In Search of the Alternative Future: Developing Participatory Digital Citizenship to Address the Crisis of Democracy

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ABSTRACT

In this workshop, we strive to formulate a working definition of a participatory digital citizenship, and to share issues, challenges, opportunities, methods and empirical examples pertaining to participatory digital citizenship as a goal. The rational for such a work lies in extensive digitalization of everyday life, which has turned data into valuable capital and a means of manipulation. Excessively datafied environments and more and more powerful algorithms and artificial intelligences used for processing data pose a threat to societies' democratic arrangements and principles. Our goal is to explore the possibilities and limitations of expanding the concept of digital citizenship towards a direction that addresses the deep power asymmetry existing between the ones that use data and ones that are monitored.

CCS CONCEPTS

• **Social and professional topics** → Computing / technology policy; Surveillance; • **Human-centered computing** → Human computer interaction (HCI); HCI theory, concepts and models;

KEYWORDS

Digital citizenship, digital literacy, big data, artificial intelligence, surveillance capitalism, democracy, participation

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1 BACKGROUND

1.1 Introduction

This workshop addresses burning questions related to datafied environments, AI and democracy by utilizing the concept of digital citizenship. Following the most dystopian interpretations, we are already living in a digital version of Bentham's panopticon: citizens have become data producers whose every movement, action and emotion are tracked, analyzed in opaque ways and used to benefit companies and (authoritarian) governments [7, 12]. Current social media is the clearest example of this development: the widespread use of digital technologies has led to the birth of the data economy in which free services are provided to billions of people and at the same time, the data produced by those services is collected, analyzed and sold. Explanations provided to the user about the data use are vague or on the other hand, extremely complex and long, and thus, incomprehensible for most of us. In the system that Shoshana Zuboff [15, 16] has famously called surveillance capitalism, our behavior is monitored in astonishing detail by big technology corporations. For democracy this has profound consequences: data equals knowledge, and knowledge, in turn, equals power, which leads to a deep power asymmetry. Those who have knowledge can manipulate and have control over the monitored ones, and this can be done in very invisible and subtle ways, including social media bubbles, targeted news, and targeted disinformation. Currently we do not have laws and regulations that would effectively prevent this. The ever-changing and expanding landscape of digital everyday life has led to a situation where we need to rethink the concept of citizenship in order to decrease undemocratizing tendencies of the current development.

Further, under current circumstances we need to address not only challenges posed by datafied environments, but also issues connected to AI and algorithms which are increasingly used for processing the data. Algorithms codify and enshire value judgments while being themselves opaque to the general public [10]. Since AI by definition is capable of autonomous adaptation and decision making [4], this raises the question of how ensure these automated processes uphold democratic, humane and just principles? One of the central contexts where the entanglements of data, AI and citizenship currently manifest themselves are cities. Smart city initiatives and urban digitalization programmes intend to make use of various types of urban data, which can turn cities into enormous data-harvesting fields [7, 12, 14]. The theme of urban data and AI is topical in global North and South alike but as data collection and processing are deeply connected with local politics and cultural views and values, they may produce different reactions and effects in different locales [3, 13].

1.2 Digital citizenship and digital literacy

It has been argued that a digital society requires a new form of citizenship, digital citizenship, which cannot be actualized without adequate knowledge of the digital realm. The definitions of digital citizenship vary, but often it refers to proper and respectful behavior in digital environments, and active role in those environments (cf. active citizenship, civic engagement) [6]. The concept is often used in educational contexts and when discussing adolescents and digital media [1, 11].

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However, we find this definition quite narrow considering our contemporary, digitalized lives. For example, Hintz et al. [5] propose that focusing on the "performative and active construction of digital citizens addresses only one side of the coin". They insist we need to pay more attention to the fact that increasingly, we *live and operate in a datafied environment in which everything we do leaves data traces* – and we need to perceive this as one of the central facets of being a digital citizen. To address the importance of data for digital society and consequently, for digital citizenship, Hinzt et al. [5] propose the following: *An ideal configuration of digital citizenship would therefore be based on the possibility of comprehensive self-determination in a datafied environment, provided by secure infrastructure, an enabling regulatory environment, adequate public knowledge, and an informed use of the relevant platforms and applications.* Building on the argumentation of Hintz at al. [5], we suggest that from the point of view of design and design research, the aforementioned definition of digital citizenship needs to be expanded to more explicitly include the principles of democracy and participation.

In this workshop, we strive to formulate a working definition of a participatory digital citizenship, and to share issues, challenges, opportunities, methods and empirical examples pertaining to participatory digital citizenship as a goal. Moving towards this definition of truly participatory digital citizenship would require, among other things, more transparent and understandable technological systems. Furthermore, it will require the development and implementation of democratic and participatory approaches to co-create better applications, policies and regulation, to improve digital literacy in practice, and to empower citizens.

An important concept through which we can approach this mission is that of digital literacy. By digital literacy we refer here to the digital literacy of users – but also technology designers and decision-makers. We suggest there is a need to dissect and expand also the concept of digital literacy. One way to approach this is to understand it as consisting of two different parts: the first facet is *digital media literacy*, having its roots in media literacy and also stemming with conventional (narrow) understanding of digital citizenship. It refers to the ability to "critically consume and creatively produce multimedia "texts" using digital technologies [8]". Further, in order to be digital media literate, one must be able to access, understand, evaluate, and analyze different types of information and different kinds of avenues existing online and participate in civic life through digital technologies [2]. The second facet of the concept that we want to highlight is discussed more rarely, and can be called *digital technology literacy*. It entails individual's understanding of the broader legal, economic and societal issues pertaining to digital technology [9]. The first aspect, digital media literacy, can be seen as the basis for more nuanced understandings of the workings of digital society and, for example, the logics of the data economy, e.g. the commodification of use data and its consequences. However, there is a pressing need to increase digital technology literacy too – and recognize digital technology's gigantic role in societies and its severe implications for our political, social and cultural arrangements. Participatory practices and methods can be seen as a central means to further this goal.

These implementation strategies and effects of these proposals must also be creatively and critically investigated. This pertains to societal institutions, such as schools and institutions of higher education; legal institutions; local, national and international policy makers; and the very practices of designers and researchers.

2 ORGANIZERS

Dr. Johanna Ylipulli is an academy research fellow and a docent in digital culture at the Aalto University, Finland, where she leads the project *Digital Inequality in Smart Cities (DISC)*. She has her background in cultural anthropology, and for over ten years, her research has focused on cultural and social implications of new digital technologies in urban contexts. Dr. Ylipulli has worked in exceptionally interdisciplinary research environments in leading Finnish Universities, and published broadly, in fora spanning from prominent social scientific journals to flagship conferences of human-computer interaction. These include *International Communication Gazette*, *Technological Forecasting and Social Change* and the *ACM Conference on Human Factors in Computing Systems*, and publishers such as Routledge and SAGE. Dr. Ylipulli is the main contact person of the workshop.

Dr. Aale Luusua is a post-doctoral researcher at the INTERACT Research Group at the University of Oulu, Finland. With a general research focus on urban environments, citizen participation, digitalization and design theory, Dr. Luusua currently leads the Academy of Finland postdoctoral project *Experiencing Artificial Intelligence in the Smart City: Co-creating applications for urban life (AICity)*. Dr. Luusua's works have been published in leading international scientific books and journals published by SAGE, Routledge and Springer, and in leading scientific conference proceedings, such as the *ACM Conference on Human Factors in Computing Systems* and the *ACM Conference on Designing Interactive Systems*.

Dr. Ylipulli and Dr. Luusua have together co-led international workshops at the *Fifth decennial Aarhus conference: Critical Alternatives 2015* and the *FabLearn Europe: International Conference on Creativity and Making in Education 2019*, and more recently at the *Designing Interactive Systems 2020*, and at the *IndiaHCI2020*. The latter two of these workshops were held fully online.

3 WEBSITE

The call for papers and results of the workshop will be published on our joint "Urban AI" website where we have collected also the information from other recent workshops we have organized. The website as a whole introduces a series of academic workshops shedding light on the phenomenon of big data, AI and their societal implications from different perspectives. This gives more visibility to the proposed workshop and its results, and enables effective community building around the theme.

Link to Website:
https://tinyurl.com/yay7zon5

4 PRE-WORKSHOP PLANS

For the recruitment we utilize our networks and mailing lists, including also lists produced as a result of our previous workshops. For example, the workshop that we organized in conjunction with the *Designing Interactive Systems Conference 2020* on the theme of Urban AI created a community that we will approach. Further, we

expect to have new connections after *the IndiaHCI* workshop, held in November 2020.

According to our experience, the ideal number of participants is from 12 to 20. Although this means we may have to reject some submissions, the relatively small number of participants means that everybody can have a say and people will also more easily remember each other. In other words, community building works better. The said number of participants enables forming groups of suitable size (see our plans below for the tasks) and everybody to briefly present their work in the beginning of the workshop.

Prior to the proposed workshop, we circulate all workshop papers, and request participants to acquaint themselves with the papers and make note of overlapping interests. We also assign each participant a commentator; i.e. each participant will prepare brief comments for another participants' paper. Further, the participants are asked to prepare a short presentation about their own paper.

5 WORKSHOP STRUCTURE

We are proposing a one-day online workshop of four hours. In the beginning of the workshop, the hosts will briefly introduce the ideas of digital citizenship, digital literacy and participation to prepare participants for the group assignment. Then, an invited keynote (to be announced) will present further relevant ideas to feed participants' imaginations. Hosts have reserved a budget for this keynote to ensure a top-class keynote presented.

During work session 1, participants will present their topics of interest briefly, in one-minute madness style with two slides, and receive swift comments from a designated commentator. The slides will be collected prior to the workshop to assure a smooth workflow. The length of the presentations and comments will depend on the number of the participants; in total, we have reserved one hour for this part.

For work session 2, we will formulate groups or pairs thematically, selected by prior the workshop by us. Groups will be divided to work in breakout rooms, and they receive an assignment to reflect on and discuss relevant theories, case studies, methods, contexts, etc. for the development of the concept of participatory digital citizenship. Different groups will get a different assignment, depending on their papers and interests, and all of them will complement each other. The idea is to create a new working definition for the concept of participatory digital citizenship, trace its roots and future, and map central methods and theories. The results will be presented on a joint Miro board which will serve as the roadmap to Participatory Digital Citizenship. **For work session 3**, groups will present their contributions.

Finally, for work session 4, we will have a closing discussion. We will discuss plans for the future; our main target is to edit a special issue for a scientific journal, and draft a roadmap or agenda for the advancement of Participatory Digital Citizenship to address the crisis of democracy.

Preliminary schedule:

10:00am–10:30am	**Welcome and hosts' presentations on Digital Citizenship and Participation**
10:30am–11:00am	**Keynote lecture by visitor and Q&A (hosted by Dr Ylipulli)**
11:00am–11:15am	Coffee break
11:15am–12:15pm	**Session 1: Pre-prepared individual presentations (hosted by Dr Luusua)**
12:15pm–1:00pm Voluntary lunch/coffee break as needed	**Session 2: Group assignment**
1:00pm–1:45 pm	**Session 3: Group presentations (hosted by Dr Ylipulli)**
1:45pm–2.00 pm	**Session 4: Closing panel (hosted by Dr Ylipulli and Dr Luusua jointly)**
2:00 pm	Closing the workshop: Feedback, plans for the future

6 POST-WORKSHOP PLANS

The results of the workshop will be disseminated as follows by publishing the position papers on the workshop website, pending on authors' approval. We will present a short analysis of the workshop results on the website, including the new definition of participatory digital citizenship. The workshop will result in publications: A special issue or an edited book; and a popular article in a suitable magazine. Furthermore, the workshop will result in the creation of a professional network that will collaborate on future ideas, projects or publications. Finally, we will take the results of this workshop, improve it, and launch another workshop to disseminate the results and take this work further at a later conference.

7 250-WORD CALL FOR PARTICIPATION

In this workshop, we strive to formulate a working definition of participatory digital citizenship, and to share issues, challenges, opportunities, methods and empirical examples pertaining to this as a goal. This is necessary to address the current crisis of democracy fueled by social media, big data and AI in the service of surveillance capitalism. Moving towards truly participatory digital citizenship would require, among other things, more transparent and understandable technological systems. Furthermore, it will require the development and implementation of democratic and participatory methods to co-create better applications, policies and regulation, to improve digital literacy in practice, and to empower citizens.

We invite those interested to submit a position paper (3–4 pages) in the SIGCHI Full paper format. These contributions may address, for example:

- Theoretical considerations; e.g., utilising key theoretical concepts from various fields
- Case studies; empirical works that explore different aspects of digital citizenship in datafied environment or that can contribute to our understanding of the concept
- Design-based explorations in real-world settings, e.g. implementation of participatory approaches into the design of societally relevant technology systems, or FabLab or DIY based projects among different populations
- Methods: Methodologies that can contribute towards understanding and developing participatory digital citizenship, such as participatory design, speculative design, citizen science, ethnography, research through design, etc.

- Thematic issues; e.g. ethical dilemmas; data privacy and surveillance; emerging geographies of digital inequalities; design thinking; wellbeing; sustainability; global perspectives, etc.

Please note that at least one author of each accepted position paper must attend the workshop and all participants must register for both the workshop and for at least one day of the conference.

Deadline: February 21, 2021

Workshop Duration: One day

Papers should be sent to: johanna.ylipulli@aalto.fi and aale.luusua@oulu.fi

Workshop website: https://tinyurl.com/yay7zon5

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