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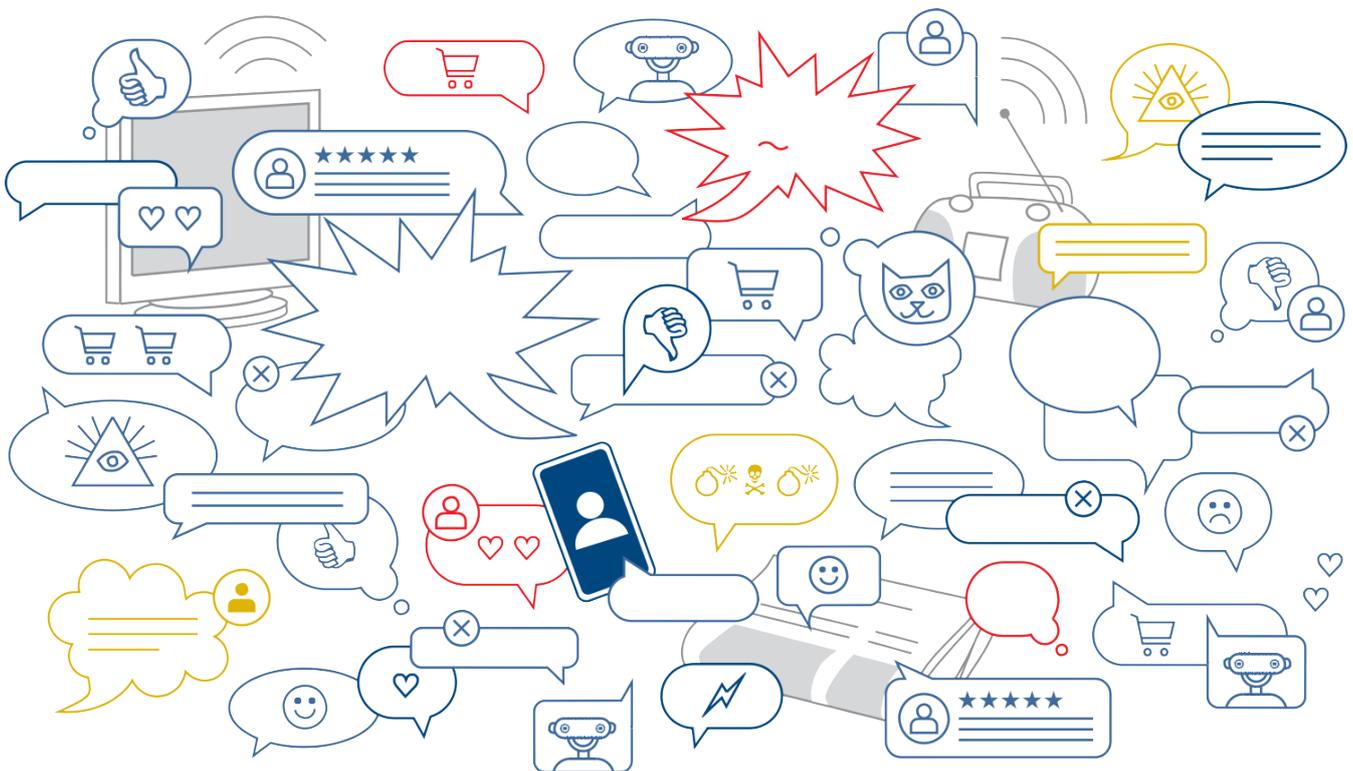
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**Statement**

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# Digitalisation and Democracy

Summary and recommendations



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## Summary and recommendations

In the course of digitalisation, the democratic public sphere has already changed fundamentally. Alongside traditional media such as press and broadcast media, new digital forms of communication such as online media and social networks have emerged. With respect to their democratisation potential, these have given rise to great expectations, but they also facilitate critical developments. This development has enabled easier access to information for the general public as well as greater opportunities for political participation and to strengthen civil society. However, it has also resulted in an increase in misinformation, attempts to manipulate and hate speech.

In order to properly understand the relationship between digitalisation and democratic public spheres, four aspects need to be considered: (a) the digitalisation of infrastructures of democratic public spheres, (b) changes in information and communication effectuated by digital media, (c) the increase in democratic participation due to new, digital formats and (d) the shift in political self-determination.

Democratic public spheres rely on infrastructures that enable fair and open discourse and provide access to diversified and reliable information. In the past, press and broadcast media have made up such infrastructures. However, digital infrastructures – in particular digital information and communication platforms (hereafter: platforms) – are playing an increasingly important role. Traditional mass media largely produce their own content which is curated, that is to say selected and prioritised by editorial departments, in accordance with professional criteria. Platforms, on the other hand, generally present the content of third parties – for example users, traditional mass media or advertisers. Algorithms are used to help select this content for individual platform users (personalised curation) to increase the time that users remain on the platforms in order to generate income from advertisements (attention-based business model). For this purpose, the algorithms underlying the personalised curation use extensive observation and analysis data on user behaviour to try to attract the attention of platform users and influence their behaviour.

The omnipresence of smartphones in everyday life and the importance of social media for both social and professional life enhance the importance of platforms still further. In addition, economic network effects result in a massive concentration of the platform market, which is characterised by a few major providers. These providers therefore have considerable power, which, in view of the key importance of platforms for the democratic public sphere, need urgent legal regulation. The existing approaches for requiring platforms to delete illegal content and make their curating criteria transparent do not suffice.

Communicating with and keeping the general public informed are essential within democratic public spheres. Digitalisation is greatly broadening the sources of information and means of communication, as evidenced by the prominent online encyclopaedia Wikipedia, new developments in sensor technology and data analysis that enable high-precision information to be provided in real time, and increasing global networking through new communication services. However, digitalisation also involves risks for information and communication. For example, the selection and reception of information present a significant challenge because the vast array of sources of information overwhelms peoples' cognitive capacities and platforms' curating practices can result in an inadequate prioritisation of information. Furthermore, adequately assessing information is often nearly impossible, as it is extremely difficult to gauge the correctness of information and the reliability of the underlying sources as relevant preconditions for normative statements. One reason for this, for example, is the rapid, far-reaching and mass dissemination of fake news in digital public

spheres. In addition, the algorithmic curation practice and users' selection behaviour present a risk to plurality and perceptions, that is to say the diversity of opinions and information in democratic public spheres. For example, consumers with extreme political views in particular select mainly sources that support their own existing opinion. Moreover, social media groups in which the members reinforce each other in their homogeneous opinions increase in number. As a result, positions can become radicalised and the tone of political debate can become charged. Finally, the civility of political discourse is threatened by phenomena such as hate speech and online harassment. In many cases criminal offences are committed, which in view of the large number of these offences can only rarely be prosecuted. Such breaks in civility can make the moderate majority of a democratic public sphere shy away from political engagement, thus reinforcing political and social polarisation.

Digitalisation of the public sphere has also had a huge impact on democratic participation. For example, political participation through platform activity has increased significantly. Users can regularly communicate with journalists, activists can organise large online campaigns, people who previously did not have access to active public communication can comment publicly on platforms and influencers reach an audience that is often broader than audiences of traditional mass media. Such means of communication enable a political discourse to take place across all social classes and environments as well as beyond geographical boundaries. However, digitalisation-enabled participation is not restricted to the use of these new forms of participation, but rather also includes the participation of civil society in the creation of digital technologies and infrastructures. For example, the *open data community* champions free access for all users to data which, as in the case of numerous research projects, is generated with the help of public funds, and the *open source* movement develops freely available software. The *civic technology* movement then uses these data and tools for digital services to strengthen civil society and democracy. In addition, the pioneer journalism movement establishes new practices for journalistic production and the dissemination of information with huge potential for democracy. A further new development in this regard is participation through the voluntary donation of data, which can be continuously collected through the use of digital devices and in particular smartphones.

Ultimately, the digitalisation of democratic public spheres also affects an individual's self-determination, that is, an individual's ability to independently develop desires, expectations and goals and to make decisions freely. Digital public spheres support said self-determination because they offer people additional means to express their opinions and participate in public discourse. However, social pressure to adapt and breaks in civility can outweigh these opportunities altogether. A further risk for self-determination is presented by microtargeting, a process in which digital services collect information about their users and analyse these data algorithmically in order to influence users individually. Microtargeting is a problem in particular in the political arena. While it remains unclear how successful such attempts to influence users really are, such an attempt alone can have a negative impact on users' political engagement. In Germany and Europe, political microtargeting has played an insignificant role up until now. However, it is expected that the number and impact of data-based attempts to influence individual users will continue to increase as a result of technological advancements.

Against this background, the German National Academy of Sciences Leopoldina, the German National Academy of Science and Engineering acatech and the Union of the German Academies of Sciences and Humanities recommend the following measures:

### Regulate the curating practices of digital information and communication platforms

(1) Platform operators should be required to participate in an independent, pluralistic body with binding decision-making powers which is funded by them and made up of the representatives of governmental and civic bodies and users and which makes decisions on principles and procedures for content curation. Through its composition and actions, the body should contribute to the adequate representation on the platforms of the full range of topics and positions that are relevant to the public.

(2) The platform operators should be required to publish information on the design of their platform and the principles of curation in order to create transparency and enable public discussion of this information. All parties involved should be granted the right to contact the independent body and suggest that the curating criteria be reviewed.

(3) A mechanism should be established that enables users to have individual curation decisions (such as the deletion of or commenting on certain posts) placed under review.

### Strengthen online content from public service broadcasters

(1) The telemedia mandate (*Telemedienauftrag*) of public service broadcasters should be extended. In particular the prohibition of press-like telemedia services should be lifted. The current three-stage test which decides on the admissibility of telemedia services from public service broadcasters protects commercial providers adequately against unfair competition.

(2) The broadcasters should publish programmes increasingly under public licences, in particular educational content such as documentaries, explanatory films and contemporary history programmes.

### Facilitate research on platform databases

(1) Platform operators should be required to make their databases available for non-commercial research projects that meet scientific standards, for example for the research of the relationship between digitalisation and democracy. However, this should not violate the legitimate confidentiality interests of platform operators.

(2) The platform operators should be required to provide scientists with information in general form on the data that is available and might be of use for research purposes and to provide more specific information upon request.

(3) In cases of very complex research projects, platform operators should be required to make their own processing resources (in terms of technology and personnel) available for scientific purposes for a reasonable fee.

(4) In order to protect business secrets and personal data effectively, an independent body should be created that decides on requests for access. This body should be funded by the platform operators.

(5) The existing legal requirements for the further processing of collected research data should be reviewed, as copyright and data protection currently present large obstacles for the publication of research results and the transfer of data for validation purposes or for the undertaking of further research projects.

### Ensure civility within the discourse

- (1) Non-governmental organisations (NGOs) that work on behalf of the victims of digital violence and against the brutalisation of public discourse should have the right to take legal action so that they can prosecute legal violations that carry significance beyond an individual case.
- (2) The prosecution authorities should use personnel development, targeted training and appropriate technical support to ensure expertise and awareness of the problem as well as to make resources available for effectively punishing criminal acts of digital violence.
- (3) Governmental and civic institutions should join together and cooperate in order to strengthen prevention, victim support and law enforcement.

### Promote the democracy-friendly design of digital technologies and infrastructures

- (1) Digital service usage environments should promote transparency – for instance concerning the curation criteria used – and user autonomy. One important measure for the design of such usage environments would be the provision of additional information concerning the reliability and epistemic quality of sources.
- (2) Research and development of platform-independent tools that can support users in the extraction and assessment of digital information and communication should be promoted, for instance by providing them with an understandable overview of relevant arguments and positions concerning a specific topic.
- (3) More research should be conducted on how explainable and fair algorithms based on artificial intelligence (AI) are, and they should be better implemented in practice. Being explainable means that important decision-making criteria are understandable for human users. Fairness means that AI decisions are consistent with fundamental democratic values and fundamental rights, in particular the principles of equal treatment and protection against discrimination.

### Strengthen the development of digital and media skills

- (1) Low-threshold measures should enable users to be architects of their own digital information environment. To this end, the usage environment must be designed accordingly, platform-independent tools must be made available and simple rules must be in place that can be learned and applied quickly.
- (2) Digital skills should be developed in pre-school, school, university and beyond. Suitable concepts already exist in the area of school education that should be implemented. In particular, measures should be in place to ensure that teachers are suitably qualified.
- (3) The handling of data should be an important part of school education as a topic that bridges many subjects, and a basic knowledge of statistics and probability theory as well as the skills for acquiring and interpreting relevant contextual knowledge should be taught.
- (4) At the university level, relevant expertise in the humanities and the social and behavioural sciences should be integrated into the curricula of STEM disciplines and basic technical mathematics and methodological skills should be promoted in all subjects. In addition, there should be compulsory courses in research and data ethics.
- (5) Media skills should be promoted as part of lifelong learning, namely in adult education (for example, in adult education centres) and with a specific focus on senior citizens (for example, in welfare institutions and care centres).

## Promote data journalism

(1) High-quality, data-based journalism should be promoted that, instead of focusing on individual anecdotes and narratives, analyses empirical data covering as wide an area as possible as well as long-term trends.

## Increase digital participation

(1) A government-funded initiative for a term of at least six years that is dedicated to new forms of digital participation and journalism aimed at this should be established. The initiative should in part promote humanities and social sciences research as well as technical developments based on this. It should focus on alternative platforms as well as pioneer and non-profit journalism, with special attention paid to local and regional journalism, which has been put under massive pressure as a result of digitalisation. The initiative should also promote civic organisations dedicated to developing infrastructures for new means of participation, for example in the area of data donation. In particular, those projects should be supported that involve young people from socio-economically disadvantaged or politically disengaged backgrounds and focus on the integration of all, in particular previously excluded social groups.

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