Decentralized Web as a Public Sphere

Problem identification

This is how the machine of modern capitalism works: the intertwine between corruption in political power, interest of multinational enterprises (MNE) and commercialism thriving under the millennial era of social media creates a deterministic path for individual existence: user can either opt in the loop of social media which creates addictive content or being left out by the system. In other words, if you want to exist in the system, you have to adapt and assimilate into a part of the machine. Your taste, your deepest fear and your dream are, in a sense, shaped by the allocation of your attention, which are disproportionately allocated to the commercial advertisement, where capital intentionally directs. This can be a silent penetration process, as depicted in the *The Society of the Spectacle* by Guy Debord, where the consumer culture and commodity fetishism would only affect the individual thinking and decision-making in a subconscious way.

Ethical Concern

The relative uprising of the materialized and atomized life-style in post-modern society with the massive invasion of centralized social media platforms (e.g. Twitter, Facebook, Instagram, etc) is not a coincidence. Currently, the ownership of social graphs are grasped by the social media monopolies, meaning all of the data regarding bidirectional and multidirectional relationships are stored in the centralized server, which gives them the power to make profit by monetizing the social graph. As Ovadya (2022) states, traditional social media attempts to extend the length of users lingering at the platform by predicting what content is able to trigger intense emotions, including hysteria, fear, anger and anxiety, since the user volume would be positively associated with the fee of advertisement spots. Although some may argue that it's rational and legitimate for businesses to maximize their profits by all means, this behavior of distributing toxic content did have negative externalities on the society by distracting citizen's concentration on the significant social discourse and intensifying the social polarization.

The true representation behind them is the profit-mongering MNEs, the exact opposite public interest. As a seemingly obvious consequence, it witnesses a decaying of the public sphere: an arena where citizens come together, exchange opinions regarding public affairs, discuss, deliberate, and eventually form public opinion. As more and more activities and community gatherings shift from in-real-life to the virtual space,

digital space becomes a more important venue for the civic activities and public sphere, a place for individuals to gather as equals to promote democratic participation and accountability defined by Habermas (1991).

Potential Solution

Social media as the modern "agora" for citizens to gather should not be owned by any centralized entity, but to be built as a public good infrastructure, which can be realized through decentralized social graph protocols such as Nostr, Facaster, ActivityPub, etc, which guarantees all of the content post by user are record on chain as unmodified data. Based on the protocol, decentralized storage systems such as IPFS and Filecoins would enable data privacy and move forward towards individual sovereignty. Most importantly, the ownership of social graphs indicated by the individual digital footprint (likes, following, comments, views) can be returned to the user itself. For instance, Lens protocol would enable user to mint NFT (non-transferable tokens under ERC-721) as a follower, Disco creates multi-dimensional social graphs by enabling bidirectional verification between nodes, and Mask creates profile graphs by organizing user's personal twitter activity.

To re-imaging the social media as a public good, citizens not only need a decentralized web which guarantees the freedom of speech and the creation and ownership of social graph, but also need a platform for democratic activities: debate, discuss and vote. DAO (decentralized autonomous organization) provides an ideal place for digital governance, since the decision making is automated by open-source algorithm deployed based on consensus, and the novel voting mechanism (e.g. quadratic voting, retroactive voting, etc) are aiming to reshape a more healthy and equal power structure. To resolve the echo-chambers created by the engagement-based algorithm which fuzzy matching users by their online identities, bridging-based algorithms would match between users which are located in different echo chambers by default. Similar to polis as a public opinion aggregator, the platform would enable any user to be the initiator of the conversation and allow any user to leave comments under conversation, creating n-dimensional matrix before mapping the user to a 2-dimensional social graph and identifying consequential events which would be the concern for both parties and prioritize the comments from user on the furthest distance of social graph to allocate the attention.

The solution to the above problem did not exist in communism, where the regime forced individuals to surrender individual happiness to the welfare of the whole society using authority power, without realizing a fatal problem - the optimization of the resource allocation is merely to maximize the

aggregation of the welfare of every individual. Otherwise, 'the servant to the pleasure of the people', as the 'communist servant' put it, can easily be manipulated into the 'the servant to the authoritarian regime'. 'People' without flesh and blood, are just a number. A number would not speak for itself. Thus, the answer is not prioritizing ethics and national interest to the individual welfare, nor calling appeasement on the penetrating force of commercialism. What we should really do is to admit the existence of corruption of private interest into the public sphere by tokenizing the attention economy.

Future Work

Although the thesis presents an optimistic view towards the future of social media as a public good. The decentralized web only provides infrastructure, which does not guarantee the transformation towards the Schelling point. To understand the whole picture and whether vulnerable groups are empowered or marginalized in this reconstruction. This thesis would explore the representativeness of 'mini public' in the current digital space from the perspective of the paramount view of whole demographic paramount view.

Resources

https://www.scu.edu/ethics-in-technology-practice/ethical-lenses/

https://nyupress.org/9781479837243/algorithms-of-oppression/

External Resources:

https://www.belfercenter.org/publication/bridging-based-ranking

https://arxiv.org/pdf/2302.00672.pdf

https://www.belfercenter.org/publication/beyond-buzzwords-web3-daos-and-future-human-coordination

https://journalqd.org/article/view/2558/2297

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4245233

https://www.belfercenter.org/publication/holding-platforms-accountable-not-enough-we-need-compass-social-technologies