

# Enhancing citizen participation through data subject right delegation

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**Abstract.** Data subject rights (DSRs) such as the right of access and the right to data portability can provide citizens with information about how their data are used in society. Researchers in academia and civil society alike have used such rights to investigate and improve transparency in democratic institutions. Researching with DSRs, however, is quite hard to conduct, requires some legal and technical knowledge, and suffers scalability limitations. One method to improve this is through delegation, where data subjects allow researchers to take the lead in exercising DSRs on their behalf. In this paper we present initial results from a user study investigating the acceptability of delegation of DSRs. We find that 86.67% of our 55 participants are willing to delegate their DSRs, and across three hypothetical research scenarios, the most acceptable delegate is a researcher conducting studies. Our findings can guide researchers in developing platforms that improve citizen participation in digital democracy studies that employ DSRs as a data collection tool.

**Keywords:** Data protection · Data subject rights · Digital democracy · Citizen participation.

## 1 Introduction

In our data-driven world, personal data, held by powerful data controllers, are at high risk of abuse. One such abuse can be the unethical use of data analytics in political campaigns. The Cambridge Analytica scandal and the UK Parliament’s Digital, Culture, Media, and Sport (DCMS) Committee’s inquiry into the role of disinformation in Brexit exposed how data controllers trade and use personal data to profile the political opinions of electorates [6,8]. The data in possession of these data controllers may be inaccurate, and so the use of these kinds of data in politics can cause political disengagement of a section of the public by politicians who govern them [7]. While data protection regulations can attempt to mitigate these unethical abuses, practical implementation of these regulations and the data rights that they confer citizens may be incomplete [2]. To measure data controllers’ behaviours around personal data, a growing number of academics have used various data subject rights (DSRs), for example, the right of access, to collect data in research studies [3], for instance investigating the implementation

of access rights [2] or the technical details of portability rights [11]. Beyond academia, civil society researchers have used DSRs to help members of the public to request data held about them by political parties [7].

As part of ongoing work, we conducted a systematic literature review of current Data Subject Rights Driven Studies (DSRDS), that is, research studies that employ DSRs as a methodology for data collection [4]. We note in our review that there are several scalability limitations to DSRDSes, for instance, data subjects need technical and legal knowledge to exercise their rights. Asghari et al. propose the notion of *delegation*, where participants allow other people, who may be more knowledgeable and skilled, to take the lead in the process of exercising their DSRs [1]. Delegation may help with the collective exercise of these rights, and so reveal occurring patterns that can enable citizens [5,2], and also help bring the participatory successes of citizen science [10] in engaging the public in scientific and knowledge discovery to the world of personal data.

We are developing a citizen science framework to allow public participation in the process of knowledge creation through collective data subject requests to data controllers. Our position is that delegation will improve citizen participation in DSRDSes to enhance digital democracy. The delegate can handle the complex bureaucratic process of exercising data subject requests while the citizens are involved in the data analysis. Asghari et al. tested the idea of delegation to a circle of friends and families [1], but expanding this circle to include researchers or other users may introduce new risks and privacy concerns. We therefore need to understand the public perception of delegation. In this paper, we present results of a user study ( $n = 55$ ) on the willingness of delegation. We asked participants the following questions:

1. Are people willing to delegate their DSRs in research studies?
2. When, to whom, and why would people delegate their DSRs?

Our results reveal participant willingness in delegating DSRs to a number of potential delegates, the most popular being a researcher conducting studies for the benefit of establishing facts and producing new knowledge. This suggests that citizens may delegate their DSRs for research studies that will enhance digital democracy.

## 2 Methodology

To understand public acceptance of delegating DSRs, we conducted a questionnaire user study to measure participants' willingness to delegate. The questionnaire was implemented on the Qualtrics platform, with participants recruited through word of mouth, mailing lists and social media. Participants were restricted to students at the University of St Andrews aged 18 or older, and the study was approved by the University of St Andrews ethics committee.

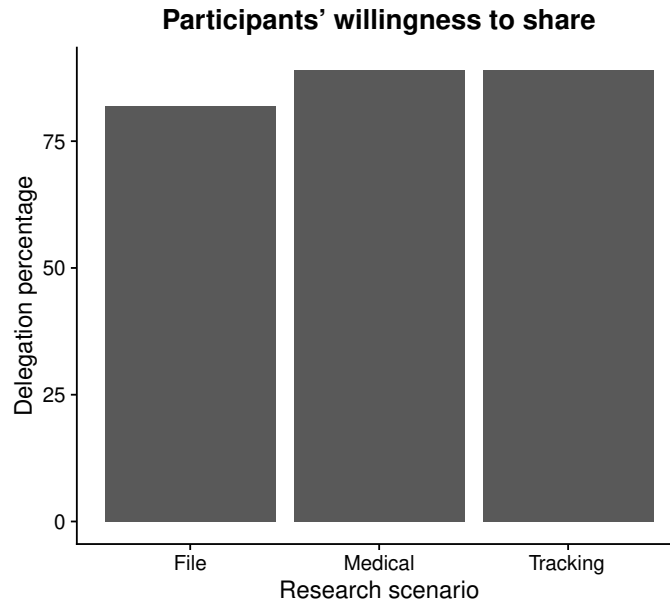
Participants were asked to consider delegation of DSRs in three hypothetical research scenarios based on existing studies: the right to data portability

being used to audit *medical* systems [12]; the right of access being used to understand the trading of location and behavioural data for *tracking* [9]; and the right of data portability being used to understand *file* formats returned by data controllers [11].

### 3 Results

#### 3.1 Are participants willing to delegate their DSRs?

We analyse delegation willingness responses in each of the three scenarios. Figure 1 shows that 89.09% of the 55 participants are willing to delegate their DSRs in the medical and tracking scenarios. We observe that fewer participants (81.82%) are willing to delegate in the file scenario. Overall, 86.67% of the 55 participants are willing to delegate their DSRs.



**Fig. 1.** Participants' responses to the question "Would you delegate your DSRs?". Across all three research scenarios, the majority of participants are willing to delegate their DSRs.

#### 3.2 To whom are participants willing to delegate their DSRs?

We asked participants which types of delegate they would be willing to use. Across the three research scenarios, a researcher conducting studies was the

most popular choice in two scenarios (35 participants in both website tracking and file). For the medical scenario, 42 participants chose a family member, with 38 choosing a researcher. Overall researchers proved the most popular choice. Using the Freeman-Halton extension of Fisher’s exact test, we reject the null hypothesis at  $p = 0.05$  that the type of delegate and the research scenario are independent. In other words, there is no evidence that there is no relationship, and we will this in future work to determine if and when researchers might be able to use delegated DSRs.

### 3.3 Why would participants delegate their DSRs?

We asked participants to explain their reasons behind choosing to delegate or not to delegate. We aggregate the data from the three research scenarios and looked at each potential delegate in turn. When delegating to a researcher, the most popular reasons were because of the benefits of the research, and trust in the researcher. When delegating to a family member or friends, the most popular reasons were trust and the personal relationship. The least popular class of delegates was colleagues: reasons for delegating to them included a working relationship and trust. One participant also suggested delegating to a lawyer, as a lawyer might be “more qualified”. The minority group that chose not to delegate cited mainly privacy concerns and lack of trust, among other reasons for their decisions.

## 4 Contribution to workshop and discussion

Our initial results show participants’ willingness to delegate their data subject rights to mostly researchers to establish facts and build new knowledge. The minority that chose not to delegate cited mainly privacy concerns and lack of trust, among other reasons. If these concerns can be alleviated, then it may be possible to use delegation to enhance citizen participation in digital democracy research. For example, we could use delegation to hypothetically audit the personal data of the members of public held by political parties.

Building on our results from this work, our next step is to develop a data subject rights citizen science framework to test the possibility of engaging the public in local, regional, or national-level political decision-making on issues that affect their lives. Citizen science has been successful in crowdsourcing evidence to support claims in a decision-making process [10]. Given the difficulty in exercising data subject rights, we posit that the idea of delegation will motivate participation in this kind of citizen science project. These rights are by design meant to empower citizens, and their collective exercise can create a power shift that favour citizens against those charged with governing them [5].

We would like to discuss the following issues in the workshop:

1. How can delegation improve public participation in DSRDSes that aim to investigate digital democracy?

2. What do our results reveal to researchers employing DSR in studies?
3. Can the transparency, fairness, and accountability principles of data protection regulations help convince the public to participate in DSRDSes? How could we communicate these to participants?
4. We are looking at how to design and build a citizen science framework to allow public participation in DSRDSes and would welcome feedback.

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