing and to empower users to make informed choices.

In this project, we set out to understand how different ways of presenting information about data sharing on social media platforms affects users' comprehension of what data they are sharing, with whom, and for what purpose. In addition to this primary research question, the study also explored whether giving users greater control over the type of data they shared and with whom would influence their comprehension, and how people utilised these options to exercise more granular control over their data sharing choices. The study involved a Randomised Controlled Trial (RCT) on a purpose-built simulated social media platform, WeConnect, and involved a nationally representative sample of adults from the UK.

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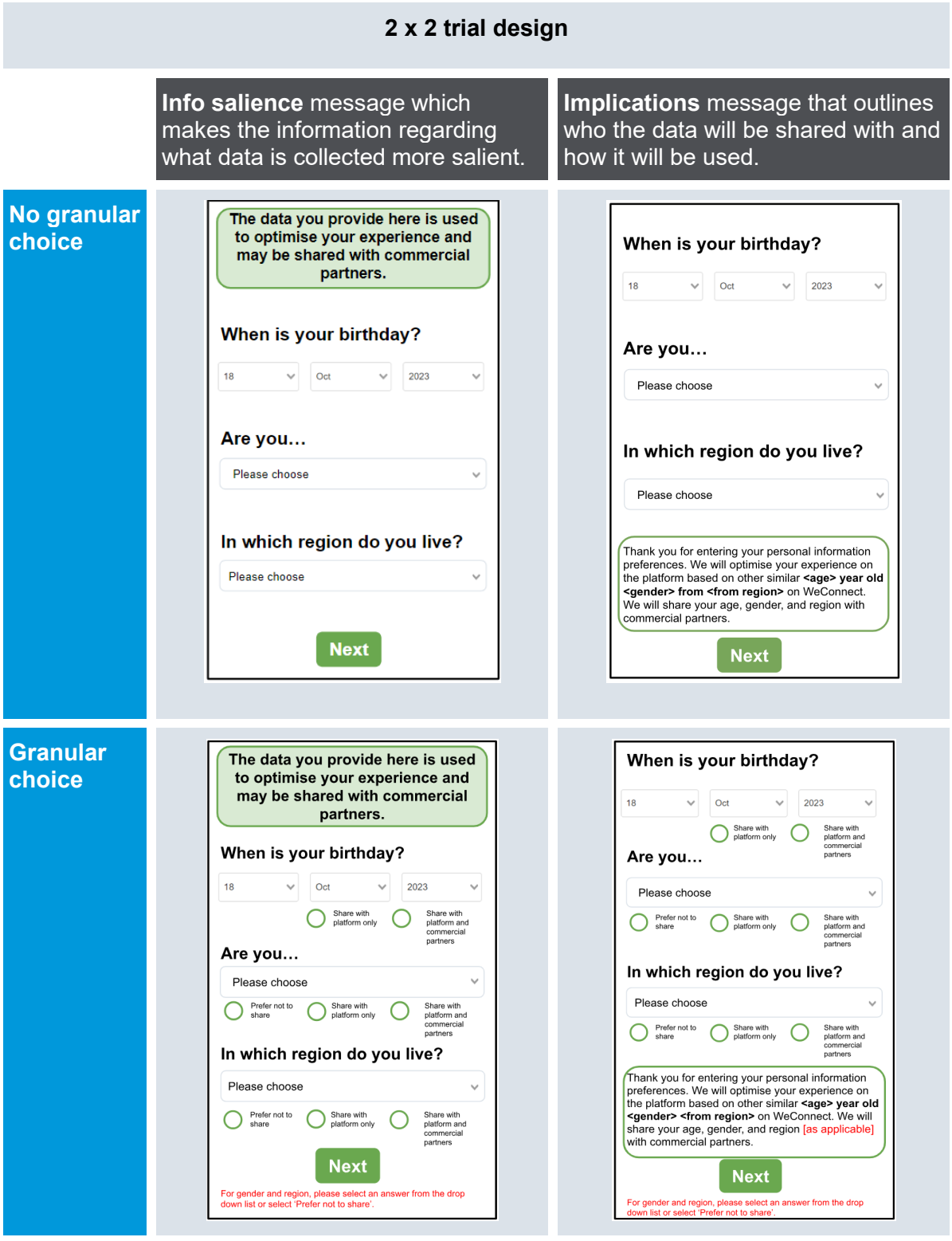
[3] Evidence scan (see Section 1.2)
[4] Rader, E. (2014). Awareness of behavioral tracking and information privacy concern in Facebook and Google. In *10th Symposium On Usable Privacy and Security (SOUPS 2014)* (pp. 51-67).
[5] Hope, A., Schwaba, T., & Piper, A. M. (2014, April). Understanding digital and material social communications for older adults. In P*roceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 3903-3912).
[6] Hitlin, P., & Rainie, L. (2019). *Facebook algorithms and personal data*. Pew Research Center, 16, 1-22.
[7] Pangrazio, L., & Selwyn, N. (2018). "It's not like it's life or death or whatever": Young people's understandings of social media data. *Social Media+ Society*, 4(3).
[8] Pybus J, Coté M, Blanke T (2015) Hacking the social life of big data. *Big Data & Society* 2(2): 1–12.
[9] Ofcom (2022) *A day in the life. An ethnographic exploration of media literacy*
[10] Michener, G., & Bersch, K. (2013). Identifying transparency. Information Polity, 18(3), 233-242.
[11] Pangrazio, L., & Selwyn, N. (2018). "It's not like it's life or death or whatever": Young people's understandings of social media data. *Social Media+ Society*, 4(3).
[12] Skeggs, B., & Yuill, S. (2016). The methodology of a multi-model project examining how Facebook infrastructures social relations. Information, *Communication & Society*, 19(10), 1356-1372.
[13] UK Government (2003) Section 11 of the *Communications Act 2003*

We tested two types of messages: one that made the data sharing information more salient ("Info salience"), and another that outlined the implications of data sharing more clearly for users ("Implications"). Additionally, we tested how people behaved when they were offered the opportunity to make more granular choices with respect to their data sharing by selecting which data type they wanted to share, and who they wanted to share it with. This type of 'granular choice' is not typically offered on social media platforms at present[14], but we were interested in the preferences that users expressed when given this option, and whether this influenced their comprehension of data sharing. An RCT comparing these four arms (2 messages x 2 types of choices) versus a Control arm allowed us to measure the causal impact of our interventions on participants' behaviour and their sentiment towards data sharing on social media platforms. Figure 1 below provides an overview of the trial arms.

[14] Evidence Scan (see Section 1.2)

Figure 1: Overview of trial arms in RCT testing understanding of data sharing choices

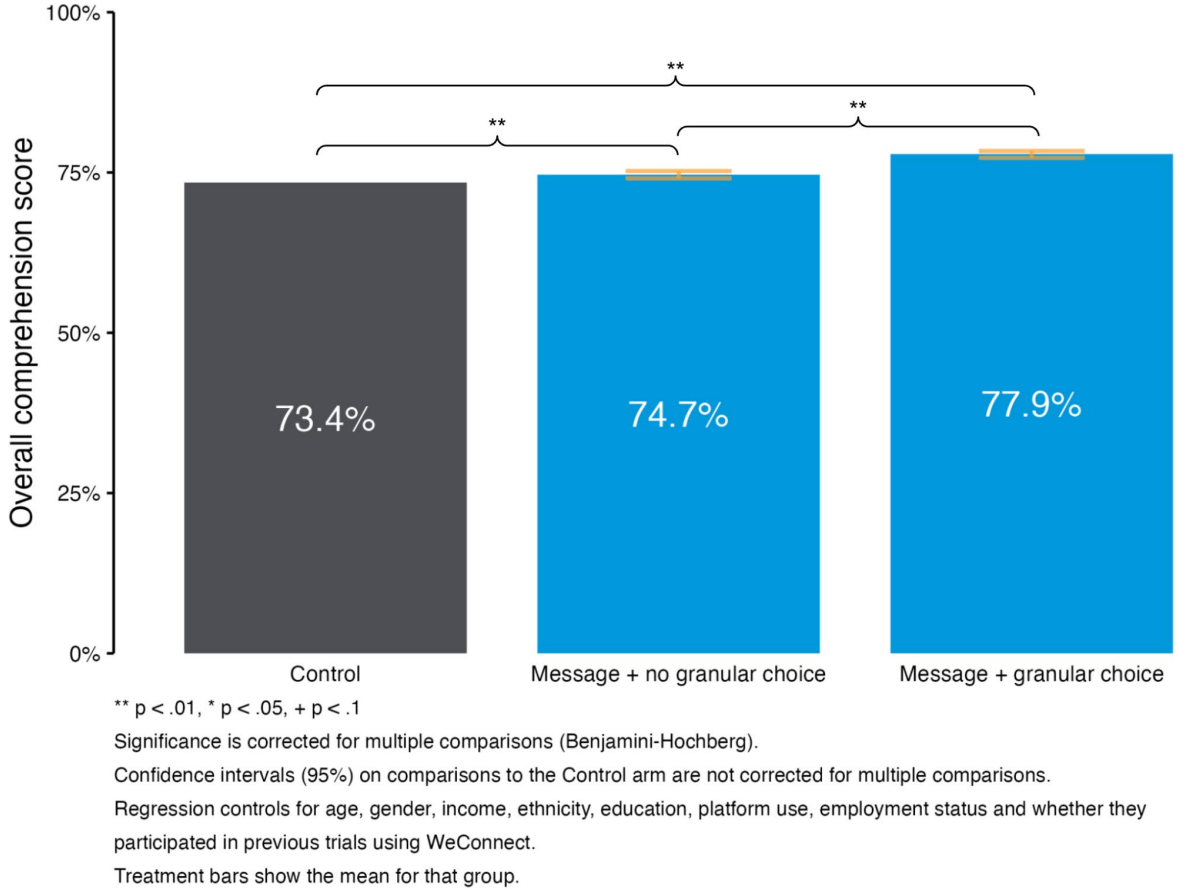


Our primary outcome measure was participant comprehension of what data is being collected by platforms, who it is shared with and how it is used. **We found that a message providing additional information about data sharing was effective at improving comprehension, although the gains were limited due to high baseline levels of comprehension on data sharing** (which may result in a ceiling effect[15]). Participants in the Control arm scored 73.4% on comprehension, while participants in the message-only arms scored 74.7% on comprehension, a 1.3 percentage point increase. This suggests that increasing transparency could increase comprehension, although we note that the overall increase in comprehension is relatively small despite being statistically significant.

We also found that having to make a granular choice boosted comprehension of data sharing, and that combining a granular choice with a message was more effective than a message on its own. Participants in the granular choice arm scored 77.9% on comprehension, 4.5 percentage points higher than in the Control arm and a statistically significant difference. In the granular choice arms, participants had to make a choice on who to share the data with for each type of data. This also introduced a small element of friction as they had to make at least three clicks at various parts of the screen before proceeding, whereas in the Message + no granular choice arms they could directly click the Next button to proceed after inputting their data. We hypothesise that this slight friction of having to make this choice for each data type could be boosting comprehension for participants on these granular choice arms. However, further research to prototype and test different granular choice designs could help to develop a user interface that optimises both comprehension and control while also managing choice overload and the additional effort required. Results are shown in Figure 2.

[15] Wang, L., Zhang, Z., McArdle, J. J., & Salthouse, T. A. (2008). Investigating ceiling effects in longitudinal data analysis. Multivariate Behavioral Research, 43(3), 476-496

Figure 2. Overall comprehension score by intervention type.



** p < .01, * p < .05, + p < .1
Significance is corrected for multiple comparisons (Benjamini-Hochberg).
Confidence intervals (95%) on comparisons to the Control arm are not corrected for multiple comparisons.
Regression controls for age, gender, income, ethnicity, education, platform use, employment status and whether they participated in previous trials using WeConnect.
Treatment bars show the mean for that group.

At the same time, providing users with granular choice may also act as a barrier to signing up. Participants in the granular choice arms were slightly more likely to drop out of the trial when compared with participants in the other arms (22.0% vs 17.3%). There could be several factors that could have reduced participants' motivation to proceed. These include choice overload (the number of different choices they need to make); friction (the number of clicks required to continue); or increased awareness of the data sharing required to access the platform. Conversely, we note that participants' motivation could have been lowered in an experimental context given the relatively modest payment for participating. With a real-world platform, users' motivation could be higher given the reward for signing up is access to a platform with its content, connections, etc.

Being given granular choices also made people feel more in control of how their data is used. Of the participants in the arms with granular choices, 70.1% felt that the data sharing page made them feel in control of how their data is used, compared to 55.4% in the Control arm, and an average of 57.6% in the arms with messages only.

Participants were selective about what data they shared when given more control over their data sharing. A majority of participants chose to share their gender (60.1%) and region (60.2%) just with the platform (and not with commercial partners) when given a choice (in the two Message + granular choice arms). This suggests that people may want to have their experience on the platform personalised or have a pragmatic understanding that they have to share their data in return for access. However, when it came to sharing data

with third party commercial partners as well, far fewer participants were willing to share their gender (25.4%) or their region (24.0%).

When it came to sharing data on their region, participants were more likely to change their sharing preferences when faced with the implications of doing so. In the implications + granular choice arm, participants would input their age, gender and region, and choose who to share this data with for each input. They would then see a message saying that their experience on the platform would be optimised based on other users of the same age, gender and location. In this arm, most participants (84.3%) changed who they wanted to share their region data with at least once after seeing this message.

Taken together, these findings suggest that **while there is a high baseline comprehension of what data is collected by platforms, how it is used and who it is shared with, there is an opportunity to increase comprehension by giving users more granular choice when it comes to their data sharing settings**. Providing users with this choice also increases their feelings of control when it comes to their data.

1. Introduction

1.1 Background

Ofcom has a statutory duty to promote media literacy and to carry out research into media literacy matters.[16] Ofcom is also the regulator for social media platforms. The Online Safety Act 2023 has clarified and added specificity to Ofcom's media literacy duties, including a requirement to support public awareness and understanding of how their personal information may be protected when using regulated services.[17]

Making Sense of Media (MSOM) is Ofcom's programme of work to help improve the media literacy of UK adults and children. [18] They achieve this by sharing evidence-based insights and by encouraging the media literacy community to pilot activities and initiatives which support MSOM's aim. More broadly, MSOM's objective is to establish what works well and what does not, identify good media literacy design principles, and to inform Ofcom and their stakeholders' thinking about media literacy policy and practice.

To investigate the use of user controls in tackling online harms, Ofcom has commissioned four online randomised controlled trials (RCTs) with the Behavioural Insights Team (BIT). Each trial uses the simulated social media platform "WeConnect". This fourth trial builds on Ofcom's "Day in the Life" research and focuses on **improving user understanding of data usage by social media platforms.**

1.2 Evidence scan and context

The research began with a rapid evidence review looking at whether people understand how social media platforms use their data and a rapid examination of the user experience relating to data sharing on three popular platforms[19].

Social media platforms have become an indispensable part of many people's lives[20]. However, participation on these platforms often comes with a requirement to share personal data with the platform and potentially third parties. Users are typically required to share various data types as a condition of membership, including personal information and geolocation data (see Table 2 for examples of data that may be requested by platforms).[21]

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[16] UK Government (2003) *Communications Act 2003.*
[17] UK Government (2003) *Section 11 (1A) of the Communications Act 2003*
[18] Ofcom. (n.d.). *Making Sense of Media*.
[19] Researchers reviewed the sign-up process for three popular platforms, focusing on where during this process a potential user is informed about the data collected, who it will be shared with and for what purpose. Researchers did not complete the sign-up process, focusing only on what information is provided to someone considering using a platform.
[20] Ofcom. (2004) *Adults' Media use and attitudes report 2024*
[21] Users may be given the option to change the data they share in some platforms' privacy settings following sign-up. The evidence scan for the purposes of this research focused only on what information is provided to someone when considering using a platform.

This requirement to share all requested data categories is known as a 'no granular choice' scenario for the purposes of this research. Users are not generally offered the option of selecting specific data to share (referred to as 'granular choice' for the purposes of this research). Instead, they usually face an all-or-nothing decision: share everything required or forgo access to the platform entirely.

While there is a general awareness that social media platforms collect user data, many users have a vague understanding of the specific data captured and how it is used. [22,23,24,25] Some studies show that people often struggle to make the connection between data collection and its subsequent applications. When presented with explicit details of data capture, such as location data, individuals find it "surprising"," unsettling" and "creepy".[26]

Understanding of personalisation algorithms on social media platforms and how this relates to data capture can also vary. While many internet users recognise that their online experiences are personalised, their awareness of how these algorithms make use of user data varies considerably, depending on gender, age, level of education, and socioeconomic status [27,28,29] Interestingly, there seems to be a difference in how acceptable users find data-driven personalisation across different content types. Personalisation for political, social media, and news content is generally less acceptable than for commercial content.[30,31] [32]

There is limited evidence on how to improve public understanding of personal data use. Even when information is shared openly, its impact is reduced if it is hard to understand.[33] Some studies have used software tools to help make the ways companies handle personal data more transparent. For instance, one smartphone app demonstrated to teenagers how their personal data was processed by tools for object recognition, sentiment analysis, and

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[22] Rader, E. (2014). Awareness of behavioral tracking and information privacy concern in Facebook and Google. In *10th Symposium On Usable Privacy and Security (SOUPS 2014)* (pp. 51-67).
[23] Hope, A., Schwaba, T., & Piper, A. M. (2014, April). Understanding digital and material social communications for older adults. In P*roceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 3903-3912).
[24] Pangrazio, L., & Selwyn, N. (2018). "It's not like it's life or death or whatever": Young people's understandings of social media data. *Social Media+ Society*, 4(3).
[25] Ofcom (2022) *A Day in the Life*
[26] Pangrazio, L., & Selwyn, N. (2018). "It's not like it's life or death or whatever": Young people's understandings of social media data. *Social Media+ Society*, 4(3).
[27] Carmi, E., Yates, S. J., Lockley, E., & Pawluczuk, A. (2020). Data citizenship: Rethinking data literacy in the age of disinformation, misinformation, and malinformation. *Internet Policy Review,* 9(2).
[28] Gran, A. B., Booth, P., & Bucher, T. (2021). To be or not to be algorithm aware: a question of a new digital divide?. *Information, Communication & Society*, 24(12), 1779-1796.
[29] Cotter, K., & Reisdorf, B. C. (2020). Algorithmic knowledge gaps: A new horizon of (digital) inequality. *International Journal of Communicatio*n, 14, 21.
[30] Kozyreva, A., Herzog, S., Lorenz-Spreen, P., Hertwig, R., & Lewandowsky, S. (2020). *Artificial Intelligence in Online Environments: Representative Survey of Public Attitudes in Germany* Max Planck Institute for Human Development.
[31] Smith, A. (2018) *Public Attitudes Toward Computer Algorithms* Pew Research Center.
[32] Powers, E. (2017). My news feed is filtered? Awareness of news personalization among college students. D*igital Journalism,* 5(10), 1315-1335.
[33] Michener, G., & Bersch, K. (2013). Identifying transparency. Information Polity, 18(3), 233-242.

geolocation, with many finding the tracking of their geolocation data unsettling.[34] Another project developed a plug-in that revealed how users were tracked beyond the platform in the study and how this impacted the advertising they saw on the platform (influenced by other sites they visited) and on other sites (influenced by their platform engagement). However, frequent platform updates made this tool difficult to maintain, and it was tested by only a small group of users.[35]

1.3 Research objectives

Ofcom's objective is to improve users' understanding of how their personal information may be protected so that they can make informed choices about their personal data. This aligns with Ofcom's fairness for customer outcomes: "Customers are supported to make well-informed decisions" and Ofcom's media literacy duties under the OSA that state Ofcom must take steps, or enter into arrangements, to help the users of regulated services understand how their personal information may be protected.[36]

This trial's primary objective is to assess user comprehension of the data they share with the platform. We achieve this by presenting data sharing information in different formats and measuring user understanding.

Our second objective is to explore user preferences concerning data sharing and privacy by examining their reactions to granular and non-granular data sharing options. Our innovative approach involves testing data-sharing options that are currently unavailable on major social media platforms. Specifically, we will compare two scenarios: non-granular data sharing, where participants provide their consent to share data with the platform upon signup ('no granular choice'), and granular data sharing choices, where participants have the autonomy to decide for each piece of data whether to share it with the platform, friends, or commercial partners.

1.4 Research questions

The trial investigates the following main research questions (RQs):

- **RQ1**: How do varying formats of presenting data-sharing information influence user comprehension?
- **RQ2**: To what extent do users utilise granular options for data sharing when they are provided?
- **RQ3:** To what extent does requesting users to make granular choices about each type of data and their sharing preferences enhance comprehension?

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[34] Pangrazio, L., & Selwyn, N. (2018). "It's not like it's life or death or whatever": Young people's understandings of social media data. *Social Media+ Society*, 4(3).
[35] Skeggs, B., & Yuill, S. (2016). The methodology of a multi-model project examining how Facebook infrastructures social relations. Information, *Communication & Society*, 19(10), 1356-1372.
[36] Ofcom (2019) *Making communications markets work well for customers A framework for assessing fairness in broadband, mobile, home phone and pay-TV)*

Our primary outcome measure to assess user comprehension is their responses to survey questions. Additionally, we examine the extent to which users choose not to share all data when presented with granular options (see section 3.5 for the full analytical framework).

1.5 Summary approach

We are investigating how people comprehend and manage their data sharing on social media platforms. To achieve this, we are conducting an RCT using our simulated platform, WeConnect.

The RCT design is crucial because it randomly assigns participants to different groups. This allows us to isolate the effects of our interventions (message types and data control options) from other influences. By comparing outcomes across groups, we can confidently attribute any observed differences to the specific intervention participants received.

Within the WeConnect platform, we are testing two types of messages: information salience ("info salience") and implications. These messages aim to increase users' understanding of the data they are sharing. Additionally, we are exploring how participants interact with two options to control what data they share with the platform and commercial partners. Overall, the RCT has five "arms" comprising these four interventions and a control group.

This research design, with its random assignment and focus on message types and data control options, allows us to measure the causal impact of our interventions on participants' behaviours and attitudes towards data sharing on social media.

2. Interventions

2.1 Intervention design process

Following an evidence scan (summarised above), BIT conducted a light-touch review of social media platform data sharing practices, by reviewing the user experience for three popular platforms when we browsed to their start page (without being logged into the platform). We examined what information was provided to users about what data was being collected, how it would be used and who it would be shared with. Our focus was on when in the customer journey users are requested to specify their data sharing preferences ("Timing") and the type of data they are requested to share ("Data Types").

BIT collaborated with Ofcom's Behavioural Insights Hub and MSOM's policy team to develop ideas for the trial interventions including Timing, Data Types and the content of the website data sharing communication ("Messaging Priorities"). We consider the following factors: policy context, external validity (generalisability of findings), feasibility of implementation in a trial, and likelihood of successful outcomes.

Timing

Table 1 summarises the points at which users are requested to share data. We decided to implement the intervention on account creation, where users may be more receptive to this type of intervention (see Table 1).

Research on gambling operator websites suggests that gambling behaviour comes as consumers move from a "cold state" of consideration into a "hot state" of play[37]. The study concludes (p43) "Reaching people with relevant information during the cold state is more likely to result in lasting change" and in the play state messages are "most likely to be seen but due to the hot state it's the point when people are least likely to be receptive due to the friction that they create".[38] Furthermore, this real-life scenario can also be convincingly simulated in an online trial.

[37] "Hot state" here refers to when someone is experiencing high emotional arousal, and in the gambling context is associated with winning streaks, chasing losses, or seeing friends place high stakes. This can lead to more impulsive, emotion-driven decision making. In contrast, "cold state" is characterised by lower emotional arousal and more rational thinking, leading to more controlled and restrained behaviour, or a better ability to set and stick to limits in the gambling context.
[38] 2CV(2019) *Exploring the information needs of gambling consumers*

Table 1: Timing of setting data sharing preferences

Type of data	Rationale
On Account Creation	During the initial account setup process, users are often asked to specify their data sharing preferences.
On Interaction with Platform Features	When uploading content, interacting with ads, or participating in surveys, users may be prompted to confirm their consent for data usage
Following Regular Reviews and Updates	Social media platforms encourage users to periodically review and update their data-sharing preferences.
At Any Time	Users are encouraged to share photos, videos, status updates, and other content to engage with their network and contribute to the platform's content ecosystem. Identifies trends, topics users engage with, and potential content creators to promote on their feeds.
Connections and Networks	Social media platforms thrive on connections and networks, so users are prompted to connect with friends, family, colleagues, and other users to expand their social circles and interactions. Personalise group recommendations, and target ads based on users' social circles.

Data Types

Table 2 summarises the types of data typically collected by social media platforms from the examination of user experience that was carried out. In our trial we opted to collect personal information in the form of basic demographic data such as age, gender, and region, which trial participants necessarily provide during the recruitment process (see Table 2).

We specifically decided not to collect personally identifiable information (PII) about participants due to the following considerations:

- Data Handling: Collecting PII would necessitate the implementation of distinct data handling protocols compared to other trials in the series, thereby increasing complexity.
- Recruitment Impact: Particularly in scenarios where PII collection is explicitly stated, participants might be less inclined to share it, potentially hindering recruitment efforts.
- Impact on social media feed: By not collecting PII, we eliminated the need to tailor WeConnect's simulated social media feed for each participant. This was outside the scope of his trial.
- Timescales: Overall the decision not to collect PII facilitated a more efficient execution of the trial.
- Data minimisation: In line with GDPR this ensured that the data collected was limited to only what is necessary for the purposes of the trial.

Table 2: Types of data typically collected by social media platforms

Type of data	Rationale
Personal Information	This includes basic demographic details such as name, date of birth, gender, and contact information (e.g., email address, phone number) to personalise the user experience.
Profile Information	Social media platforms may prompt users to provide additional profile information such as education, occupation, relationship status, interests, hobbies, and affiliations to personalise users' feeds, recommendations, and advertisements.
Location Data	Platforms may request access to users' location data to provide location-based services, such as local business recommendations, event suggestions, or geotagged posts.
Content and Media:	Users are often encouraged to share photos, videos, status updates, and other content to engage with their network and contribute to the platform's content ecosystem. Identifies trends, topics users engage with, and potential content creators to promote on their feeds.
Connections and Networks	Social media platforms thrive on connections and networks, so users are prompted to connect with friends, family, colleagues, and other users to expand their social circles and interactions. Personalise group recommendations, and target ads based on users' social circles.
Activity and Interaction Data	This includes information about users' interactions on the platform, such as likes, comments, shares, clicks, and browsing history. Such data help platforms understand user engagement and behaviour patterns.
Device Information	Social media platforms may collect data about users' devices, operating systems, browsers, and IP addresses for analytics, troubleshooting, and security purposes.

Messaging

The key priorities that came out of the Ofcom/ BIT brainstorming session are outlined in Table 3.

Table 3: Messaging priorities

Intervention	Rationale for intervention from evidence-scan
Info salience: Make the information regarding what data is collected salient	This information is typically bundled into the T&Cs and people are not made aware of what data is being collected and its use when they sign up to a platform.
Implications: Explain how this data will be used in clear terms	The evidence scan suggested that bridging the gap in understanding between what data is collected, and the implications of how it is used could be important.

As explained above, the social media feed in our WeConnect experimental platform is not tailored to individuals. In order to avoid influencing our results, we say in our messaging that sharing data personalises the experience, not the feed.

2.2 Trial arm overview

We test:

- The message that participants see whether 1) ***Info salience*** or 2) ***Implications***
- Whether participants are shown a 1) ***Message + no granular choice*** or a 2) ***Message + granular choice*** i.e whether participants are required to share all data or can make a granular choice about the data categories that they share.

This results in 2 x 2 trial design as illustrated in Figure 3, giving us the four intervention arms and a control arm. The actual interventions are described in section 3 and illustrated by Figures 9 -12.

Figure 3: Overview of trial arms

2 x 2 trial design		
	Info salience message which makes the information regarding what data is collected more salient.	**Implications message** that outlines who the data will be shared with and how it will be used.
No granular choice	Intervention 1	Intervention 2
Granular choice	Intervention 3	Intervention 4

Control arm

When designing the control arm of the trial, we aimed to replicate a typical social media platform, with a simple message at sign-up. The Control arm is described in section 3 and illustrated by Figure 6.

Hypotheses

Our hypotheses for the trial are that when it comes to comprehension of what data is being collected, who it will be shared with, and how it will be used:

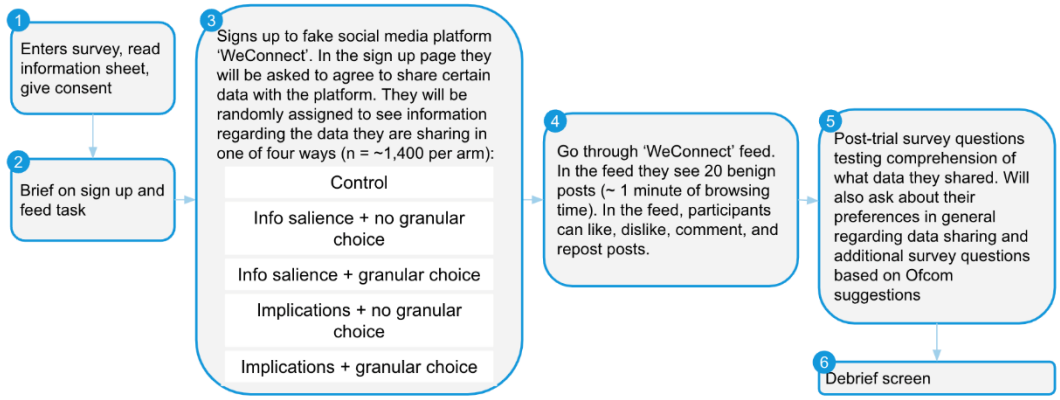
1. Making this information salient will improve user comprehension
2. Providing users with clear implications of how this will be used will improve user comprehension
3. Giving users more granular control over the types of data they share and who they can share this with will improve user comprehension

3. Methodology

3.1 Trial design

To answer our research questions, BIT designed a simulated social media platform that mimicked real platforms. The simulated environment was embedded into an experimental survey with an RCT design. In an RCT, research participants are randomly divided into different groups and exposed to either an intervention or a control. Due to the random assignment into experimental arms, intergroup differences in outcome measures such as people's comprehension scores, or how frequently they click on a link, can be causally attributed to the interventions participants were exposed to. Our trial design allowed us to measure the causal impact the different interventions have on participants' behaviours and attitudes. Figure 4 illustrates the flow of the experiment.

Figure 4. Participant journey.



3.2 Simulated social media platform

Platform design

BIT designed the WeConnect platform, with the intention of facilitating a trial environment that mimicked real experiences on social media as much as possible to increase the external validity of our findings. External validity refers to the extent to which the findings of a study can be generalised to, and are representative of, real-world populations, settings, and conditions beyond the specific context of the research. While WeConnect was not based on one sole real-world platform, its design was inspired by many of the most popular platforms. By making participants' experiences on WeConnect as realistic as possible, we aimed to generate findings that indicated how our interventions would impact users' understanding of how their data may be protected on actual platforms.

In the previous Sign-up trial by Ofcom and BIT using a similar WeConnect platform, 61% said WeConnect was similar or very similar to platforms they had used before and 90% said WeConnect was easy or very easy to use. [39]

Initial user journey steps

Participants begin by reading an information sheet which explains that they are requested to sign up for and engage with a social media platform, followed by completing a short questionnaire. Before proceeding, participants must provide informed consent and pass a brief attention-checking test. They move onto the WeConnect welcome screen (Figure 5) where they are assigned a user name (DelphiOracle23!) and then are prompted to enable notifications from WeConnect (Figure 6).[40]

Figure 5. Welcome screen.

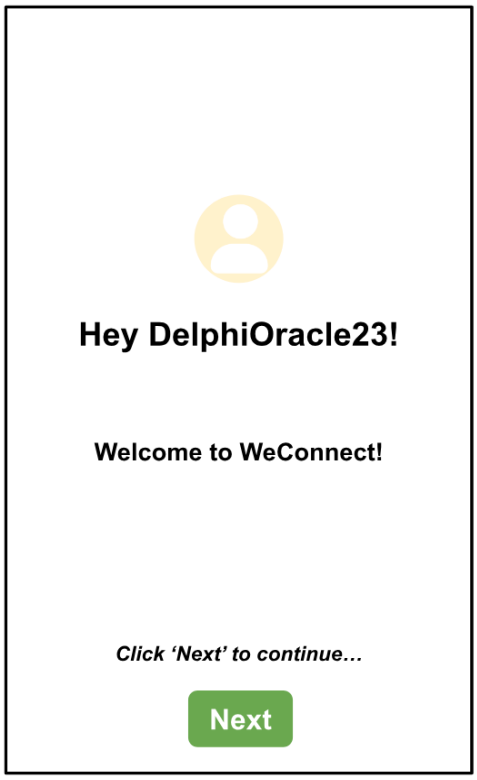
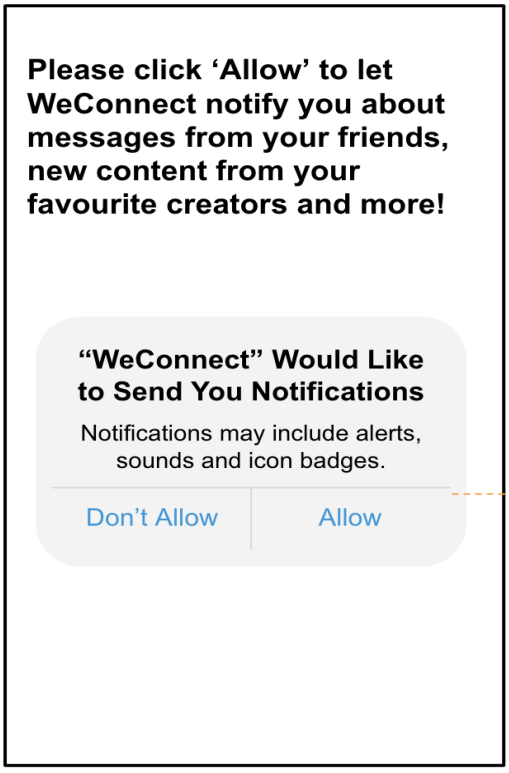


Figure 6. Allow notifications screen.



Main task

Participants are asked to sign up to the WeConnect platform, with the specific sign-up screens they see depending on the trial arm to which they are randomly assigned. As previously explained, this study employs a 2x2 trial design with 4 intervention arms and a control arm. For the intervention arms, participants are presented with either an ***Info***

[39] Ofcom (2024, May 21). Behavioural insights to empower social media users. Retrieved September 8, 2024 from https://www.ofcom.org.uk/online-safety/safety-technology/behavioural-insights-to-empower-social-media-users/

[40] Participants will go to the next screen, regardless of whether or not they allow notifications.

salience message or an ***Implications*** message. Participants are shown the ***Message + no granular choice*** or the ***Message + granular choice*** about the data they share.

All participants are asked to select up to three of their interests (see Figure 7). The "Skip" button (located at the top right) appears only in the ***Message + granular choice*** arms since it is only in these arms that participants are offered an implicit choice to not disclose their interests to the platform and not have their experience on the platform tailored to these interests.

Data-sharing

Participants are asked to provide three categories of data: their date of birth, gender, and the region of the UK where they live. Region is a deliberately broad indication of the participant's location to avoid raising concerns about their potential identification.

Figure 8 shows the ***Control*** arm sign-up screen. If a participant in the Control arm clicks on the Privacy Policy link, then a pop-up appears saying that the age, gender, and region data that they provide is used to optimise their experience and may be shared with commercial partners.

Figure 7. Interests screen.

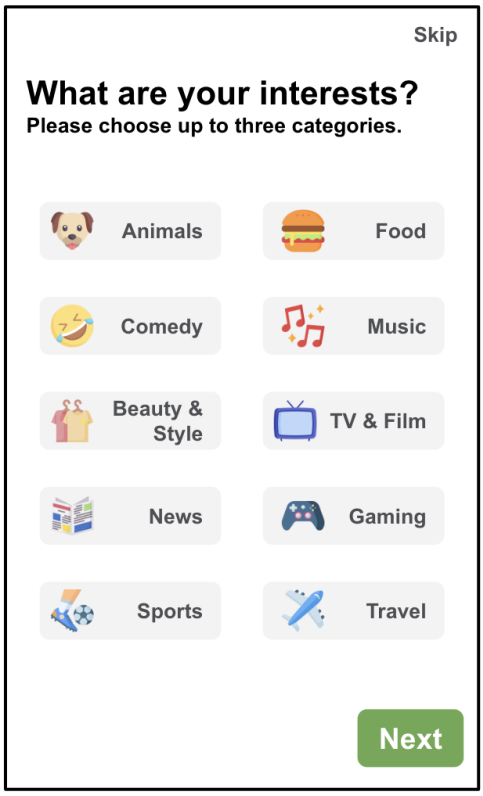
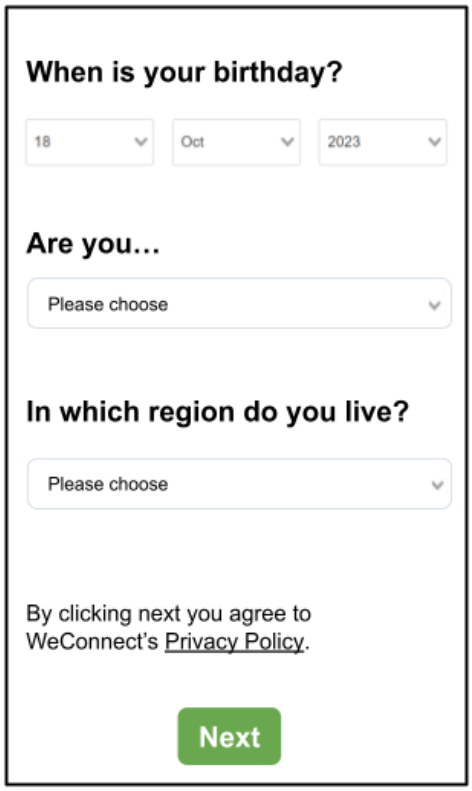


Figure 8. Sign-up screen: Control.



The sign-up screens for the ***Info salience + no granular choice*** (Figure 9) and ***Implications + no granular choice*** (Figure 10) interventions are similar except for the inclusion of different messages as explained below.

Figure 9. Sign-up screen: Info salience + no granular choice.

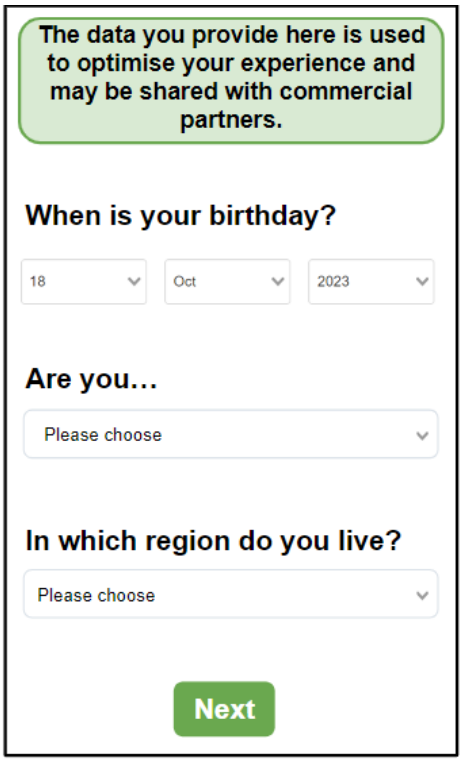
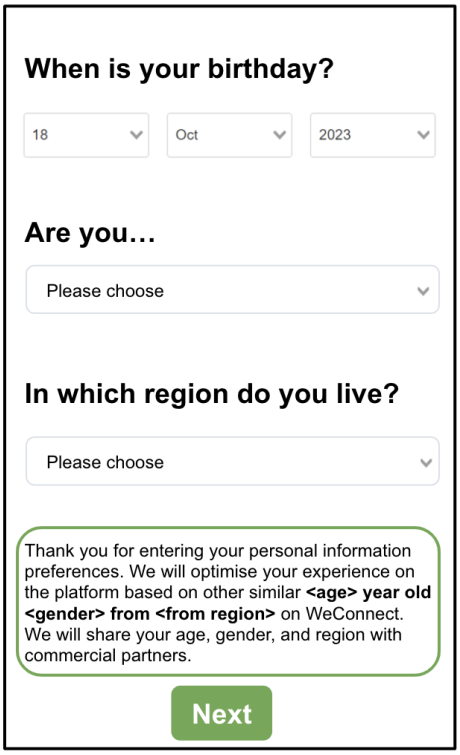


Figure 10. Sign-up screen: Implications + no granular choice.



For the ***Message + granular choice*** interventions, participants are presented with the message and, in addition, up to three different data-sharing options for each of the three categories of data: "Prefer not to share," "Share with platform only," and "Share with platform and commercial partners" (Platforms typically require the sharing of age data so the "Prefer not to share" option is not available for this data category.). Figures 11 and 12 show the sign-up screens for the ***Info salience + granular choice*** and ***Implications + granular choice*** interventions respectively.

Figure 11. Sign-up screen: Info salience + granular choice.

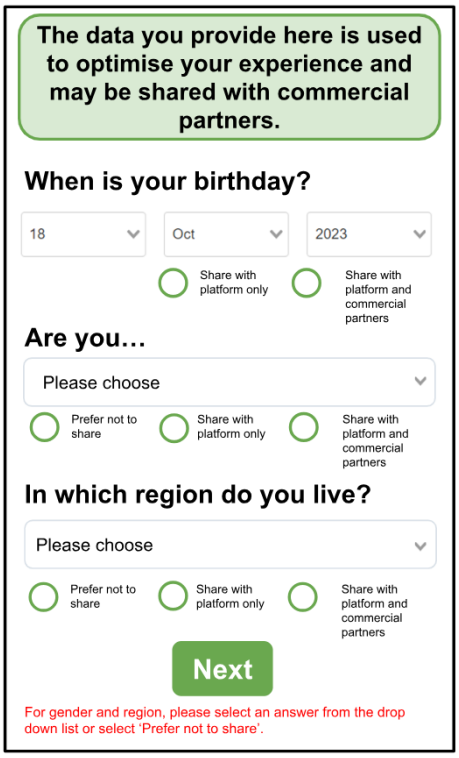
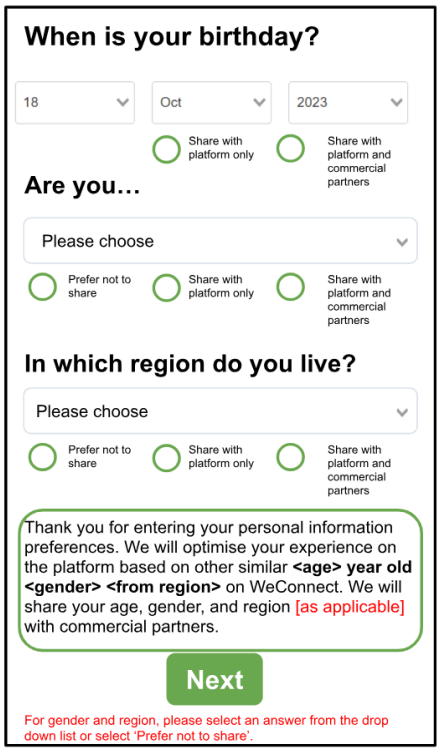


Figure 12. Sign-up screen: Implications + granular choice.



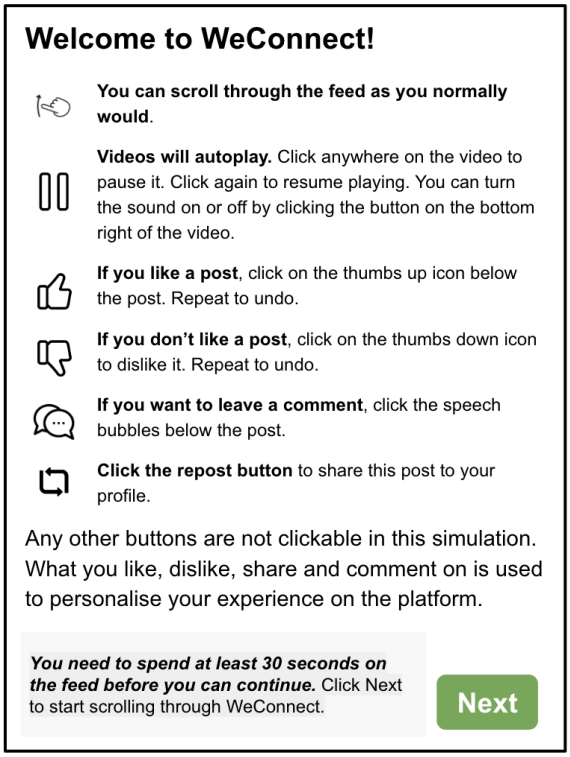
Messages

The sign-up screen for the ***Info salience*** intervention arms also includes the message: "The data you provide here is used to optimise your experience and may be shared with commercial partners." (see figures 9 and 11). The ***Implications + no granular choice*** intervention message, explicitly specifies that the participant's age, region and gender will be used to optimise their experience based on people with similar characteristics (see Figure 10) and be shared with commercial partners. The ***Implications + granular choice*** intervention message is similar, but the exact phrasing depends on which data categories the participant agreed to share with the platform and its commercial partners (see Figure 12).

Social media feed

Following sign-up, participants are presented with a Welcome screen. The Welcome screen for the treatment arms (see Figure 13) differs from the control arm only by the inclusion of a sentence explaining how their engagement data is used. Participants then see a social media feed of 20 benign posts (with no violative content) with which they can interact, including liking posts or leaving comments.

Figure 13. Welcome screen for intervention arms.



Post-feed survey

After interacting with the main feed, participants completed a post-feed survey. This survey comprised a standard set of questions for all participants, designed to assess:

- Comprehension: Participants' understanding of the data collected by the platform and how it is utilised.
- Sentiment: Participants' emotional response to the sign-up page (e.g., positive, negative, neutral).
- Previous platform use: Participants' history of using similar online platforms.
- Data sharing experience: Participants' previous knowledge or experience with data-sharing practices.

In addition to the standard set, participants who interacted with either of the granular choice data-sharing intervention arms were presented with further questions. These questions aimed to elicit their motivations for (or against) sharing their data.

3.3 Sampling and data collection

Sample criteria

We recruited a nationally representative sample of adult internet users from the UK. Participants were required to:

- be aged 18 years or older
- live in the UK

Power calculations

The sample size was based on power calculations for our primary outcome (overall comprehension score; see section 3.5). In the absence of published online experiments looking at comparable outcomes, we conducted calculations for baseline proportions ranging from 50%-80% (see Table 4), assuming 80% statistical power and a significance level of α = 0.83% (5% / 6; correcting for 6 comparisons in primary analyses[41]). A sample size of 7,000 participants (1,400 participants per arm) would allow us to detect a minimum detectable effect size of 4.99pp (percentage point difference) between arms with an overall comprehension score of 80% in the control arm. We deemed this sufficient for an online experiment and consistent with previous online experiments conducted by Ofcom[42].

Table 4. Power calculations for a sample of 7000 participants (1,400 per arm) assuming 80% statistical power and a significance level of α = 0.83%.

Outcome baseline	Minimum detectable effect size (% point difference)
60%	6.56pp
65%	6.13pp
80%	4.99pp

Data collection

All participants were recruited through the panel aggregator Lucid, with payments being administered by the panel providers they're registered with. Participants were only invited to take part in the experiment by Lucid if they were aged 18 years or older and lived in the UK.

To identify and mitigate any data protection risks, Ofcom and BIT conducted a data protection impact assessment of the research that was signed off by Ofcom's data protection officer and corporate secretary. As part of the trial, no personally identifiable data was collected from the participants. Participants were made aware of that through their panel providers before being redirected to our experiment.

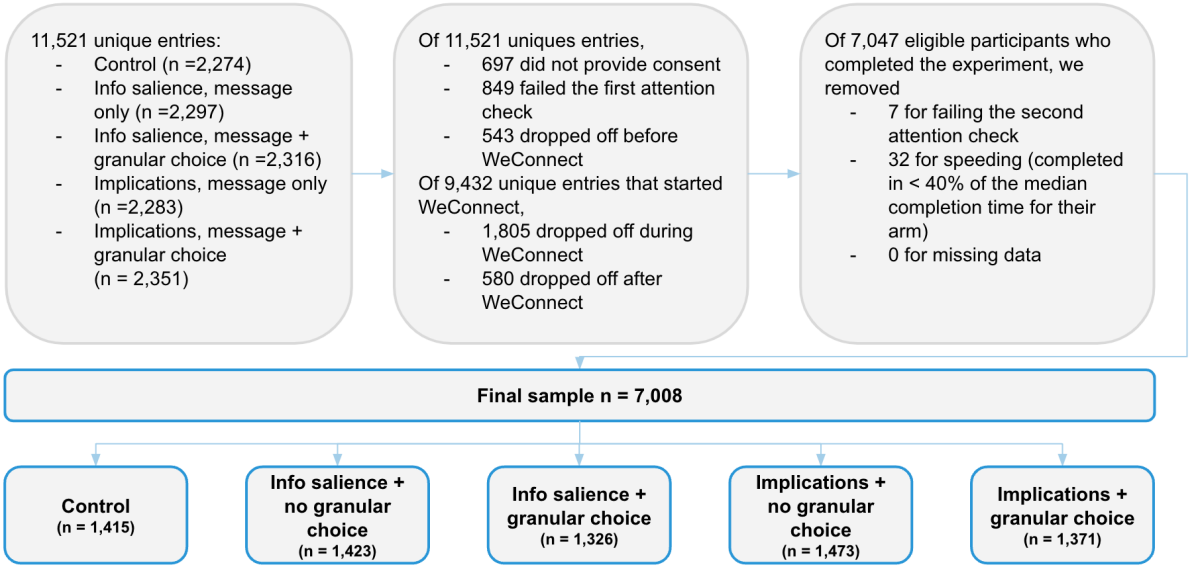
To ensure there were no significant issues concerning data collection, we conducted a soft launch prior to the full launch of the trial. At this stage, the trial launched but only recruited ~100 participants. Data collection was then paused while we conducted diagnostic checks to ensure data capture proceeded as planned and participants were not reporting any issues with the experiment. During the data collection period, our platform experienced a technical issue where individuals were registering as entering the experiment multiple times on the

[41] Note that for our analyses we use a Benjamini-Hochberg (BH) correction to adjust for multiple comparisons; however, it is not possible to apply this correction prior to data collection and so for power calculations we use a more conservative Bonferroni correction.
[42] Ofcom. (2023). *Boosting users' safety online: Microtutorials.*

first page. This inflated the number of individuals who entered the first page but did not proceed to complete the experiment. As a result, the number who did not consent appears higher than it was in reality. During data collection, we continued to monitor the incoming sample against the quotas and flagged any criteria adjustments to the panel provider.

In the trial, we imposed additional pre-specified data quality measures in the form of attention and validation checks—only participants who passed these were retained for the analysis. The attention checks were brief questions near the beginning and the end of the trial, which asked people to choose a particular response item to confirm they are paying attention. As a validation check, we looked at the time participants spent working through the trial and excluded those who were speeding through it i.e. their survey completion time was less than 40% of the median completion time of that arm. Figure 14 shows the full participant flow with numbers on how many submissions were excluded at which part of the process.

Figure 14. Participant flow diagram



3.4 Ethical considerations

The research went through BIT's internal ethics review process and received full approval. The trial was assessed as low-risk. However, the primary ethical concern stemmed from qualitative research reviewed in the evidence scan, which indicated that some individuals may find the disclosure of how their data is tracked to be "creepy" or "unsettling".[43] To mitigate this potential harm, we implemented the following safeguards:

Prior to the trial

- The BIT project team collaborated with Ofcom to develop appropriate messaging for the trial.

During the trial

[43] Pangrazio, L., & Selwyn, N. (2018). "It's not like it's life or death or whatever": Young people's understandings of social media data. *Social Media+ Society*, 4(3).

- **Informed Consent**: We obtained explicit informed consent from all participants before the trial commenced. This involved a clear explanation of the research purpose and data collected. Participants were explicitly informed of their right to withdraw from the research at any point during the experiment.
- **Transparency:** Participants received clear and comprehensive consent forms detailing the research purpose, potential risks involved, and their right to opt-out at any time. Additionally, both the consent forms and the survey landing page explicitly communicated the option to withdraw from the experiment at any point.
- **Skip to survey:** Throughout the trial, participants were empowered to withdraw from the WeConnect sign-up. To facilitate this, a prominent emergency exit button was implemented within the data sharing screen. This button sent participants to the survey section of the trial, ensuring participants can still complete the survey but mitigating any discomfort around providing demographic information.

After the trial

- **Debriefing and support**: All participants, including those who opted-out at any stage, were presented with a debriefing screen upon completion of the trial. This screen provided links to relevant support resources such as the Samaritans and Mind Infoline.

3.5 Analytical framework

Data checks

First, we checked for differential attrition on a data set of unique entries to the experiment who provided consent, passed the attention check and who made it to or past the WeConnect platform without dropping off (n = 9,432) using a linear regression with the last page of the experiment they completed as the outcome variable and the treatment arm as the predictor variable. We then checked that our final sample (n = 7,008) was balanced in terms of demographics (age, gender, ethnicity, annual household income (pre-tax), education, urbanicity, employment, region, social grade, and social media platform use) across treatment arms using chi-squared tests for categorical variables and analysis of variance for continuous variables. We also checked whether the sample of people who dropped off the experiment on or after the WeConnect screen (n = 2,385) was balanced for demographic variables collected prior to the WeConnect screen (age, gender, ethnicity, annual household income (pre-tax), education, urbanicity, employment, region).

Analytical strategy

We followed a pre-specified analysis framework which involved allocating our variables to primary, secondary, and exploratory outcomes based on an agreed upon hierarchy. We used a significance level of 5% throughout all analyses, correcting for multiple comparisons separately within the primary analysis and across the secondary analyses. All analyses control for age, gender, income, education, ethnicity, social media platform use, and whether the participant completed each of the previous trials using WeConnect.

We ran these analyses and made the following six comparisons for all primary and the majority of exploratory analyses:

- Control vs. Info salience (across no granular choice and granular choice arms)
- Control vs. Implications (across no granular choice and granular choice arms)
- Control vs. Message + no granular choice (across Info salience and Implications arms)
- Control vs. Message + granular choice (across Info salience and Implications arms)
- Info salience vs. Implications (across no granular choice and granular choice arms)
- Message + no granular choice vs. Message + granular choice (across Info salience and Implications arms)

For the secondary analysis, we compare all individual treatment arms against each other (4 comparisons).

Primary analysis

The primary outcome was the overall comprehension score. Each individual comprehension item was coded as 1 if correct and 0 if incorrect. We divided the total number of correct items per participant by 23 (the total number of comprehension items) to make the overall comprehension score (a proportion of items they got correct).

We used a Logit regression to analyse this outcome. We assessed the goodness of fit for this model using a Hosmer-Lemeshow test.

Sensitivity analysis

As a sensitivity check, we reran the primary analysis, excluding participants who have participated in a previous trial using the WeConnect platform.

Secondary analysis

The secondary analysis was the same as the primary analysis, but we made comparisons to each individual treatment arm.

We dropped comparisons to the Control arm when the treatment arms performed statistically significantly better than the Control in the primary analysis in order to limit the number of comparisons. This resulted in 4 comparisons for the secondary analysis:

- Info salience + no granular choice vs. Info salience + granular choice
- Implications + no granular choice vs. Implications + granular choice
- Info salience + no granular choice vs. Implications + no granular choice
- Info salience + granular choice vs. Implications + granular choice

Exploratory analysis

As exploratory analysis, we looked at the following outcomes:

- **Exploratory analysis 1:** Comprehension of what data is collected. This is the proportion of 12 comprehension questions they got correct. We used a Logit regression to analyse this outcome.

- **Exploratory analysis 2:** Comprehension of who the data may be shared with. This is the proportion of 6 comprehension questions they got correct. We used a Logit regression to analyse this outcome.
- **Exploratory analysis 3:** Comprehension of how the data is used. This is the proportion of 5 comprehension questions they got correct. We used a Logit regression to analyse this outcome.
- **Exploratory analysis 4:** Whether participants shared their age with WeConnect and their commercial partners (1) or not (0). We used a Logit regression to analyse this outcome. This was only measured and analysed in the Message + granular choice, so we only made a comparison between the Info salience + granular choice and Implications + granular choice arms.
- **Exploratory analysis 5:** Whether participants shared their gender, shared it with WeConnect or shared it with WeConnect and their commercial partners. We used an multinomial regression[44] to analyse this outcome. This was only measured and analysed in the Message + granular choice arms, so we only made a comparison between the Info salience + granular choice and Implications + granular choice arms.
- **Exploratory analysis 6:** Whether participants shared their region, shared it with WeConnect or shared it with WeConnect and their commercial partners. We used a ordered logit regression[45] to analyse this outcome. This was only measured and analysed in the Message + granular choice, so we only made a comparison between the Info salience + granular choice and Implications + granular choice arms.

Subgroups

We reran the primary analysis within the each of the following subgroups:

- Age: 18-24
- Age: 25-44
- Age: 45-64
- Age: 65+
- Gender: Male
- Gender: Female
- Social grade: AB
- Social grade: C1C2
- Social grade: DE

[44] The proportional odds assumption was violated for this outcome. We otherwise would have used an ordered logit regression.
[45] The proportional odds assumption was not violated for this outcome.

4. Results

4.1 Sample characteristics

We found evidence for an overall effect of differential attrition (adjusted R^2 = 0.004379, $F(4, 9427) = 11.37$, $p < .01$). The experiment consisted of 21 separate screens that participants had to progress through in order, and participants who made it to screen 21 were considered to have completed the experiment. Of participants who made it to the main task of the WeConnect feed (screen 5 of the 21 experiment screens; n = 9,432), those in the Control arm had a mean last experiment screen of 17.6. Participants in each of the Message + granular choice arms were statistically significantly more likely to drop out of the experiment compared to the Control arm (Info salience + granular choice, β = -0.94, $p < .01$; Implications + granular choice, β = -91, $p < .01$). There were no significant differences in drop out between the Control arm and the Message + no granular choice arms, $p > .05$. The majority of the dropouts across arms were on the WeConnect screen. The proportion of participants who dropped off the experiment on WeConnect screen, after the WeConnect screen and who completed the experiment are reported in Table 5. One possible explanation for this result is that the granular choice may have been perceived by some participants as being too much effort which increased the likelihood of dropping off. The sample of people who dropped off on or after the WeConnect screen was balanced across arms for all demographic variables (all $p > .05$), except for urbanicity (X^2 (8) = 24.33, $p < .01$). Across all levels of urbanicity, the granular choice arms showed the highest number of people dropping off the experiment.

Table 5. Of those who made it to or past the screen with WeConnect, percent who dropped off the experiment at different stages.

Arm	% who dropped off during WeConnect	% who dropped off on a screen after WeConnect	% who completed the experiment
Control	17%	6%	77%
Info salience + no granular choice	18%	5%	77%
Info salience + granular choice	22%	7%	71%
Implications + no granular choice	17%	6%	77%
Implications + granular choice	22%	7%	71%

We conducted sensitivity checks to correct for the differential attrition observed in the Message + granular choice arms for comparisons of primary, secondary and exploratory analysis on comprehension outcomes. We found a similar pattern of results, so report these sensitivity checks in the appendix.

The demographics for our final sample (N = 7,008) are reported in Table 6. The sample was balanced across treatment arms for all variables (all $p > .05$), except for income (X^2 (4) = 11.35, $p < .05$) and employment status (X^2 (8) = 16.45, $p < .05$). N per arm for unbalanced demographics are reported in Table 7. We include income as covariate in all statistical models as planned, minimising the effects of these imbalances. We added employment status as a covariate to all statistical models. We didn't find evidence of collinearity between covariates (Income: GVIF(1) = 1.19; Employment status: aGVIF(2) = 1.10).

Table 6. Sample demographics for final sample (n = 7,008).

Age	
18-24	11%
25-44	36%
45-64	33%
65 and over	20%
Gender	
Male	51%
Female	47%
Other (e.g. nonbinary)	3%
Ethnicity	
White	85%
Asian	6%
Black	6%
Mixed or other	3%
Annual pre-tax income	
£40,000 or over	47%
Less than £40,000	53%
Education	
Degree	32%
No degree	65%
Prefer not to say	3%
Urbanicity	
Urban	32%
Suburban	47%
Rural	21%
Employed	
Employed	64%
Unemployed	4%
Inactive	32%

Location	
London	13%
Midlands	16%
North	25%
South & East	30%
Wales, Scotland & Northern Ireland	15%
Social grade	
AB	36%
C1C2	45%
DE	19%
Don't know	< 1%

Note. Some variable totals do not sum to 100% due to rounding.

Table 7. N per arm for unbalanced demographics.

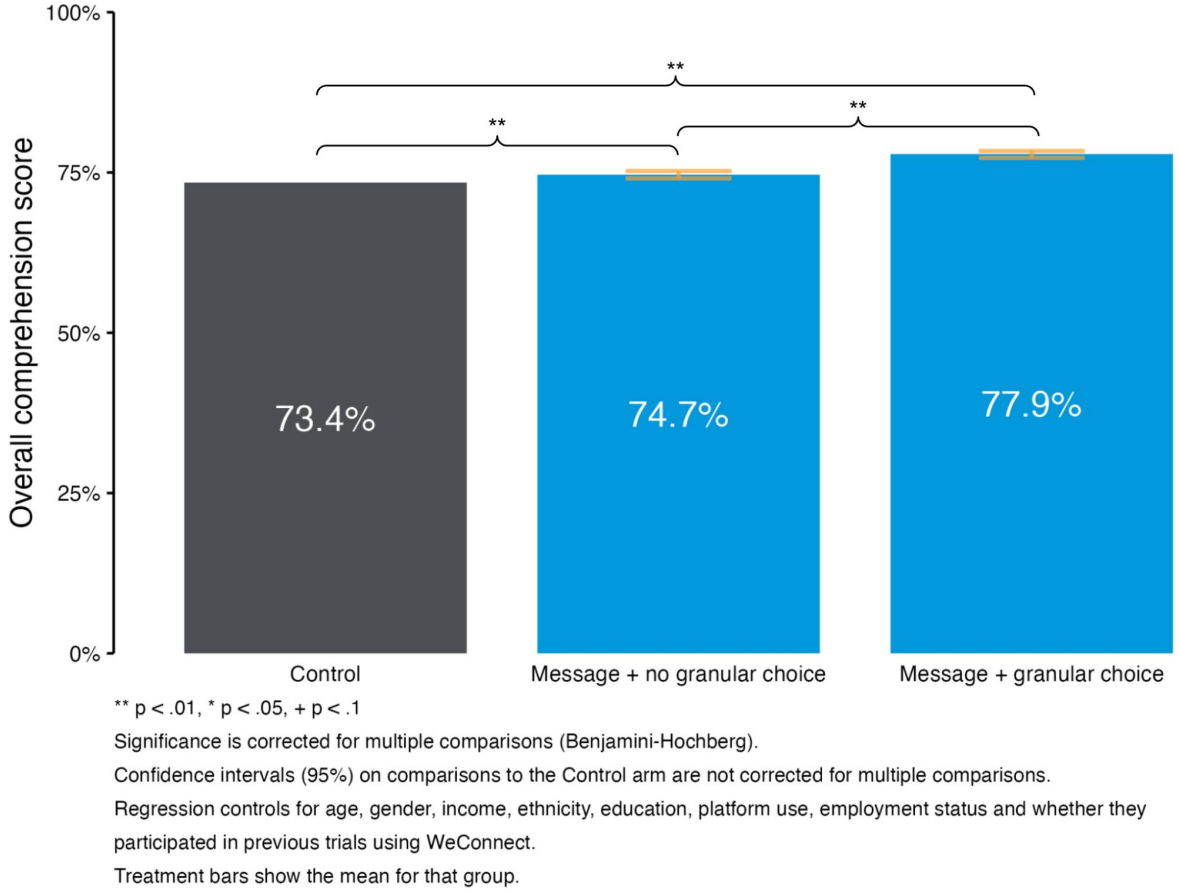
	Control	Info salience + no granular choice	Implications + no granular choice	Info salience + granular choice	Implications + granular choice
Employment status (N who are employed)	921	904	875	927	866
Income (N who have above median income)	641	668	674	679	622

4.2 Primary analysis: Overall comprehension score

Participants who saw one of the messages, either with or without a granular choice had statistically significantly higher overall comprehension scores than those in the Control arm, $p < .01$ (74.7% for Message + no granular choice arms and 77.9% for Message + granular choice arms compared to 73.4% for the Control arm). Participants in the Message + granular choice arms also had statistically significantly higher comprehension scores than those in the Message + no granular choice arms, $p < .01$.[46] Results are shown in Figure 15.

[46] A Hosmer and Lemeshow test showed the logit regression used for the primary analysis was a good fit (X^2 (8) = .5561, p = .9998). The Hosmer and Lemeshow test checks how well our logistic regression fits the actual data. It does this by comparing observed outcomes (what actually happened) with predicted outcomes (what our logistic regression says should happen). In this instance, the test did not provide evidence for a difference between observed and predicted outcomes ($p > .05$), which indicates our logistic regression fits the data well and would make accurate predictions.

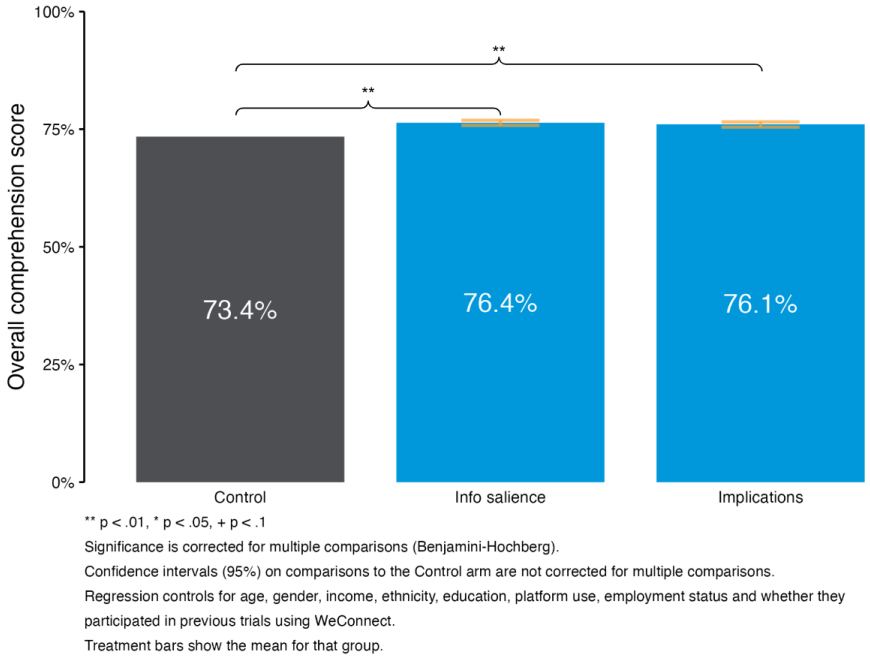
Figure 15. Overall comprehension score by intervention type.



** p < .01, * p < .05, + p < .1
Significance is corrected for multiple comparisons (Benjamini-Hochberg).
Confidence intervals (95%) on comparisons to the Control arm are not corrected for multiple comparisons.
Regression controls for age, gender, income, ethnicity, education, platform use, employment status and whether they participated in previous trials using WeConnect.
Treatment bars show the mean for that group.

Participants who saw either the Info salience or the Implication message had a statistically significantly higher overall comprehension score, than those in the Control arm, both $p < .01$ (76.4% for Info salience arms and 76.1% for Implications arms compared to 73.4% for the Control arm). There were no significant differences between the Info salience arms, and the Implications arms, $p > .05$. Results are shown in Figure 16. A Hosmer and Lemeshow test showed the logit regression used for the primary analysis was a good fit (X^2 (8) = .7264, p = .9995).

Figure 16. Overall comprehension score by message.

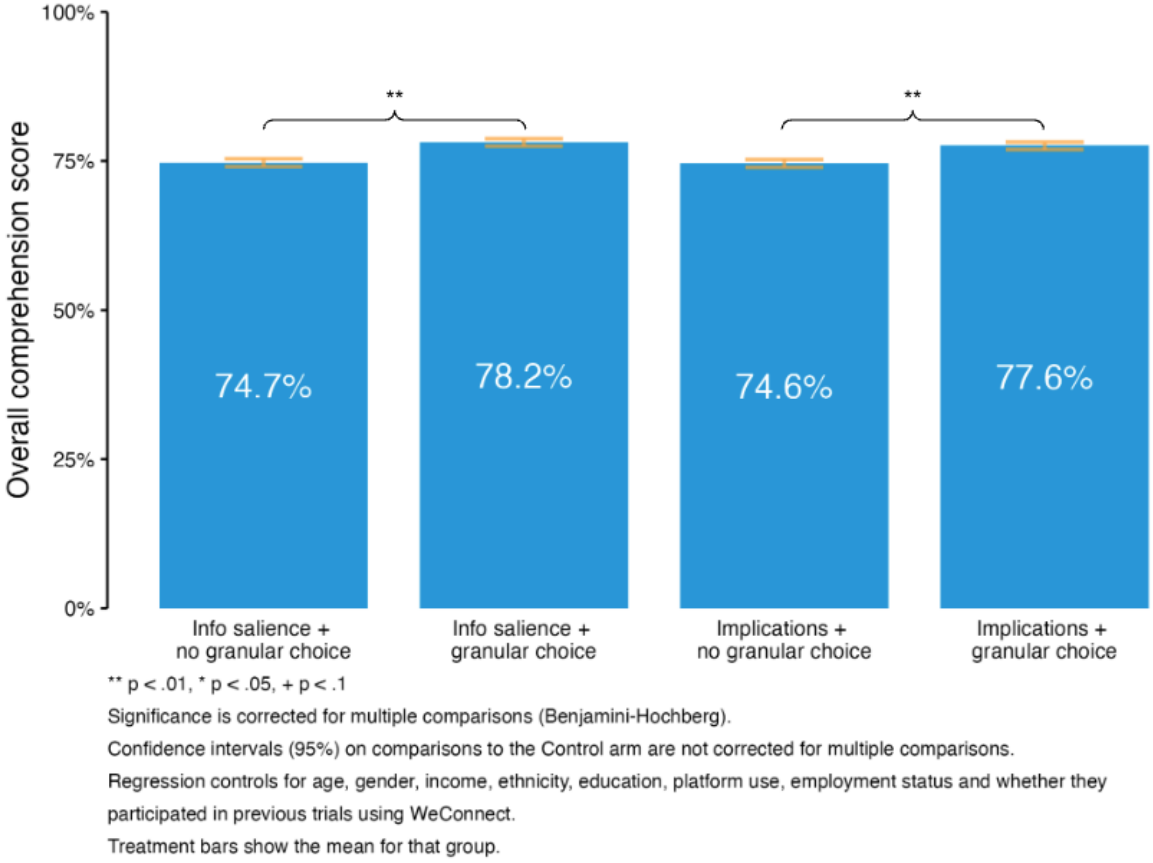


4.3 Secondary analysis: Further comparisons on the primary outcome

Because the treatment arms performed statistically significantly better than the Control in the Primary analysis, we will compare the individual treatment arms to each other and not to the Control.

Participants who saw the Info salience + granular choice had statistically significantly higher overall comprehension scores than those who saw the Info salience + no granular choice, $p < .01$ (78.2% vs. 74.7%). Those who saw the Implications + granular choice had statistically significantly higher overall comprehension than those who saw the same message + no granular choice, $p < .01$ (77.6% vs 74.6%). There were no significant differences between the messages within the Message + no granular choice arms, and the messages within the Message + granular choice arms, $p > .05$. Results are shown in Figure 17.

Figure 17. Overall comprehension score by individual treatment arms.



A sensitivity check correcting for differential attrition in the Message + granular choice arms found comprehension was significantly higher for those who saw the Info salience + granular choice than those who saw the Implications + granular choice (78.2% vs. 77.6%, $p < .05$). The sensitivity check increases the precision of our estimates by weighting the data in a way that makes it more similar to the original randomisation. As a result, the sensitivity analysis has smaller standard errors, allowing us to detect significant differences. Though these findings indicate the info salience message may perform better than the implications message when combined with the granular choice, the difference observed between the arms is small in magnitude (0.6 percentage points). We did not correct for multiple comparisons in the sensitivity checks which may also account for this result. The results of the rest of the comparisons were consistent with the main analysis.

4.4 Exploratory analysis

Note that exploratory analyses have not been corrected for multiple comparisons. Correcting for multiple comparisons is a statistical adjustment made when analysing data that helps to reduce the probability of incorrectly rejecting a true null hypothesis (a "false positive"). The approach to not do multiple comparison corrections for exploratory comparisons is driven by interpretation considerations. For exploratory comparisons, we focus more on the direction and magnitude of effects, rather than significance and power. A statistically significant result for an exploratory comparison is generally reported as an opportunity for further research. Exploratory comparisons help us to explain the results arising from our primary and

secondary analyses, but they are not the focus of the interventions. Therefore, the findings in this section should be taken as exploratory rather than hypothesis confirming.

Comprehension outcomes

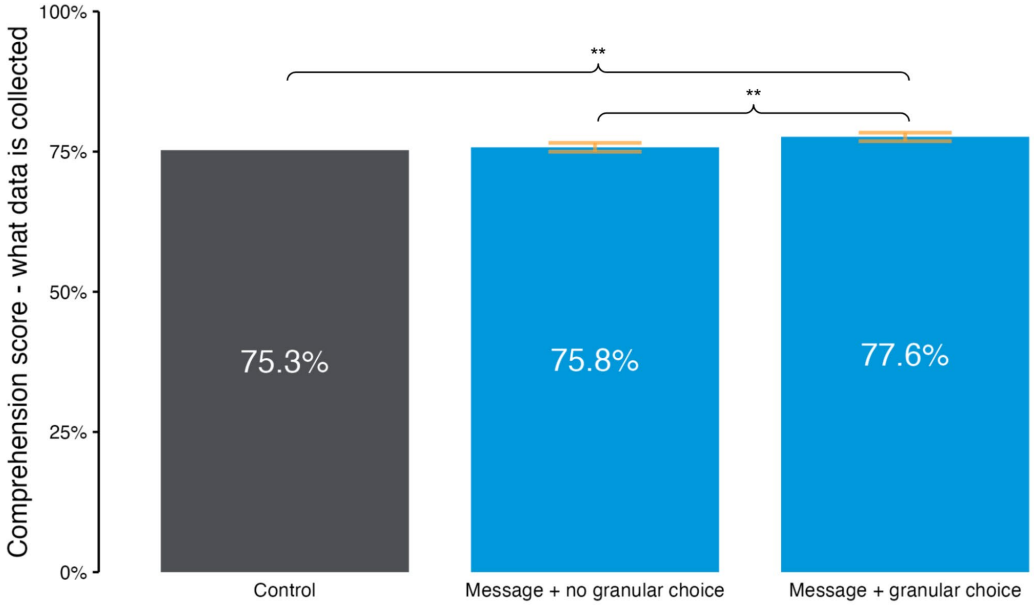
Overall comprehension was derived from the comprehension of the following information:

- what data is collected (12 items)
- the people and organisations who have access to the data (6 items)
- how the data is used (5 items)

Comprehension of what data is collected

Participants had an average comprehension score of what data is collected of 76.4%. Participants in the Message + granular choice arms had statistically significantly better comprehension scores for what data is collected (77.6%) than those in the Control arm (75.3%) and those in the Message + no granular choice arms (75.8%), $p < .01$. There were no significant differences between the Message + no granular choice arms and the Control arm, $p > .05$. Results are shown in Figure 18.

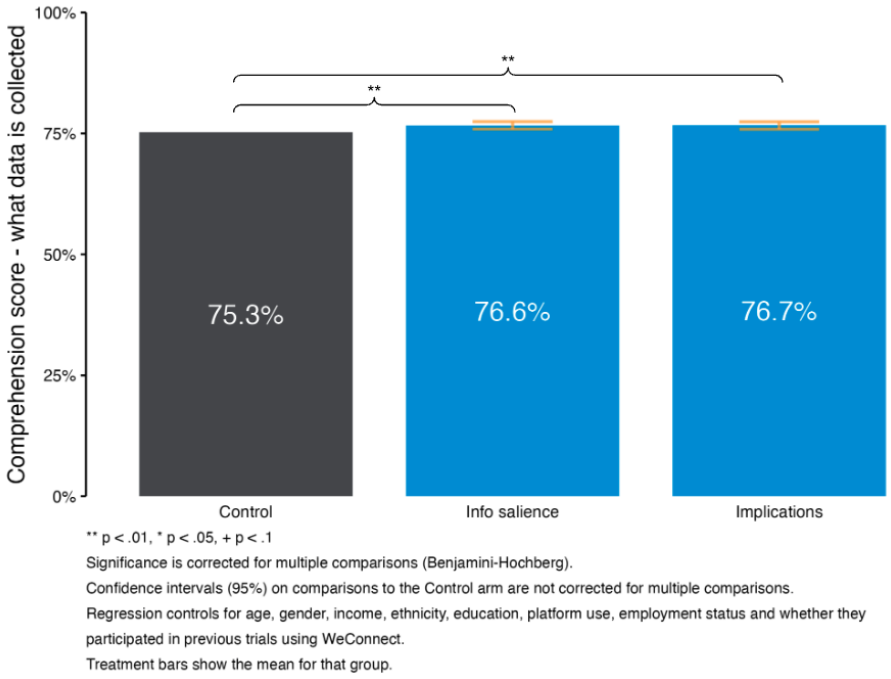
Figure 18. Comprehension of what data is collected by intervention type



** p < .01, * p < .05, + p < .1
Significance is corrected for multiple comparisons (Benjamini-Hochberg).
Confidence intervals (95%) on comparisons to the Control arm are not corrected for multiple comparisons.
Regression controls for age, gender, income, ethnicity, education, platform use, employment status and whether they participated in previous trials using WeConnect.
Treatment bars show the mean for that group.

Participants who saw either the Info salience message, or the Implication message had statistically significantly higher comprehension of what data is collected by WeConnect, than those in the Control arm, both $p < .01$ (76.6% for Info salience arms and 76.7% for Implications arms compared to 75.3% for the Control arm). There were no significant differences between the Info salience message, and the Implications message, $p > .05$. Results are shown in Figure 19.

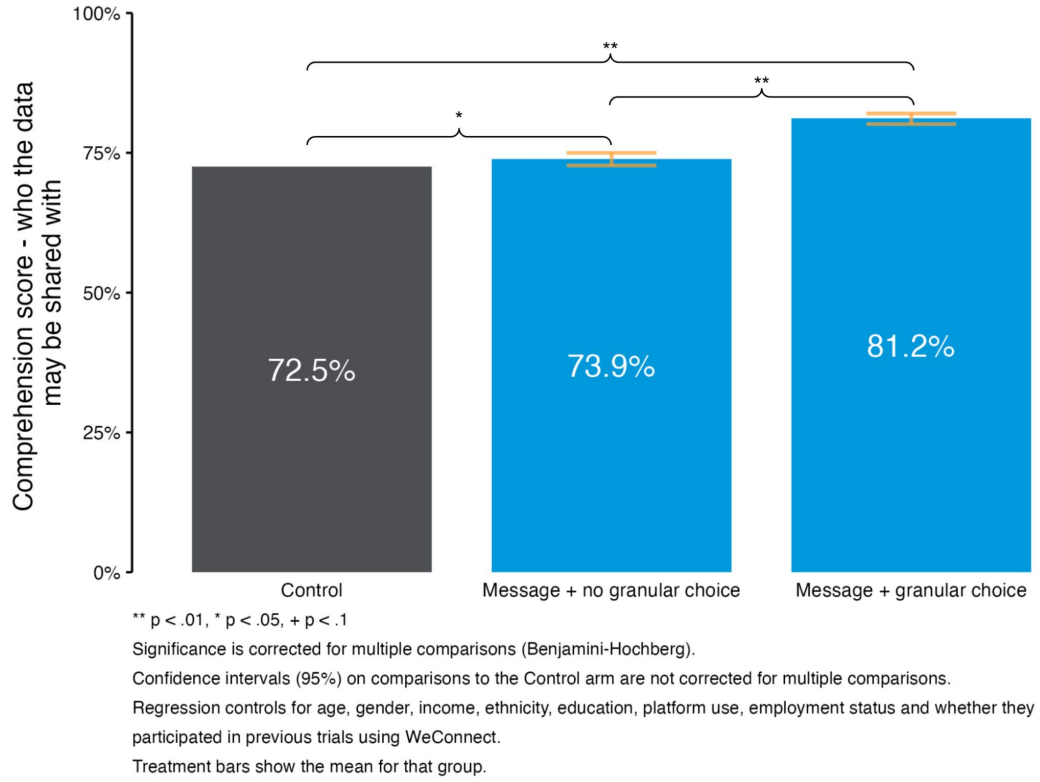
Figure 19. Comprehension of what data is collected by message.



Comprehension of who the data may be shared with

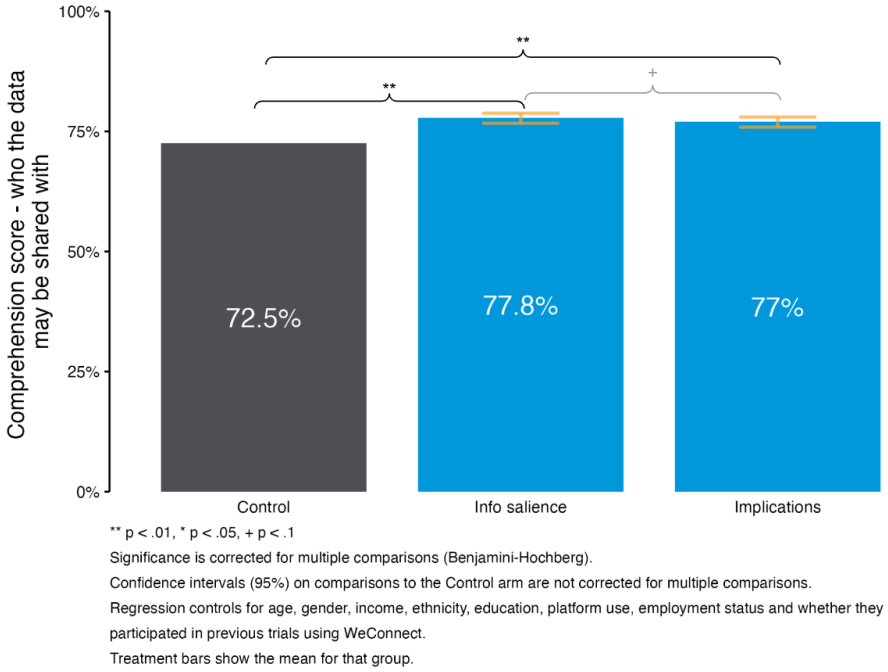
Participants had an average comprehension score of who the data may be shared with of 76.4%. Participants in the Message + no granular choice and Message + granular choice arms had statistically significantly better comprehension of who WeConnect is asking for the data to be shared with than those in the Control arm (73.9% and 81.2% respectively compared to 72.5% in the Control arm), $p < .01$. Participants in the Message + granular choice arms had statistically significantly better comprehension on this than those in the Message + no granular choice arms, $p < 05$. Results are shown in Figure 20.

Figure 20. Comprehension of who the data may be shared with by intervention type.



Participants who saw either the Info salience message or the Implication message had statistically significantly higher comprehension of who WeConnect is asking for the data to be shared with, than those in the Control arm, both $p < .01$ (77.8% for Info salience arms and 77.0% for Implications arms compared to 72.5% for the Control arm). There was weak evidence suggesting that the Info salience arms had statistically significantly higher comprehension than the Implications arms, $p > .1$. Results are shown in Figure 21.

Figure 21. Comprehension of who the data may be shared with by message.

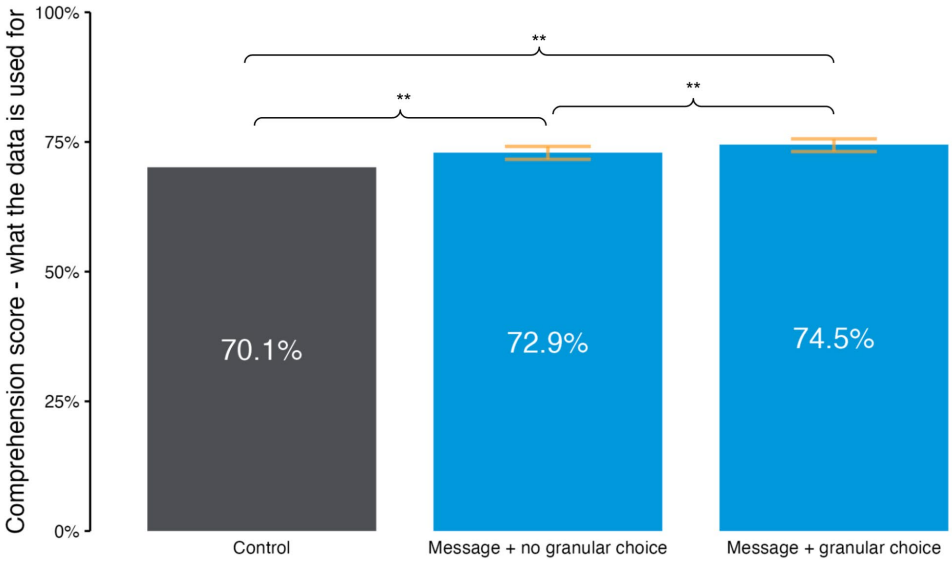


** p < .01, * p < .05, + p < .1
Significance is corrected for multiple comparisons (Benjamini-Hochberg).
Confidence intervals (95%) on comparisons to the Control arm are not corrected for multiple comparisons.
Regression controls for age, gender, income, ethnicity, education, platform use, employment status and whether they participated in previous trials using WeConnect.
Treatment bars show the mean for that group.

Comprehension of what the data is used for

Participants had an average comprehension score of what data is used for of 73.0%. Participants in the Message + no granular choice and Message + granular choice arms had statistically significantly better comprehension of what the data is used for than those in the Control arm (72.9% and 74.5% respectively), $p < .01$. Participants in the Message + granular choice arms had statistically significantly better comprehension on this than those in the Message + no granular choice arms, $p < 01$. Results are shown in Figure 22.

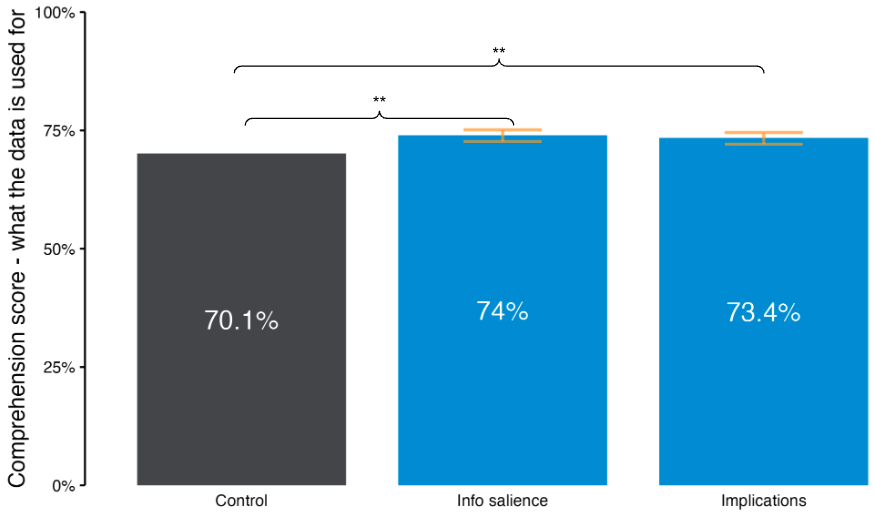
Figure 22. Comprehension of what the data is used for by intervention type.



** p < .01, * p < .05, + p < .1
Significance is corrected for multiple comparisons (Benjamini-Hochberg).
Confidence intervals (95%) on comparisons to the Control arm are not corrected for multiple comparisons.
Regression controls for age, gender, income, ethnicity, education, platform use, employment status and whether they participated in previous trials using WeConnect.
Treatment bars show the mean for that group.

Participants who saw either the Info salience message, or the Implication message had statistically significantly higher comprehension of what the data is used for, than those in the Control arm, both $p < .01$ (74.0% for Info salience arms and 73.4% for Implications arms compared to 70.1% for the Control arm). There were no significant differences between the Info salience arms, and the Implications arms, $p > .05$. Results are shown in Figure 23.

Figure 23. Comprehension of what the data is used for by message.

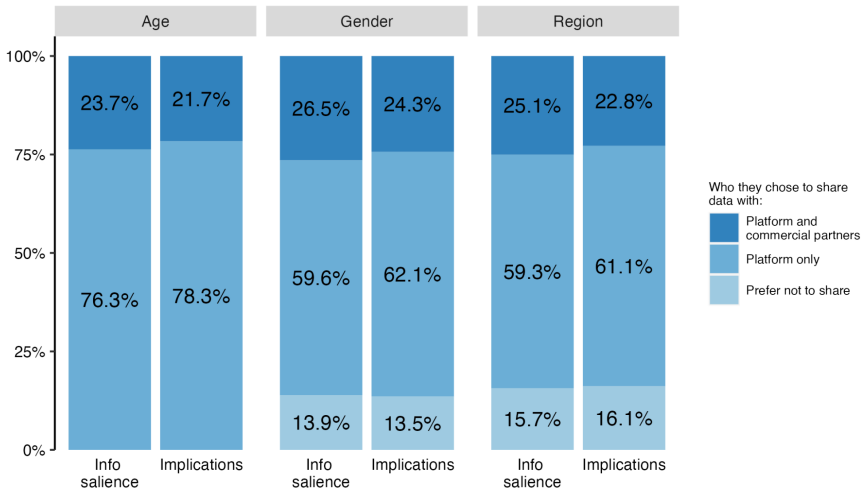


** p < .01, * p < .05, + p < .1
Significance is corrected for multiple comparisons (Benjamini-Hochberg).
Confidence intervals (95%) on comparisons to the Control arm are not corrected for multiple comparisons.
Regression controls for age, gender, income, ethnicity, education, platform use, employment status and whether they participated in previous trials using WeConnect.
Treatment bars show the mean for that group.

Sharing preferences in granular choice arms

We collected data on who participants chose to share their age, gender and region within the Message + granular choice arms. Results are shown in Figure 24.

Figure 24. Of people in granular choice arms, what information they chose to share with who.



** p < .01, * p < 0.5, + p < .1
Significance is not corrected for multiple comparisons.
Regression controls for age, gender, income, ethnicity, education, platform use, employment status and whether they participated in previous trials using WeConnect.
Participants were not given the option to not share their age.

Sharing age

Of those who completed the sign-up process in the Message + granular choice arms (n = 2,603), 22.7% chose to share their age with commercial partners and 77.3% shared it with WeConnect only. There were no significant differences between the Info salience and Implications messages in whether people chose to share their age between commercial partners, $p < .05$. Results are shown in Figure 24.

Sharing gender

Of those who completed the sign-up process in the Message + granular choice arms (n = 2,603), 86.3% chose to share it with WeConnect or their commercial partners. A Brant test[47] showed that the proportional odds assumption was violated (X^2 (18) = 28.98, $p = .05$), so a multinomial regression was used to compare the messages on the decision on who to share gender information with.

[47] The Brant test checks whether the data meet the proportional odds assumption, which is a key assumption for ordinal logit regressions. The test checks whether the relationships between the model predictors and the outcome are consistent across all levels of the outcome (Prefer not to say; Platform only; Platform and commercial partners). In this instance, the Brant test indicated that the effect of the model predictors was not consistent across all levels of the outcome ($p = .05$), meaning the proportional odds assumption was violated.

There were no significant differences between those who saw the Info salience message and those who saw the Implications message, in terms of who they chose to share gender information with, $p > .05$. Results are shown in Figure 24.

Sharing region

Of those who completed the sign-up process in the Message + granular choice arms (n = 2,603), 84.0% chose to share their gender with WeConnect or their commercial partners. A Brant test showed that the proportion odds assumption holds (X^2 (18) = 22.91, p = .19), so a ordinal logit regression was used to compare the messages on the decision on who to share region information with.

There were no significant differences between those who saw the Info salience message and those who saw the Implications message, in terms of who they chose to share region information with, $p > .05$. Results are shown in Figure 24.

4.5 Subgroup analysis

Generally, age, gender and social grade subgroups reacted similarly to the interventions we tested. Results are summarised below and reported in full in the appendix.

Age

Results by age were broadly consistent with the primary results. The only difference was that for participants aged 25 to 44, the Info salience message performed statistically significantly better than the Implications message (75.8% vs. 74.5%, $p < .01$).

Gender

Results by gender were broadly consistent with the primary results. Women had slightly better overall comprehension than men across all arms (76.5% vs. 74.7% across arms).

Social grade

Results by age were broadly consistent with the primary results. The only difference was that for participants in social grade AB, the Info salience message performed significantly better than the Implications message (76.6% vs. 75.3%, $p < .01$).

4.6 Exploratory Descriptives

Comprehension outcomes

What data was collected

Participants were generally quite good at understanding what data was collected. The majority correctly identified that date of birth, gender, what kind of content they like and region was collected, which was all information that participants explicitly gave. 42.3% of participants correctly responded that engagement with WeConnect was also collected. 28.1% inaccurately said that their name was collected by WeConnect. The full list of outcomes is in Table 9.

Table 9. Responses to individual outcomes on what information is collected.

Correctly responded that the following information is collected	
Date of birth	78.3%
Gender	72.7%
What kind of content you like	60.5%
Region	53.8%
Engagement with WeConnect, including likes, dislikes, reposts, and comments	42.3%
Incorrectly responded that the following information is collected	
Name	28.1%
Exact location	15.9%
Email address	14.9%
Relationship status	10.8%
Job title	7.8%
Pronouns	7.0%
Phone number	6.4%
None of the above (exclusive)	3.9%

Who the data is shared with

45.8% correctly responded that WeConnect can access their data. This was lower for WeConnect's commercial partners at 35.0%. There weren't specific misconceptions about who the data is shared with, however, 33.2% said that their data isn't shared with any of the answer options listed, including WeConnect and their commercial partners. This might be because participants were told that their data wasn't being saved, so they were reflecting on the survey as a whole rather than the information they saw at sign up. The full list of outcomes is in Table 10.

Table 10. Responses to individual outcomes on who data is shared with.

Correctly responded that the following can access the data	
WeConnect	45.8%
WeConnect's commercial partners	35.0%
Incorrectly responded that the following can access the data	
Your friends and family	10.1%
Anyone can see it	6.6%
Your employer	2.9%
Law authorities	2.6%
WeConnect doesn't share your data (exclusive)	33.2%

What the data is used for

60.7% correctly said that WeConnect uses the data to optimise their experience. The biggest misconceptions were that their data is used to let them monitor engagement with their content or to check they know how to use WeConnect. The full list of outcomes is in Table 11.

Table 11. Responses to individual outcomes on what the data is used for.

Correctly responded that their data is used for the following	
To optimise your experience	60.7%
Incorrectly responded that their data is used for the following	
To let you monitor the engagement with your content	29.4%
To check you know how to use WeConnect	28.5%
To verify your account	23.7%
To notify you if you get a friend request	14.3%

Clicking to the privacy policy

In the Control arm, 1.3% clicked to read the privacy policy when inputting their demographic information on the data sharing page. A link to the privacy policy was not shown in any of the treatment arms, as this information was shown on the main screen.

Time on the data sharing page

Participants spent a median of 33 seconds on the data sharing page. This was higher for participants in the Message + granular choice arms compared to the Control and Message + no granular choice arms, which may have led to the significant drop out rate in these arms. Medians by arms are shown in Table 12.

Table 12. The time in seconds that people spent on the data sharing screen

Median time on data screen (in seconds)	
Control	26
Info salience + no granular choice	27
Info salience + granular choice	46
Implications + no granular choice	28
Implications + granular choice	47

Changes in the Implications arms

The Implications message appeared in the data screen after participants inputted their age, gender and region. Since the message included their age range, gender and region, we recorded whether participants changed the information they gave, or changed who they wanted to share it with after making an initial selection and seeing the message. Results are shown in Table 13.

Participants were not very likely to change the age, gender or region they gave after seeing the Implications message, with 85.3% choosing not to change. Of those who did, participants were most likely to change their region with 11.4% changing their region at least once.

In the Implications + granular choice arm, 86.2% changed who they want to share their age, gender or region with after seeing the Implications message. They were most likely to change who they want to share their region with, with 84.3% changing it at least once. This aligns with the findings discussed in Section 1.2, where the literature shows that people often find the capture of their geolocation data "surprising", "unsettling" or "creepy" when they are made aware of it.[48]

[48] Pangrazio, L., & Selwyn, N. (2018). "It's not like it's life or death or whatever": Young people's understandings of social media data. *Social Media+ Society*, 4(3)

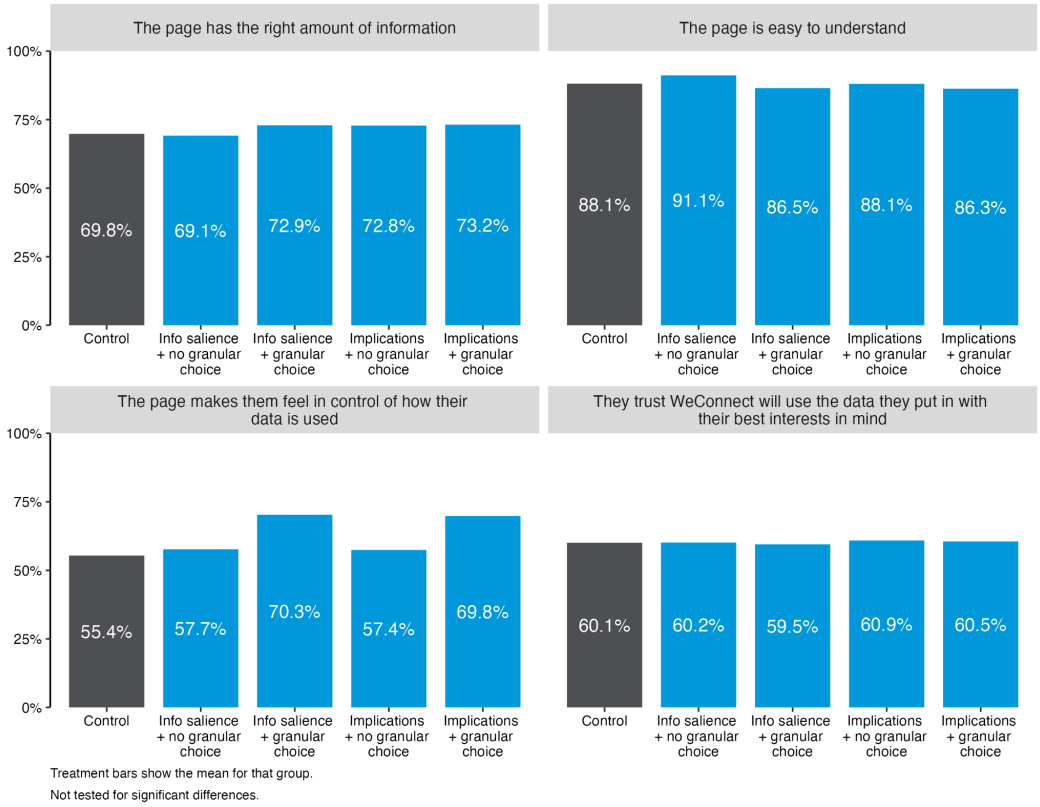
Table 13. Changing response after seeing the Implications message.

Changed input (i.e. what age, gender, or region they gave)					
	Never	**Once**	**Twice**	**Three times or more**	**Maximum**
Age	97.4%	1.7%	0.7%	0.2%	4
Gender	96.2%	2.1%	0.4%	1.3%	14
Region	88.6%	7.4%	1.9%	2.1%	16
Changed who they want to share it with (Message + granular choice arm only)					
	Never	**Once**	**Twice**	**Three times or more**	**Maximum**
Age	71.5%	27.5%	0.7%	0.3%	5
Gender	66.2%	30.6%	2.1%	1.1%	5
Region	15.7%	74.4%	5.4%	4.5%	8

Sentiment

Overall, sentiment towards the data sharing page is high. 88.1% agree or strongly agree that the page is easy to understand, 61.9% say it makes them feel in control of how their data is used and 60.3% say they trust WeConnect will use the data with their best interests in mind. 71.6% say the page contains the right amount of information. Results by treatment arms are shown in Figure 25. More participants in the Message + granular choice arms thought the page made them feel in control than in the Control or Message + no granular choice arms (70.0% compared to 56.9%). Participants in the Message + granular choice arms also reported that these arms were slightly less easy to understand than in Control and no granular choice arms, though the differences were only a few percentage points (not significance tested) and the overall rates were high in comparison to other sentiment scores. While not definitive, these dual patterns could suggest a potential trade-off between feelings of control and ease of understanding when it comes to offering a more granular choice. The full response scale by treatment arm is in the appendix.

Figure 25. Sentiment by treatment arm.



Why people chose to share information with the platform

In the survey section of the trial, we asked participants in the Message + granular choice arms who chose to share their gender or region information with WeConnect (n = 2,294), why they want to share this with the platform.

The most common reasons people shared this information is that they didn't mind WeConnect having their data, that they wanted WeConnect to personalise the content and that they thought they had to. The full list of responses is shown in Table 15.

Table 15. Why people shared information with WeConnect.

You chose to share your gender and/or region data with the WeConnect platform. Why did you choose to share this data with the WeConnect platform? (Participants could select more than one option, n = 2,294)	
I didn't mind WeConnect having my data	40.1%
I wanted WeConnect to personalise my content on the platform	31.6%
I thought I had to share this data to access WeConnect	27.6%
I wanted WeConnect to show me relevant adverts	21.9%
I just wanted to access WeConnect quickly	14.3%
I wanted WeConnect to recommend people for me to follow	14.1%
I didn't provide accurate data to WeConnect so did not mind sharing	6.0%
I didn't mean to share this data	4.7%
Other (e.g. "Didn't mind giving the information that I did", "I didn't really understand who I was sharing it with", "I thought it was part of the required information so that I can access the survey")	1.6%

Why people chose to share with commercial partners

We also asked participants who chose to share their age, gender or region information with commercial partners (n = 753) why they chose to do so.

The most common reasons people shared this information is that they want WeConnect to optimise their experience, that they don't mind WeConnect's commercial partners having this information and that they already share this on other social media platforms. The full list of responses is shown in Table 16.

Table 16. Why people shared information with commercial partners.

You chose to share your age, gender and/or region data with WeConnect's commercial partners. Why did you choose to share this data with WeConnect's commercial partners? (Participants could select more than one option, n = 753)	
I wanted WeConnect to optimise my experience on the platform	38.9%
I didn't mind WeConnect's commercial partners having my data	37.6%
I already share this data on other social media platforms	33.1%
I thought I had to share this data with WeConnect's commercial partners to access WeConnect	22.6%
They can't identify me with this data	18.5%
I just wanted to access WeConnect quickly	12.9%
I didn't provide accurate data to WeConnect so did not mind sharing	5.7%
I didn't mean to share this data	4.5%
Other (e.g. "Didn't feel it's a risk", "I feel if I can share my data with WeConnect, there's nothing bad sharing it with WeConnect's commercial partners.", "It was the only way to proceed with the platform I assumed")	1.2%

Why people chose not to share

We asked participants in the Message + granular choice arms who chose not to share their gender or region information (n = 462) why they chose not to do so.

The top reasons people chose not to share their gender or region data were that they value their privacy and prefer not to share certain information, that they want to be in control of their data and to reduce the risk of identity theft. The full list of responses is shown in Table 17.

Table 17. Why people did not share information with WeConnect or commercial partners.

You chose not to share your gender and/or region data with the WeConnect platform or WeConnect's commercial partners. Why did you choose not to share this data? (Participants could select more than one option, n = 462)	
I value my privacy and prefer not to share certain information	52.8%
I want to be in control of my data	47.2%
To reduce the risk of identity theft	33.8%
To reduce the risk of being scammed	28.8%
To reduce the risk of people being able to find me	27.5%
To reduce the number of targeted adverts in my feed	26.8%
To reduce the risk of being hacked	23.2%
I don't trust WeConnect	13.2%
I didn't want WeConnect to optimise my experience on the platform	8.0%
I wasn't aware that I made this choice	6.7%
Other (e.g. "I DO NOT use social media I am a private person and think all those idiots out there are putting themselves, their property in danger by informing the world of their likes, dislikes, where they go whatever and so on.", "I think it's best to share as little as possible", "To avoid creepy personalisation")	2.0%

5. Discussion

This project set out to understand how different ways of presenting information about data sharing on social media platforms affect users' comprehension of what data they are sharing, with whom, and for what purpose. In addition to this primary research question, the study also explored whether giving users greater control over the type of data they shared and with whom would influence their comprehension, and how people utilised these options to exercise more granular control over their data sharing choices. The study used a purpose-built simulated social media platform, WeConnect, and involved a nationally-representative sample of adult internet users from the UK.

Baseline levels of comprehension for data sharing were high. Study participants had a high baseline level of comprehension of the data being collected by the platform (WeConnect) and how it is used, with people in the Control arm scoring 73.4% on comprehension. At the same time we note that a sizable minority (28.1% of participants) wrongly said that WeConnect collected their name. We hypothesise that this incorrect response indicates many participants were actually relying on previous knowledge and experience of data sharing on real-world platforms to respond to the comprehension questions. We should also note that our sample was drawn from a panel of UK adult internet users and this may have also contributed to the results.

Clear and concise messages improved comprehension. Including a salient message or explaining the implications of data sharing clearly improved comprehension among study participants by 1.4 percentage points to 74.7%, a statistically significant increase. This suggests that increasing transparency could improve comprehension, although we note that the overall boost in comprehension is relatively small. Further, there was little difference between the two types of messages tested, suggesting that further research could help us understand whether it is simply the presence of a message or a specific type of message that improves comprehension.

Adding a granular choice to the messages increased both comprehension and feelings of control. Allowing participants to choose which data type to share and with whom, in addition to a clear and concise message, led to an even greater improvement in participant comprehension when compared to the Control arm and the Message + no granular choice arms. Participants in the two granular choice arms had a comprehension score of 77.9%, an increase of 4.5 percentage points compared to the Control, which was statistically significant. In these granular choice arms participants had to make a choice on whom to share the data with for each type of data. This also introduced a small element of friction as they had to click at least three times on various parts of the screen before proceeding, whereas in the Message + no granular choice arms they could directly click the Next button to proceed after inputting their data. We hypothesise that this slight friction i.e. having to make this choice for each data type, could be boosting comprehension for participants on these granular choice arms but further research is needed to separate out the two effects.

We found that providing participants with granular choice may act as a barrier to signing up. Participants in the granular choice arms were slightly more likely to drop out of the trial when compared with participants in the other arms (22.0% vs 17.3%). There could be a number of reasons that could have reduced participants' motivation to proceed, including choice overload (the number of different choices they need to make), increased effort (the number of clicks required to continue) or increased awareness of the data sharing required to access the platform. We should note that their motivation could have been lowered in an experimental context given the relatively modest payment for participating; in a real-world platform their motivation could be higher given the reward for signing up is access to a platform with its content, connections etc. Further research to prototype and test different granular choice designs could help to develop a user interface that optimises both comprehension and control while also managing choice overload and the additional effort required.

When given the choice, participants were selective in the data they chose to share. Most participants chose to share their gender (60.1%) and region (60.2%) with the platform when given a choice. This suggests that people may want to personalise their experience on the platform, or that people understand that this is a typical condition for access. However, when it came to sharing their data with third party commercial partners, far fewer participants were willing to share their gender (25.4%) or their region (24.0%). Providing participants with a granular choice seemed to allow them to reflect more nuanced preferences leading to increased feelings of control. **Participants were more likely to change their sharing preferences for data on their region when faced with the implications of doing so.** In the Implications message + granular choice arm, participants would input their age, gender, region, choose who to share this data with for each input, and then see a message saying that their experience on the platform would be optimised based on other users of the same age, gender and location. In this arm, most participants (84.3%) changed who they wanted to share their region data with at least once after seeing this message.

Limitations

It is important to acknowledge the limitations of the study. As noted, the study took place in a simulated social media environment, which may not fully reflect the incentives and motivations that guide users' behaviour on real-world social media platforms. Moreover, the short timescale over which our online experiment was conducted limits the conclusions that can be drawn with respect to the long-term effects of our interventions.

Despite these limitations, the study provides valuable insights into user comprehension of data-sharing practices on social media platforms. The findings underscore the importance of transparency, user control, and clear communication in fostering greater data literacy among users. They also highlight the need for platforms to consider the potential impact of design choices and messaging around data sharing on user experience and engagement, particularly regarding sensitive data categories like third-party sharing and location information.

6. Annex

Annex A: Results from sensitivity checks

Correcting for differential attrition

We reran the following analysis by applying inverse probability of attrition weighting to correct for the differential attrition we saw in the granular choice arms:

- Primary analysis (granularity comparisons only)
- Secondary analysis (all comparisons)
- Exploratory analysis 1-3 (granularity comparisons only).

We did not correct for multiple comparisons on the sensitivity analysis.

Primary analysis

The results of the sensitivity check on primary analysis are shown in Table 18. All results were consistent with the main findings, before correcting for differential attrition.

Table 18. Results of sensitivity check correcting for differential attrition on primary analysis (overall comprehension score).

Comparison	Coefficient	Standard error	z-value	p-value
Control - Message + no granular choice	-0.638	0.0132	-4.832	< .0001**
Control - Message + granular choice	-0.2389	0.0134	-17.847	< .0001**
Message + no granular choice - Message + granular choice	-0.1751	0.0111	-15.837	< .0001**

Secondary analysis

The results of the sensitivity check on secondary analysis are shown in Table 19. Most results were consistent with the main findings, before correcting for differential attrition, but we now see that people who saw the Info salience + granular choice had significantly higher comprehension than those who saw the Implications + granular choice, $p < .05$.

Table 19. Results of sensitivity check correcting for differential attrition on secondary analysis (overall comprehension score).

Comparison	Coefficient	Standard error	z-value	p-value
Info salience + no	-0.18892	0.0158	-11.953	< .0001**

granular choice - Info salience + granular choice				
Info salience + no granular choice - Implications + no granular choice	0.00679	0.0153	0.443	0.6578
Info salience + granular choice - Implications + granular choice	0.03370	0.0159	2.114	0.0345*
Implications + no granular choice - Implications + granular choice	-0.16201	0.0155	-10.465	< .0001**

Exploratory analysis 1

The results of the sensitivity check on exploratory analysis 1 are shown in Table 20. All results were consistent with the main findings, before correcting for differential attrition.

Table 20. Results of sensitivity check correcting for differential attrition on exploratory analysis 1 (comprehension of what data is collected).

Comparison	Coefficient	Standard error	z-value	p-value
Control - Message + no granular choice	-0.0279	0.0187	-1.496	0.1346
Control - Message + granular choice	-0.1316	0.0188	-6.996	< .0001**
Message + no granular choice - Message + granular choice	-0.1037	0.0154	-6.729	< .0001**

Exploratory analysis 2

The results of the sensitivity check on exploratory analysis 2 are shown in Table 21. All results were consistent with the main findings, before correcting for differential attrition.

Table 21. Results of sensitivity check correcting for differential attrition on exploratory analysis 2 (who the data is shared with).

Comparison	Coefficient	Standard error	z-value	p-value
Control - Message + no granular choice	-0.0683	0.0256	-2.669	0.0076**

Control - Message + granular choice	-0.4853	0.0266	-18.242	< .0001**
Message + no granular choice - Message + granular choice	-0.4170	0.0222	-18.752	< .0001**

Exploratory analysis 3

The results of the sensitivity check on exploratory analysis 3 are shown in Table 22. All results were consistent with the main findings, before correcting for differential attrition.

Table 22. Results of sensitivity check correcting for differential attrition on exploratory analysis 3 (what the data is used for).

Comparison	Coefficient	Standard error	z-value	p-value
Control - Message + no granular choice	-0.1373	0.0275	-4.996	< .0001**
Control - Message + granular choice	-0.2132	0.0276	-7.726	< .0001**
Message + no granular choice - Message + granular choice	-0.0759	0.0229	-3.314	0.0009**

Excluding those who participated in previous Ofcom trials

995 (14.2%) participants had previously participated in a previous Ofcom Trial using WeConnect. A breakdown by trial is shown in Table 23.

Table 23. N who took part in previous Ofcom trials.

Trial	N
T1 User Controls	424
T2 Msom Establish	273
T3 Terms of Service	403
Any of the above	**995**

We reran the analysis excluding those who have taken part in a previous Ofcom trial. For the 6,013 who have not taken part in a previous Ofcom trial, we see the same pattern of results in our primary analysis. Results are shown in Table 24.

Table 24. Results of sensitivity check.

		Message comparisons		Granularity comparisons	
Outcome	**Control**	**Info salience**	**Implications**	**Message + no granular choice**	**Message + granular choice**
Overall comprehension score	73.2%	76.2% [75.6%-76.8%]**	75.8% [75.2%-76.4%]** / +	74.4% [73.8%-75.0%]**	77.7% [77.1%-78.2%]** / **

** p < .01, * p < .05, + p < .1, - p ≥ .1
This table reports the means for each arm and results of regressions comparing each treatment arm against the Control arm (first significance), the Implications arms against the Info salience arms and the message + no granular choice arms against the message + granular choice arms (second significance). Confidence intervals are based on comparisons to the Control arm.
Regressions control for age, gender, income, education, ethnicity, platform use, employment status, and if they completed a previous similar trial.
Significance and confidence intervals (95%; reported in brackets) are not corrected for multiple comparisons.

Annex B: Results of subgroup analyses

Table 25. Results of subgroup analysis.

			Message arms		Granularity arms	
Demographic	**Subgroup**	**Control**	**Info salience**	**Implications**	**Message + no granular choice**	**Message + granular choice**
Age	Under 25 (n = 756)	73.5%	76.0% [74.3%-77.9%] **	76.1% [74.3%-77.9%] ** / -	73.8% [71.9%-75.7%]	78.4% [76.9%-80.2%] ** / **
	25 to 44 (n = 2,521)	72.8%	75.8% [74.8%-76.7%] **	74.5% [73.6%-75.5%] ** / **	73.9% [73.0%-74.9%] *	76.4% [75.5%-77.3%] ** / **
	45 to 64 (n = 2,309)	73.3%	77.2% [76.0%-77.9%] **	77.1% [75.9%-77.8%] ** / -	75.4% [74.3%-76.2%] **	79.0% [77.8%-80.0%] ** / **
	65 and over (n = 1,422)	74.9%	76.4% [75.3%-77.9%] **	77.1% [76.2%-78.7%] ** / -	75.2% [74.3%-76.8%]	78.6% [77.5%-79.9%] ** / **

Gender	Female (n = 3263)	74.2%	77.3% [76.4%-78.0%] **	77.0% [76.2%-77.8%] ** / -	75.6% [74.7%-76.4%]	78.7% [78.0%-79.5%] ** / **
	Male (n = 3,544)	72.6%	75.4% [74.5%-76.1%] **	75.2% [74.2%-75.8%] ** / -	73.8% [72.9%-74.6%] **	76.9% [76.0%-77.5%] ** / **
Social grade	AB (n = 2,512)	73.1%	76.6% [75.6%-77.5%] **	75.3% [74.2%-76.1%] ** / **	74.2% [73.1%-75.1%] *	77.9% [76.9%-78.7%] ** / **
	C1C2 (n = 3,126)	74.1%	76.9% [76.1%-77.8%] **	76.8% [76.0%-77.7%] ** / -	75.2% [74.5%-76.2%] **	78.5% [77.7%-79.3%] ** / **
	DE (n = 1,346)	72.8%	74.7% [73.5%-76.1%] **	75.8% [74.5%-77.0%] ** / -	74.3% [72.9%-75.5%] *	76.5% [75.3%-77.8%] ** / **

** p < .01, * p < .05, + p < .1, - p ≥ .1
This table reports the means for each arm and results of regressions comparing each treatment arm against the Control arm (first significance), the Implications arms against the Info salience arms and the message + no granular choice arms against the message + granular choice arms (second significance). Confidence intervals are based on comparisons to the Control arm.
Regressions control for age, gender, income, education, ethnicity, platform use, employment status, and if they completed a previous similar trial.
Significance and confidence intervals (95%; reported in brackets) are not corrected for multiple comparisons.

Annex C: Sentiment

Table 26. Sentiment to the data sharing page by treatment arm.

The page is easy to understand					
	Strongly disagree	**Disagree**	**Neither disagree or agree**	**Agree**	**Strongly agree**
Control	2.3%	1.1%	8.4%	43.0%	45.0%
Info salience + no granular choice	0.9%	1.1%	6.8%	44.4%	46.7%
Info salience + granular choice	2.4%	2.3%	8.7%	49.4%	37.1%
Implications + no granular	1.7%	1.8%	8.4%	47.3%	40.8%

choice					
Implications + granular choice	1.9%	2.4%	9.4%	52.2%	34.1%
The page makes them feel in control					
	Strongly disagree	**Disagree**	**Neither disagree or agree**	**Agree**	**Strongly agree**
Control	4.3%	10.8%	29.5%	39.3%	16.1%
Info salience + no granular choice	3.5%	10.8%	28.0%	41.5%	16.2%
Info salience + granular choice	4.5%	6.0%	19.2%	49.2%	21.0%
Implications + no granular choice	3.6%	10.7%	28.2%	43.0%	14.4%
Implications + granular choice	2.8%	6.9%	20.5%	50.1%	19.7%
They trust that WeConnect will use the data they put in with their best interests in mind					
	Strongly disagree	**Disagree**	**Neither disagree or agree**	**Agree**	**Strongly agree**
Control	4.5%	6.9%	28.6%	44.0%	16.1%
Info salience + no granular choice	3.8%	7.9%	28.2%	41.3%	18.9%
Info salience + granular choice	5.3%	8.4%	26.8%	42.2%	17.3%
Implications + no granular choice	3.0%	8.0%	28.1%	45.2%	15.7%
Implications + granular choice	3.9%	7.8%	27.7%	45.3%	15.2%

Table 27. Whether people think the data sharing page has the right amount of information by treatment arm.

The page has…			
	Too little information	**About the right amount of information**	**Too much information**
Control	24.1%	69.8%	6.1%
Info salience + no granular choice	24.7%	69.1%	6.1%

Info salience + granular choice	20.1%	72.9%	7.0%
Implications + no granular choice	21.5%	72.8%	5.7%
Implications + granular choice	20.9%	73.2%	6.0%

Annex D: Balance checks on drop-offs

Table 28. Balance checks on drop-offs

	Control	Info salience + no granular choice	Info salience + granular choice	Implications + no granular choice	Implications + granular choice	X^2 (df)
Age						12.65 (12)
Under 25	31	32	27	33	46	
25 to 44	114	103	144	120	147	
45 to 64	135	142	176	154	193	
65 and over	146	148	198	130	166	
Gender						1.63 (4)
Male	191	196	251	203	239	
Female	225	219	282	224	303	
Ethnicity						13.45 (12)
White	384	378	486	392	475	
Asian	14	22	21	18	34	
Black	20	20	20	18	29	
Mixed or other	8	5	18	9	14	
Annual pre-tax income						2.92 (4)
£40,000 or over	167	189	227	186	240	
Less than £40,000	259	236	318	251	312	

Education						2.62 (4)
Degree	110	99	138	103	149	
No degree	298	308	384	322	383	
Urbanicity						24.33 (8)**
Urban	83	99	122	104	166	
Suburban	210	224	272	232	248	
Rural	133	102	151	101	138	
Employment						10.67 (8)
Employed	227	221	316	251	327	
Unemployed	10	14	15	16	20	
Inactive	189	190	214	170	205	
Region						25.25 (16)+
London	34	57	57	41	66	
Midlands	76	78	78	55	106	
North	108	103	135	127	129	
South & East	136	129	187	148	179	
Wales, Scotland & Northern Ireland	72	58	88	66	72	

** p < .01 * p < .05 + p < .1
This table reports the number of people per arm for each demographic on a sample of people who dropped off the experiment on or after the WeConnect screen (n = 2,385).