

5. Platform Architectures and Their Implications for Deliberative Systems

As I have established thus far, communication via social media platforms is especially relevant in deliberative systems that work under the conditions of the digital constellation. These platforms provide vital infrastructure for their communication processes. At the same time, their architectures structure the behaviour and interaction of their users: “the design choices that underlie the built environment can be just as effective at reshaping ‘user behavior’ as more traditional manifestations of power, like laws[, and] this remains just as true in digital environments as it is for the more traditional physical ones” (Forestal 2021: 13; similarly, Pereira/Keller 2022: 2661).

In other words, platform architectures can be partially read as the digital counterpart of the spatial context of face-to-face communication processes. Considerations on the spatial conditions surrounding deliberation have been repeatedly addressed by scholars of deliberative democratic theory; the most prominent work has been presented by Parkinson (2012a). These spatial arrangements are said to have a considerable influence on communication processes: “it can be the case that only certain kinds of spatial arrangements will do, or that certain arrangements amplify or mute particular behaviours that democrats find valuable” (ibid.: 4).¹ Parkinson identifies

three ways in which form might relate to political behaviour: it can be (a) absolute, physically preventing, or mandating certain action; (b) suggestive,

¹ Parkinson names numerous examples to this effect, including a debate on three broad templates of parliamentary buildings – the Westminster model, the French Estates General model and theatre style – and their implications for the communication processes in plenary sessions (cf. Parkinson 2012a: 105).

encouraging certain kinds of behaviour at the expense of others; and (c) symbolic, triggering a sense of identification or recognition, which in turn impacts on such things as political efficacy. (ibid.: 77)

In short, the architectural features surrounding a communication process structure and shape the participants' behaviours and interactions with different degrees of force.

Similarly, communication on social media platforms is structured by the platforms' architectures. These architectures comprise the technical protocols, interfaces and algorithmic systems of the platforms.² They provide the platforms with "many different ways in which [they] can promote, shape, and constrain public communication" (Moore 2018: 175), and they "profoundly shape the reception of [the exchanged information] by constituting the environment within which these cultural encounters happen" (Carrigan/Fatsis 2021: 54). Platform architectures thus contribute to the platforms' "role in, for example, spreading misinformation, fueling inter-group conflict, or mobilizing social movements", and they "profoundly shape[...] the ways we engage – or not – in democratic activity" (Forestal 2020: 2). Hence, the design of specific architectures "gives social media platforms enormous potential to influence and perhaps modify our political beliefs and behaviours, through the secret algorithms that shape online content" (Bennett/Lyon 2019: 9).

In the public discourse, and even in most works by deliberative systems scholars, the entire platform is treated as one deliberative site, with its community being represented as a homogeneous group – the often-cited "Twitter-Öffentlichkeit" ("Twitter public") in the German discourse, for example. But the community of the platform formerly known as Twitter neither was nor is a homogeneous group, and it has never been the case that there is only one site with one ongoing communication process. Instead, there are multiple smaller sites that develop based on the specific platform's architectures. This applies to any of the larger social media platforms. In the following, I will propose a way to analytically differentiate sites and to grasp the connections between them. These sites and connections represent the fundamental structures of communication processes on social media platforms.

2 Moving forward, I will not address specific codes or devices that can be used to access the platforms but will focus on the basic logics of connecting with other users and discourses.

Many of the architectural elements that form sites and connections are based on the central platform logics of data management and content moderation that I described in chapter 4.1. The collection, standardisation and storage of data are embedded in the fundamental, coded structures of the platforms and provide the basis for the algorithmic systems. Meanwhile, content moderation, and especially recommender systems, reify as architectures that are directly perceptible to the users and immediately shape their possibilities and probabilities of interacting with other users.³ Rather than function as the digital counterpart of spatial contexts, they mirror the moderation – or “facilitation” (Curato et al. 2017; Dryzek 2007; Ferris 2020) – of deliberative democratic theory.

Moderation and moderators have been subject of scholarly research, especially with regard to democratic innovations. This kind of research considers how communication processes must be organised and structured in order to improve the deliberative qualities of specific communication processes. Often, human moderators – or facilitators – are appointed to further this endeavour. They can “seek to assure that the weak, and not necessarily those with the best ideas or arguments, have ample time to speak and express themselves” (Fung 2003: 344); they can aim to “ensure[...] that discussions are on-topic, civil and not dominated by specific individuals” (Baccaro et al. 2016: 552); moreover, they may try to influence the participants and “encourage the development of a greater capacity to self-reflect, to self-direct and to do so in a way that is more responsive to the needs of others and the common circumstance that the self and others share” (Rosenberg 2004: 14). Thus, moderation in the deliberative theory sense aims at improving the deliberative qualities of communication processes.

On social media platforms, the goal of moderation is different. When content moderation aims at improving communication, it does not do so in order to make political decisions in a deliberative way. Rather, platforms moderate and order contents in order to keep them “clean” and interesting for their users, since users will not stay on platforms where they are insulted or confronted with illegal or mostly irrelevant and uninteresting contents (see chap-

3 Moderation on social media platforms is not always exclusively based on algorithmic predictions. For example, Facebook uses a purely algorithmic recommender system to curate user feeds (cf. Lada et al. 2021), while Reddit appoints moderators among their users for each subreddit (cf. Duguay 2022: 1189), and all the major platforms employ human content moderators to filter for problematic contents (cf. Gillespie 2018a).

ters 4.2 and 6.1). Nonetheless, the impact of moderation on the communication processes' structures is immense – arguably, it is significantly higher than in moderated face-to-face scenarios. This is partially due to the moderation's being ingrained in the architectural elements that form sites and connections. For example, as I will show in the following sections, platforms' content moderation systems emphasise certain aspects of a communication process through rankings, shape connections between sites and determine the visibility of sites for users in a personalised manner.⁴

Though deliberative theory scholars seldom directly address the content moderation systems of social media platforms, some have commented on these systems' effects on deliberative qualities. Chambers, for example, remarked that they have “a negative impact on both epistemic and normative functions of the public sphere, which is to say, on the circulation of reasons and the inclusiveness of debate” (2023: 63). Moreover, Ercan and colleagues noted that the hiding of contents from participants in a site decreases listening and reflection, as, “[o]bviously, it is impossible to listen to something that does not reach you, let alone to reflect upon it” (Ercan et al. 2019: 24). Amoores commented that inequality between contents and participants is a necessary side effect of content moderation systems, since the “very essence of algorithms is that they afford greater degrees of recognition and value to some features of a scene than they do to others” (Amoores 2020: 8) – if some contents are bumped up in a feed, others must move downwards. These are just some assessments regarding the influence of platform architectures on the deliberative qualities of digital communication processes, but all of them similarly imply that these architectures are perceived to have significant effects.

To unravel these effects, I will focus, in turn, on the afforded forms of expression on social media platforms, on the reification of deliberative sites and connections and on the effect that platform architectures have on the embeddedness of digital sites and on the wider deliberative systems, in turn.⁵ I will outline how the architectures structure the respective communication processes and how that affects the deliberative qualities of these processes.

4 Therefore, such a system can likewise be viewed in a spatial dimension – as resembling a dynamic maze that presents itself differently to each individual user.

5 In doing so, I will largely refrain from describing the influence of app layouts and interfaces, since they mostly affect the user's individual behaviour rather than their interaction with other individuals.

The structures of communication processes are generally shaped by a variety of aspects that differ with regard to the degree and direction of their influence. Moreover, there are no obvious and static causes that produce a specific structure. Rather, the communication structures and interaction patterns on social media platforms are a result of the interplay between various conditions and influences (see chapter 4). Yet there are certain architectural traits that make the development of certain structures more probable, that lead the structuration in certain directions, that support certain deliberative qualities; and I will address these traits in this chapter. I will indicate where the architectures support or enforce certain behaviour and communication structures, which in turn enhance or lessen the various deliberative qualities to different degrees. Moreover, I will cite relevant empirical studies – if available – to support my findings.⁶

Of course, interaction is not shaped and structured only by the spatial arrangements and architectures around it. Rather, “any behaviour observed is a result not just of the setting but of that plus its ‘attached standing pattern of behavior’” (Parkinson 2012a: 108). It is set in an “agglomeration of people and practices, symbolic and normative associations, as well as the power relations that drive spatial production and reproduction” (ibid.: 88). This also applies to social media platforms.

Highly structured fields of activity, they are made out of software protocols and codes influenced by the culture and outlook of the designers, the rules and regulations of the platform (shaped by owners’ economic and ideational outlook) and the social behaviours enforced by user communities (Finlayson 2020: 4–5; similarly, Docherty 2020) .

In this chapter, I will mainly address the immediate effects of platform architectures. How these architectures act in combination with more general social structures will be addressed in chapter 6.

Parallel to structure of chapter 2, I will start this chapter by addressing the ground matter of the communication processes and describing the forms of

6 These more general reflections can be used to assess specific communication processes. Such an assessment would have to reflect the communication process’s specific contexts for the system. Due to this context-dependency of deliberative qualities, and since I do not perform any case studies, in this book, I cannot draw any definite conclusions regarding the general impacts of platform architectures on the deliberative qualities of communication processes.

expression that are afforded on social media platforms (chapter 5.1). In doing so, I will focus on two forms of expression that are uniquely prominent in platform communication and that already have structuring effects on communication processes and implications for deliberative qualities. The latter part of the chapter is concerned with the structures of platform communication. It describes how sites and connections can be identified in these processes, how these sites and connections combine, how they are connected to wider deliberative systems and how the sites' and connections' specific characteristics affect their deliberative qualities and the qualities of the deliberative systems (chapter 5.2).

5.1 Specific Forms of Expression on Social Media Platforms and Their Value for Deliberation

Most social media platforms specialise in a certain kind of content.⁷ Nonetheless, all of them support some kind of verbal communication, and text-based and oral communication are the most common forms of expression on these platforms.⁸ Among deliberative theory scholars, these verbal forms are the most commonly discussed. But non-verbal forms of expression are likewise very important within the communication on social media platforms, and they have brought new aspects to deliberative systems that operate under the conditions of the digital constellation.

Many deliberative theory scholars of the earlier generations do not ascribe particular deliberative value to non-verbal forms of expression. Therefore, these scholars deny that such forms are admissible for deliberation. The discussion on the admissible forms of expression has a long-standing tradition in deliberative theory, and this discussion has been picking up in recent years. As I have described in chapter 2.1, the importance of non-deliberative speech acts, such as bargaining and storytelling, has been especially stressed by scholars of the deliberative systems approach. Lately, the role of non-verbal

7 Videos are prominent on YouTube or TikTok, photos are prominent on Instagram, texts or memes are prominent on Twitter/X, Facebook or Snapchat and so forth.

8 Both are, of course, specific neither to the digital constellation nor to social media platforms. Verbal forms are therefore interesting to discuss only in conjunction with other architectures, affordances and social configurations that are "digital-specific". I will do so throughout chapter 6, specifically in chapter 6.1.

forms of expression has gained some attention as well. Ricardo Mendonça and colleagues (2022), in particular, have addressed this matter.⁹ To their understanding, non-verbal dimensions of communication are especially relevant in the contemporary public sphere, which “involves a richer variety of communicative repertoires, including a range of non-verbal modes of expression such as symbols, images or even silences” (ibid.: 154).¹⁰ In most instances of communication, words and non-verbal forms of expression are combined, and “the meaning of these words is not simply determined by the words themselves, but it is co-constituted by the sound of the voice and the visual, sonic and physical context in which they are situated” (ibid.: 156). However, non-verbal forms of expression are not secondary to verbal forms but are meaningful in themselves and “can contribute something beyond words to deliberation” (ibid.: 155). They “may convey messages quickly; they can bring to light discourses and actors frequently neglected or ignored; they may engage with and challenge alternative perspectives that are beyond words” (ibid.: 167); and they often add affective qualities to communication (cf. ibid.). Therefore, non-verbal forms of expression can contribute to as well as reduce the deliberative qualities of communication processes, and they must be assessed by the same standards (cf. ibid. 155).

On social media platforms, most of the communication processes contain non-verbal forms of expression. “While these [forms] have always existed, they have gained further relevance in contemporary public spheres where public discussions are held in various platforms (both online and face to face) featuring diverse forms of communication” (Mendonça et al. 2022: 167). Social media platforms are among the primary communication channels that allow for communication not only through written text, but also by means of pictures, video, audio and one-click reactions. Due to their support for the use of such “alternative repertoires and symbols” (Hendriks et al. 2016: 1121), the platforms “have the potential to extend the boundaries of where and how publics form and meet” (ibid.). In this section, I will focus on the forms of non-verbal com-

9 However, before them, scholars such as Smith (2018: 21) and Bächtiger/Parkinson (2019: 70–71) have made remarks to a similar effect.

10 This is not a new notion to sociological thinking, which has a long tradition of analysing the importance of non-verbal forms of expression and symbols (cf., among many others, Berger/Luckmann 1980; Foucault 2002).

munication that are both specific to and central for communication in the digital constellation, especially on social media platforms.¹¹

5.1.1 One-Click Reactions and the Quantification of Communication

One-click reactions are the first form of non-verbal expression that I want to address here, because they are specific to digital communication and, in fact, central to various aspects of the workings of social media platforms. Users can react to other posts by clicking once on a link and thus submitting sentiment-centred reactions such as “likes”, or they can do so through the uncommented duplication and dissemination of the post (“share”, “retweet”).

One-click reactions purely express the user’s sentiments regarding a post. Positive sentiments are usually expressed by “likes” (Facebook, YouTube), “hearts” (X, TikTok), “love” and “haha” (Facebook) or “upvotes” (Reddit). Negative reactions can be expressed by “dislikes” (Facebook, YouTube, X) or “sad” and “angry” (Facebook).¹² Though the concept of tracking emotional responses is not new,¹³ it has considerably gained in prominence since the rise of social media platforms. Positive reactions, in particular, belong to the central design features of all the major platforms. They are prominently displayed, easily accessible, important to the users and, therefore, much used. The implementation of negative one-click reactions is more controversial than including positive ones in a platform, and it often takes more effort to submit one of the

11 I will not address text-based communication here since this is not specific to communication in the digital constellation. But I will cite deliberative theory scholars’ considerations on verbal forms of expression when I address the secondary structuring influences that *are* specific to – or especially important in – this constellation (chapter 6).

12 Facebook has experimented with a larger variety of reaction than other platforms, including positive, negative and even neutral reactions (such as “wow” and “hug”), in order to “give people more ways to share their reaction to a post in a quick and easy way” (cf. Meta 2022b).

13 “Together with other innovations [...] mid-century Columbia University sociologists Paul Lazarsfeld and Robert Merton devised like and dislike buttons as a novel data-collection technique. Lazarsfeld and Merton showed videos to regular people (such as housewives being encouraged to cook with less meat) and gave them buttons to record their emotional responses” (Silver 2021).

former.¹⁴ A version of positive one-click reactions is “sharing” (on Facebook) or “retweeting” (on X) a post, that is, duplicating it and disseminating it among one’s own contacts. This type of reaction is used to spread information or raise awareness of an emerging issue (cf. Bruns/Burgess 2015: 21), or it is used to express support for or approval of the sentiments conveyed by the post (cf. Veenstra et al. 2015). It is understood to express support for a post more strongly than liking a post does.¹⁵

Seen from a deliberative systems perspective, one-click reactions in and of themselves are rather non-deliberative, and standards such as common-good orientation, authenticity or reason-giving hardly apply. But they seem to enhance at least some deliberative qualities. For example, pushing the focus on one-click reactions has been a central instrument for Twitter in its attempts to support respectful communication and thus resolve its issues with harassment and abuse (cf. Newton 2020g); these latter kinds of communication are precluded by the non-verbality of one-click reactions. Moreover, platforms “utilize a system of up- and down-voting so that (pseudonymous) users can signal what is or is not acceptable according to the group norms of their digital space” Forestal/Philips 2020: 591. These architectures therefore seem to support an increase in *respect* and civility within digital communication processes – or at least, positive one-click reactions are designed so that they do not afford disrespectful communication.

Moreover, due to their accessibility and the one-person-one-vote mentality behind them, one-click-reactions appear to have heightening effects on *inclusivity* and *equality*. Helen Margetts and colleagues (2017) describe participation through following, liking, tweeting, retweeting, sharing text or images relating to a political issue as “tiny acts” of political participation; Margetts (cf. 2019: 108) adds signing up to a digital campaign to the list of such “tiny acts”.. Tiny acts of political participation – or, as Jeanette Hofmann terms it, “digital political involvement ‘to go’” (2019: 39, author’s translation) – are very convenient for the users themselves, because these acts demand less collective identification from them while giving them more room to experiment with individual self-efficacy (cf. *ibid.*). The acts thus lower the bar for participation, “draw-

14 For example, to submit dislikes on Facebook, users need to install a browser add-in, and for signalling non-interest in a TikTok video, users need to enter a pop-up menu and scroll through the choices (cf. Krasnoff 2021).

15 This is why academic studies have sometimes analysed retweet networks on Twitter (now X) as a proxy for support networks (cf. Gruzdt et al. 2011; Kuyper 2020: 9).

ing new people into politics, particularly young people, whose absence political commentators have been bemoaning for years” (Margetts 2019: 108). The acts thereby increase inclusivity and equality.

On a systemic level, tiny acts of political participation can scale up in emergent phenomena such as attention spirals and information cascades, and these can result in large-scale mobilisation (cf. *ibid.*: 109). The shift towards these unpredictable and ephemeral forms of mobilisation that are based on tiny acts of digital participation “has brought an era of what we labelled [...] *Political Turbulence*, where politics becomes harder and harder to predict” (*ibid.*: 109–110, orig. emph.).¹⁶ This turbulence “threatens democratic institutions of all kinds, by showing that political figures from outside the mainstream [...] can win, or at least garner huge levels of support in surprising ways in a short space of time” (*ibid.*: 110). On the one hand, this can be read as an increase of *inclusivity*. On the other hand, Margetts and colleagues seem to imply here that information and campaigns can circumvent the legitimate and *rationality*- or *authenticity*-based filtering mechanisms that ideally lead to the mainstream by, instead, using alternative, platform-based methods to generate attention.¹⁷ Consequently, “[s]ocial media seem to inject instability into traditional democratic institutions” (*ibid.*).

However, there are aspects to one-click reactions, as well as to textual comments, that are highly relevant for deliberative qualities: all these kinds of reactions are quantifiable; and the reaction statistics for each post are prominently displayed in its vicinity and build the primary foundation for recommender systems and algorithmic moderation. I already addressed some more general implications of quantification for deliberative systems when I described the digital transformation of the public sphere (chapter 3.2). Here, I want to zoom in on the most important effects on the deliberative qualities of digital communication processes.

16 The concept of “political turbulence” is further explained by Helen Margetts and her colleagues (2017) in the similarly named book.

17 For example, “trending information, showing the most popular petitions, has been shown to concentrate petition signing in those petitions at the expense of the petitions not making it to the trending box” (Margetts 2019: 110–111). Thus, it is not the most rational or sensible petitions that gain support but the ones that have been featured by the platform as trending. The attention and engagement that lead to trending can be caused by all kinds of reasons, including controversy and humour (as I will explain below and in chapter 6.1).

First, the quantification of interaction influences the participants' communications with regard to both their contents and their forms of presentation. "On social media, [...] we know straight away how many people like, follow, share, view or discuss an issue or news item" (ibid.). Consequently, users can compare posts in a digital deliberative site by considering the number of reactions. They are likely to give more weight to those posts that have caused more reactions overall, and specifically to those posts with more likes, reposts and comments.

Hence, though one-click reactions do not actually contribute new aspects to a communication process, they express support for certain viewpoints – or the lack thereof. They can thus affect the general direction of the communication within a site. Furthermore, "decades of social science show that information like this is a crucial influence on how much we ourselves support something" (ibid.). In other words, people tend to agree with statements that conceivably have high support from other people, instead of making their own judgements based on *reason*. This tendency is potentiated by the recommender system's reliance on exactly the same supporter counts when selecting the order in which to present results. Consequently, statements that already have elicited many reactions are shown to more users, and these users are themselves more willing to react to them due to the already-high reaction numbers.

Moreover, quantification can change the incentives for communicating in the first place. On the one hand, the engagement metrics on platforms like Twitter (today known as X) function as scoring mechanisms, as C. Thi Nguyen (2021) argues. Achieving higher scores often substitutes for other goals of conversation, such as *truth-seeking* and collective understanding (*comprehensibility* and *openness*), "because it feels so good to watch those numbers go up and up" (ibid.). Or, in a more negative interpretation, users are driven by fear in their adaptation to the centrality of interaction scores: "Once people sense that they might be judged for the frequency and volume of their interactions, they are likely to start interacting to match the expected performance levels. The visibility of interactions through data will inevitably fuel the interactions themselves" (Beer 2002).¹⁸ On the other hand, some users can profit financially from high reaction scores. Those users whose income depends on these scores have thus been motivated to spread misinformation, even independently of their

18 David Beer (2020) has predicted that this tendency will increase in the future, due to increasing user numbers and to the consequently increasing need to make networks and feeds manageable by analysing and trimming them back.

personal political opinions. For example, in a misinformation campaign in the run-up to the 2016 US presidential campaign, “at least some distributors had no particular political axe to grind, but instead were simply exploiting the affordances of the network by circulating ‘clickbait’ carefully designed to earn the clicks, views, shares, and retweets that generate advertising revenue” (Cohen 2017: 151). So, users are induced to participate in communication because they want to improve their interaction scores, not because they want to convince other users by their reasoning or want to know what these other users think. These two inducements are incompatible. The platforms “can’t offer a score based on quality of engagement, empathy, or depth of thought”, because the interaction scores have to be “easily legible to its systems: like whether or not somebody clicks on Like” (Nguyen 2021).

Consequently, many users participate in communication as if it were a game, or they even internalise the scores, permitting their enduring goals to be influenced by the platforms’ scoring mechanisms. To do so is highly alluring. For example,

Twitter makes the scoring system pervasive and highly salient through its user interface. The ready availability of this pre-fabricated, neatly packaged evaluation system may, by itself, discourage further reflection on one’s values. More importantly, Twitter’s metric is hard-wired into the system. Even if we managed to discover that we did, in fact, want to adjust the heuristic, that adjustment is hard to do on our own – because the scoring system is embedded in an externally-controlled technology. [...] Twitter’s interface comes with a pre-fabricated, hard-wired measure, which points its users firmly in the direction of popularity – rather than allowing the user to search out the heuristic that best matches their own interests. (ibid.)

This forced shift and simplification of communication goals clearly jeopardises deliberative qualities such as *authenticity*, *reflection* and – in the case of disinformation – *truth*. This is especially the case when users who approach platform communication explicitly as a game “don’t clearly mark themselves as game-players”, when they “are conversing in bad faith [and] are presenting themselves as engaging in a discursive, epistemic practice while actually being guided by non-epistemic motives” (ibid.). Moreover, when “other [...] users take game-playing users as serious participants in sincere discourse, [...] these others will be mistaking gaming talk for serious testimony” (ibid.). This im-

pairs *mutual comprehensibility* and the ability to contextualise the game-players' posts and assess their authenticity.¹⁹

Though I would refrain from the generalisation that each and every social media user communicates purely with the aim of generating reactions, I would concede that the platforms' architectures endorse such a mentality, that how to generate reactions is a central point of interest in the discourse surrounding platforms²⁰ and that many of the users probably often compose their posts with at least the partial aim, at least, of generating reactions.²¹ Indeed, Nguyen himself describes users who have "avoided internalizing the scores of Twitter in any way" and who treat the quantified reactions "merely as useful data" (ibid.). Yet while the platforms' architectures are not actually enforcing gamification or value change on their users, they still offer "an intoxicating hedonic reward" (ibid.) for trying to elicit as many reactions as possible.

Deliberative theory scholars have discussed the possibilities of and attempts at using gamification techniques to the advantage of deliberation. According to John Gastil and Michael Broghammer, there are forms of gamification that can prove beneficial to deliberative sites and connections. "Lab and case studies have shown that different game-inspired features may draw people into [deliberative] spaces, hold people's attention, and alter their behavior and attitudes – whether to induce purchases, forge social connections, or build bridges across cultural divides" (Gastil/Broghammer 2021: 11). In these experiments, the scoring systems were much more complex and in line with deliberative standards than the simple reaction-based scoring systems of social media platforms. However, the authors also caution against the potential downsides of gamification and warn that it can produce unwanted results. For instance, a study on participatory budgeting showed that gamified digital spaces for political communication "could prove so enticing that they draw too much energy away from other political channels, such as public protest and campaigning" (ibid.: 10; citing Meloni et al. 2018). Gamification of sites might thus actually decrease *inclusivity* on a systemic level and reduce the diversity

19 In chapter 3.2, I already described in more general terms how quantified data omit additional information that can help participants assess the authenticity of particular information.

20 For every major platform, there are courses to learn the dos and don'ts involved in the quest to generate engagement (cf., e.g., Melotti 2018).

21 The latter is one point in the definition of communication that I introduced in chapter 2.1, though, according to this definition, the anticipated reactions do not have to reify as one-click reactions.

of sites, since they draw participants to the gamified spaces that have very specific contexts. This warning seems even more plausible in light of the sheer number of social media users and the platforms' importance for deliberative systems, in combination with the fact that, despite the platforms' ostensible support for meaningful communication, they are actually driven by simple reaction-based scoring systems.

As I already noted, the more negative reading of the gamification argument implies that users are driven by fear in their adaptation to interaction scores. The importance of quantified reactions seems to build pressure for the users and to turn platform communication into a competition.²² "The competition for the validity of one's own arguments has turned into a competition to secure one's own visibility in the digital realm" (Cardon 2017: 139, author's translation); the *rationality* of an argument is superseded by the striving for reactions. Consequently, a "friendship or interaction economy is formed in which we are judged and ranked in a marketplace of engagement based on our volume and frequency of connection" (Beer 2020) – not on the *rationality* or *truthfulness* of our contributions to the discourse. Due to this pressure, platforms such as Instagram have repeatedly been criticised for being detrimental to mental health (cf. Newton 2021c; Spiegel 2021). Mental health problems of the participants, in turn, would negatively affect deliberative qualities such as *rationality*, *authenticity*, *non-coerciveness*, *truth*, *open-mindedness* and *orientation towards a common good*.²³

Social media users employ various techniques to provoke reactions and thereby achieve higher scores. For example, "one reliable way to encourage people to comment is to post divisive content" (Narayanan 2023). Similarly, "sensational rather than factual content turns out to satisfy this criterion of maximal 'share-ability' best" (Marres 2018: 430–431). Another effective way to reach a large audience – and increase the potential number of reactions – is to "[s]teal some questions that went viral somewhere else, spam them on your page, and presto: you're one of the most-viewed links for the entire quarter on the world's biggest social network" (Newton 2021d; similarly, Melotti 2017). All these strategies imply a lack of qualities such as *authenticity*, *truthfulness* and *rationality*.

22 Influencers, who directly monetise reaction and follower counts, especially depend on the public display of these numbers (cf. Spiegel 2021).

23 Instagram tested hiding the number of likes, and it found that "removing likes doesn't seem to meaningfully depressurize Instagram" (Newton 2021c).

Yet it is not only individual actors that are trying to artificially increase their reaction scores, but often “large, well-coordinated groups”, and the platform companies are acutely aware of this (Tarnoff/Weigel 2020: 95). That is, users also join ranks in order to employ more systemic methods of increasing reaction and follower counts and thereby increasing their visibility. For example, before and after the 2016 US elections, the Russian propaganda organisation “Internet Research Agency” aimed to influence the public discourse on various platforms through various orchestrated operations (cf. Diresta 2018; Thompson/Lapowsky 2018). It used strategies such as the deployment of fake accounts, the mass posting of divisive content, posting memes, targeting contents to specific audiences, selling vast arrays of merchandise and recruiting users with job listings or suspect advertisements (cf. Diresta 2018; Thompson/Lapowsky 2018).²⁴ Additional cases in which strategic combined efforts have been used to gain reactions and attention include: Macedonian teenagers who made advertisement money by spreading sensationalist misinformation on Facebook (cf. Silverman 2016); “collab houses” where influencers live together for the entertainment of their followers (cf. Lorenz 2020a); Instagram comment pods, where users agree to react to each other to increase their scores (cf. Melotti 2018); organisations that sell followers for different platforms in a gradual way that is not detectable by fraud detection algorithms (cf. *ibid.*); and countless versions of automated and semi-automated reaction generators that users can pay for (cf. *ibid.*). Again, qualities such as *rationality*, *authenticity* and *truthfulness* are impaired when the quantity of reactions is more important than their actual contents. Moreover, in this situation, the orchestrated and joined efforts are detrimental to *equality* between the users who join the effort and those who do not, as the organised insiders outweigh and therefore dominate the unorganised outsiders.

24 Since then, platforms have reacted in order to prevent many of these measures as far as it is possible. For example, Facebook has taken measures to “make it more difficult for people to disguise their identities or countries of origin” (Newton 2021d), and it “routinely removes networks of pages where the creators’ identities are suspect” (*ibid.*). The platform now also has “a policy against ‘abusive audience building’ – switching topics and repeatedly changing a page’s name for the purpose of growing a following” (*ibid.*).

5.1.2 Images and Sounds

Social media platforms also provide architectures that allow the inclusion of various forms of *images* in the communication processes and thereby “enabl[e] rapid and easy circulation of (moving) images” (Mendonça et al. 2022: 156). These images “are used not only to mobilize support and build solidarity, but also to rescript the discursive and geographical contours of [...] controversy” (Hendriks et al. 2016: 1118). Photographs, for example,

add an unspeakable dimension to the issues at stake by inducing shock, disdain, amusement or sympathy [...]; they can also draw attention to certain issues, expose suffering in traumatic situations, challenge existing interpretive frames, advance new agendas, evince wrongdoing and mobilize citizens for action (Mendonça et al. 2022: 160).

Thus, images can go beyond words. They “assemble complex information and make it perceptible at a glance” (ibid.: 158), and they “can express reasons that are difficult or impossible to put into words” (ibid.: 158; see also Curato et al. 2019; Shifman 2014). For example, there is an image that often travels through social media platforms in the context of a discussion on a general speed limit on German highways. This image shows a map of Europe with signs indicating the speed limits on the highways of each country. The sign for Germany varies according to the political standpoint and humorous intention of the author – from signs conveying the *Richtgeschwindigkeit* of 130km/h, which downplay the problem by implying an equivalence of speed limit and *Richtgeschwindigkeit*, to a sign indicating the ridiculously high speed limit of 350, to a sign indicating a speed limit of 88, which points to the right-wing tendencies of the arguments that have thus far prevented the introduction of a general speed limit on German highways.

Thus, images can aid in the expression of and reflection on reasons that would otherwise be overlooked (cf. Mendonça et al. 2022: 158–159) and thereby promoting deliberative qualities such as *reason-giving* and *inclusion*. Images, furthermore, are particularly apt for conveying and inducing emotions. Hence, they can also “enhance empathy and induce reflection that would not be achieved through mere verbal exchange” (ibid.: 160), and they can “make other people’s views and realities more comprehensible, thus nurturing other-regarding views” (ibid.: 161). Therefore, marginalised groups “may make their arguments perceptible by visual illustration rather than by verbal expression”

(ibid.: 159). Images can thus also improve qualities such as *listening*, *reflection* and *respect*.²⁵

On social media platforms, conveying and supporting political messages through images is especially common. On these platforms, particularly, users enter into a “peer-to-peer exchange of self-created news through digital visualization [that] challenges entrenched divisions of power” (ibid.: 160). There are countless examples in which users document occurrences of discrimination, abuse and war crimes and thus raise awareness of and reflection on issues through the power of visual images. Among the most prominent examples of the last years are the documentations of police brutality against members of ethnic minorities that have been circulated across social media platforms and have resulted in global discussion on racial power asymmetries (cf. ibid.). From a deliberative systems perspective, this exactly fits the notion that sites of the public sphere are often the best places for bringing issues to the political forefront – a notion that has already been voiced by Habermas (1996: 354). The central qualities for this are *inclusivity*, *listening* and *equality*, all of which are displayed to a high degree in these examples.

Images that are communicated on social media platforms often come in the form of memes. Generally, memes are “social or cultural elements whose primary purpose is replication” (Edwards 2022: 29). They “spread through social networks as they are picked up and transmitted from one person to another by means of reposts, reactions, and modifications” (ibid.: 29–30).²⁶ Though, essentially, memes can be generated from any cultural object, the most popular memes on social media platforms are based on images. Elements of these images are reappropriated “in order to contribute to ongoing conversations” (ibid.: 30):

Activists of Occupy Wall Street, for instance, created memes using a photograph of a riot policeman in military gear, pepper spraying students sitting on the ground as part of a sit-in protest. The image was then taken up and reproduced in various memes showing “pepper spray cop” spraying Jesus Christ at the last supper, Rosa Parks sitting in the front of the bus and the protester

25 In chapter 6.1, I will come back to the relevance of the expression of emotion.

26 Though older cultural forms, such as fables, caricatures, and political cartoons, can be seen as historical predecessors for memes (cf. Lyons 2020: 12), the properties and affordances of digital communication render the internet “the ultimate meme hothouse” (Rintel 2013: 256).

standing in front of a tank in Tiananmen square. Another version shows “pepper spray cop” spraying ink over the US constitution [...]. Social actors who create and share these memes intend to make a public argument about the dangers of institutional violence, recurring to signs and figures capable of resonating culturally to their audiences. (Mendonça et al. 2022: 159)²⁷

Thus, memes contribute to arguments; their consistent part “links visual arguments to one another, while alteration of the image articulates a response and adds new content to the conversation” (ibid.: 159). In this manner, they “often assume archetypical scripts, normative messages, and cast actors involved as stock characters” (Lyons 2020: 14), and they thus “provide accessible scripts with which to enter and shift debate” (ibid.). With these strategies and characteristics, memes increasingly enter political discussions. There, they “can be utilized by users to take stances on and react to political events, they can challenge mainstream discourses and viewpoints, and they can mobilize voters, but they can also simplify, divide, and perpetuate dominant ideologies and falsehoods” (Chevrette/Duerringer 2020: 242). Due to this inclusion in political discussions, they represent an “online performance of citizenship” (ibid.). The many levels of an image that are created in a meme make an argument visible in a strong, often emotive way and in one glance convey many of its facets to those who follow the communication process. Consequently, memes are important contributions to the communication processes of the digital informal sites of deliberative systems that operate under the conditions of the digital constellation.

Hence, memes must also be – and they have been – evaluated with regard to their impact on the deliberative qualities of these communication processes. First of all, memes are by definition *reciprocal*. That is, their nature of imitating and adjusting tokens that have been brought forward by other participants implies a minimum of *listening*, *comprehension* and *reflection* on the part of the users that post them. Moreover, memes “dramatize politics by way of binary representation of issues [...] and are often vivid renderings that elicit emotional responses” (Lyons 2020: 14). They therefore “offer grounding for abstract policy points, making debate more *inclusive*” (ibid., own emph.). Depending on whether the projected emotions are positive or negative, memes can, moreover, increase or decrease deliberative qualities such as *listening*, *comprehension* and *reflection*, and they can convey *authenticity* (cf. Chambers 2009: 336; Wright

27 The *Richtgeschwindigkeit* map is another example of a meme.

et al. 2018: 78; Graham 2009: 160). While Zizi Papacharissi (2015: 120) has cautioned that a predominance of emotion in communication processes ^{jeopardises} qualities such as *rationality* and *truthfulness*, Mansbridge (1999: 225–226) has argued that emotion and reason are conjunct. Since memes mostly play on the emotions of the audience, both these assessments apply here as well. However, memes are “ambiguous and negotiable” and users can “emphasize them differently in different contexts” (Lyons 2020: 14). So, the comprehension of and emotional response to memes can differ widely. The same meme can both contribute to and detract from deliberative qualities, depending on the context of the communication processes it is part of.

Audio and sound elements provide another means of expression that is afforded by the architectures of most social media platforms. Like images, sounds can convey messages in a way that goes beyond words. Deliberative theorists have found that sound elements “play a significant role in public deliberation” (Mendonça et al. 2022: 161). They “can be used to draw attention to the causes of marginalized groups”, and they can “engage with dominant discourses and induce reflection about their meanings” (ibid.). On social media platforms, the effect of sound is different than in face-to-face encounters. In the latter, singing, chanting or drumbeats may be used to draw attention to a perspective or drown out other voices (cf. ibid.). Digital communication usually occurs in separate posts, due to the technical infrastructures enabling it, and sounds are utilised in a different manner. Attention-catching and drowning-out effects, on the other hand, are achieved by non-sonic tactics such as flooding sites with specific posts, gaming content moderation systems or “trolling”.

One of the especially important forms of sonic contribution to communication processes on social media platforms is music.

Pitch, rhythm and sonic qualities convey meaning beyond words that can work to include marginalized groups. Songs cannot be reduced to the content of their lyrics only [...]. Music offers a way of perceiving the world; it “reflects the manufacture of society; it constitutes the audible waveband of the vibrations and signs that make up society” (ibid.: 162; citing Attali 1985).

From a deliberative theory perspective, therefore, music can be seen to “work as an important element for inclusion in deliberative processes” (ibid.: 162).²⁸ On social media platforms, music is often combined with (moving) images and used to convey emotions and atmosphere, which supports *authenticity*.²⁹

Another prominent sonic element in digital communication processes is the sound of voices. On the one hand, platforms by now provide architectures that enable users to record their voices and post these recordings, usually in video formats. On the other hand, users can talk in spaces that resemble conference calls, such as Audio Rooms on Facebook or Spaces on the website formerly known as Twitter (cf. Newton 2021b, 2020g).³⁰ Here, the sound of voices becomes especially important. “Sound is inherent in all non-written linguistic expression as talk does not only consist of mere words but of voice and its sound as well” (Mendonça et al. 2022: 163). Kayvon Beykpour, the head of product at the website formerly known as Twitter, reasoned in a similar manner when he explained the introduction of Twitter Spaces:

When you can hear someone’s voice, you can empathize with them in a way that is just more difficult to do when you’re in an asynchronous environment. ... We think audio is powerful, because that empathy is real and raw in a way that you can’t achieve over text in the same way. (Newton 2020g)

This stress on empathy shows the qualities Twitter has hoped to increase with this format – *listening*, *reflection* and *respect* through empathy and *authenticity*. This aligns with the observation made by Mendonça and colleagues that the specific sound of a voice, its timbres, intonations, accents, rhythms and frequencies, may induce or hinder these qualities (cf. Mendonça et al. 2022: 163). The voice “can bring the speaker closer to listeners because [it] speaks of life

28 Mendonça et al. (2022: 162) give the example of rap music in order to illustrate music’s ability to convey political messages. Beyond the messages contained in the lyrics, sounds in rap music “work to vent anger about the injustice of marginalization at the intersection of class, race and age, aiming at promoting the inclusion of certain voices in the public space. [Rap music] is an attack in the form of defence, amplified by the beat of the drums and the volume of the loudspeakers”.

29 See chapter 6.1.

30 Moreover, the constantly developing dominant platforms repeatedly work on introducing new audio formats. For an example regarding Facebook, see Newton (2021b).

experience and social positionality” (ibid.).³¹ How participants speak and hear voices, moreover, “is produced by, and reproduces, codings of power, class, gender and race” (Kanngieser 2012: 339). It therefore may enhance or decrease deliberative qualities such as *inclusivity* and the *absence of domination* within a communication process.

Very often, images, sounds and text are combined in *video formats* on social media platforms. The effects of these different forms of expression on deliberative qualities are combined here, too. Thus, users tend to interact more with video contents than with other forms of expression, even on platforms that primarily focus on still images (cf. Newton 2022b). One might argue that communication via video comes closest to face-to-face communication. However, the logics of communication processes on social media platforms, such as how individual posts are connected to discourses and how they are ordered and presented to the users, reveal that the remaining gap is still very wide.³² The functions and value of communication through social media platforms, with their specific architectures for deliberative systems, are different from those of face-to-face interactions – which fits well with the notion of a division of labour within systems that is advanced by the deliberative systems approach.

5.2 Fundamental Structures of Communication Processes on Social Media Platforms

Social media platforms do not only allow for specific forms of expression. They also provide architectures that lead to specific structures of the communication processes that, from a deliberative systems view, can be interpreted as deliberative sites and as the connections between these sites. In this chapter, I will first demonstrate how sites and connections can be distinguished to make the complex structures of communication on social media platforms more accessible. Based on my conceptions of digital sites on platforms and the connections between them, I will proceed to analyse the role and embeddedness

31 Moreover, if people hear specific voices more frequently, they often get the impression of knowing the person, while, in reality, there never has been a direct contact with the person. In chapter 6.3, I will come back to such parasocial relationships.

32 Even when taking into account the architectures for livestreaming and the reactions that many platforms provide, one must consider the missing physical dimension, whose effects on deliberation are described by Parkinson (2012a) and Mendonça and colleagues (2022).

of digital sites and connections for deliberative systems and how that affects the deliberative qualities of the respective communication processes.

5.2.1 Identifying Sites and Connections on Social Media Platforms

Here, I will demonstrate how sites and connections can be identified and distinguished on social media platforms. In this first part of the chapter, I will only sporadically comment on the effects of deliberative qualities that are implied by the architectures, as there is too little context to make many reasonable assessments at this level of abstraction. But I will revisit many of the points I make here throughout the remainder of this book.

Sites

In chapter 2.2, I defined deliberative sites as arenas where participants have the opportunity to communicate with each other on political issues. The participants are aware of other individuals' participation in the site. They "communicate" in the sense that individuals express their thoughts according to their expectations of how these expressions will be understood and reacted to by other individuals. Each participant has the opportunity to react to each other participant's contributions, though the respective opportunities do not have to be similar, and participants do not have avail themselves of such opportunities in a similar manner. At least some of the participants take the opportunity to interact.

The architectures of social media platforms produce structures, that is, certain clusters of communication, that adhere to this definition of deliberative sites. These clusters address political issues, the authors of the contributions are aware that other users are viewing their posts, other users take the opportunity to react to these posts, and all the posts belonging to the cluster are tied to a common anchor. I therefore propose to approximate digital sites with such clusters of posts. The anchors can be singular posts, issues, groups or profiles, as I will describe in the first section of this chapter. Further patterns within these often-large digital sites are generated by referencing techniques. In the second part, I will address how commenting on a post, implicitly referring to the content of other posts, "mentioning" other users or referencing multiple anchors will produce such patterns. These patterns can furthermore result in smaller deliberative sites.

All social media platforms provide spaces where users can direct a post without any specific context at a general audience in the hope that it will

be distributed widely via the platform's moderation systems. When posting such blog-type communication, individuals "are not so much 'talking to one another' as they are 'posting notices for all to read'. Others might (or might not) take note of them, and reply" (Goodin 2003: 176). While such posts may contribute to a wider discourse or implicitly refer to contents that have been posted by other users, they do not refer to a discourse in a way that automatically connects them to it and makes them particularly visible to other users contributing to it. Deliberative theory scholars argue that "merely posting notices on billboards or the internet [...] does not in and of itself constitute communication, much less full-blown deliberative democracy" (ibid.: 177). Though, per my definition of communication, such blog-type posting does constitute communication, this clearly does not necessarily qualify as *reciprocal* communication. In practice, pure blog-type communication is very rare. Most platforms provide different possibilities to explicitly anchor posts on deliberative sites.

There are different facets of a discourse that can serve as anchors for posts. Users can explicitly contribute to a debate, for example, by commenting on a post, by including hashtags or by contributing to groups or profile pages. These types of anchoring result in different spaces of interaction that can be interpreted as deliberative sites.

The first type of sites emerges when users "comment" on a specific post. Users can take up a point made in the anchor post and comment on it, frame it or add to its arguments. Comments usually take the form of text but may be supplemented by any other form of expression the respective platform architectures support. If the anchor post concerns an issue of a deliberative system, all comments on this post form a deliberative site, and the authors of these posts are its participants. Viewed from a deliberative systems perspective, post-anchored sites imply at least a minimum of *interactivity*, since reacting to something in and of itself means connecting anchor and comment at least on a technical level.

Thirdly, some social media platforms provide the architecture for users to join groups and thus anchor the post on the space of the respective group. Platforms

have lowered the costs of forming affinity groups of all kinds. Platform users can more easily find and connect with others who share their hobbies and passions, their political affiliations and goals, their racial, religious, or gender identities, their affiliations with real-world communities (such

as neighborhood or parent-teacher associations), and many more. (Cohen 2017: 148–149)

Groups on social media platforms remain relatively stable. Users can exit or join them and thus become participants in the site, but doing so involves slightly more friction than contributing to an issue-anchored site.³³ Groups can therefore be less *inclusive* than other types of digital sites. On some platforms, groups are “a place to communicate about shared interests with certain people”, and “[y]ou can create a group for anything – your family reunion, your after work sports team or your book club” (Facebook Help Centre 2022a). As can be seen by this description of Facebook Groups, these spaces are designed to mirror social configurations that already exist in non-digital spheres. Thus, their participants may display greater *authenticity*, mutual *comprehensibility*, *listening* and *respect*. Since the participants cannot effectively hide behind their pseudonyms but may be held accountable for their contributions in the parallel non-digital constellations, they are more likely to refrain from acting out an alternate persona.³⁴

Lastly, digital social media posts can be anchored on specific profiles. On many social media platforms, profiles come with spaces for other users to publicly or semi-publicly address the profile owner, comment on her posts or otherwise interact with her.³⁵ The posts in these spaces are anchored on the respective profile and can additionally be anchored on specific posts. The profile spaces can be considered deliberative sites if they address an issue of a deliberative system.³⁶ These spaces can then be viewed as “*stage[s]* where political com-

33 That is, joining a group often requires an application to do so and confirmation by some group moderator.

34 In chapter 6.3, I will elaborate on the implications of anonymity and pseudonymity. Of course, there also are more temporary groups that, for instance, revolve around certain events and dissolve after the event has happened.

35 To give an example, Facebook provides the architecture to set up pages that represent individual persons, organisations, other social groups, pets and much more. On these pages, the profile owners as well as their friends can submit posts. YouTube provides similar spaces where content producers with their own channel can address and interact with their “community”.

36 In fact, one of the very few qualitative analyses of digital deliberative sites focussed on these kinds of profiles when it analysed partisan Facebook pages regarding a specific issue (cf. Hendriks et al. 2016). This study by Carolyn Hendriks and her colleagues finds that “environmental controversies enacted on social media share many features with offline venues of political contestation” (ibid.: 1117).

munication is performed” (Hendriks et al. 2016: 1103). Depending on the profile owner, they can be closely connected to specific issues. For example, pages of gas companies or environmental activists are partisan sites in a deliberative system on gas well projects almost by definition, as Hendriks and colleagues (ibid.: 1107–1108) argue in their study. Such sites are often

scripted and staged to emphasize or support particular values [...]: they project particular frames, provide interpretations of events and decisions, assert particular “facts” and contest others, promote particular events, and cast protagonists and antagonists to highlight the trustworthiness (or lack thereof) of key players (ibid.: 1117).

But profile spaces can also be more topically open and only occasionally touch upon a system’s issue. Profile-anchored sites are relatively stable, as long as the profile is active. The deliberative qualities of such sites largely depend on the platform architectures and profile owners. To name an example, on many platforms, these sites are curated by the owners and are therefore susceptible to their *domination*. In consequence, other qualities, such as *inclusivity* and *publicity*, as well as *respectful communication*, are dependent on the profile owner’s profile settings, curation and moderation. Moreover, the staging of political communication can undermine the *authenticity* of contributions.

Which of these types of anchoring are dominant on a platform depends on the culture and collective practices of the specific platforms and their communities. For example, using the picture-sharing platform Instagram to post pictures and videos that are not connected with a particular issue seems to be more rational than using Twitter/X to post political opinions that are unconnected to any former discourse. Moreover, these types of anchoring are often combined in practice; for instance, any anchored post can itself serve as an anchor for comments. The connections that are thus formed between the posts represent the fundamental structures of the communication processes on social media platforms.

Some of the sites I just introduced can become extremely broad due to their wide accessibility and their low thresholds for participation. In such broad sites, users can form smaller groups or communities within a site by using referencing techniques. That is, users can *reference* each other or each other’s posts. They can thus immediately and noticeably react to what has already been relayed within the site. Different platforms provide slightly dif-

ferent referencing techniques, but there are roughly four methods that are available on nearly all of the platforms.

Firstly, patterns within larger deliberative sites can result from the reactions to a post. As I have described above, users can react to posts with one-click reactions or by commenting on a post. All forms of reactions can be quantified (which produces the various effects on deliberative qualities that I described in chapter 5.1). Regarding the patterns within a site, moreover, posts that generate more reactions are perceived as more important by other participants. The quantification of reactions thus emphasises certain contributions and side-lines others. Content moderation systems increase this effect, as they use the numbers of reactions to select and order the supposedly most important posts. Posts with the highest numbers of reactions are thus perceived as more important, though the higher weight does not usually reflect a higher degree of deliberative qualities like rationality (see chapter 5.1).

Secondly, patterns can emerge through the users' implicitly referencing other posts, that is, through referring to other posts without explicitly adding the respective anchors.³⁷ The referenced contents might have been presented on the same platform in the same anchored deliberative site, but they can likewise be tokens from more widely known popular culture. By directly reacting to another post, users can form patterns within the respective site. Noticing and understanding implicit references requires all participants to know of and reflect on the referenced post and even the context it was posted in. It therefore involves deliberative qualities like *listening*, *reflection* and *interactivity*, but it can also *exclude* those who are not familiar with the reference from the communication process.

Thirdly, users can "mention" other participants through adding an @-handle to a post. The use of @-referencing has two effects. On the one hand,

37 For example, not all posts of a conversation that has been inspired by a certain anchor include the anchor in every post. This might even be founded in the wish to enhance deliberative quality, for, "to hashtag a response to a previous hashtagged tweet, in fact, may be seen as *performing* the conversation in front of a wider audience, by comparison with the more limited visibility which a non-hashtagged response would have" (Bruns/Burgess 2015: 19, orig. *emph.*) – performing conversation is here equated with lower quality. Conversation might thus simply "hang off" the anchor and develop outside the original site (cf. *ibid.*: 22). Another example of implicit references are memes. "The consistency of the image [...] links visual arguments to one another, while alteration of the image articulates a response and adds new content to the conversation" (Mendonça et al. 2022: 159).

platforms automatically notify the profile owner who is being mentioned, for example, by introducing the respective post in their feed. Referencing a handle in a post, in this case, signals the aim to include the mentioned profile owners in the conversation and to provoke their reaction. This enhances the potential for deliberative qualities such as *reciprocity* and *listening*.³⁸ On the other hand, @-referencing is often used to indicate that the post is referring to something that has been previously communicated by the referenced profile owner. Users may, for example, express their support for or opposition to contents that the mentioned user has previously posted on the site. In such cases, @-responses are used for “the smaller, micro-level of human interactions [...] between people who don't know each other and never would have found each other without the [digital site]” (Rocheleau/Millette 2015: 245–246). Thus, these new connections enhance *inclusivity*, and the more personal address might support *authenticity*. Moreover, by expressly referencing posts and users, participants can more easily follow the argumentation and *comprehensibility* can be increased.

Lastly, patterns within deliberative sites can result from users' referencing multiple anchors in one post. Referencing multiple hashtags, for example, “can be understood as an organizational strategy, allowing users in a hashtag community to manage information while broadcasting it” (ibid.: 244). Users who reference the same set of hashtags form sub-clusters within the deliberative sites of the respective single hashtag-anchored sites.³⁹ The co-occurrence of a

38 Consequently, references have been used to assess interactivity within a digital site. Thus, Axel Bruns and Jean Burgess based parts of their study on the assumption that a “high volume of [@-]response messages would indicate that users are not merely tweeting *into* the hashtag stream but also following what others are posting” (2015: 21).

39 An example to this effect has been given by Sylvain Rocheleau and Mélanie Millette in a study on hashtag co-occurrences on Twitter. They found that under a common meta-hashtag, several other hashtags have been used as markers to cluster the respective contributions. Thus, the meta-hashtag is the “[m]ain hashtag in a specific community or network” that is used “to differentiate the tweets relevant for this community from the entire Twitter stream” (Rocheleau/Millette 2015: 250). The hashtags that structure the communications within this community include civic and cultural markers that are “used to characterize or to distinguish a subject or an object in a given online community”, location markers that are “used to locate the tweets in a geographical context” that “may or may not contain a political or cultural connotation”, political markers that are “used to identify the level of government the tweet refers to or their corresponding politics and political topics and that “usually have a long-term presence in Twitter”, as well as topical markers that are “associated, for the most part, with news, events and

meta-hashtag with various clustering hashtags leads to cluster patterns within the digital site anchored on the meta-hashtag. The implications for deliberative qualities depend on the types of anchors that are combined.

The reification of patterns is heavily shaped by the culture and milieu on the specific platforms and in user communities (see chapter 6.1). Thus, patterns on YouTube might be more the product of @-responses, while hashtag-anchored sites on Twitter/X might include many more instances of multiple referencing.⁴⁰ Nonetheless, taking note of such patterns can give additional orientation in the analysis of the often vast and complex deliberative sites on social media platforms.

Connections

The platforms also provide different architectures to connect these digital deliberative sites. According to the deliberative systems approach, connections between deliberative sites can generally be relatively stable couplings between sites, or they can be established via alternative carriers of transmissions (see chapter 2.3). Both these types of connection are present on social media platforms. But since this chapter addresses platform architectures, I will focus here on the couplings.⁴¹

Couplings are mostly established by the platforms' specific technical features, and there are two modes of technically coupling deliberative sites on social media platforms. On the one hand, social media platforms provide architectures for direct couplings via hyperlinks, the use of which leads a user immediately from one deliberative site to another. For example, including a hashtag in a comment links the respective hashtag-site with the site at which the comment has been posted, and this link remains stable as long as the post is online. Hyperlinks provide full access to the site itself, as using a hyperlink leads a user

current affairs" and that are "[c]ommonly used to promote an event or comment on breaking news" (ibid.). I will come back to why and how these clusters build around community, geography and political leaning throughout chapter 6.

40 It should furthermore be noted that the reference types do not only produce patterns within anchored digital sites but also can occur across various digital sites or even entirely beyond the system, for example, by combining several large hashtags on different issues.

41 In chapter 6.3, I will address the individual user's role as a potential carrier of transmissions.

to the other site, but they do not actually transmit the contents.⁴² The *reciprocity* of these links depends on whether the connection is accessible from both sites. This is the case when a post includes multiple hashtags, which makes it occur in all the tagged sites. But even uni-directional links enable rather *strong* connections, as any user from one site can follow the link to access the other site. They can thus listen to and reflect on all or at least large parts of what has been discussed in the other site. In practice, this usually results in a problem of scale: nobody follows every link that has been referenced in one site and reads everything that has been discussed in the respective other sites.⁴³ But, the more users who follow the link and transmit contents and perspectives back into the original site, the tighter the coupling becomes. Therefore, the actual filtering is done by those users who include the hyperlink in the first place and transmit and frame contents from the other site in the process. Those users who follow the link and transmit further contents strengthen this connection.

On the other hand, social media platforms provide architectures for more indirect, volatile and complex connections between digital sites. There are spaces on social media platforms that display lists of posts that double as hyperlinks to the sites they have been posted in.⁴⁴ These link lists do not directly and inevitably link two or more specific deliberative sites. Instead, users can view the various links and choose for themselves which links to follow and how to behave in the respective sites. The selection of transmissions between two sites connected through such lists therefore depends primarily on the users that access the link lists and transmit contents between the sites. But

42 However, depending on the specifics of the platform architecture, couplings might not exist for all users in the same way. If the post is submitted to a specific group, forum or profile page with restricted access, users without access will not be able to view the post in the hashtag-anchored site (for example, cf. Facebook Help Centre 2022b).

43 Selecting the links to follow and the communication processes to read can be interpreted as the second instance of selecting transmissions. But in contrast to the first instance, this is a more dispersed and second-order kind of process, to which the definition of transmission I have given above does not fully apply. Here, different users make different choices as to what input they gather via the connections that are provided in a site. The contents they view in other sites are not actually transmitted to the first site and are thus not viewable for all the participants equally.

44 Such couplings might be classified as what Hendriks called “spaces that develop between parts of the system” (2016: 46). However, they are most probably not what Hendriks had in mind with her description (see chapter 2.3), since link lists do not resemble a communication process but merely display a collection of links that lead to different deliberative sites.

the probability that contents will be transmitted from one site to the other increases because they are part of the same list. Still, indirect couplings via link lists are much more loose than direct couplings via links.

The most prominent version of such a link list is the personalised feed that recommender systems provide for each user. This system predicts the posts with which the user is most likely to interact.⁴⁵ On most platforms, these feeds are based on the more stable connections between users. As a result, they present a selection of the latest posts by friends and followees (see chapter 4.1).⁴⁶ Many platforms furthermore introduce contents from users that, thus far, are not connected with the profile owner (cf. Healy 2015: 195–196; Newton 2022b; Scharkow et al. 2020: 2762). Users are thus repeatedly reminded of their existing connections with other users and, moreover, encouraged to forge new connections.

This can affect the strength of a coupling between digital sites and lead to site clusters (as I described them in chapter 2.4). Users that are technically linked as friends or followers are repeatedly encouraged to enter the same sites, because they are notified of each other's activities within these sites through their feeds. More specifically, one user may post in a site, and some followers of this user will be notified of the post and will have a direct technical link to the site in their feed. If these followers, in turn, react to the post or participate in the site, some of their own followers will be notified of the activity, and the user that has first posted in the site and thus inspired the second user's posting will most likely be included in this notification. This can cause the first user to participate in the site again and thus induce an interaction cascade for the set of users that are notified of the activities within the site. When there is an increase in the number of activities in a site from users within the same network

45 Moreover, there are spaces that display a list of all the posts that have been published by a profile owner, and such lists can then be viewed by users who click on the respective user handle. These lists are not personalised to the viewer, but otherwise they work similar to recommender feeds. Some social media platforms provide additional link lists that display more specific personalised recommendations concerning, for example, groups to join, pages to visit or individual users to befriend. Another type of link lists is the list of search results that a social media platform displays in reaction to specific user queries.

46 Such connections can be one-directional (usually “followers”) or bi-directional (mutual “followers” or “friends”, depending on the platform). In contrast to bidirectional links, connections between follower and followee do not have to be mutual, and followees usually do not need to confirm the link.

of friends or followers, there is an increase in the probability that these activities will be featured in the feeds of other members of this network and thus that the more of these members will participate in the site. Hence, the technical links between users (friends, followers) often overlap with the participants in digital sites and are mirrored by the referencing patterns within these sites. In cases where this dynamic applies to two or more separate sites at the same time, several users will repeatedly enter both sites. The probability of transmissions between both sites increases with each user and each user activity. In practice, one of the users will connect the sites with a direct link sooner or later. Thus, the coupling between two sites is not only initiated but also strengthened via personalised user feeds.

A similar consideration applies on a larger level to posts that are from individuals previously unconnected to the user and that are recommended in the feed. These recommendations are usually based on similarity metrics and the reaction numbers of the respective post. Similar posts that have already gained much attention are presented in more user feeds, which generates even more reactions. Hence, the probability of several users entering the same sites increases, which strengthens the connection between these sites. Thus, similar sites that are popular are more likely to have stronger connections than less popular sites or sites that are dissimilar. As I described in chapter 2.4, connections within site clusters are considered beneficial for comprehensibility. Empirically, this hypothesis has been tested, for instance, regarding language clusters and platform communities. As I will relay in chapter 6.2, clusters of sites display an above-average level of comprehensibility as a deliberative standard, due to a similar language and similar communicational conventions. Higher comprehensibility and higher homogeneity between sites are, in turn, estimated to strengthen systemic inclusivity, in the sense that the like-minded communication within and between sites can strengthen the positions of weaker political actors in the system (Mendonça 2018: 35).⁴⁷

In sum, there are various platform architectures that afford the development of post clusters that can be interpreted and conceptualised as deliberative sites, as well as hyperlinks and feeds that resemble direct and indirect couplings between these sites. These digital sites and connections represent the fundamental structures of the communication processes on social media

47 However, there is no empirical evidence to support this for social media platforms, specifically.

platforms. In the next sections, I will use the conceptualisations of and preliminary assumptions about platform architectures' effects on deliberative qualities in order to analyse the significance of these architectures for deliberative systems.

5.2.2 Platform Architectures' Significance for Deliberative Systems

As I described in chapter 4.2, social media platforms are highly interwoven with all parts of the deliberative systems they are part of. In the previous sections, I have also shown that social media platforms' architectures shape how their users interact with each other, how deliberative sites form and how they are connected. Consequently, these architectures likewise affect the wider deliberative systems. More concretely, they enable and constrain the ways in which the sites forming on the platforms are embedded within the wider deliberative system through these digital sites' connections to sites that are situated both in the digital realm and beyond. Systems approach scholars concur that social media platforms must be analysed with regard to how they are organised and implemented in deliberative systems (cf. Dryzek et al. 2019). For instance, "[w]hen viewed in the broader framework of deliberative systems [...] the deliberative potential of online systems depends on how they may fit into a larger institutional context" (Gastil/Broghammer 2021: 8). Platform architectures, specifically, can have varying effects on these systems, and these effects can spread far beyond the immediate confines of the platforms, or even the digital realm. Therefore, I will now turn to the effects of social media platforms' architectures on the deliberative systems they are part of.

Digital Sites' Connections to and Embeddedness within Deliberative Systems

Sites on social media platforms are embedded within the parts of the system that are situated on the same platform, within digital parts of the system beyond the platform and within the entire deliberative system, with all its non-digital spheres. As I have shown above, there are different ways in which sites on social media platforms are embedded among other sites on the same platform. Scholars of both the deliberative systems approach and digitisation research have observed and empirically studied various effects of this embeddedness. For example, Selen Ercan and colleagues note that "online spaces in particular can play a crucial role in establishing connections across different publics", and they can "facilitate transmissions in deliberative systems" (2019:

24). They find that both of these functions are essential in a healthy deliberative system. But while these connections are technically afforded by the platforms' architectures, they are not necessarily used to bridge different publics or work out an understanding between different perspectives. Thus, Jonathan Kuypers cites a quantitative Twitter study covering the 2010 US midterm elections that found that "users retweet information in ways that lead to polarization, but mention other users in ways that cross partisan divides" (2020: 9). In a qualitative Facebook study on environmental debates, Hendriks and colleagues come to a similar conclusion. They find that "the architecture of the networked publics mediated through social media encourages horizontal forms of interaction" (2016: 1121–1122), but that "their capacity to transform polarized debates and bridge opposing viewpoints on divisive environmental issues remains limited [due to] the tightly scripted performances that define the scope of such interactions" (ibid.). These performances "were more aimed at building solidarity (by sharing information and stories) and antagonizing opponents than forming bridges across deep community divisions" (ibid.: 1120–1121). Consequently, they found "very few opportunities for open public debate and critical questioning of core assumptions in controversies" (ibid.: 1121), as well as "little evidence [...] of diverse perspectives coming together to engage in reasoned open public debate" (ibid.). In other words, the platforms' architectures generally support communication on differing viewpoints – either in heterogeneous sites or through the connections of partisan sites with the wider system. But this seldom leads to communication processes that are oriented towards or that result in converging opinions. Thus, the architectures provide the opportunity for *heterogenous*, *inclusive* and *reciprocal* sites, but the users seem reluctant to *listen* to and *rationaly reflect* on transmissions and perspectives from viewpoints that differ from their own.

The observation that, in social media communication enhanced by platform architectures, users tend to be impervious to differing viewpoints often culminates in the diagnosis that there is a polarisation of discourse on these platforms.⁴⁸ This diagnosis is not a new one, and the platform companies have taken different measures to counteract polarisation and its political repercussions. Some platforms have tweaked their algorithms so as to prevent political contents as far as possible (cf. Lima 2021a; Narayanan 2023) – with vary-

48 Among others: Gillespie (2014), Helbing et al. (2017), Nguyen (2021), Pariser (2011), Sunstein (2002, 2017), Turow (2011) – in this discussion, the publications by Sunstein and Pariser have had the largest impact.

ing success. Other platforms have opted for trying to bridge the divides by recommending contents that express different views (cf. Wei 2020) or that, concerning certain issues, give preference to established, more moderate news outlets rather than the contents of private users (cf. Roose 2020a).⁴⁹ Either way, the platform companies actively influence the establishment of connections between sites – and thus the embedding of specific sites within the platform-based parts of deliberative systems – by adjusting the platforms' architectures.⁵⁰ Since the platforms' approaches differ and since such architectural adjustments happen continuously, it is not surprising that scholars have had varying empirical results over the years with regard to the degree of polarisation and fragmentation on social media platforms.⁵¹ I will elaborate on the fragmentation thesis in the next section.

Moreover, sites on social media platforms can be connected with digital sites that are not themselves situated on the same platform, especially through hyperlinks to external URLs.⁵² Within the digital site, these links are “used to support deliberative arguments with supplementary facts” (Lyons 2020: 8), thereby transmitting these facts to the site. Therefore, “hyperlinks allow us to see connections among sites of deliberation being made at a granular level” (ibid.). From a deliberative systems perspective, these connections thus embed the sites on a platform in the wider deliberative system beyond the platform – regarding both the system's network and its sequences:

Joining an evolving Twitter discourse to other documents and forums on the Web, hyperlinks bring together commentary emanating from mass media, government, advocacy organizations, and the public. In doing so, they also connect across time, surfacing five-year-old press releases or buried YouTube

49 In such cases, the interdependence of society and technology becomes apparent again: content moderation increases the fragmentation of societal communication, and the discourse addressing this fragmentation prompts the platforms to reform their content moderation technology.

50 In the wake of such adaptations, official documents that declare, for example, the platforms' codes of conduct are likewise updated.

51 Cf. Bright (2018); Conover et al. (2011); Soares/Recuero (2021); Wadman (2020).

52 By now, all the dominant platforms provide the architectures for doing this. On sites that concern political subjects, external URLs often belong to traditional media organisations, and the web pages present contents such as newspaper articles or professional video reports. Some platforms also provide APIs that allow users to crosspost, for example, comments that they posted in the comment space of a newspapers on their own Facebook timeline (cf. Moore et al. 2020: 59–60).

videos and casting old content in a new light. These tools allow users to re-frame old arguments and generate new meaning. (ibid.: 9)

In fact, the most widely shared posts on the platforms often do not originate in the platform itself, but are links to other social media platforms or websites from news organisations (cf. Newton 2021d; Wakabayashi 2020; Zannettou et al. 2017: 412). However, the platforms differ in their exact use of such linkages due to the differences in architecture and user demographics (cf. Wright et al. 2018: 81–82; Zannettou et al. 2017: 412). Some platforms' architectures limit the possibilities, allowing only the referencing of certain URLs or enabling such referencing only in specific spaces on the platform, and some limit or prevent the possibilities for users to disseminate posts beyond the platform (cf. Muldoon 2022: 145).⁵³

Regarding deliberative qualities, these links support the strength of the connections between sites and therefore systemic *inclusivity* and *diversity*. The lack of such links, on the other hand, “is associated with enclaves and single-discourse *dominance* which is self-reinforcing” (Lyons 2020: 8, own emph.; for more details, cf. Stevenson/Dryzek 2012). As I have repeatedly cited, such tendencies are considered detrimental to a system's deliberative qualities.

Hyperlinks likewise embed the sites on social media platforms in wider systems beyond the digital realm, since digital spaces are used by individual citizens, news organisations, NGOs, political professionals and so forth who can act as alternative carriers of transmissions to and from non-digital spaces. Political communication on social media platforms usually is about events and issues that originate at least partially in the non-digital world. As Parkinson, a deliberative theory scholar, put it, “while a growing proportion of political communication uses digital means, the things that are communicated involve real people who take up, occupy, share, and contest physical space” (2012a: 1–2). Thus, news can travel from face-to-face situations that are covered by journalists, who publish them online, and can then be cited and linked by social media users. Conversely, discussions on social media platforms are regularly cited by other media formats and even become news stories themselves: “User-generated social media posts not only serve as content fodder for large-audience digital aggregators like BuzzFeed, but content created on Tumblr, Instagram, Reddit and other platforms is then picked up and broadcast by mass media” (Lyons 2020: 6). Thus, social media platforms provide architectures that can be

53 They thus produce the network, lock-in and log-in effects I described in chapter 4.2.

used to embed digital sites, by means of hyperlinks, within wider deliberative systems.

The transmissions via these connections make the system more *connected*, *diverse* and *inclusive*. “Social media messages possessing high retransmission potential [...] may filter up to more empowered sites in traditional mass media [...] and outward to peripheral face-to-face conversations”, thus serving as “connections which reduce the importance of demographics” (ibid.). Thus, the possibility of sharing social media contents via hyperlinks counterbalances the demographic discrepancies between digital and non-digital sites, and it connects these diverse sites through the transmissions flowing between them.⁵⁴

Disseminating Effects of Platform Architectures

The architectures of social media platforms do not only enable the embedding of digital sites within the wider deliberative systems; they also produce affordances that spread throughout these systems. For example, the platforms' content moderation techniques individualise the media repertoires of their users.

The shifts in the digital production of the public sphere are crystallised [...] in the substitution of the filter functions of traditional media by automated evaluation and selection practices like the Facebook Newsfeed algorithm. Facebook thus acts as upstream, prejudicial programme architecture that decides who gets to see which contents, which public and when. (Maschewski/Nosthoff 2021: 338, author's translation)

The content moderation systems and architectures dynamically structure and individualise the information they provide their users with, and each individual's use of different platforms, communication channels and media outlets enhances this diversification (cf. Schrape 2021a: 162). Media repertoires subsequently vary according to individuals' social milieus and their private and professional environments, as well as according to their life-world requirements and life situations (cf. ibid.). This not only restructures the development of de-

54 In fact, Facebook spokespeople have explicitly stated that the platform's “mission was to provide its own digital infrastructure and tools to support online communities, which have the potential to ‘strengthen existing physical communities’ and ‘enable completely new ones to form’” (Muldoon 2022: 46). Therefore, “in a world where this physical social infrastructure has been declining, we have a real opportunity to help strengthen these communities and the social fabric of our society” (ibid.).

liberative sites and connections, but also diversifies the informational basis on which people communicate with each other:

If news [items] [...] are programmed and sorted less according to societal relevance or ratio than according to the patterns of individual interaction and preferences, [and] users and voters are “performed for” as “core target groups” or *audience*, [...] a collective frame of reference for political opinion-information threatens to disappear and be replaced by situational affiliation. (Maschewski/Nosthoff 2021: 338, orig. emph., author’s translation)

So, the content moderation architectures of the platforms massively contribute to the individualisation of media repertoires and the subsequent dissolution of a common frame of reference in political communication.⁵⁵ From a deliberative systems perspective, the diversification of information, perspectives and sites signals an increase in the *inclusivity* of a system. However, the dissolution of a common frame of reference may lead to a dissolution of a common language among the sites (see chapter 2.3) and thus may impair the *systemic connectedness* and the *comprehensibility* of transmission processes – which would consequently impair the *listening*, *reflections* and *rationality* in the receiving sites. This, in turn, would negatively affect the *inclusivity* of the system: only such perspectives that have been adequately included in the systemic decision-making can be correctly understood and deliberated. Therefore, increased contextualisation becomes necessary in order to understand and process not just the transmissions from other sites, but even the contributions of individual participants from within a site. For the systemic composition, this implies that systems need to be closely knit with strong connections in order to avoid faulty contextualisation and interpretation. Sluicing information, moreover, becomes more complex, since many digital sites are larger and more complex and since the relevant information transmitted from one site to another will likewise increase in amount and complexity.

Relatedly, scholars have argued that the polarisation and fragmentation of the communication processes within the platforms disseminate beyond these

55 However, one must dispute the idea that there ever was a common frame of reference within the public sphere, much less an entire system. The “notion of a public has often been charged with normative values and suggests a uniformity that in fact cannot be achieved” (Schrape 2021b: 12). Hence, it appears “hardly instructive to simply assume a digitalization-induced disintegration of a uniform public” (ibid.).

platforms, leading to the development of many parallel publics and self-referential social spaces (cf. *ibid.*: 338–339; Seeliger/Seignani 2021c: 30–31). As content moderation systems partially base their recommendations on similarity metrics, they are criticised for clustering users and posts into homogeneous sites. As I explained above, these sites, in turn, tend to cluster into homogeneous site clusters, due to the interaction of recommender systems and user behaviour. This is said to fragment society even beyond the digital communication processes, and the discourse around such phenomena and their effects on the public sphere, in particular, has gained momentum within digitisation research: Habermas warns that the “great emancipatory promise [of society-wide discussion] is being drowned out by the desolate cacophony in fragmented, self-enclosed echo chambers” (Habermas 2022: 159). To him – and to many other authors, too⁵⁶ – self-supporting social spaces such as “filter bubbles” and “echo chambers” are real and serious challenges to a society-wide democratic discourse (see chapter 3.2). These spaces

share with the classical public sphere their porousness to further networking; at the same time, however, they differ from the fundamentally inclusive character of the public sphere – and the contrast to the private sphere – through their rejection of dissonant and the inclusion of consonant voices into their own limited, identity-preserving horizon of supposed, yet professionally unfiltered, “knowledge”. [...] From the limited perspective of such a *semi-public sphere*, the political public sphere of constitutional democracies can no longer be perceived as an inclusive space for possible discursive clarification of competing claims to truth and the generalisation of interests; precisely this public sphere, which hitherto presented itself as inclusive, is then downgraded to one of the semi-public spheres competing on an equal footing. (*ibid.*: 166, orig. emph.)

The existence and omnipresence of digital echo chambers, filter bubbles and rabbit holes have been doubted, and the respective publications have been empirically challenged by many scientific studies.⁵⁷ It must also be noted that “a selective perception and a preference for opinions close to one’s own point of

56 Among others: Gillespie (2014), Helbing et al. (2017), Nguyn (2021), Pariser (2011), Sunstein (2002, 2017), Turow (2011).

57 Among others: Bail (2021: 4–6), Barberá (2020), Chen et al. (2023), Dahlgren (2021), Dubois/Blank (2018), Jürgens et al. (2014), Rau/Stier (2019).

view [...] have been known in social sciences for a long time and cannot be attributed to platformization alone" (Schrape 2021b: 11; cf. also Chambers 2023; Dahlgren 2021; Scheuerman 2023). However, there seems to be an academic agreement that the rise of digital communication technologies has caused a decrease in the number of spaces that a majority of citizens at least occasionally use for information acquisition and political communication (cf. Ritzi 2021: 308).

According to the systemic approach, the differentiation and homogenisation of sites is not necessarily a problem for deliberative systems. On the contrary, communication in homogeneous groups can even improve the deliberative quality of the communication and help the group to form and strengthen a certain viewpoint. It creates "the fertile, protected hothouses sometimes necessary to generate counter-hegemonic ideas", which, in turn, "may play powerful roles in the broader deliberative system, substantively improving an eventual democratic decision" (Mansbridge et al. 2012: 7). Consequently, minorities within a system can enhance their chance of being heard and considered in the wider system, and *systemic inclusivity* increases. Hence, the fragmentation of informational bases is problematic for systemic deliberative qualities only if the deliberative sites are systematically disconnecting from the system and the perspectives cannot flow and be filtered through the system.

While the informational basis of communication becomes more individualised, many communication processes themselves become more public. Social media platforms' architectures afford their users the opportunity to communicate with a potentially very large public.⁵⁸ This way, social media platforms can increase *inclusivity* and *equality*. The deliberative systems scholar Ricardo Mendonça has warned that, in deliberative systems,

relatively weak actors [...] do not have the resources to make their positions present in many arenas. Some actors are not strong enough to push their discourses across the various levels of the system and they end up becoming invisible. Other actors may strategically interpret this type of invisibility not as proof of the weakness of the actors, but of the positions they advocate. A lack in financial and human resources can lock up some actors and, more importantly, their perspectives in specific discursive arenas, while maintaining their consideration as full participants in the system. (2018: 36)

58 Of course, the actual visibility of individual posts often depends on the platforms' content moderation systems.

Participation in political communication on social media platforms is not dependent on financial resources. On the contrary, these platforms generate their profits mostly by selling advertisement space. They try to bind as many users as possible, and therefore they do not charge them monetary fees but instead collect their data. Social capital from beyond the platform can be helpful in the content distribution on the platform. But many of the influential profiles with large outreach generate their social capital directly on the platform itself. Besides, minorities can gather more easily on these platforms, since geographical distances are being bridged and communities of people with similar interests can be found more easily. Thus, “digital media simplify the access to public spheres” (Seeliger/Seignani 2021a: 461–462, author’s translation). Weak actors with little capital can be heard better on these platforms, since the logics there differ from the formation of the – pre-digital – deliberative systems on which Mendonça founds his critique.

This *inclusivity*, in turn, can improve the *openness* and *common-good orientation* of the participants. Because “spaces in which one can encounter the demos in all its variety have an important democratic function – they help us see and recognize others and make us more willing to take their right to make claims on us seriously when we encounter them in political debate” (Parkinson 2012a: 67). The platforms’ architectures thus afford heterogenous sites that raise the participants’ awareness of the varieties of other participants. This awareness affects not only the citizens’ online communication, but also their perception of “all those affected”. Depending on their deliberative stance, citizens either show more acceptance of others and more common-good orientation, or they resist alternative perspectives, which leads to polarisation and hardened fronts between partisan groups; there are several studies that suggest that the latter is more common (cf. Bail 2021: 21; Yang et al. 2022).

Moreover, awareness of other participants and perspectives brings to recognition that there are different kinds of societies and political systems that are democratic to different degrees. Depending on individuals’ experiences, these systems can seem more or less desirable. As Elisabeth Stoycheff has found,⁵⁹ “an open global internet does indeed provide new perspectives that citizens can use as a barometer of their own government’s performance” (2020: 401). On the one hand, this might lead to heightened expectations in the public regarding decision-makers’ *rationality*, *authenticity* or *common-good*

59 Stoycheff (2020) conducted a large-scale comparative survey that was simultaneously administered in Russia and the United States.

orientation and “may undermine leaders’ legitimacy should the political climate change” (ibid.).⁶⁰ On the other hand, “a one-internet model also provides individuals exposure to new, nondemocratic alternatives” (ibid.); and, especially in today’s deliberative systems, “authoritarians have excelled in projecting their own institutions as powerful and secure” (ibid.). Therefore, whether the platform architectures’ effects on deliberative qualities are positive or negative depends on the specific context of sites and systems.

Another systemic effect of platform architectures is the dissemination of forms of expression that are originally specific to digital communication. For example, political memes have originated in “subcultural internet areas”, but they can now be found in mainstream discourse both online and offline (cf. Lyons 2020: 12). The “convergence” (Jenkins 2006) of platform architectures – that is, their similarities and their mimetic tendencies – “contributes to an environment in which memes can flow, and therefore link spaces, in previously unseen ways” (Lyons 2020: 12). Therefore, memes

are transmitted through basic protocols such as hyperlinks and retweets, and exposed to more general audiences through the technical affordance of platforms’ Trending topic features [...]. Crucially, they pass through platforms’ personal networks that are to some degree isomorphic to users’ offline social circles after often originating in the interest or issue-centric communities common online. Users also transmit these messages from their original platform to others, typically remediating them in the process [...]. Memes so selected through collaborative filtering hold great capacity to connect to mass media and non-mediated discussion space and thus bear some influence on decision making. (ibid.: 11)

In other words, meme-based political statements “spread via new iterations across participatory media, into embodied conversations, and through pundits addressing massive audiences” (Milner 2016: 174).⁶¹ From a deliberative systems perspective, the “use of memes [...] allows speakers to enhance deliberation at a system level” (Lyons 2020: 13). As empirical studies show, memes assist

60 Although “evidence from other authoritarian states shows that attitudes toward censorship and other undemocratic practices normalize over time” and that “dissatisfaction may fade into apathy or ambivalence”, Stoycheff concludes that “now is the time to have the fight for a singular global internet – while users can still remember it” (2020: 401).

61 For empirical examples, see Chevrette/Duerringer (2020) and Lyons (2020).

discussions between dissimilar points of view due to their general accessibility, comprehensibility and openness to interpretation (ibid.: 13–14). All in all, “political Internet memes are important connective tissues in the deliberative system [and] they can connect discussions occurring across networks, sites, and spaces in the greater deliberative system” (ibid.: 17), thus supporting *inclusivity*. This important connective tissue was originally afforded by the architectures of social media platforms and has spread into the wider deliberative systems operating under the conditions of the digital constellation.

Social media platforms have disseminated into the wider systems not only their affordances, but also some of their fundamental logics – most importantly, the logics of quantified communication. As I have already described, almost any communicative action on social media platforms is counted, weighted and processed in the recommender systems that order and connect communication on these platforms. The logic of quantification builds the backbone of most of these platforms’ architectures. But it has spread from there into entirely other spheres of deliberative systems. For example, political actors make use of these metrics to gain political momentum (cf. Conger/Perlroth 2020). They employ countless strategies⁶² to generate reactions and other “tiny acts of participation” and thus to acquire greater influence in public discourse. As I already mentioned, these tiny acts of political participation “can scale up dramatically and rapidly” (Margetts 2019: 109) to “large-scale mobilisations and campaigns for policy change that have brought major shocks and surprises to political regimes all over the world” (ibid.). By affording and promoting this kind of quantifiable participatory behaviour, social media platforms additionally prepare their users for such digital social movements. As the German publicist Sasha Lobo put it,

It is practically impossible not to come into contact with one form of activism or another on Twitter, Instagram or TikTok. Even the widespread so-called challenges, a kind of mass participation competition on social media, can be seen as a dry swim of activism to keep the dissemination tools pliable for the real thing. (2022; author’s translation)

The shift towards these unpredictable and ephemeral forms of mobilisation led into an era of *Political Turbulence* (Margetts 2019: 109–110). In this era, “political figures from outside the mainstream – such as Jeremy Corbyn and Donald

62 See chapter 5.1.

Trump – can win, or at least garner huge levels of support” (ibid.: 110), due to the architectures that afford quantifiable tiny acts of participation.

For deliberative systems, this means that “[s]ocial media seem to inject instability into traditional democratic institutions” (ibid.: 110). This is because one cannot predict whether tiny acts will scale up to a movement and outbalance traditional political institutions. Moreover, actors can garner attention and influence, regardless of whether they originally belonged to any political elite. From a deliberative theory perspective, this is not necessarily detrimental to a deliberative system. According to Habermas, civil society and the public sphere must be able “to ferret out, identify, and effectively thematize latent problems of social integration (which require political solutions) [and to] introduce them via parliamentary (or judicial) sluices into the political system in a way that *disrupts* the latter’s routines” (1996: 358, orig. emph). From this perspective, social media platforms can be viewed as a tool for the periphery’s intervention in the political system’s routines. By scaling tiny acts of participation, issues emerge and are brought to the attention of political actors who can then act as carriers of transmissions and sluice them into deliberative sites that are closer to the decision-making processes. However, such a procedure skews and circumvents the more institutionalised deliberative sluices that are supposed to forward only relevant, true and rational information from one site to the other. The relevance of issues and perspectives is not ascertained through deliberation but emulated through counting individual reactions. This emulation foregoes some processes that are central to deliberative systems theory, including active participation, communicative opinion-formation and the filtering and “sluicing” of relevant information throughout the system.⁶³ By definition, the normative ideal of systemic communication with distributed labour between the sites, as well as gradual formation and convergence of opinion, cannot be achieved through the mere accumulation of data on individual opinions. Moreover, “[c]rowd-based judgments about relevance can create information cascades that lend sensationalized, false, and hatred-inciting online material extraordinary staying power” (Cohen 2017: 149–150), and “[e]fforts to remove hurtful material typically backfire by drawing additional attention to it, intensifying and prolonging the unwanted exposure” (ibid.). Thus, the quantification logic of platforms seems to hinder, rather than simplify, the identification of actually relevant issues and the deliberative sluicing of these issues in

63 I have described the effects of emulation on the public sphere and deliberative systems more elaborately in chapter 3.2.

accordance with deliberative qualities such as *rationality*, *openness* and *authenticity*.

In sum, social media platforms have various architectural traits that structure the communication processes on the platforms themselves, and, moreover, many of their logics and effects spread into the wider deliberative systems the platforms are part of. But the architectures are not alone in their structuring of communication processes. They do so in conjunctures with further social structures that originate beyond the platforms and reify in the platform communication in specific ways. The following chapter will address the most significant reifications of social structures and will relay their effects on sites, connections and systems.