Gauging the Unemployed's Perceptions of Online Consent Forms

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Abstract

Background: *Online users are presented with consent forms when they create accounts on new websites. Such forms request consent to collect, store and process the web user's personal data. Forms vary, displaying a range of statements to persuade people to grant such consent.*

Aim: *In this paper, we report on a study we carried out to gauge unemployed users' opinions of such forms.*

Methods: *We commenced by reviewing the literature on consent forms and deriving several statements about consent forms that unemployed people could either agree or disagree with. We then used Q-methodology to gauge agreement with these statements.*

Results: *Unemployed people care about their data but feel pressured to consent to giving their data away when confronted with these kinds of forms.*

Conclusions: *A redesign of consent forms is required, because, in their current state, online users – especially the unemployed – are not granting **informed** consent for the collection, storage and processing of their data.*

Keywords: online consent; needs; Q-methodology; unemployed

1. Introduction

Internet service users routinely encounter online consent forms (OCFs), asking them to permit the website to collect, store and process their data. It is usually claimed that this is required for 'personalisation' purposes [De Andrade, 2016], but in reality the data is often collected to sell to other companies [Spiekermann and Korunovska, 2017]. The reality is that '*the dominant priority on the internet today is to extract as much data as possible*' [FPI, 2014].

When researchers ask participants to grant consent, they abide by strict ethical requirements adhered to by researchers across the globe, i.e., "*seek to do no harm; then to do right by those with whom we work; and thirdly help our successors as much as is consonant with those two principles*" [Fellous-Sigrist, 2018, p. 4]. Organisations trading online, on the other hand, generally obtain consent to comply with regulations, such as the European Union's General Data Protection Regulations (GDPR) [Breen et al., 2020].

The forms used both by researchers and organisations are often drafted by legal teams and tend towards verbosity and complexity [Ahmed et al., 2020]. The underlying assumptions of OCFs are that: **(i)** decision-making can be improved by providing exhaustive information [Purcaru et al., 2014a] meaning that people want all possible information about how their data will be stored and used [O'Reilly III, 1980], and **(ii)** service providers should limit their liability by having trained legal staff craft OCFs [Hopper et al., 1998]. These assumptions are, unfortunately, naïve and unfounded.

(i) With respect to people wanting all possible information, this ignores the fact that too much information leads to uncertainty which inhibits decision making [Malhotra, 1982]. Moreover, human effort, even mental effort, is subject to utility judgements and is costly [Kool and Botvinick, 2018]. Without a commensurate reward, people are unlikely to expend effort. Moreover, this assumption ignores the way people actually make decisions, using heuristics and focusing on particular features [Gigerenzer and Gaissmaier, 2011] rather

than exhaustively and rationally considering all different dimensions of a situation. This is the 'bounded rationality' highlighted by Herbert Simon [Simon, 1990]. In reality, information should be brief and to the point in order to maximise comprehension and to enable informed decision-making [Epstein and Lasagna, 1969].

(ii) With respect to the perceived need for legal staff to craft these documents, this does indeed protect the service provider. However, it is well known that 'legalese' is difficult for the lay public to understand [Forshey, 1978, O'Sullivan et al., 2020]. Legally drafted forms fail to inform the general public, defeating their *raison d'être*.

In summary, consent forms should not be designed based on these assumptions. To arrive at a new dispensation, we need first to understand what people want these forms to provide, and what needs they need to satisfy, so that our new design does not continue to fail in its core purpose: obtaining informed consent.

Given [Carolan, 2016]'s arguments about people being impelled to grant consent, we chose to focus our study on a demographic that is particularly vulnerable in the online domain, the unemployed. This demographic is disempowered and marginalised [Briscese et al., 2022] and understudied in the privacy and security domain [Bashir et al., 2017]. In the UK, members of this demographic are forced to interact with online welfare systems [Wintour, 2012] and also for other essentials [Williams, 2020], perhaps without fully understanding how to preserve their own privacy in the process.

Seabright [Seabright, 2010] explains that the unemployed inhabit 'information islands': there are no bridges to up-to-date information. This means that those who know a little inform others and are not aware that they either misunderstand or are out of date. Society, Seabright says, does not construct bridges to these increasingly isolated societies. This is even more damaging in the cyber security context, a field that changes extremely quickly due to the continuous efforts of global cyber criminals coming up with new exploits. Hence, this demographic is more at risk of being vulnerable online and also having their privacy violated. Moreover, declining to give consent might be infeasible if monetary rewards are dependent on consent, for example.

In Section 2, we review the related research before explaining how we addressed our research questions in Section 3. Section 4 reports on our findings, which we discuss in Section 5. Section 6 concludes.

2. Related Research, Aim, Rationale, & Contribution

GDPR aimed to empower people to take control of their own privacy [Carolan, 2016]. However, the Article 29 Working Party [EDPB, 2015] expressed concerns that the Council's GDPR's definition of consent "*may create some confusion ... especially on the Internet where there is now too much improper use of consent*".

There is evidence that online users do not read consent forms [Geier et al., 2021]. This might be because they are incomprehensible [Williamson and Martin, 2010], too long [Perrault and Nazione, 2016] or do not satisfy human needs [Renaud and Van Schaik, 2023]. Moreover, as argued by [Carolan, 2016, p.462], '*website users are subject to a variety of specific situational influences that intuitively impel the giving of consent*'.

Several researchers have focused on how cookie consent forms do not align with GDPR [Santos et al., 2021, Kulyk et al., 2018, Bollinger et al., 2022, Papadogiannakis et al., 2021, Soe et al., 2020]. Indeed, Graßl *et al.* [Graßl et al., 2021] find that many cookie consent dialogues deliberately manipulate users with so-called "dark patterns", probably in violation of the spirit of GDPR. However, most of these studies (with the notable exception of [Graßl et al., 2021]) do not consult end users about their perceptions of these practices.

[Machuletz and Böhme, 2020] investigated cookie acceptance, contrasting those providing either specific or overarching purposes of data collection, and discovered that there was no difference in acceptance. People who see an "accept all" button were likely to use it. Ma and Birrell [Ma and Birrell, 2022] discovered that the kinds of risk and the framing of cookie notices could impact cookie opt-out rates by a factor of three. Giese and Stabauer [Giese and Stabauer, 2022] identified a range of external factors that influenced cookie consent, including ease of use of the cookie notice and the speed with which the notice could be dismissed. Fernandez *et al.* [Bermejo Fernandez et al., 2021] also highlighted the influence of cookie choice architecture design on people's choices. Degeling *et al.* [Degeling et al., 2018] point to the lack of usable mechanisms for accepting or rejecting cookies. Bauer *et al.* [Bauer et al., 2021] discovered the importance of user sovereignty and the need for regulation in influencing whether people would accept or reject cookies.

In sum, there is a lack of existing research that considers users and their needs, in particular unemployed users, when studying online consent. Consequently, the aim of the current study was

to identify unemployed users' perceptions of OCFs. Therefore, the research question is '*what different viewpoints on online consent exist among unemployed users?*'

By identifying unemployed users' perceptions, our research uniquely contributes to understanding online consent decisions made by unemployed users.

3.   Study

To assess perceptions of opinions related to consent forms, we used Q-methodology, a research method introduced by Stephenson [Stephenson, 1935] for the systematic study of subjectivity.   Q-methodology is essentially an informal instantiation of Cultural Consensus Theory [Weller, 2007], which provides a framework for the measurement of beliefs *as cultural phenomena*. In other words, it allows us to assess beliefs shared by groups of individuals i.e., this theory helps us to assess what people consider to be the culturally appropriate answers to a series of related questions (in our case, the overriding theme is the appropriateness of existing OCFs).

The findings are not meant to be representative of the general population, but rather to reveal the nature of subjectivity in this domain. Not '*how are people thinking on the topic?*', but rather: '*what is the nature of their thinking?*' This focus on segments of similar or dissimilar points of view renders the issue of large participant numbers '*relatively unimportant*' [R. Brown, 1993].

In general, participants sort the statements into a fixed quasi-normal distribution, usually ranging from -4 (disagree) to +4 (agree). In our study, participants were given a chance to amend and confirm their rankings and then asked for open-ended comment for the most agreeable (ranked +4) and most disagreeable (ranked -4) statements. This serves to give us '*an impression of the range of opinion at issue*' [R. Brown, 1993].

3.1.   Deriving Statements

From the literature, we extracted statements related to the qualities of existing consent forms. We had to find a balance between statements that participants could agree or disagree with, and also statements indicating the following five categories that we extracted from the literature:

(1) experience of consent forms
[Anderson et al., 2017, Turow, 2003,
Micheti et al., 2010, Purcaru et al., 2014b,
Acquisti and Grossklags, 2005];

(2) personal principles
[Solove, 2007, Purcaru et al., 2014b, Vila et al., 2003,

McStay, 2013, Soe et al., 2020];

(3) requirements
[Anderson et al., 2017, Renaud and Shepherd, 2018,
Dickert et al., 2017, Sunstein, 2020];

(4) judgements
[Koops, 2014, Soe et al., 2020, Akkad et al., 2006,
Klitzman, 2013, Dickert et al., 2017, Gandy Jr, 1996];

(5) reassurance
[Kulyk and Renaud, 2021, Lapinski and Rimal, 2005,
Renaud and Shepherd, 2018,
Anderson and Agarwal, 2010];

Q-sorts usually make use of around 25 statements, so we settled for 5 in each of the above-mentioned categories (Table 1).

3.2.   Piloting, Recruitment & Remuneration

Three pilot tests were undertaken and timed, to get a sense of the time needed for the task. Based on feedback obtained from the pilot testers, unclear statements were subsequently refined and clarity improved.

Forty-six participants were recruited on the Prolific platform (https://www.prolific.co/) (Prolific facilitates balancing genders and recruiting only UK residents without regular employment).   Prolific is a crowdsourcing survey platform that has been successfully used in similar (and recent) behavioural research [Peer et al., 2021], enabling researchers to enhance the demographic diversity of their study samples [Palan and Schitter, 2018].

The number of participants is consistent with recommended participant group sizes in Q-methodology [Watts and Stenner, 2005].   Based on the pilot study timings, we paid participants £2 for 12 minutes of labour, exceeding the UK minimum wage.

Participants only provided their age and gender, ensuring that participation was anonymous.   We collected their Prolific ID to pay participants, but then deleted these from our data set. The study was approved by the University of Strathclyde's ethical review board.

4.   Analysis & Findings

We used the free R package *qmethod* for data analysis, as this offers improvements over other packages.   First, as the package works in the R environment, this facilitates the integration with other procedures in R for data-wrangling and other data analysis. Second, the package supports full transparency of the analysis at each step as well as a range of correlation coefficients as a basis for extraction; it also provides an improved and integrated analysis of consensus statements and distinguishing statements, novel visualisation of results as well as import- and

export functionality [Zabala, 2014]. We extracted components using the principal components analysis (PCA) procedure. This is because, in *qmethod*, only PCA allows non-orthogonal direct oblimin rotation as well orthogonal varimax rotation. Non-orthogonal rotation is essential because this should be attempted if extracted components are substantially correlated (> .30) [Tabachnick et al., 2013], allowing the solution to reflect the association between the components. Often, the pattern of results does not substantially differ between PCA and factor analysis procedures [Tabachnick et al., 2013]. In order to ascertain whether this general observation also applied to our data set, we validated our analysis by running the analyses with *qmethod* and centroid extraction; we found the same pattern of results, but with 5% variance explained and dampened loadings.

To create the final solution, we proceeded as follows. Forty-six Q-sorts were analysed in terms of correlations (correlation matrix available on request) and with PCA extraction, initially without rotation. Based on the criterion of > 50% of variance explained by the solution and inspection of the scree plot (which tailed off after four components), four components (explaining 56% of variance) were extracted and then rotated. As the correlation between Components 1 and 2 was .38 > .30, oblimin rotation was attempted in the first place. The results were then compared with those of varimax rotation, which is commonly used in Q-studies. As the solutions showed essentially the same pattern, the varimax solution is reported here. In this solution (Table 2), 36 out of 46 Q-sorts (78%) loaded significantly on one of the four components, with a loading defined as significant if > 1.96/sqrt(N) and the squared loading greater than sum of the squared loadings on the remaining components [Zabala, 2014]. Composite reliability was very high for each of the components (0.98, 0.98, 0.96, and 0.94 for Components 1, 2, 3, and 3, respectively), adding to the credibility of the solution. The Q-sorts that load significantly on each component, by definition, have a rather similar sorting pattern. Therefore, they indicate a shared viewpoint on OCFs. The shared viewpoint that each component represents is presented as a pattern of component z-scores (Table 1). Each pattern shows an ideal-typical Q-sort for the corresponding component, which can be interpreted in relation to perceptions of OCFs.

We present a summary description of each component with summary demographics of participants whose Q-sorts loaded significantly on the component. We then describe the content of the viewpoint that represents the pattern in terms of statements that have relatively large scores ($z \leq$ -1 or $z \geq$ +1). We illustrate

the viewpoint with illuminating comments made by these participants.

4.1. Component 1: Care about their data but feel pressured to consent

Component 1 had significantly loading Q-sorts from 16 participants (6F/9M/1 prefer not to say) with an average age of 27.8 years (SD = 10.0). This group obviously did care about their data: they expresssed an interest in their data that were held online by service-providers and did not always read consent forms. They also expressed a lack of trust in these organisations and a desire to attend to using the service rather than spending effort on (reading) consent forms. Their experience was largely negative in terms of ease of use and feeling pressured into signing consent forms. They believed that existing consent forms did not protect their privacy, but rather protected the organisations' interests.

The following quotations illustrate Viewpoint 1 expressed in the Q-sorts. P41: *"I really do care about my data. If consent forms were easier to read, a lot more people would pay attention to them"*; P32: *"Even though I do value my data privacy, at the end of the day I just want to use whatever service it is. Perhaps it's laziness or just not caring enough"*; P37: *"They're usually long and boring, full of legal jargon that I can't be bothered to digest"*; P39: *"I don't want to have to spend an hour understanding them"*; P33: *"I really believe that consent forms are just a way of covering the companies' back and making sure they are following the law"*; P20: *"They are very confusing and not materials for reading"*; P2: *"I don't want my data to be out there."*

4.2. Component 2: Care about their data and need reassurance

Component 2 had significantly loading Q-sorts from 10 participants (6F/2M/2 prefer not to say) with an average age of 31.3 years (SD = 13.9). These people strongly cared about their data, but did not feel strongly about the other personal principles. They did not feel pressure to consent and overall their experience of ease of use was not particularly negative. In contrast to Group 1, these people expressed support for requirements to consent forms, including knowledge of data use, simplicity, and the presentation of essential information. In contrast to Group 1, they also wanted reassurance about data protection.

The following quotations illustrate Viewpoint 2 expressed in the Q-sorts. P38: *"I care about my data as I don't want companies to know what I like/do on a regular basis. I like to have most of my information*

Table 1. Varimax-rotated principal components analysis solution: standardised component scores, with consensus/distinctiveness analysis

Item	Statement	Category	ZC1	ZC2	ZC3	ZC4
S1	In my experience, consent forms contain too much information	Experience	1.33	-0.61	-0.95	1.04
S2	In my experience, consent forms are easy to understand		-1.00	0.02	-0.46	0.76
S3	Consent forms never confuse me		**-1.63**	-0.45	-0.42	-1.13
S4	In my experience, consent forms are too vague		0.06	-1.01	0.69	-0.82
S5	I often feel pressured into signing consent forms		**1.66**	-1.09	**1.64**	-0.19
S6	I have nothing to hide, so I don't worry about sharing my data	Personal Principles	-0.91	-0.05	-1.28	**1.55**
S7	I don't really care about my data		**-1.84**	**-2.05**	**-2.34**	-0.69
S8	I always read consent forms		**-1.74**	-0.05	0.65	**-1.56**
S9	I do not want to be annoyed by consent forms because I want to get on with using the service		1.31	-0.35	**-1.58**	1.21
S10	I don't trust online services – and that includes what they say they will do with my data		1.15	-0.89	**1.64**	0.90
S11	Consent forms should be as simple as possible	Requirements	0.77	1.45	-0.08	1.26
S12	Consent forms should include both text and pictures		-0.37	-0.95	0.00	0.65
S13	I would like to be able to confirm what a company is doing with my data		0.89	**1.51**	2.08	0.61
S14	I would like to see only essential information, with more on request		0.56	1.10	-0.62	0.93
S15	If companies behave ethically, consent forms should only contain essential information		0.23	1.00	-0.02	0.26
S16	Consent forms exist to prevent people from exercising their rights according to privacy law	Judgements	-0.20	-0.80	0.22	-0.26
S17	Consent forms are a hurdle to be overcome		0.53	-0.66	0.09	-0.29
S18	Consent forms are informative		-0.46	0.43	0.01	0.17
S19	Sometimes consent forms look like back-covering exercises		1.11	-0.12	0.63	**-1.82**
S20	Consent forms focus on my need to protect my privacy		-1.05	0.39	0.81	1.35
S21	I am reassured if I'm told a security professional has checked that the company protects my data	Reassurance	0.12	**1.88**	-0.27	-0.77
S22	I am reassured if I'm told ethical hackers were not able to break into the company s systems		-0.33	0.87	-0.90	-1.24
S23	I find it helpful to know what percentage of users are happy with the way the company stores and uses their data		0.14	0.58	0.33	-0.58
S24	I am reassured by examples making it clear how the company's practices impact me		0.33	1.05	0.12	-0.05
S25	I would like to ask a person questions before signing a consent form		-0.67	-1.19	0.01	-1.29

Note. ZCi: z-score on Component *i*. An underlined figure indicates that the statement distinguishes the component. A bolded figure indicates a z score > 1.5

Table 2. Varimax-rotated principal components analysis solution: Loadings and Flags

Varimax-rotated solution

QS	C1	SC1	C2	SC2	C3	SC3	C4	SC4
Q1	0.60		0.58		0.04		-0.18	
Q2	0.52	*	-0.08		0.30		-0.01	
Q3	0.77	*	0.07		0.01		-0.22	
Q4	0.00		0.82	*	0.01		0.02	
Q5	0.35		0.42		0.51		0.22	
Q6	0.01		0.21		0.43	*	-0.18	
Q7	0.26		0.28		0.08		0.06	
Q8	0.45		0.67	*	0.05		-0.01	
Q9	0.06		0.18		-0.60	*	0.39	
Q10	0.22		0.38		0.10		-0.03	
Q11	-0.31		0.47		0.54		0.32	
Q12	-0.02		0.08		0.16		0.85	*
Q13	0.11		0.11		0.71	*	-0.10	
Q14	-0.10		0.78	*	0.09		0.25	
Q15	0.39		-0.10		0.70	*	-0.09	
Q16	0.27		0.26		0.08		0.28	
Q17	0.35		0.28		-0.15		0.17	
Q18	0.59	*	0.34		-0.15		0.08	
Q19	0.45		0.48		-0.17		0.31	
Q20	0.54	*	-0.18		0.31		0.15	
Q21	0.46	*	-0.14		0.12		0.30	
Q22	0.75	*	0.29		-0.07		0.23	
Q23	-0.08		0.56	*	0.03		0.15	
Q24	-0.14		0.70	*	-0.04		0.03	
Q25	0.15		0.44		0.56	*	-0.03	
Q26	-0.12		0.83	*	0.20		-0.19	
Q27	-0.21		0.05		0.39		-0.64	*
Q28	0.31		0.54	*	-0.22		0.31	
Q29	0.60	*	0.57		-0.05		-0.17	
Q30	0.62	*	-0.03		0.40		-0.21	
Q31	0.50	*	0.17		0.35		0.11	
Q32	0.81	*	0.14		-0.09		0.22	
Q33	0.73	*	-0.03		-0.12		0.00	
Q34	0.01		0.64	*	0.35		-0.11	
Q35	0.58	*	0.45		0.15		0.22	
Q36	0.47		0.05		-0.18		0.67	*
Q37	0.77	*	0.10		0.00		0.14	
Q38	0.23		0.74	*	0.09		0.30	
Q39	0.76	*	-0.03		0.28		0.16	
Q40	0.49		0.59		0.33		0.30	
Q41	0.90	*	-0.02		0.13		0.08	
Q42	0.67	*	0.00		0.16		0.28	
Q43	0.11		0.20		-0.07		0.72	*
Q44	0.15		0.47	*	-0.41		-0.01	
Q45	-0.26		0.40		0.44		0.15	
Q46	0.34		0.03		0.66	*	0.26	

Sorted varimax-rotated solution

QS	LC1	SC1	LC2	SC2	LC3	SC3	LC4	SC4
Q41	0.90	*	-0.02		0.13		0.08	
Q32	0.81	*	0.14		-0.09		0.22	
Q37	0.77	*	0.10		0.00		0.14	
Q3	0.77	*	0.07		0.01		-0.22	
Q39	0.76	*	-0.03		0.28		0.16	
Q22	0.75	*	0.29		-0.07		0.23	
Q33	0.73	*	-0.03		-0.12		0.00	
Q42	0.67	*	0.00		0.16		0.28	
Q30	0.62	*	-0.03		0.40		-0.21	
Q29	0.60	*	0.57		-0.05		-0.17	
Q18	0.59	*	0.34		-0.15		0.08	
Q35	0.58	*	0.45		0.15		0.22	
Q20	0.54	*	-0.18		0.31		0.15	
Q2	0.52	*	-0.08		0.30		-0.01	
Q31	0.50	*	0.17		0.35		0.11	
Q21	0.46	*	-0.14		0.12		0.30	
Q26	-0.12		0.83	*	0.20		-0.19	
Q4	0.00		0.82	*	0.01		0.02	
Q14	-0.10		0.78	*	0.09		0.25	
Q38	0.23		0.74	*	0.09		0.30	
Q24	-0.14		0.70	*	-0.04		0.03	
Q8	0.45		0.67	*	0.05		-0.01	
Q34	0.01		0.64	*	0.35		-0.11	
Q23	-0.08		0.56	*	0.03		0.15	
Q28	0.31		0.54	*	-0.22		0.31	
Q44	0.15		0.47	*	-0.41		-0.01	
Q13	0.11		0.11		0.71	*	-0.10	
Q15	0.39		-0.10		0.70	*	-0.09	
Q46	0.34		0.03		0.66	*	0.26	
Q9	0.06		0.18		-0.60	*	0.39	
Q25	0.15		0.44		0.56	*	-0.03	
Q6	0.01		0.21		0.43	*	-0.18	
Q12	-0.02		0.08		0.16		0.85	*
Q43	0.11		0.20		-0.07		0.72	*
Q36	0.47		0.05		-0.18		0.67	*
Q27	-0.21		0.05		0.39		-0.64	*
Q1	0.60		0.58		0.04		-0.18	
Q40	0.49		0.59		0.33		0.30	
Q11	-0.31		0.47		0.54		0.32	
Q5	0.35		0.42		0.51		0.22	
Q19	0.45		0.48		-0.17		0.31	
Q45	-0.26		0.40		0.44		0.15	
Q10	0.22		0.38		0.10		-0.03	
Q17	0.35		0.28		-0.15		0.17	
Q16	0.27		0.26		0.08		0.28	
Q7	0.26		0.28		0.08		0.06	

Qi: Q-Sort/Participant i.
LCi: Component i's loading.
SCi: significance of Component i's loading

private and secure"; P14: *"They need to be simple, or at least explained simply so that those who read it understand. Often those loaded with jargon confuse the public which cause them to get frustrated or just blindly accept"*; P24: *"They are usually very basic and easy to understand in my opinion"*; P34: *"I care strongly about my personal data being protected"*; P28: *"I do care about my data if it has the potential to be used for nefarious reasons."*

4.3. Component 3: Care about their data, and need to verify that company is being truthful

Component 3 had significantly loading Q-sorts from 6 participants (4F/2M) with an average age of 31.3 years ($SD = 13.8$). This group also strongly cared about their data and expressed a strong interest in how their data, that were held online by organisations, were processed. They had a similar profile of personal principles as Group 1, but compared to the other groups indicated some inclination to read OCFs. Similar to Group 1, they felt pressured to signing consent forms. They also expressed a deep mistrust in online companies asking for their data and a desire to attend to using the service rather than spending effort on (reading) consent forms.

The following quotations illustrate Viewpoint 3 expressed in the Q-sorts. P6: *"Often when signing consent letters, it is usually from a company that is new to you. Therefore, the consumer must develop trust with the company and this can only be done if there is no manipulation of the wording"*; P15: *"I think that it's essential to be as protective as possible of personal data in the modern age, whether because of advertisers being able to create a virtual consumer profile of a person to enable them to sell more effectively with targeted ads and services"*; P46: *"I care about my data and what happens to it"*; P25: *"I care a lot about my privacy and my data that can be used in many ways from spamming to much more severe practices."*

4.4. Component 4: Do not believe they have anything to hide and don't read the forms

Component 4 had significantly loading Q-sorts from 4 participants (1F/3M) with an average age of 30.5 years ($SD = 13.0$). These four participants did not believe that they needed to protect their data and did not read OCFs. Their experience of ease of use was negative and, like Group1, they also believed that existing consent forms did not protect their privacy, but rather protected the organisations' interests.

The following quotation illustrates Viewpoint 4 expressed in the Q-sorts. P36: *"They contain pages and pages of information that would realistically take an age to read. Companies know full well that users will simply skim/skip through to the end without paying any attention to it."*

4.5. Analysis of Consensus and Distinctiveness

An analysis of consensus and distinctiveness among the viewpoints (components) was conducted with *qmethod*'s *qdc* function to identify statements about which consensus existed and others that distinguished the viewpoints (full results available on request). This automated analysis is useful for identifying statements with consensus (no significant differences between viewpoints) and other statements with 'complete' distinctiveness (all differences between viewpoints significant; therefore no consensus). There was no statement about which there was a consensus between the viewpoints and one statement ("Sometimes consent forms look like back-covering exercises, judgments") with complete distinctiveness (for z-scores see Table 1). Viewpoint 1 supported and Viewpoint 4 strongly rejected this statement. Viewpoint 3 somewhat supported the statement and Viewpoint 2 was approximately neutral.

This automated analysis is less useful for statements that distinguish one or more viewpoints according to the analysis. This is because a viewpoint that differs from one or two other viewpoints will not be identified as 'distinguishing'; rather, only a viewpoint that differs from all three other viewpoints will be identified as 'distinguishing'. Therefore, this analysis does not catch potentially important distinctiveness between pairs of viewpoints.

Nevertheless, including the above statement that distinguished all viewpoints, the analysis showed that 7 statements distinguished Viewpoint 1, 12 statements distinguished Viewpoint 2, 9 statements distinguished Viewpoint 3, and 7 statements distinguished Viewpoint 4 (see Table 2). Viewpoint 1 was distinct in the belief that current OCFs do not protect users' privacy and poor user experience of online consent. Distinctive for Viewpoint 2 was the need for reassurance. Viewpoint 3 was distinct in a lack of trust in online service-providers with respect to data protection and a desire to avoid being annoyed OCFs. Distinctive for Viewpoint 4 was a lack of interest in online consent.

In sum, the analysis of consensus and distinctiveness shows varying degrees of distinctiveness and no consensus. Therefore, the four-component solution provides gives a sense of the unemployed's viewpoints on OCFs.

5.   Discussion & Reflection

Our results show commonality as well as a divergence in the unemployed's beliefs about online consent. The commonality is that most groups in our study engaged with consent in the sense that they cared about their online data, but emphasised different additional beliefs (feeling pressurised to consent, a need for reassurance to consent, a need to verify the company's truthfulness). A minority did not engage, believing they had nothing to hide.

A *first* implication is that proof needs to be presented that service-providers act in accordance with the consent that users have provided, in terms of data protection. This type of reassurance would create or increase users' trust in the service-provider and increase the chances that potential online-service users would consent and thereby potentially increase the number of customers.

A *second* implication is that it should be made clear why particular data are genuinely necessary for service provision. For example, some data may be used for targeted advertising to generate (additional) income, but not necessarily required for providing the service for which users give their consent. If not collecting these data renders the service unsustainable an (increased) charge for service may be necessary. Service-providers may increase consumer trust by explaining (increased) charges.

A *third* implication is that it is important to find ways in which to engage the disengaged. Currently, they do not provide truly informed consent. Interventions could include privacy literacy education, but also making online systems and OCFs accessible to those with low privacy literacy skills and with other deficits (e.g., low literacy or dyslexia).

A *fourth* implication is that user experience of online consent should be improved. A promising approach is to apply principles of subtraction [Klotz, 2021] to decrease annoyance and increase well-being [Sunstein, 2020].

6.   Conclusion

There is a lack of research investigating expressed needs underlying online consent decision making. This is important, especially in those who may be most vulnerable to consenting without being genuinely informed. At present, it seems as if a power imbalance exists, where online consent exists to cover the backs of service providers, with online users unwittingly losing their privacy by consenting without understanding the implications.

We focused on the needs of the unemployed, as a disempowered and vulnerable demographic. We find that unemployed people mostly *do* care about the privacy of their data and have specific requirements concerning online consent. Therefore, a redesign of OCFs is required, because, in their current state, online users are not granting truly **informed** consent.

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