Szymon Andrzejewski

"Can augmented democracy fulfil the ideal of deliberative democracy?"

University of Gdańsk, Faculty of Sociology

ORCID ID: 0000-0002-7841-7194

Academics in the field of political science are putting more and more interest in deliberative democracy. Idea that was developed in 1970 by Ned Crosby and Peter Dienel (Smith, Wales 2000) is under the process of constant transformation. This interest has brought the first handbook about mini-publics, the most known exemplification of this idea (Reuchamps, Julien Vrydagh, and Yanina Welp 2022). Also, examples of using this idea in government proceedings are rising in numbers. There have been 289 mini-publics till 2020 and 282 in OECD countries (OECD, 2020) and the number is still growing. Practice shows that single mini-publics may be not enough to fulfil deliberative democracy on a local level. Since 2019 a new trend of establishing permanent mini-publics has started in the region of Ost Belgien[1]. There are new permanent mini-publics institutions on a local level, like in Newham or in Aachen, that have been inspired by the OstBelgien Model (Podgórska-Rykała 2023).

The entrenchment of deliberative democracy within mainstream discourse has inevitably drawn more intense scrutiny and criticism. Since the twilight of the 20th century there have been many critics of this concept in the democracy science like Shapiro (1999), Mueller (1999), Mouffe (2000) or Kuyper (2012). Central veins of criticism are that deliberative democracy is defenseless against strong aggressors, is focused only on debate, it is overly idealistic, the extended time demands it places on participants. Deliberative democrats defended their positions through many years. (Curato at al 2016). Also enthusiasts of deliberative democracy like Lafont (2020) are critical to today's deliberative democracy but from the standpoint that it is not fulfilling its assumptions. She argues that deliberative democrats are focused on mini-publics rather than searching for concepts that could realize deliberative democracy for every citizen. Also, they are not skeptical enough of the mini-publics outcomes.

An outcome-centric evaluation of mini-publics may also show vulnerabilities of this concept. Wesołowska (2013) analyzing accuracy of delibdem principles to the polish society concludes that this concept may be appropriate for societies on a macro level with high social capital but in countries with small rate of mutual trust it could be limited to small local societies. The Author's own research on deliberative mini-publics in Gdańsk and interviews with citizen assembly members shows that panelists from an inner perspective have few skills to participate in

---

1   https://equalitybylot.com/2019/03/01/new-permanent-sortition-assembly-in-belgium/ (access 27.08.2023)

deliberative bodies, including lack of skills of asking questions to the experts and other participants. (Andrzejewski, 2023)

Deliberative democracy has been analysed from many perspectives. Alternatively, what we are missing is more evidence base. Boswell (2021) had an unique opportunity to be drawn in the citizen assembly as a normal participant. One of his main remarks from being an embedded scholar was that working on public issues as a panelist is a great cognitive and analytical challenge. Panelists need to absorb a huge amount of information, arguments, data opinions then they start a deliberation and the cycle repeats. Then they need to analyze all information, confront results of their own analysis and analyze again and then the cycle repeats several times. There are also other factors like time pressure, influence from friends and relatives and others. Suggestions from Gronlund (2010) tells us that after citizen assembly members could become more withdrawn from the public sphere and authors explain this from realising how sophisticated public problems can be. In opposition to this option it is also possible that some people may feel that after mini-publics they have a sense of omniscience. Thesis of this paper is that there are serious cognitive and analytical bandwidth that people may feel in citizen assembly and more generally in deliberative democracy.

When looking for solutions to overcome this deficiency, deliberative democrats should be more open to technological solutions. Augmented democracy is a far-reaching answer that is still a wave of a future but it is worth consideration, especially in the time of AI-supported services (like ChatGPT), that are getting more and more common. This term may relate to different terms like the concept of virtual smart cities (Pournasas 2019). In this paper I refer to the meaning proposed by Cesar Hidalgo at the website „Augmented democracy - exploring the design space of collective decisions"[2]. In his concept Hidalgo suggests to overcome human limits (like cognitive bandwidth) by creating „digital twins" of people, avatars with computation abilities and skills that could make decisions on people's behalf with limited or without control of its protoplast. Digital twins could be created from answers about different social aspects of protoplasts life. New technologies are recalled to fulfil it in the real world. Opinions of digital twins would be aggregated and the majority of opinions would become law. According to this Augmented democracy in Hidalgo concept is rather a development of direct democracy than deliberative democracy.

Above mentioned digital twins as virtual versions of physical objects are known in industry and engineering for 20 years (Jones, 2020). Federated learning (McMahan et al., 2017) is a distributed machine learning approach which enables training on a large corpus of decentralized data residing on devices like mobile phones. Bonawitz (2019) presents a scheme of such a system. Software, after installing it on the computer, downloads from the server all new upgrades that are

---

2https://www.peopledemocracy.com/ (access 27.08.2023)

needed, but is not sending any data to the central server in return. In this concept data about devices and about users' views are not centralized in one database.

Some similar concepts have been already analyzed by scholars. Burgess (2022) see that technical development puts constant pressure on democratic proceedings and present 4 levels of augmentation of democratic process: Blockchain, Blockchain+, Algorithm and Algorithm+ where Algorithm+ is a wholesale replacement of the physical legislature and the individuals within it with a legislature composed of algorithms representing the voting public. According to Dahl and Shapiro democracy criteria and Fuller's eight Rule of Law desiderata author finds Algorithm+ as most coherent and getting the highest score among other concepts. Burgess shows also a belief that humans are not necessary in democractic process. Landemore (2023) revisits the merits and perils of proxy mass deliberation via AI. She see the dilemma between creating deliberative space in one room among a group of people or having mass participation that is not truly deliberative. Concepts of "mass online deliberation" by Velikanov are presented where every participant deliberately addresses the whole community, and gets back deliberation data. Inspiration comes also from the method of French Grand Debat which could organize thousands of mini-publics with more than one hundred participants.

Augmented democracy may answer to many deficits of today deliberative democracy:

1)It could create deliberative system for the whole society
2)People wouldn't have spend too much time participating in the system
3)Deliberation process would include computation resources with large benefits for consideration depth and quality

Many conditions need to be fulfilled and some of them aren't already known. There might not be enough appropriate research, there is always a risk that some variable hasn't been included. Augmented democracy needs a friendly environment with fully publicly accessible information and data to be transformed. Open research and government data needs to be public. Without this decisions would be not optimal according to the wrong data. Let's call this environment „informatory". Place that is composed of information, not atoms. Informatory may be biased on many levels from the very beginning. Criado Perez (2019) proves that big data that fills our informatory has been based on data from human males, which tends to be universal for every human being. Making deliberative processes by digital twins needs creating a common sphere in issues that has little space for common agreement. Computational augmentation can show more clearly If there are issues where there is no place for common agreement.

The idea of automating political processes has its followers but also it has been criticised. Helbing and Sánchez-Vaquerizo (2022) warns that this idea can create digital populism with supremacy of majority will without space for minorities and diversity. Other critics are focused on a „black box" problem. How the opinion is created and what is the path for input data to output data in case of AI? But we can reverse this charge and show that we can always trace and monitor this process, even If it is proprietary. Can we do the same thing in the case of human reasoning? Michał Kosiński is an example of a scientist that believes in algorithms much more than in human assessment (Kosiński, 2021). He thinks that they can see differences and regularities that are invisible to the human eye. In the case of constant control and improvement algorithms can judge much more objectively than humans[3]. His analysis on datasets like personal FB main photos and person's activity in social networks proves that algorithms are far more accurate in judgments than humans. These facts can be used for the good of all humankind.

Every idea needs to be assessed from different perspectives. Looking at this concept through Black Mirror lens, people may use their digital twins not only for public decision making. Below are potential misuse of digital twins technology:

- to enhance their professional abilities - plumber would use his twin (e.g. by a VR glasses and wireless headphones) to analyze what kind of pipes he see, what is maximal flow capacity in pipes by its diameter, what is the level of corrosion of the pipes by the color of the piper or maybe also by the sound of regular hits to the pipe, financial manager would use his twin to e.g. analyze paper financial document by scanning numbers and calculate revenue rate
- to enhance their social and matrimonial status - people who have some emotional or relationship issues would use digital twins to analyze human behavior by their body speech. They may then analyse If they are attractive to others or just to talk to someone when they are alone.
- to compete for maximization of point of view – people don't have to deliberate. They may prefer competition in discussion.

We can also speculate what can be the development of augmented democracy and what are other challenges. Human protoplasts will pass away but their digital twins will persist. Can we threaten digital twins autonomously from a person? It is an ethical question if we can delete digital twin. Also, why should we lose all the input of this digital twin to the informatory? It is imaginable that after many years the digital sphere of informatory may become a sacred sphere for preliminaries of people that have passed away. Augmented democracy may also raise expectations

---

3   Recording in Hogan podcast Link from https://www.michalkosinski.com/home (access 28.08.2023)
     https://drive.google.com/file/d/1IfAxkdFmfQZHr5zoyfvMXPbimuCydBz8/view

for quick results. People judge machines by their outcomes (Hidalgo 2021), but outcomes may be very extended in time. Citizens can lose faith in rational decisions and in augmented democracy If there won't be quick results. Of course we can't forget how much hardware energy consuming this system may be. People have to keep enough resources.

Discussion about AI in politics is growing. The subject has been noticed, e.g. by Innovation in Politics Institute in Vienna.[4] It needs to be continued by political scientists to predict what can be done to make the process of adopting AI into politics the most people and democracy oriented.

Literature:

Andrzejewski S. (2023) "Instytucje demokracji bezpośredniej, partycypacyjnej i deliberacyjnej w Gdańsku od 2010 roku", PhD thesis unpublished

Bonawitz, K., Eichner, H., Grieskamp, W., Huba, D., Ingerman, A., Ivanov, V., Kiddon, C., Konečný, J., Mazzocchi, S., Brendan McMahan, H., Van Overveldt, T., Petrou, D., Ramage, D., & Roselander, J. (2019). Towards federated learning at scale: System design. *ArXiv*.

Boswell, J. (2021). Seeing Like a Citizen: How Being a Participant in a Citizens' Assembly Changed Everything I Thought I Knew about Deliberative Minipublics. *Journal of Deliberative Democracy*, *17*(2), 1–12. https://doi.org/10.16997/jdd.975

Burgess, P. (2022). Algorithmic augmentation of democracy: considering whether technology can enhance the concepts of democracy and the rule of law through four hypotheticals. *AI and Society*, 37(1), 97–112.

Reuchamps M., Vrydagh J. , Welp Y., (2023) De Gruyter Handbook of Citizens' Assemblies

published by Walter de Gruyter GmbH, Berlin/Boston 2023

Criado Perez, C. (2019). *Invisible Women: Exposing Data Bias in a World Designed for Men*. New York: Abrams 2019

Curato, N., Dryzek, J. S., Ercan, S. A., Hendriks, C. M., & Niemeyer, S. (2016). *Twelve Key Findings in Deliberative Democracy Research*.

Helbing, D., Argota Sánchez-Vaquerizo, J. (2022) Digital Twins: Potentials, Ethical Issues, and Limitations Handbook on the Politics and Governance of Big Data and Artificial Intelligence, Edward Elgar, Forthcoming,

Hidalgo C., Orghian D., J. Albo-Canals, F. de Almeida, Martin N. (2021) How humans judge machines. Cambridge, Massachusetts, The MIT Press, 2021

Landemore H. (2022). Can AI bring deliberative democracy to the masses? [Working Paper]. https://www.law.nyu.edu/sites/default/files/Helen%20Landemore%20Can%20AI%20bring%20deliberative%20democracy%20to%20the%20masses.pdf

---

4   https://democracy-technologies.org/opinion/dont-use-deliberative-democracy-to-distract-from-regulation/ (access 29.08.2023)

McMahan, H. B., Moore, E., Ramage, D., Hampson, S., Arcas, B. A. (2017) Communication-efficient learning of deep networks from decentralized data. *In Proceedings of the 20th International Conference on Artificial Intelligence and Statistics,* pp. 1273–1282, 2017

Kosinski, M. (2021). Facial recognition technology can expose political orientation from naturalistic facial images. *Scientific Reports by Nature* (IF4.5).

Jones D. et al. (2020) Characterising the Digital Twin: A systematic literature review, CIRP Journal of Manufacturing Science and Technology 29 (2020) 36–52

OECD (2020), Innovative Citizen Participation and New Democratic Institutions: Catching the DeliberativeWave, OECD Publishing, Paris

Podgórska-Rykała J. (2023) Innowacje deliberatywne jako sposób na łagodzenie kryzysu demokracji: wybrane przykłady zagranicznych mini-publik Samorząd terytorialny na świecie nr 8/2023 , Wydawnictwo Fundacji Rozwoju Demokracji Lokalnej , Warszawa 2023

Pournaras, E. (2019). Proof of witness presence: Blockchain consensus for augmented democracy in smart cities. *ArXiv*.

Smith G. Wales C., (2000) Citizens' Juries and Deliberative Democracy. *Political Studies* 48, no. 1 (March 2000)

Wesołowska E. (2013) Potencjały i bariery urzeczywistniania deliberacji w polskich warunkach kulturowych *Kultura i Społeczeństwo* 2013, nr 2