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Decentralization as Democratization: Mastodon as an Alternative to Platform Power

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About the impulse series and this publication

In collaboration with the Upgrade Democracy team at the Bertelsmann Stiftung and the Humboldt Institute for Internet and Society, we are hosting a five-part impulse series from April to September 2023 on the topic of “Digital Platforms: Proposals for Design, Governance, and Alternatives.” The series aims to present and discuss alternatives to established social platforms by examining the challenges and issues associated with them. It focuses on the themes of participation and robust governance, with a particular emphasis on the democratic design of dominant social platforms and the decision-making processes that prioritize the common good. Each input in the series is thematically interconnected and seeks to develop ideas as well as actionable and policy recommendations for a sustainable form of Platform and Content Governance in digital spaces.

All inputs will draw upon ideas generated in expert workshops where small groups discuss provocative hypotheses and central questions under Chatham House Rules. Following each event, an impulse paper summarizing the most important aspects of the discussion will be published.

The series concept was developed by Cathleen Berger, Charlotte Freihse, Vincent Hofmann, Matthias C. Kettemann and Katharina Mosene.

Participating discussants on April 18, 2023

Lightening Talks

- Elisa Lindinger, Superrr Lab
- Christof Stein, Press Officer at the Federal Commissioner for Data Protection and Freedom of Information

Experts

- David Alders, Stiftung Mercator
- Christina Dinar, Leibniz Institute for Media Research | Hans Bredow Institute
- Maik Fielitz, Institute for Democracy and Civil Society, Jena
- Stefan Kaufmann, Wikimedia
- Katharina Klappheck, Heinrich Böll Foundation
- Paula Matlach, Institute for Strategic Dialogue
- Jan-Hinrik Schmidt, Leibniz Institute for Media Research | Hans Bredow Institute
- Felix Sieker, Bertelsmann Stiftung
- Kai Unzicker, Bertelsmann Stiftung

1 Why does the fediverse matter?

An oft-heard criticism of the digital age is that too much power is concentrated in the hands of too few individuals. An infrastructure that is both democratic and designed to serve the common good, particularly one utilized by social platforms, conflicts fundamentally with the business models of large commercial platforms. Unsurprisingly, current debates about common-good alternatives to the standard commercial platforms are thus increasingly focusing on the so-called fediverse. As a portmanteau combining the words “federation” and “universe,” the term “fediverse” refers to a collection of interoperable, decentralized social networks and other online services that are independent but able to communicate with each other.

By moving away from profit-oriented logics, decentralized networks for the purpose of communication pose a genuine threat to dominant power structures. As decisions relevant to technical design, user management, and content moderation are now distributed among various instances (i.e., communities with their own rules and culture), the focus is once again on communication and interaction, rather than advancing the profit maximization of platform economies.

Mastodon as part of the fediverse

The fediverse is a network of decentralized, independent services such as Peertube, Hubzilla, Diaspora and Mastodon that have been developed since 2008. Since then, additional applications that use a common standard or protocol called “ActivityPub” have been added. This standard enables users to communicate and exchange information across different platforms, achieving both technical and communicative interoperability. Similar to what we know from email, but unlike centralized platforms such as Facebook, Twitter, and TikTok, the fediverse allows for communication across different services through a single account.

The most well-known and widely discussed application is Mastodon which, since Elon Musk’s takeover of Twitter in 2022, has become a popular alternative to traditional social networks. Under development since 2016, Mastodon has nearly 11.2 million users across all instances (as of April 2023), though upwards of 10 million have signed up since October 2022. It is financed primarily through crowdfunding and promoted through collectively organized efforts.

What sets the fediverse apart from other major social platforms?

The fediverse’s potential as a non-profit, common good-oriented alternative to commercially driven platforms makes it particularly relevant. Criticisms of large social platforms focus on three general aspects: (1) [the collection and sale of user data and behavior for advertising purposes](#) (often referred to as “surveillance capitalism”); (2) [content moderation and behavioral rules that are aligned with the value systems of companies located in either Silicon Valley or China](#) (often referred to as “digital colonialism”); and (3) [closed platforms that aim to keep users using their services for as long as possible, sometimes at the expense of individual well-being](#) (often referred to as “attention economy”).

Featuring a decentralized, non-profit infrastructure, the fediverse has fueled hopes of providing an

alternative to all three concerns. Three characteristics of the fediverse have attracted considerable attention: the absence of user-based advertising, decentralized spaces with diverse behavioral rules, and interoperability.

But how does the fediverse's decentralized and non-commercialized infrastructure work in practice? Does it truly create an inclusive space where everyone's voice is heard, and how might transparent moderation practices fit into this picture?

In other words, can the fediverse live up to the hopes placed in decentralized networks? We discussed these questions with a panel of experts on April 18, 2023.



2 Key challenges facing the fediverse

The challenges associated with large, commercial platforms have been discussed from various perspectives for several years. Recently, there have been discussions about whether decentralized networks can provide experimental spaces for democratic communication, and whether commercial providers can learn from decentralized networks. In an effort to systematically reflect on these questions, we have formulated two hypotheses:

1. **First, decentralized networks lack sufficient legal certainty.**
Decentralization means that everyone can contribute to moderation, but no one is required to do so. The incentives to moderate effectively are not economic; they can be altruistic, but they can also be absent. The scope of available resources and levels of professionalization for moderation can vary widely among instances, making successful content governance (i.e., contributing to and moderating content) challenging.
2. **Second, in their current form, the ostensibly more democratic structures of the fediverse can disadvantage marginalized groups.**
Most instances are currently operated by people located in Europe or North America, leading to a one-sided perspective on the needs and challenges of users, as operators are often white, male-identified individuals. Content moderation is often carried out by volunteers, which can be problematic for marginalized groups if they are not involved in the decision-making process. Not everyone has a say in shaping the process.

Based on these hypotheses, there are three central questions that arise:

1. **How can decentralized alternatives be financed?**
2. **Can participation and safe spaces be scaled effectively?**
3. **What conditions must be met to encourage the positive, common good-oriented development of the fediverse?**

2.1 Mastodon as a business model: Who should finance decentralized networks?

The added value of the fediverse lies in its non-commercial structure, where individuals and smaller organizations set up and manage applications and instances. Server costs are incurred based on the number of users and communication volume, and there are expenses for technical support, community management and content moderation – which are currently provided primarily by volunteers. Each instance operator defines a code of conduct to which the users of that instance are bound. This can involve labeling content related to the climate crisis, gender-based violence, or the Russian attack on Ukraine with a “Content Warning,” or focusing on specific topics like gaming, pets or religion.

As the instances and number of users in the fediverse increase, so do the costs of operation, maintenance, support and moderation. The concern is that the more successful the fediverse becomes, the less likely it is that the necessary resources can be covered by voluntary activity alone.

What are the generally conceivable financing options or business models?

- **Advertising:** One option is advertising, where instance operators generate revenue through advertising deals or the sale of user data (ad tracking) in ways similar to commercial social platforms. However, this is a controversial and rather uninspiring approach that deviates from the non-commercial logic of most instances and could result in a (re)commercialization of the networks in ways similar to the large social platforms.
- **Subscription model:** This model has been successfully implemented by the voluntary association Digitalcourage, who charges users one euro per month for data protection and moderation services, although it's unclear whether this amount covers the actual costs. Nevertheless, it might prove to be a viable option.
- **Public funds:** This option involves the state assuming a stronger role in regulating and guaranteeing communicative infrastructures. However, this approach is in tension with a digital reality that reaches across national borders and benefits from cultivating its distance from the state.
- **Promoting civil society organizations:** Institutional support for civil society actors could create new spaces for advice centers on the establishment and maintenance of fediverse instances, data protection and content moderation. Additionally, organizations could specialize in community approaches to solving conflicts and best practices for creating safe spaces that cultivate discourse on a particular issue. However, in addition to questions regarding scalability, it's important to avoid a Eurocentric bias.
- **Digital volunteering:** Expanding and providing comprehensive support for voluntary work and lifelong opportunities for voluntary engagement could produce alternative models. Though compelling, this approach does not solve the moderation challenges facing decentralized networks, at least in the short and medium term.

Through the process of weighing in on various financing and business models, it became clear that because societal problems are rooted in social structures, they cannot be easily solved in the digital realm. Also, because these problems scale differently in the digital realm, social injustice and discrimination will be found in digital spaces. Certain funding models could potentially exacerbate specific privileges or lead to the marginalization of certain groups. Financing models must therefore be developed with intersectional needs in mind, and questions regarding accountability and responsibility must be raised on a regular basis.

2.2 Mastodon and empowerment: Can inclusion and safe spaces be scaled effectively?

The questions of participation, inclusion and safe spaces gain particular relevance given the issues associated with business models. Co-creation can take different forms. An absolute form involves self-hosting an instance within the fediverse, another form involves promoting democratic governance that empowers marginalized groups in particular. Below, we consider three forms of participation in terms of their pros and cons:

- **Self-governance:** Hosting an instance requires expertise in technical, legal and cultural issues to ensure data privacy and develop codes of conduct. While this offers the potential for inclusive spaces in which different communities can establish their own codes of conduct, current communicative power structures remain relatively stable. The majority of fediverse users and instance operators are male-identifying, white and technologically proficient, which poses a challenge to developing these communication spaces in ways that are inclusive.

- **Co-creation of codes of conduct:** The bottom-up models employed within the fediverse, reflected in the codes of conduct of each instance, are crucial to ensuring participation and co-creation. These codes serve as social norms that regulate the spread of content on instances, and often go beyond state criminal law or measures targeting equality. They can also reflect advances in such norms that have yet to be codified in law. Due to the decentralized nature of the fediverse, these codes tend to exceed the terms of use issued by commercial platforms.
- **Technical empowerment:** Deepening the involvement of all users in the technical development of features is another powerful tool for spreading communicative power. However, requesting technical development is typically done through GitHub, an open-source application owned by Microsoft, which presents its own challenges regarding access and diversity.

To consistently develop participation and empowerment, instances need support and access to consulting. They need help with ensuring constructive and inclusive design at the technical, legal and cultural levels. For example, expert support could be provided for developing ideal terms and conditions or advisory services provided to help with balancing interests. Instances could then collaborate to develop their own moderation rules with expert support.

2.3 Mastodon as a catalyst for the common good: What conditions are necessary to drive the positive development of the fediverse?

Advancing the positive development of the fediverse involves promoting diversity and inclusion. Decentralized platforms should thus be designed in a way that allows people with different backgrounds, interests and needs to access and customize their features. This can be achieved through communities or groups that focus on specific topics or interests. We highlighted three areas that require further discussion:

- **The role of democratic structures:** Democratization tools such as instance advisory boards could be introduced to achieve diversity in content moderation. Such tools are to some extent already a requirement for large platforms and are being debated for the implementation of the European Digital Services Act (DSA). However, the processes and resources for setting up and implementing such structures need further clarification.
- **The role of companies:** The role of companies in instances is controversial. While well-known companies are needed to encourage more people to switch to decentralized networks, this can lead to a market-driven logic that conflicts with the decentralized network's ethos. The question is whether decentralized networks can attract commercial users without giving in to a commercial logic.
- **The role of public authorities:** Many instances struggle with the challenges of establishing regulatory frameworks and enforcing rules. Public authorities could bring the resources and normative-technical competence needed to the network, helping to ensure the professional moderation of content in the interest of a diverse debate. However, the independence of these debates is also crucial for the attractiveness of decentralized networks, particularly from a legal perspective.

2.4 Observations and recommendations for the future of decentralized networks

The idea of a global digital village where borders are non-existent was once marketed as a utopian vision by commercial social platforms. However, the recent growth of and interest in decentralized alternatives have shifted the narrative toward a focus on inclusion and participation. The presence of many small digital villages that operate independently but remain technically connected reflect the diversity of our analogue world and societal structures. While the digital world can't magically dismantle these structures, it can help bring about change by making them more visible.

1. **The decentralization of discourse:** Decentralized networks like Mastodon can contribute to the common good in a number of ways. First, they enable freer and more independent communication as they are not controlled by a central provider. This can lead to a pluralistic and diverse discourse that includes marginalized voices. Rather than being globally and centrally controlled, discourses can be driven by interests and moderated on a collaborative basis.
2. **Co-design and transparency:** The varying rules and practices governing content moderation across different Mastodon instances do not necessarily contribute to a broad and deep democratization of regulatory practices or to genuine procedural transparency. In the classic platform landscape, the European model of digital regulation leads to an increase in compliance obligations, which is a positive outcome. In the fediverse, other approaches to community building should also be piloted and iterated. User surveys, particularly those involving marginalized groups, would help monitor the progress made through such visions and pilot projects.
3. **Law enforcement:** Freedom entails responsibility. Users in decentralized networks who spread hate speech, disinformation or calls to violence must be held accountable. Instance operators must develop governance models that ensure users can report and block content in the interest of promoting safe and healthy discourse, even across instances. At the same time, operators must ensure that they cannot be held liable for the criminal behavior of their users.
4. **Interoperability:** Decentralized networks must be interoperable so that users from different services can communicate with each other. This may pose legal challenges, but real innovations can set an example.
5. **Data protection:** Decentralized networks can better guarantee users' privacy and data security because they are not reliant on a central server controlled by a company or government. However, this works only if the instances actively pursue data and privacy protection.
6. **Financing:** Decentralized networks such as Mastodon are often supported by a community of users, but most instances are not sustainable. Small contribution models can set an example here, especially if they are supplemented by funding for civil society advisory centers that provide templates for terms and conditions and content moderation guidelines.
7. **Civil society engagement:** There is a clear interest in establishing social structures that promote a non-profit, inclusive society on Mastodon. However, as made clear in our discussions, social and economic incentives must first be created in the analogue world. Engaging in voluntary efforts for the common good requires having time at one's disposal and financial security. Key concepts such as the 4-day work week, an unconditional basic income or time models for civic engagement were raised during the discussion.
8. **Continuing education and skills-building:** Instances must consciously work on professional content moderation and ensure that the interests and needs of all users are taken into account in the processes of rule-making and enforcement. Providing training or resources for marginalized groups can help users raise their voices and contribute to the discourse.

Now's the time to up the fediverse's game with regard to participation, empowerment and inclusion – we need to seize the moment and turn positive insights into action.

3 What else is there to know about the fediverse?

The following is a list of recommended readings on the fediverse and its developments. If you have any suggestions to add to the list, please let us know!

- For further information regarding the first hypothesis about developing Mastodon's legal certainty, see Hinrichs und Kettmann (2023): [Hans Bredow Institute – Hans Bredow Institute for Media Research](#)
- In her article addressing our second hypothesis – that certain privileges are exacerbated through the fediverse – Berger (2022) offers recommendations for strengthening diversity and inclusion: [Mastodon as a common good alternative: Conditions apply – reframe\[Tech\] \(reframetech.com\)](#)
- This NYT article provides an overview of Mastodon and why many consider the service a strong alternative to Twitter, particularly in the wake of Elon Musk's acquisition of Twitter: [What Is Mastodon and Why Are People Leaving Twitter for It? – The New York Times \(nytimes.com\)](#)
- For a comprehensive look at the history, different applications, pros and cons of the fediverse, CheckFirst offers a valuable resource: [Mastodon, the rise of the Fediverse – CheckFirst](#)
- Having recognized the importance of recent developments, commercial providers are exploring investments and launching their own pilot projects: [Nach Twitter-Wechsel: Aktivität der Nutzer auf Mastodon geht zurück | heise online](#)
- Another article on netzpolitik.org examines the role of politics in relation to Mastodon and Twitter and the origins of social networks: [Irgendwas mit Internet: Twitter vs. Mastodon – ein Rück- und Ausblick \(netzpolitik.org\)](#)
- The Electronic Frontier Foundation highlights some of the key criticisms of commercial social platforms and discusses how these issues can be addressed in the fediverse: [The Fediverse Could Be Awesome \(If We Don't Screw It Up\) | Electronic Frontier Foundation \(eff.org\)](#)
- An interview with Mastodon founder Eugen Roschko sheds light on the governance structure of Mastodon and the limitations of decentralization in breaking power structures: [Can Mastodon seize the moment from Twitter? – The Verge](#)
- A study by ISD examines the challenges posed by extremist groups using PeerTube: [Die Hydra im Netz: Herausforderung der extremistischen Nutzung des Fediverse am Beispiel PeerTube – ISD \(isdglobal.org\)](#)
- On the technical background of the fediverse, the importance of ActivityPub and diversity: [Welcome to the fediverse: Exploring Mastodon, ActivityPub and beyond \[Special\] | Thoughtworks](#)
- A report on arxiv.org explores decentralized content moderation in the fediverse: [\[2302.05915\] Will Admins Cope? Decentralized Moderation in the Fediverse \(arxiv.org\)](#)
- Finally, an article on bag-gegen-hass.net delves into the impact of sorting communities by hate speech on public discourse: [Black Hole Musk: Was bedeutet Twitter 2.0 für den Hass im Netz? – Machine Against the Rage \(bag-gegen-hass.net\)](#)