SOCIAL MEDIA PLATFORMS AS MULTI-SIDED STAKEHOLDERS: YOUTUBE'S ROLE IN SHAPING IMAGINARIES OF AI

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Artificial intelligence (AI) is considered a key technology in contemporary societies with vast resources dedicated globally to its development. Simultaneously, AI technology has been at the center of public debate considering its societal impact. Social Media Platforms (SMPs) play a crucial role today in providing a space for such public debates but also partake in public discourses on various levels. At the same time, AI as a concept is often vaguely defined and inconsistent across debates acting as an umbrella term for various technical innovations, which has been critiqued for either over-promising the technology's impact turning towards solutionism or painting a dystopian future. This highlights that the perception of a broad technology such as AI is shaped by sociocultural, economic, and political factors and, therefore, contextually flexible and vulnerable to being influenced. Questioning the important position SMP's inhabit by interfacing different stakeholders around AI while also representing different types of stakeholders within the AI environment is therefore relevant to gauge their potential influence in shaping different publics perception of an evolving key technology.

Public debates and the public arenas, within which they are held, are crucial in shaping public perception. Understanding social media's power in informing, shaping, and sparking these debates as stakeholders as well as providing such a public arena is crucial especially in light of their global reach and position. Public debates are important as well as the access and option to participate in them because "sociotechnical imaginaries" (Jasanoff & Kim, 2015), meaning a societies' perception of a technologies' (future) risks and possibilities, are hereby co-constructed. These imaginaries play an important role in influencing how societies deal with emerging key technologies like AI by impacting what could be considered 'public imaginaries', which focus particularly on the *public* communication in this process (Brause et al, 2022). While Bareis and Katzenbach (2021) have previously considered national AI imaginaries through AI policy papers and traditional media's role has often been questioned for framing public

debates and resulting imaginaries, this paper is questioning what role social media platforms play in shaping users and, hence, public(s) imaginaries of AI.

In order to analyze SMPs with their complex assemblage of technical and social actors, the paper considers SMPs like YouTube beyond multi-sided markets (Nieborg & Poell, 2018) as multisided stakeholders when it comes to AI. SMP's like YouTube simultaneously represent (1) the industry as an AI innovator, (2) the platform as a technological implementer, (3) a media representative producing content about AI, and (4) a political mediator through their platform environment interfacing various AI stakeholders. Furthermore, SMP's are global entities, expanding their impact on public imaginaries globally as they can have differing effects on national and regional sociotechnical imaginaries. Hereby, SMPs concentrate power in one corporation going beyond considerations of "data colonialism". Citizens' data is not only claimed and privatized (Couldry & Mejias, 2018) by SMP's but also shaped and sorted as certain data production is incentivised while others might be 'lost' in the recommendation algorithm. To understand the role of SMPs in co-constructing public imaginaries, it is important to understand the various sociotechnical imaginaries they buy into and push in their communication. Furthermore, questioning these differences depending on the various roles the platform inhabits helps to visualize the complex negotiations happening with and within the platform and their societal implications that slowly but surely are able to stabilise sociotechnical imaginaries beyond the space of SMP's. Hereby, SMP's represent multisided stakeholders in AI by acting as different stakeholders but also interfacing them.

The research design focuses on YouTube as a case study. In order to conceptualize the platform as a multisided stakeholder, the operationalisation is based on a mixed-method approach considering four streams of data to analyze YouTube as

1) an AI innovator through their communication about AI innovation and use (collection of website material, PR, reports)
2) a media representative through their produced content about AI (YouTube Original AI Series: *The Age of A.I.*)
3) an AI implementer on their platform (academic literature review and popular sources)
4) and lastly, as a political mediator shaping YouTube's platform as a space for public debate (platform walkthrough following Light et al. (2016) in combination with creator gossip through YouTube video content of 5 commentary channels focused on influencer culture and labor)

The mixed-methods approach draws on a combination of document analysis, platform analysis as well as content analysis of YouTube content. The concept of gossip as loose, unmethodological talk that is generative previously used by Sophie Bishop (2018), is employed to incorporate creators' communication about the platform's use of AI. This brings forth the ongoing negotiation between platform, creators, and users to question the multifaceted role SMPs play in shaping imaginaries of AI.

The preliminary analysis shows that YouTube acts as a multisided stakeholder by shaping other stakeholders' imaginaries of AI from various angles depending on the intended audience of the public communication, created content, or applied technology. Their communication about AI on the platform itself is sparse and obscure by not

employing the term AI or other technical equivalents on their YouTube About pages but buying into known sociotechnical imaginaries such as platforms as open and accessible spaces. Research into YouTube's use of AI has highlighted its consistent expansion of AI from machine learning algorithms in their recommendation and content moderation system to detecting plagiarism and hate speech. At the same time, YouTube's public communication about the platform stays clear of AI related language. In contrast, YouTube has released an eight part Original video series titled *The Age of A.I.* in 2019 dissecting different AI aspects and industries. Platforms were no such industry, unsurprisingly, obfuscating YouTube's own role in AI development and application, while also stereotypically painting AI in a solutionist light. Despite the chasm between the SMP's use of AI and its communication about their own AI use contrasting with their media production on AI development, the platform hosts a wide range of content on AI from various angles including creator's calling out YouTube's harmful AI use regarding cultural creators. The platform, its affordances, and overall environment have become a staple of discussion in commentary channels focused on influencer labor. The same channels have, however, also brought forth the concern that the algorithmic curation supposedly "making YouTube safer" (YouTube, 2022) might also undermine critical voices that counteract the sociotechnical imaginaries YouTube wants to endorse – not only when it comes to AI.

Overall, taking the framework of sociotechnical imaginaries to consider social media platforms' role in shaping public debates allows a new perspective to the complex negotiations within YouTube's different roles itself as well as the platform imaginaries it evokes beyond its platform environment. It also highlights SMPs multi-sided role regarding AI from innovation, implementation, communication about, and political mediation of AI technology. While this preliminary study focuses on AI imaginaries in general, the framework allows both a deeper dive into specific aspects and industries of AI as well as a transition to other multisided stakeholders and other technological developments in future research to analyze the complex power dynamics in global digital networks.

References

Bareis, J., & Katzenbach, C. (2021). Talking AI into Being: The Narratives and Imaginaries of National AI Strategies and Their Performative Politics. *Science, Technology, & Human Values*, 016224392110300. https://doi.org/10.1177/01622439211030007

Bishop, S. (2019). Managing Visibility on YouTube through Algorithmic Gossip. *New Media & Society*, *21*(11-12), 2589–2606. https://doi.org/10.1177/1461444819854731

Brause, S. R., Katzenbach, C., Richter, V., Mao, Y., Schäfer, M. S., & Zeng, J. (July, 2022). *Public Imaginaries of Artificial Intelligence: Conceptualizing Public Debates About AI*. Paper presented at EASST 2022: Politics of Technoscientific Futures. Madrid, Spain: EASST. Retrieved from https://easst2022.org/EASST_2022_Madrid_Book_of_AbstractsDEF.pdf

Couldry, N., & Mejias, U. A. (2018). Data Colonialism: Rethinking Big Data's Relation to the Contemporary Subject. *Television & New Media*, *20*(4), 336–349. https://doi.org/10.1177/1527476418796632

Jasanoff, S., & Kim, S.-H. (2015). *Dreamscapes of Modernity : Sociotechnical Imaginaries and the Fabrication of Power*. Chicago ; London: The University Of Chicago Press.

Nieborg, D. B., & Poell, T. (2018). The Platformization of Cultural Production: Theorizing the Contingent Cultural Commodity. *New Media & Society*, *20*(11), 4275–4292. https://doi.org/10.1177/1461444818769694

YouTube. (2022). *How YouTube works - Product Features, Responsibility, & Impact*. YouTube. Retrieved March 1, 2022, from https://www.youtube.com/intl/en_us/howyoutubeworks/