How to Capture the Relations and Dynamics within the Networked Public Sphere?

Modes of Interaction as a New Concept

Christoph Neuberger

Abstract
The aim of this chapter is to suggest ways to better capture the diversity of constellations and the dynamics of interactions in the public sphere, triggered by the digital transformation. The starting point is the question of why relations and dynamics should be considered more in communication studies and how they have been researched so far. In this respect, the limits of public sphere theory and social network analysis (SNA) are discussed. To overcome these limits, I propose a theoretical framework that combines public sphere theory and SNA with – as a third and new concept – modes of interaction. Such modes of interaction are ideal-typical patterns of interaction between actors in different constellations – namely, diffusion, mobilization, conflict, cooperation, competition, and scandal. Afterwards, I discuss these modes of interaction in the context of different societal subsystems and phases of media change in order to demonstrate their heuristic value. Traditional mass media foster the universalization of competition in several dimensions because competition requires only one-way relations of observation and influence. The Internet supports the interactive, multi-stage, and sequential communication that is characteristic of conflict and cooperation.

Current analysis of the digitalized public sphere partly indicates a dissolution of the established order of the mass media era. Diagnoses state a "new crisis of public communication" (Chadwick, 2018) or a "disinformation order" (Bennett & Livingston, 2018). What we are faced with, however, is not only a crisis of the public sphere itself (symptoms are, e.g., fake news, hate speech, polarization, and the digital divide), but also a crisis of its scientific observation and interpretation.

How has the digital transformation changed the public sphere? Mass media constitute a comparatively simple and rigid structured public sphere

with dominant one-way, single-step, and one-to-many communication, based on a strong hierarchy (professional monopoly of gatekeeping) and a clear separation of roles (journalists, audience, spokespeople). The technical affordances of digital media give more opportunities for more actors to shape public communication (van Dijk, 2012, pp. 14–18). As a result of the digital transformation, the expanded possibilities have led to a greater complexity of the public sphere (Benkler, 2006), characterized by a high diversity of different constellations between actors and patterns of interaction. Here, it would be wrong to make a strict distinction between an old and a new public sphere. Rather, we are confronted with a hybrid mixture of old and new media logic (Chadwick, 2013).

The changing media landscape confronts communication studies with the task of getting a grasp on the tremendous complexity of the digitalized public sphere. The aim of this chapter is to suggest ways to better capture the diversity of constellations and the dynamics of interactions, triggered by the digital transformation. This chapter is organized as follows: The starting point is the question of why relations and dynamics should be considered more in communication studies and how they have been researched so far. In this respect, the limits of public sphere theory and social network analysis (SNA) are discussed. To overcome these limits, I propose a theoretical framework that combines public sphere theory and SNA with – as a third and new concept – modes of interaction. Such modes of interaction are specific relations of observation and influence in specific constellations of actors – namely, diffusion, mobilization, conflict, cooperation, competition, and scandal. Afterwards, I discuss these modes of interaction in the context of different societal subsystems and phases of media change in order to demonstrate their heuristic value. The chapter revisits, updates, and develops an earlier paper on modes of interaction that I published several years ago (Neuberger, 2014).

Concepts for Analyzing the Public Sphere

I distinguish between two closely interrelated concepts to capture the public sphere: (1) the *relations* between actors in terms of quantity and quality, and (2) the *dynamics* of public communication.

Relations

In the mass media public sphere, the constellation can be depicted as a triangle of journalism, spokespeople (representing particular interests), and audience. Therefore, the dominant approaches in the field of communication studies are preoccupied with one-way, single-step mass communication. Their primary focus is on analyzing the effects resulting from immediate contact between media and recipients, and they consider messages (like news) as isolated items without relations to other messages. Furthermore, communication studies mostly look at communicators and recipients separately in different areas of research. This limits the opportunities to capture interaction from the outset, as participants must switch between roles for both phenomena to occur.

Whereas traditional mass media are limited to a one-way relationship, starting from spokespeople and leading via journalism to the audience, the Internet brings all three relationships into the limelight of the public sphere, with direct communication being technically feasible among all actors and in both directions (two-way communication). An immediate relationship between spokespeople and audience has become possible, as journalistic gatekeepers can be circumvented ("bypassing"); so has audience feedback to journalism (Lee & Tandoc, 2017). Online, not only is the number of possible communication partners growing, but so is the variety of types of communicative and receptive action (Friemel & Neuberger, 2021, pp. 79–81), such as linking, sharing, voting, recommending, and commenting (Costera Meijer & Kormelink, 2014; Krämer, 2020, pp. 230–235).

For this "context of expanded opportunities" (Bimber, 2017, p. 8), a network model of the public sphere is more suitable than the traditional gatekeeper model for grasping the higher complexity and dynamics. In such a network view, nodes represent actors and link the connective actions between them. The opportunities for networking are mainly provided by platforms. Parker, Van Alstyne, and Choudary (2016, pp. 6–12) have described the "platform revolution" as a transition from the traditional pipeline model of the fixed, linear, closed value chain to a model of interactive, open platforms. On the one hand, platforms enable broad participation, but on the other hand, they also have the power to define structures of networks (Castells, 2009, pp. 42–47) and influence the course of communication through algorithmic selection and aggregation (Just & Latzer, 2017; Krämer & Conrad, 2017). Several suggestions can be found in the communication studies literature to capture this new actor constellation in the public sphere in a renewed model, like the "cascading

network activation model" from Entman and Usher (2018, p. 288; see also Benkler et al., 2018, pp. 75–82; Shah et al., 2017, pp. 496–498).

Dynamics

The dynamics of communication must now be considered in wider temporal, spatial, and social contexts (Cappella, 2017, pp. 546–549). On the Internet, the multi-step dissemination of messages (diffusion), for instance, through retweets or the mutual exchange of messages between two or more actors in online discussions (conflict), are more prevalent than in traditional mass media. Mass-media-induced communication among audience members, as analyzed, for instance, by the two-step-flow approach (Maurer, 2008), occurs mostly outside of the public sphere. The same applies to interaction between spokespeople and journalists. Mass media do offer interactive formats that feature face-to-face communication, such as talk shows and interviews, but the number of participants is very small. Apart from the one-way flow of published information, the periodicity of traditional mass media is another obstacle to interaction, as temporal gaps are inevitable and references to earlier messages that are no longer present need to be made explicit. In the press and broadcasting, many instances of communication remain isolated acts lacking any connection to a wider web of messages.

The situation is different online because it favors longer interaction sequences by providing techniques for connecting messages (such as hyperlinking and retweeting) and the conservation of earlier messages. As follow-up communication online is often public, we can expect responses to be more frequent and related than in traditional mass media. The task then is to describe and explain these dynamics, which are often triggered unexpectedly, unfold rapidly, and are far reaching (González-Bailón, 2017; Margetts et al., 2016; Vasterman, 2018). Digitalization reinforces the general societal trend towards dynamization and the acceleration of processes (Rosa, 2013, pp. 153–154).

Empirical studies on the dynamics of public communication have mostly addressed patterns of diffusion (Rogers, 2003) and mobilization (Bennett & Segerberg, 2013). These are rather simple modes of interaction because they consist dominantly of one-way communication with one or several steps. This kind of unidirectional (linear) communication is successful if recipients transfer the received message to other people or become motivated to perform follow-up actions, such as a protest, boycott,

or donation. The goal of this paper is to extend the analysis to other modes.

Towards a Theory of the Dynamic Networked Public Sphere

Theory development in communication studies has not been able to keep up with the rapid pace of media change (see, as alternative ways to address this theory deficit, Keinert et al., 2021; Waldherr et al., 2021). In order to meet this challenge, I suggest combining the theory of the public sphere, SNA, and – as a third and new component – modes of interaction as building blocks for a theory of the dynamic networked public sphere. Such a systematization of interactions is missing in the discussion of the theory so far (e.g., Benkler, 2006; boyd, 2011; Friedland et al., 2006; Friemel & Neuberger, 2021; González-Bailón, 2017; Kaiser et al., 2017; Meraz & Papacharissi, 2013; Simone, 2010; Waldherr et al., 2021).

In the next two paragraphs, I briefly discuss the limitations of public sphere theory and SNA. Afterwards, I introduce modes of interaction as a new theoretical component and show how it can compensate for their weaknesses.

Limitations of Public Sphere Theory

The theory of the public sphere can be applied to overcome the outdated division of communication studies into separate research areas, in which journalism, audience, and spokespeople are analyzed in separate fields of research. The theory of the public sphere considers the whole triangle of journalism, audience, and spokespeople as an interrelated constellation (Neuberger, 2014, p. 571). When thinking about the Internet in these terms, we must bear in mind that all actors can switch between the roles of communicator and recipient, and, furthermore, all actors can relate to each other. Instead of a uniform space, the public sphere is divided horizontally into multiple publics of different groups (counterpublics, enclave publics, satellite publics, dominant publics; e.g., Squires, 2002) and vertically into publics of different sizes (mass media, special interest media, gatherings, encounters).

However, so far, the theory of the public sphere has been limited by two restrictions (e.g., Wessler, 2018, pp. 82–108): It has largely remained a theory of political conflict and has neglected other modes of interaction

and other subsystems. Furthermore, the perspective that it adopts is primarily of a static and normative nature, which is to say that its primary interest is in the affordances of different contexts and the criteria of deliberative quality. By contrast, little attention has been paid to interaction between actors and the dynamics thereof in the course of public deliberation (Bächtiger & Parkinson, 2019, pp. 87–93). For this, it is necessary to understand the public sphere not as a uniform space with sharp boundaries (e.g., "forum", "arena"), but relationally as a network (Friemel & Neuberger, 2021, pp. 88–91; Keinert et al., 2021).

Limitations of Social Network Analysis

A relational analysis of public communication leads to the concept of the network and the methods of SNA (Friemel, 2017; Foucault Welles & González-Bailón, 2020). SNA has the advantage that it can be used to map all conceivable constellations of actors and interaction relationships. Actors in different roles are the nodes of the network. The links between these nodes are established through the communicative and receptive acts of the participants. Although a network view seems especially pertinent when considering the Internet, it also lends itself to analyzing traditional mass media (van Dijk, 2012, p. 27). However, SNA has three often stated shortcomings.

First, SNA adopts a mostly static view of networks (Granovetter, 1973, p. 1366), which is therefore limited to describing network structures but not explaining their genesis, for example, with the help of evolutionary theory (Monge et al., 2008, pp. 468–469; on dynamic SNA, see Watts, 2004, pp. 256–261). Secondly, the quality of the communicative relations is largely not taken into account. Only a content analysis of exchanged messages can unearth the underlying "meaning structure of social networks" (Fuhse, 2009, p. 53). For this purpose, SNA needs to be combined with content analyses. However, doing so requires further development of both methods, as the units of analysis are typically analyzed without considering the quality of relations between texts or actors (Wellman, 1988, pp. 31–35). Content analysis must be designed so as to incorporate relational variables in order to capture the connections between messages (Nuernbergk, 2014). It must also be able to grasp the numerous steps of interaction sequences. A third weakness of SNA is that it is often used without much theoretical grounding (Fried, 2020; Monge & Contractor, 2003). By contrast, macro-theories of networked society (e.g., Castells, 2010) and theories of the public sphere (e.g., Habermas, 2006, p. 415) tend

to use the term "network" only in a metaphorical sense. What is needed is a description and explanation of the public sphere as a dynamic network (Friemel & Neuberger, 2021; Neuberger, 2017).

Modes of Interaction as Constellations of Actors

To overcome the weaknesses of public sphere theory and SNA, I suggest introducing modes of interaction as a further element of the theory of the dynamic networked public sphere (Neuberger, 2014). Modes of interaction are, in short, ideal-typical patterns of interaction between actors in different constellations. In recent years, there has been an intense discussion in German-speaking sociology about modes of interaction, referring to Georg Simmel's (1858–1918) formal sociology and his distinction between social forms. SNA also has its roots in Simmel's work (e.g., Burt, 1993; Granovetter, 1973; Wellman, 1988).

An actor constellation arises the moment the intentions of at least two actors interfere and this interference is perceived by those involved (Schimank, 2016, p. 202), that is, as soon as the action of one actor affects that of another and "several individuals are in a reciprocal relationship" (Simmel, 1909, p. 296). Such actor constellations can be determined either deductively, that is, as theory-driven ideal types, or inductively, that is, as real types through empirical exploration (as in the communicative figurations approach; Hepp & Hasebrink, 2014). The approach suggested here pursues the deductive path. Simmel distinguished "social forms" like conflict (Simmel, 1908/2009, pp. 227–305) and competition (Simmel, 1903/2008), which he saw as the core subject matter of sociology. However, Simmel – according to a criticism raised by Kieserling (2011, p. 196) – never went beyond merely listing forms, and his definition of the term "social form" remained vague (Kieserling, 2011, p. 193). Cederman (2005, p. 871) has defined social forms as "configurations of social interactions and actors that together constitute the structures in which they are embedded".

Modes of Interaction – A Literature Review

Which types of interaction modes can be discerned? Scholars in sociology have made several suggestions for systematization. For example, Scharpf (1997) developed a complex classification by combining game-theoretical constellations (pure conflict, pure coordination, and mixed-motive games),

interaction orientations (individualism, solidarity, competition, altruism, hostility), modes of interaction (unilateral action, negotiated agreement, majority vote, hierarchical direction), and institutional contexts (anarchic fields, networks, associations, organizations). Game theory typically focuses on two players whose strategic decisions depend on the expected outcomes, and whose modes of interactions can lie anywhere between mutual gain (pure cooperation) and a gain for one player at the expense of the other (pure competition) (e.g., Weise, 1997). However, these typologies from game theory – used in laboratory experiments and computer simulations (Nowak & Highfield, 2011) to explore the conditions in which rational actors can be expected to cooperate and are able to form reliable expectations – are too simple and too abstract to be applied in empirical settings (Schimank, 2016, p. 209; Wellman, 1988, pp. 35–37). Public communication in networks, by contrast, involves a much larger number of participants, and the rationality assumption is questionable.

The concept of "interaction modes" suggested by Rosa (2006, pp. 84–85) is much better suited for analyzing interaction in public communication, as it draws on broad sociological categories. In addition to competition, he has mentioned (antagonistic) conflict, (associative) cooperation, (traditionalist, status-based) allotment, and (authoritarian-hierarchical) regulation. His main interest has been the concept of competition, which, so far, has been neglected in sociological analyses (Rosa, 2006, p. 83). The distinction between competition and conflict has not yet played a prominent role in sociology, as Werron has noted (2010, p. 303). Usually, he has claimed, there is a rather loose understanding of both forms (Werron, 2010, p. 303). However, sociology is not the only discipline that has concerned itself with modes of interaction.

From a linguistic perspective, Allwood (2007) drew the dividing line between cooperation and competition with reference to the attitude of participants. Cooperation is marked by actors taking each other into cognitive and ethical consideration, having a joint purpose, and trusting that the other will act according to these requirements. In the case of competition, the participants pursue the same goal but cannot all achieve it. In the event of conflict, there is no shared goal at all.

In political science, Bartolini (1999, pp. 439–441) distinguished competition from other types of interaction – namely, cooperation, negotiation, and conflict, which he systematized using the criteria of principles of action, goals, perceived interests, means, prizes, and unintended consequences. According to this reasoning, competition and conflict are individualistic modes of action, and cooperation and negotiation operate along lines of solidarity. Whereas in conflict and negotiation the goals are different, in

the two other types they are similar. Whilst conflict involves using means against one another, this is not so for competitors. Other typologies can be found, for instance, in economics and biology (e.g., Hirshleifer, 1978). It becomes apparent that there is no common understanding of interaction modes and no elaborated typology.

Proposal for a Typology of Modes of Interaction within the Public Sphere

Modes of interaction represent patterns of related communication acts in different constellations of actors, which observe and influence each other. The term "interaction" is defined differently in the literature (Neuberger, 2007). Here, the term is not restricted to two-way (reciprocal) communication, which requires the continuous switching between the communicator and recipient role, but is defined more broadly and also considers one-way (linear) communication. Modes of interaction are not only categories applied by academic observers but are also relevant to those actors involved in a situation. Modes of interaction function as mental models to define typical situations (frames) and to select typical sequences of action (scripts) (Esser & Kroneberg, 2015).

In the following, only interactions in the context of public communication will be considered. The public sphere is a special context for communicative interaction, characterized by a high grade of openness, dynamic, and unpredictability, which is even further increased on the Internet (Bimber, 2017; Dolata & Schrape, 2016; Dolata & Schrape, 2018; Neuberger, 2017).

The aim of this chapter is to systematize modes of interaction, which often take place in public. Compared to the first systematization of modes of interaction, which was limited to conflict, competition, and cooperation (Neuberger, 2014, pp. 573–575), I add diffusion, mobilization, and scandal as further modes. This results in a list of six modes (see Table 1), which is not exhaustive, but is open to further additions. Such dynamic modes of interaction are traditionally studied in the fields of collective action (Flanagin et al., 2006) and collective behavior (van Ginneken, 2003). In the following, modes are excluded that are not based on communication primarily like violent conflicts or establish interactions stably through regulation.

I use the following criteria to distinguish modes of interaction as ideal types: They differ in terms of actor constellation (dyad, triad) and forms of communication (one-way or two-way, direct or indirect interaction). In

the case of competition and scandal, the audience is essential as a third party because the members of the audience observe what is happening and their subsequent reaction is crucial to success in competition and scandal. In contrast, conflict and cooperation are also conceivable without an audience and in non-public contexts. When an observing audience is added, this can change the situation decisively. In democracy, communicative conflicts are also fought out in public in order to win over voters. Here, conflict and competition overlap.

Another distinguishing criterion are the shared or antagonistic interests of the parties involved. It is a basic sociological insight that people are dependent on one another because there is often a gap between their interest in the use of scarce resources and their control thereof (Esser, 1996, p. 342). Actors can either attempt to assert their interests jointly or against one another. In the first case – cooperation – they pursue their interests collectively and support one another. In the second case, rival actors engage in fighting one another to assert their interests even against resistance. Such antagonistic modes of interaction can be distinguished by whether the actors interact directly (conflict) or indirectly (competition, scandal) (see, as a typology of antagonistic structures on the Internet, Krämer & Springer, 2020). The result of the fight depends on the soft power of the antagonists to gain attention and persuade the audience. The course and outcome of these modes of interaction can also be considered normatively. Favorable conditions can be established for this, for instance, by mediating third parties such as journalism.

In the next sections, I will characterize the modes in more detail.

Table 1: Typology of Modes of Interaction

Characteristics	Diffusion	Mobilization	Conflict	Cooperation	Competition	Scandal
Actor constellation, forms of communication	*Dyad:* – One-way communication with one or multiple steps – Direct interaction	*Dyad:* – One-way communication with one or multiple steps – Direct interaction	*Dyad:* – Two-way communication between opponents – Direct interaction	*Dyad:* – Two-way communication between cooperation partners – Direct interaction	*Triad:* – Competitors engage in one-way communication with the audience to win its favor – Audience as "laughing" third party – Indirect interaction between competitors, mediated through the audience	*Triad:* – Culprit and denouncer engage in one-way communication to convince the audience that the allegations are correct or to rebut them – Audience as "indignant" third party – Indirect interaction between culprit and denouncer through the audience
Interests of the participants	Sharing of messages	Dissemination of a call to action to achieve a common goal	Antagonistic interests	Shared interest or cooperation in pursuing individual interests	Antagonistic interests (win the audience's favor)	Antagonistic interests (win the audience's favor)
Favorable conditions	Willingness to share messages correctly with other people	Willingness to share a message and to perform a collective/connective follow-up action	Rules of rational discourse free of coercion (deliberation)	Willingness to participate (problem of free-riding); productive form of cooperation (wisdom of crowds)	Equal opportunity for competitors; transparent and valid comparisons of performance for the audience	Equal opportunity for both sides; transparent and valid comparisons of the arguments from both sides for the audience

Dyadic Modes of One-Way Communication

Diffusion can be defined as dyadic, one-way communication. At least one sender and one receiver of the message are involved. The spread of the message can be limited to one step – as in the case of mass communication, in which simultaneously numerous recipients are reached (one-to-many communication). Or the message may be passed on through several steps, as in the case of rumors. Accordingly, a distinction can be drawn between a co-present and an additive audience being reached by the message (Neuberger, 2017, pp. 554–556). For example, the spread of topics, news, innovations, disinformation (like fake news), misinformation (like rumors), advertising (viral marketing), recommendations, insults (firestorms), and emotions (like fear and anger) can be analyzed. So far, there is no encompassing understanding of diffusion (Cohen, 2017; Rogers, 2003).

Mobilization extends the mode "diffusion" by a collective/connective follow-up action like protest, to which the recipients are encouraged in the distributed message. Mobilization can be the result of a centrally organized or crowd-enabled campaign (Bennett & Segerberg, 2013, pp. 45–48).

Dyadic Modes of Two-Way Communication

Conflicts are antagonistic, direct, interactive, and ongoing sequences of communicative acts between the counterparts, which demands high coordination efforts (Kieserling, 1999, pp. 37–44). According to Hug (1997, p. 207), conflict exists as soon as a proposal (first sequence) is rejected (second sequence). Messmer (2007, p. 104) did not speak of conflict until the third sequence, because the actual incompatibility of two expectations needs to be verified in communication and should not simply be assumed. Only once the initial objection is objected to does a shared definition of the situation exist.

Cooperation is characterized by the same forms of communication as conflict, and it too requires at least two participants (dyad). What they differ in is the goal of the interaction. Cooperation can be understood as communicative interaction serving a joint purpose and/or mutual support for achieving individual goals (Lewis, 2006, pp. 201–204). There have been studies addressing the motives underlying the willingness to cooperate (Benkler, 2011; Nowak & Highfield, 2011) and the question of how a certain quality of outcomes can be assured (McIntosh, 2008; Sunstein,

2006). Communication itself can be interpreted as cooperation (Bormann et al., 2021, pp. 6–11).

Triadic Modes of Indirect Communication

The constellation becomes more complicated when a third party is involved (Fischer, 2013). *Competition* is such a triadic constellation. In his article "Sociology of Competition", first published in 1903, Simmel (1903/2008, p. 959) defined competition as an indirect form of fighting in which one "proceed[s] as if there were no adversary present […] but merely the goal". The situation is defined by two parties competing to attain something from a third party (Simmel, 1903/2008, p. 961). Actors like companies or political parties employ communicative "means of persuading and convincing" (Simmel, 1903/2008, p. 963) in order to win the public's favor.

The relationship between competitors is an indirect one that is mediated via the audience: Whoever gains greater attention and acceptance reduces the possible success of their competitors without having to have met or even having to know them. The audience is the third party that is courted and thus the beneficiary (Brankovic et al., 2018, pp. 272–273; Werron, 2014, pp. 62–66). Members of the audience observe, compare, assess, and choose from among competing offers.

The performances of providers are honored by means of attention, approval, payments, and other forms of follow-up action. To do so, members of the audience need to communicate neither with one another nor with the competitors. So while the audience members remain in a rather passive position of being mere recipients and the ones to choose from the different offers, the competitors engage in communication to court the public in order to gain an edge when services are being compared, and to coax it into making the desired choices, for instance, electing one's party or buying one's products. This kind of influence can operate effectively in a one-way fashion as well, that is, without interacting with the audience.

Besides competition, *scandal* is another example of a triadic actor constellation – with the culprit, allegedly responsible for breaching a moral norm, the denouncer, who exposes this offence and frames it in terms of a "scandal", and the audience as the indignant third party (Esser & Hartung, 2004, pp. 1043–1044; Neckel, 1989, p. 58), "for whose attention, affection, and compliance the scandal is performed" (Esser & Hartung, 2004, p. 1044). In the case of a scandal, a widespread agreement on the validity of the accusation of guilt must be reached, whereas culpability is

disputed in the case of a conflict (Kepplinger, 2018, p. 3156). A scandal is successful when the allegations are immediately convincing and cause outrage. Scandalized people must strive to transform the scandal into a conflict by denying the accusations and making the arguments for their falsity the subject of the dispute. Similar to the case of competition, culprit and denouncer want to win the favor of the audience. Whether a politician resigns depends crucially on how the audience's response is assessed, for example, with regard to the next election.

Systematization

Let us sum up the argument so far. Modes of interaction can be defined as constellations in which two or three actors directly or indirectly observe and influence one another. In the case of conflict or cooperation, acts of communication are rich in information, are direct, interactive, sequential, explicitly related to one another, expensive, time-intensive, and therefore sluggish; this is why the capacity of the media for the number of participants and the number of topics to be discussed is limited (Kieserling, 1999, pp. 32–47; Werron, 2010, p. 312). They differ in regard to the antagonistic and cooperative intentions of those involved. In contrast, competition and scandal are an indirect, one-way, isolated, implicit, anonymous, individual, efficient, and therefore light form of fighting (Werron, 2010, p. 312). The one-way observation of media offers by the audience and one-way influence on the public from media providers requires no role changes and little coordination.

Communication in its simplest form involves two people (dyad). In observing and reacting to one another, *alter* and *ego* form an interaction system. The presence of third parties introduces the viewpoint of an external observer, such as the audience in the case of competition and scandal. The dyad becomes an object to this third party (Werron, 2014, p. 64); interactions can thereby be objectified and their rules institutionalized (Fischer, 2013, p. 94; Pyythinen, 2009, pp. 116–117). There are a multitude of different triadic actor constellations and roles of third parties (Fischer, 2013; Pyythinen, 2009, p. 118). In public communication, two roles of third parties are of particular importance and have already been mentioned by Simmel (1903/2008, pp. 101–115): the audience, which derives gratification from the services of media providers ("*tertius gaudens*", translated as "the laughing third"), and intermediaries (mediators, brokers, gatekeepers), such as journalists, that shape actor constellations and create more favorable conditions for interactions, for example, as moderators of

conflicts (Brankovic et al., 2018, p. 273; Burt, 1993, pp. 72–79; Granovetter, 1973, pp. 1370–1371; Werron, 2014, p. 66).

The basic dyadic and triadic constellations can expand to larger networks (van Dijk, 2012, p. 27). Media contribute to such a universalization of modes of interaction in the social, temporal, and spatial dimensions. Accordingly, there is an increase in the number of actors involved, the duration, and the spatial scope of relationships (Werron, 2014, pp. 66–67). As relationships of observation and exerting influence of a one-way nature are sufficient for competition, the latter can, in principle, fully participate in the universalization and globalization dynamics (Werron, 2010, p. 311). As a result, engaging in global competition is much more plausible than engaging in conflict in a global public sphere (Wessler, 2004).

The ideal-typical modes distinguished above can overlap, or one can change into another (Werron, 2010, p. 312–316). For example, conflicts waged in public expand from a dyad to a triad, because the audience is watching and judging (Schimank, 2016, pp. 291–292). In this case, conflict overlaps with competition as adversaries court the audience's favor (Hug, 1997, pp. 121–122).

In the next two sections, I apply modes of interaction in a *synchronic* perspective (subsystems) and a *diachronic* perspective (media change) in order to demonstrate their heuristic value (following Neuberger, 2014, pp. 577–580).

Modes of Interaction in Subsystems of Society

This section focuses on the macro-level and looks at the modes of interaction in subsystems of a functionally differentiated society (e.g., politics, economy, sports, art; Schimank, 2015). The basic constellation in such systems is pre-structured by the division into the roles of performance providers on the one hand, and the audience as performance recipients on the other (Stichweh, 2005). The providers of these subsystems (companies, political parties, sports clubs, artists, etc.) compete for the favor of the audience (consumers, citizens, sports fans, art recipients, etc.). In all subsystems, third parties mediate between actors in performance roles and audience roles. In politics, such intermediaries are parties, associations, and social movements; in business, merchants, unions, and consumer organizations; in sports, leagues and referees; and in art, museums, galleries, and critics. As a sort of meta-intermediary, journalism creates relationships of observation and influence between providers, recipients, and these system-specific intermediaries via the public sphere (Neuberger, 2022). Journalists

act as intermediaries, which determine the rules according to which conflict, competition, scandal, and other modes of interaction unfold and contribute to enforcing them. They also mediate directly between service providers and the public. For example, journalists collect, validate, and distribute news, mobilize citizens, moderates conflicts, help citizens solve problems together, investigate scandals, and provide transparency about competing offers. Journalism is itself a societal subsystem that imposes its own logic on other subsystems through mediation in and between them – a process known as "medialization". As a general principle, modes of interaction are not tied to any particular subsystem (Rosa, 2006, p. 85). Conflict is not exclusive to politics, nor is competition a characteristic feature of the economy only (Simmel, 1908/2009, p. 24). This has already been shown by Hirschman (1970) in his famous distinction between "exit" and "voice": In circumstances defined by competition, the audience sanctions poor services by means of exit, that is, by switching to a competitor, whereas in the event of conflict, the audience publicly voices its criticism, which contains more information than just selecting another offer. The audience's role in a subsystem can be viewed as being either of a more active-critical (voice) or more passive-selective (exit) nature. For example, in democratic political systems, conflict and competition are combined, because citizens debate issues and elect politicians (Bartolini, 1999; McCombs & Poindexter, 1983). The relation between subsystems and modes of interaction is therefore variable in principle, and the relevance of each mode can shift. A growing dominance of competition is being witnessed in many subsystems (Rosa, 2006, p. 82). Competition is based on several practices: categorizing, comparing, evaluating, quantifying, and publishing (Heintz, 2021). These practices have expanded in all sectors of society (Mau, 2019; Ringel & Werron, 2020). This raises the question as to what degree traditional mass media have contributed to this development by enhancing the means of one-way observation and influence, which play a particularly important role in competitive relationships.

Media Change and Modes of Interaction

The Context of Mass Media

Traditional mass media has primarily enabled one-way, single-step relationships of observation and influence in society and thus has foremost favored diffusion, mobilization, competition, and scandal as modes of interaction. With the aid of transmission technology, the great reach of

mass media, and professional journalism, the categorizing, comparing, evaluating, and quantifying has become a public endeavor, visible to a mass audience (Heintz, 2021; Ringel & Werron, 2020; Wehner et al., 2012, pp. 59–66; Werron, 2015). As Werron (2009) has shown, it was as early as the second half of the 19th century that the press and telegraphy furthered the multi-dimensional universalization dynamics of competition. In the case of sports, telegraphy not only enabled up-to-the-minute reports on athletic competitions held in different places, but also helped to assess and compare these events in journalism. Thus, traditional mass media have played a pioneering role in the temporal, spatial, and social universalization of competition in the system of sports.

- In the *temporal dimension*, a series of contests have led to a high frequency and continuity of comparisons in order to satisfy growing media demand. By means of their periodic publication, the media have been a driving force in establishing the continuity of performance comparisons; their high topicality has fueled the simultaneity of comparison; and their memory function has expanded the business of comparing by extending it into the past. All of this is reflected in rankings, for instance (Werron, 2009, pp. 27–29).
- In the *spatial dimension*, the ever-growing scope of media coverage and increasing dissemination has advanced the globalization of comparisons. In sports, differentiated levels of comparison have evolved that extend from the regional and national levels to the global level (Werron, 2009, p. 29).
- In the *social dimension*, mass media have expanded the circle of observers from an immediately present audience of assessable size to a mass media public of innumerable size (Werron, 2010, pp. 309–310; Werron, 2014, p. 70).

There is also evidence of such co-evolution of competition in other subsystems. In the 19th-century economy, for instance, the introduction of the telegraph, news agencies, and financial journalism accelerated and widened the distribution of stock information and business news (Stäheli, 2004). In the arts, the dissemination of creative works and hence the opportunities for their comparison underwent considerable expansion through developments in conservation, for example, of music performances, which are transient in nature, with the aid of audio-visual recording media as well as through broadcasting. This was accompanied by the development of cultural journalism. As a consequence, "the work of art in the age of its technological reproducibility" (Benjamin, 2008) and the producing artists came under competitive pressure (Sennett, 1992, p. 289). In education,

university rankings are another example of growing competition, initiated and organized by media (Brankovic et al., 2018).

By contrast, press and broadcasting are much more limited in their compatibility for conflict and cooperation because of the lack of opportunities for participation and interaction. Sequential interactions are only possible among a small circle of elite actors, for instance, on talk shows. Their periodic publication and the lack of access to archives impede linking messages.

The Internet as Context

The Internet is much more suitable for conflict and cooperation, as its technical potential facilitates two-way and sequential communication that these modes of interaction call for, while it also enables a broad public to participate. The structural affordances (persistence, replicability, scalability, searchability) foster the variability, speed, and range of the other modes of interaction as well (boyd, 2011, pp. 45–48). Interpersonal and mass communication merge online (Walther, 2017; Walther & Valkenburg, 2017). In contrast to the mass media, interactions are often not journalistically mediated, but can unfold unhindered, uncontrolled, and algorithmically amplified.

Diffusion and mobilization can unfold quickly and achieve broad reach under certain conditions. Research distinguishes several forms of online *diffusion* (Cha et al., 2020), which are labeled as "virality" (Nahon & Hemsley, 2013), "word-of-mouth" (Sun et al., 2006), "cascade" (Bollenbacher et al., 2021), "contagion" (Kramer et al., 2014), "firestorm" (Johnen et al., 2018), and "meme" (Shifman, 2013). What is still lacking is a systematization of such diffusion processes (González-Bailón, 2017, pp. 71–98; Nahon & Hemsley, 2013, pp. 35–40; Shifman, 2013, pp. 55–63). Empirical research has also devoted a lot of attention to new forms of online *mobilization* for collective/connective action, like protests (Bennett & Segerberg, 2013; Jungherr et al., 2020, pp. 132–144).

The Internet has significantly improved the opportunity to participate in *conflicts*: Consumers and citizens can now articulate their criticism publicly in a fairly unrestrained manner. However, empirical research shows weaknesses in deliberation quality with regard to civility, justification, and responsiveness in online contexts (Esau et al., 2020; Wessler, 2018, pp. 82–108).

In the pre-Internet era, *cooperation* was of little relevance in public communication, as neither was it feasible to involve a large number

of participants nor was such communication independent of time or space. The question of how cooperation via social media can function has been discussed with great, partly naive optimism under vague headings such as "peer production" (Tapscott & Williams, 2007), "wisdom of crowds" (Surowiecki, 2005), and "crowdsourcing" (Howe, 2009). Encouraging cooperativeness and assuring quality requires finding suitable formats and rules for the Internet (e.g., Bos et al., 2007; Walther & Bunz, 2005). The most successful and debated case of cooperative knowledge collection, validation, and dissemination is the online encyclopedia Wikipedia (Frost-Arnold, 2019). In future analysis, forms of cooperation should be distinguished more precisely (Krämer, 2020, pp. 200–201).

The Internet has also opened up new opportunities for *competition*. The audience, on the one hand, has become more transparent to performance providers. User behavior (data traces) and comments provide information that make the audience more legible. On the other hand, consumers can create transparency themselves by making their ratings of competing offers available to other consumers. Data-rich markets "help market participants to find better matches" (Mayer-Schönberger & Ramge, 2018, p. 63). Algorithms overtake the competition practices of categorizing, comparing, evaluating, quantifying, and even selecting options (Heintz, 2021, pp. 33–42; Mennicken & Kornberger, 2021). At the same time, however, algorithmic data processing also opens up possibilities for manipulating market actors.

Finally, *scandals* can no longer be triggered only by the media, but now can be, in principle, by anyone. On the one hand, this empowers citizens to allege norm violations, as in cases like the #metoo and #blacklivesmatter movements; on the other hand, it opens up opportunities for false accusations (Pörksen & Detel, 2014).

Conclusion

The starting point for the considerations presented here was the question of how relations and dynamics might be better taken into account in communication studies. I have proposed incorporating modes of interaction as an additional concept into the theory of the dynamic networked public sphere. Here, the goal is pursued in order to break the dominance of approaches in communication studies once designed for the analysis of one-way, single-step mass communication, which considers diffusion and mobilization as rather simple modes of interaction.

A more differentiated typology of modes of interaction can open new perspectives for research. They represent patterns of related communicati-

on acts, which can develop in different ways. Conflict can escalate and polarize, or it can lead to consensus. Accusations in a scandal can be confirmed and lead to a great deal of public pressure, resulting in the resignation of a politician, for example. Or the accusations may be refuted. To describe such dynamics of interactions, processual accounts in social analysis should be given greater attention (Abbott, 2016; Neuberger, 2017; Tilly, 2008, p. 27). As in the sociology of violence (Hoebel & Knöbl, 2019), processual accounts capture sequences as chains of events, and they prefer explanations that use endogenous factors coming out of the process instead of exogenous factors. Accordingly, communication networks can be understood as self-organizing complex systems, steered by generative mechanisms, which aggregate micro-behavior to macro-effects (Monge & Contractor, 2003, pp. 79–98; Neuberger, 2017, pp. 558–564; Schelling, 2006; Waldherr, 2017; Waldherr et al., 2021, pp. 158–161).

Empirically, modes of interaction should be analyzed at all three societal levels: Studies at the *micro-level* involve individual acts of communication and sequential patterns of one-way and two-way communication in dyadic and triadic constellations. Here, the question is how one act of communication initiates the next, and how they are interlinked (e.g., Cederman, 2005). SNA as a method would have to be developed further for the analysis of modes of interaction. Here, we can draw on, for example, work in sequence analysis (Abbott, 1995), network analysis of discourses (Leifeld, 2017; Song, 2015), mergers between content analysis and network analysis (Nuernbergk, 2014), and agent-based simulation studies (Waldherr, 2014). In social media, the commonly used techniques of linking, such as hyperlinks, retweets, mentions, and followers, make it easy to trace relations. Moreover, it is possible to continuously record communication threads online. Such relational analysis can help to explain how follow-up communication is triggered (Shugars & Beauchamp, 2019).

At the *meso-level*, the task would be to examine how media and platform affordances structure, for example, diffusion processes (Goel et al., 2012), and deliberation as a form of conflict resolution (Esau et al., 2020). There are special formats that favor certain modes of interaction. For instance, discussion forums have a structural affinity for conflict, "virtual communities" for cooperation, and consumer portals with testimonials for competition (Krämer & Springer, 2020).

At the *macro-level*, research would have to focus on larger patterns of communication, analyzed as dynamic networks. Here, the entire course of a conflict or scandal must be tracked in various contexts. Among the issues to be addressed by such analyses are vertical top-down and bottom-up dynamics (concentration of power vs. participation; Friedland et al., 2006,

pp. 8–9, 21–22), the horizontal dynamics of relations between actors (fragmentation vs. integration) and in the course of public opinion formation (polarization vs. consensus building; Friedland et al., 2006, pp. 22–23; Simone, 2010, pp. 123–126), and the intermediation of such processes by network gatekeepers (Meraz & Papacharissi, 2013), influentials (González-Bailón et al., 2013) or discussion catalysts (Himelboim et al., 2009).

These are some succinct suggestions of how modes of interaction can be studied empirically. In future research, the suggested modes of interaction need further theoretical elaboration and methodological operationalization.

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Christoph Neuberger *(Dr. phil., Catholic University of Eichstätt, Germany, 1995) is Full Professor at the Institute for Media and Communication Studies, Free University of Berlin, Germany, and Managing Director of the Weizenbaum Institute for the Networked Society, Berlin. His research focuses on the digital transformation of media, the public sphere, and journalism. He is a regular member of the Bavarian Academy of Sciences and Humanities (BAdW) and the German Academy of Science and Engineering (acatech). Wolfram Peiser was his colleague at the LMU Munich from 2011 to 2019.*