

Mastodon: A Decentralized Social Network



The ambivalence of social media, from its technologies and platforms to its users and social interaction, has made it relevant for several scholars to investigate its current state of affairs. One such study is created by Zulli, Liu, and Gehl (2020), focusing on Alternative Social Media (ASM) and how structures of technologies also structure social relationships. They chose Mastodon, a decentralized social network, as their case study.

In objection to the operations of Corporate Social Media (e.g., Facebook, Twitter, Instagram), numerous ASM has emerged to challenge the hegemony of content consumption and, more profoundly, to question the hitherto existing process of producing media (Gehl, 2015). The goal is to transform social media into a 'global commons' where it is owned, controlled, and governed directly by the people that use them (Kwet, 2020). One such ASM currently of interest and can be a gateway to introduce and familiarize oneself is Mastodon, a Twitter-like, decentralized microblogging social network with over 4 million registered users.

Because Mastodon is currently understudied, the research done by Zulli, Liu, and Gehl (2020) is novel. They explore the socio-technical structure of ASM as it redefines social relationships in contrast to CSM. Moreover, they illustrated how Mastodon helps redefine the "social" in "social media" through three concepts:

- Topology of decentralization;
- Minimal abstraction of software to the user community; and
- How different paradigms of scale affect the type and quality of engagement.



Topology

A topology represents a network's logical shape or layout. A CSM, like Facebook and Twitter, uses a centralized topology where data flows to and from the center. Mastodon uses a federated, decentralized topology.

- Mastodon is a social network made up of servers called “instances.”
- Instances are where social interaction takes place.
- Users register to individual instances (such as Mastodon.social), which then communicate across a more extensive network.
- The Mastodon Federated Universe (Fediverse)

Instances are often founded on similar interests. If there are no instances for your interests or affinity, you can also host your own. The hosting and moderating are all voluntary. Some instances compensate moderators and contribute to operating costs crowdsourcing funds, but that remains the exception, not the norm.

Abstraction

- Abstraction (a computer science terminology) refers to hiding internal details from users and other developers.
- CSM, such as Facebook and Twitter, hides how their algorithms work.
- Abstraction prevents users from knowing what CSMs are doing with their data.

In contrast, Mastodon is a free and open-source software project. Instead of hiding the internal details, it is made for everyone to see and even modify. Development is done collaboratively through Github, changes and other documentation are also tracked. As an open-source project, Mastodon allows anyone to see and modify the code, licensing, features, and policy. Hence, not only the interaction within the instances is social, but the technical development as well.

The ability to talk directly to administrators is also done to remove layers of abstraction. Each instance has its policies and moderators interact closely with users. That is why some moderators

and users prefer smaller, more intimate instances to ease content monitoring. Users can also choose, through keywords, which toots (equivalence of a tweet) they want to see or not. They can even block or mute entire instances if they want to.

Scale

CSM terms scale inextricably with its currency for advertisers. For Mastodon, scale is perceived in terms of the number of instances rather than the number of users. This is done to ensure optimal moderation and the quality of engagement.

To not overextend their ability to provide the necessary social need, some instances close registration when they grow too large. The benefit of seeing growth in this way:

- Maintain a communal nature (reflected in the smaller scale of individual instances).
- But maintain the merit of networking size (reflected in the size of the Mastodon Fediverse).

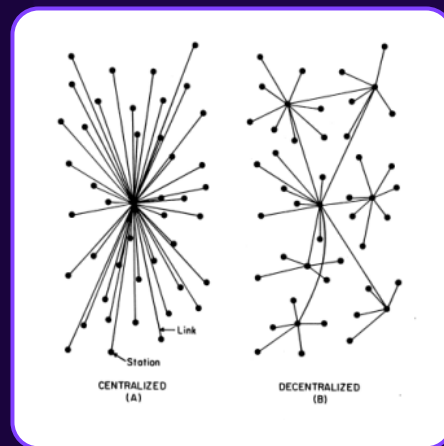
Users are encouraged to create as many niche groups as possible; if one instance closes their registration, another can be made. To find an instance, new users can visit instances.social.

Figure 1



[https://commons.wikimedia.org/wiki/File:Mastodon_Logotype_\(Simple\).svg](https://commons.wikimedia.org/wiki/File:Mastodon_Logotype_(Simple).svg)
(GNU AGPL, Wikimedia Commons)

Figure 2



<https://retroshare.readthedocs.io/en/latest/concept/topology/>
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