Communication Theory, 2025, **00**, 1–12
https://doi.org/10.1093/ct/qtaf025
Original Article

Original Article

D[X]IM—the Dynamic Intermediary Model of communicative transaction on digital platforms in a networked public sphere

Jakob Ohme[1,*], Anna-Theresa Mayer[1], Timothy Charlton-Czaplicki[2], Felix Gaisbauer[1], Lion Wedel[1], Yangliu Fan[1,3], and Christoph Neuberger[1,3]

[1]Weizenbaum Institute for the Networked Society, Berlin, Germany
[2]Minderoo Centre for Technology and Democracy, University of Cambridge, UK
[3]Institute for Media and Communication Studies, Freie Universität Berlin, Germany

*Corresponding author: Weizenbaum Institute for the Networked Society, Hardenbergstrasse 32, 10623 Berlin, Berlin, Germany.
Email: jakob.ohme@weizenbaum-institut.de

Abstract

This study introduces the Dynamic Intermediary Model (D[X]IM) to address how knowledge processes have evolved with digital platforms by shifting from a dyadic to a triadic communication model of content flow with a potential intermediary. This intermediary, which can be a journalist, influencer, artificial agent, or another platform actor, provides services to the source and recipient of a message, thereby transforming traditional direct communication. It aims to better understand information diffusion in the networked public sphere by recognizing the intermediary's role in altering source-recipient dynamics. The D[X]IM applies across different communication levels (macro, meso, and micro) and is designed for empirical research using diverse methodologies. It focuses on single instances of platform communication to explore the impact of intermediated communication. The article concludes with a research agenda and examples of how D[X]IM can be applied in empirical research.

Keywords: intermediation, digital platforms, news dynamics, networked public, knowledge order, communicative transactions, longitudinal analysis

As meeting points of professional and non-professional actors in the digital sphere, digital platforms are increasingly functioning as institutions that manage the diffusion of information in the networked public sphere (Benkler, 2006). This elevated function of facilitating public communication contrasts sharply with their business models, focusing on ad revenues and attention spirals (e.g., Gillespie, 2010). Journalism, as a profession that generates, verifies, selects, and distributes news as a particular type of knowledge to the general public, has experienced this transition in all its breadth and depth (Neuberger et al., 2023).

Focusing on information diffusion of digital platforms, the spread of journalistic content has attracted reasonable research attention (e.g., Domingo et al., 2015; Hase et al., 2023; Majó-Vázquez et al., 2020; Vermeer et al., 2020). However, comprehensive approaches to mapping public communication on digital platforms—and the roles communicative actors like journalists play in shaping content flows—remain scarce. Content flows here represent the movement of particular types of content (such as articles, videos, or social media posts) between actors on a platform. Such an approach is, however, necessary to model the multitude of different actor constellations emergent in public communication experienced by sources, recipients, and other actors on digital platforms. Furthermore, in a time where digital trace data are increasingly used to study between-user communications as the primary "transactional units" of platform communication (Van Dijck et al., 2018), there is a crucial gap that translates theoretical considerations to the networked public sphere into empirical representations of public communication dynamics on digital platforms starting from an individual user's perspective.

In response, this study theoretically develops the Dynamic Intermediary Model (D[X]IM) not only to explain content flows between single communicative actors on digital platforms but also to embed such flows in the greater context of information diffusion and public communication dynamics in the networked public sphere. Understanding public communication as a dynamic network (Friemel & Neuberger, 2023), the D[X]IM introduces the concept of an intermediary actor that turns the often dyadic nature of communication into a triadic, intermediated relationship. Through communicative actions with existing content flows, the intermediary alters the relationship between a source and a recipient of content by providing a service for each or both (Neuberger, 2022a). Given the plethora of potential intermediary actors on digital platforms, for example, journalists or influencers, this concept can be applied in various contexts and research foci.

With intermediation as a common function of platform actors on a micro level, the model transfers the dynamic transactional approach (Früh & Schönbach, 1982) to networked public communication. In doing so, it can grasp within- and between-actor changes through content flows on digital platforms and explain how communicative

Received: April 2, 2024. **Revised:** July 11, 2025. **Accepted:** August 23, 2025

transactions between actors can also alter digital platforms, e.g., their algorithms. As the model focuses on single communicative instances on digital platforms, it can be applied to empirical platform studies using qualitative, quantitative, network, and other computational methods. In sum, D[X]IM advances empirical research on knowledge processes by integrating actor-content constellations, defining intermediaries' functions, and enabling flexible modeling of evolving actor interactions over time.

Content flows in a platform order: The need for a new model

Rather than developing the model throughout this manuscript, we frontload the assumptions and then work through these theoretical foundations and propositions. We propose the D[X]IM to understand and study digital content flows, i.e., individual content exchanges between platform actors and their relation to knowledge processes. We focus on knowledge processes in the networked public sphere as they have experienced the biggest change due to digital platforms. This can be testified, e.g., by discussions about the accuracy of the information that emphasize an increased need for verification and the prevention of misunderstanding (e.g., Bennett & Livingstone, 2018) and the continuous struggle with unregulated platforms increasingly accumulating opinion power (e.g., Helberger, 2020). Hence, it is vital to understand how patterns of digital content flow contribute to the communicative power of established and new types of actors and are related to the quality of information and other outcomes in a digital society.

We define digital platforms as digital infrastructures that connect users and content providers directly (Srnicek, 2017, p. 43), thereby acknowledging the dual role of infrastructures as freely accessible systems that are programmed by private entities with commercial interests (see Plantin et al., 2018) and "facilitate and shape personalized interactions among end-users and complementors, organized through the systematic collection, algorithmic processing, monetization, and circulation of data" (Poell et al., 2019, p. 2). As Gillespie (2010) criticizes, the usage of the term *platform* is itself an attempt by content providers to position themselves as neutral actors while exercising significant power over public communication dynamics.

Public communication on digital platforms can be modeled as a dynamic network (Friemel & Neuberger, 2021), as networks are the main, transnational infrastructures of current societies (see Castells, 2007). D[X]IM draws from this approach and makes it applicable to empirical platform studies. Hence, it focuses on the single, communicative action between actors as the unit of analysis. The model itself makes the following propositions: (1) It understands digital platforms as constituting an institutional order that affects and is affected by content flows; (2) It takes a starting point in different platform actors and argues that these actors can fulfill various functions in the communication process flexibly, either as a *source* of information, the *recipient* of information, or an *intermediary* of information. We use the term "function" as it can be determined endogenously (i.e., through specific interactions in the network; cf. Friemel & Neuberger, 2023) rather than exogenously (i.e., specified by the respective institutions). This is helpful, as D[X]IM is meant to study functions as specific tasks or operations performed by a node or element in the network. An intermediary is defined as a third element that is positioned between two others and provides a service for each or both (Simmel 1908/1992; Neuberger, 2022b). It can change the dynamic network structure from the common dyadic nature of connections to a triadic network structure. D[X]IM hence introduces *additional* layers of triadic interaction but does not suggest replacing dyadic interactions as a whole; (3) The model adopts a dynamic perspective by accounting for changes over time, allowing the functions of actors within a network to shift. For example, a recipient can become a source at different points in time, reflecting how functions can reverse within longitudinal sequences or in feedback loops (e.g. Trilling, 2024); and (4) It describes the relationship between actors as communicative transactions (Früh, 1991), where actors alter each other through information exchange on platforms. Thereby, the model includes the perspective of the effects of actor constellations in a network on the micro-level (horizontal) but integrates that these constellations also relate to the meso-level of the institutional order of platforms (vertical). The full model can be found in Figure 1. It is termed D[X]IM because the X stands for the possible integration of other existing or emerging actors that can function as an intermediary, for example, journalists, influencers, or artificial agents. The model represents contemporary content flows at the micro-level of platform communication and is empirically applicable, for example, in studies on digital traces.

Digital changes to knowledge processes

Knowledge processes describe how knowledge is generated, verified, distributed, and appropriated in public communication (Neuberger et al., 2023). In pre-digital times, the flow of public information was strongly determined by journalism. Journalists and their respective outlets had the supremacy in informing the public. Traditionally, the public sphere can be described as a constellation between different actors, namely media, speakers, and recipients (Neidhardt, 1994). Whereas the generation of knowledge was mainly realized through speakers, journalism took on the function of verification and distribution, and the acquisition was mainly left to the audience, leaving the recipient in a passive role (cf. Neuberger et al., 2023). Traditional knowledge processes were built on an institutionalized structure where each actor in the public sphere had a specific role in the knowledge process. This created epistemic hierarchies, with powerful distributors (or gatekeepers) controlling information flow to a passive audience, resembling a linear pipeline model (Bartsch et al., 2025).

Digital platforms have changed these knowledge processes from a pipeline model to a platform order. First, journalism and its adjacent distribution channels (e.g., newspapers) have *lost the monopoly* of informing the public. Second, the linear relationship in the pipeline model (e.g., source—journalism—recipient) has been transformed by the potential of *role switches* between actors. This means that recipients can be sources, journalists receive information on platforms, and the source and the recipient can communicate directly. Third, the diversification of content flows on digital platforms has increased the *direct communication between source and recipients* available to platform users, as speakers can establish direct relationships with recipients.

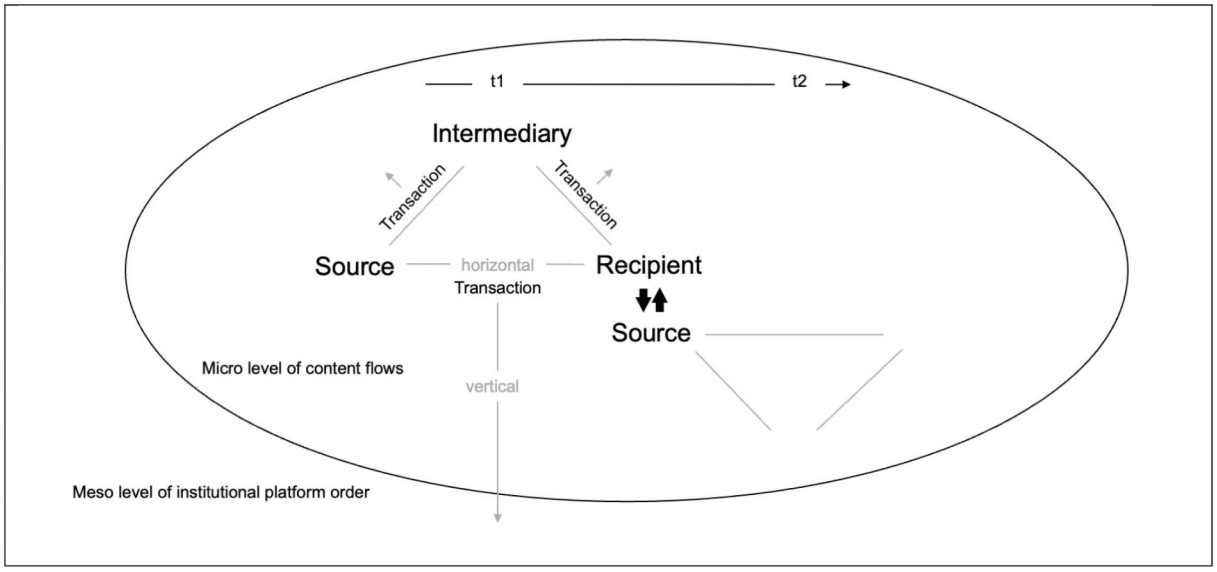


Figure 1. Dynamic Intermediary Model (D[X]IM) with the transactional and temporal dimensions.

Note: Vertical transactions take place between the micro- and meso-level (see Figure 2). The thicker arrows between the recipient and source depict a potential recipient-source-reversal. The recipient of the first communicative action and intermediation in t1 becomes the source of the subsequent communicative action in t2. The model only depicts two steps, but since platform communication can be infinite, it is not bound to a fixed number of time points.

D[X]IM takes these changes as a starting point to arrive at a more current model of public communication dynamics. Rather than advocating for either the pipeline or platform model as superior, we highlight how intermediary actors—such as journalists, influencers, and artificial agents—shape platform communication by providing a range of services. These services can influence public discourse, content visibility, and information credibility, leading to diverse and context-dependent outcomes.

Macro, meso, and micro levels in the networked public sphere

Networked communication is a multilayered phenomenon. To understand digital changes in knowledge processes, it is helpful to clarify at which level this article operates. D[X]IM operates on the micro-level but also relates to the meso-level. However, since prior research has referred to intermediation on multiple levels, we disentangle intermediation across different levels for clarity (e.g., Gillespie, 2018; Nielsen & Ganter, 2018).

Public communication dynamics structure knowledge processes. At this *macro-level* view, digital platforms have been described as intermediaries by previous research, where platforms like Facebook operate within societal systems, shaping public discourse and revenue models (Nielsen & Ganter, 2018; Hagen et al., 2017). As intermediaries, platforms intermediate through their infrastructural features between societal actors, for example, media houses and audiences. As Gillespie (2010) criticizes, platforms position themselves as neutral actors by using the terms platform and intermediaries to describe themselves while exercising significant power in public communication dynamics. However, in line with the idea of brokerage and closure (cf. Burt, 2007), platforms can also be described as brokers between previously not ideally connected groups, such as producers and customers, thereby gaining important information and resources, establishing a potential power imbalance (cf. Gillespie, 2010). At the macro level, research has specifically discussed what the economic and political orientation of platforms means for knowledge processes (e.g., Neuberger et al., 2023). At this level of *public communication dynamics*, platforms operate in relation to other actors of a communication environment, such as publishers or political regulators. Although platforms cannot be described as societal subsystems but rather as infrastructures, they nonetheless operate as independent macro-level entities that shape—and are being shaped by—other actors and societal subsystems. This tension between their infrastructural role and their systemic impact lies at the core of current analytical and normative challenges in understanding platform power.

On a *meso-level*, platforms shape knowledge processes as they function as a new institutional order that determines *information diffusion* within networks. The architecture of a platform (e.g., a share button; Bossetta, 2018), as well as the affordances (e.g., algorithmic curation; Hase et al., 2023), provide crucial conditions for the spread of information within a network. An institutional order is present when practices (such as the spread of information as part of knowledge processes) are collectively shared and normatively accepted (Schmidt, 2012). Following Goffman (1983), Dubois (2013) argues that "the institutional order constitutes the link between interactions and social structures" (p. 1), reflecting the meso-level of the institutional platform order. For communication and the appropriation of knowledge, digital platforms constitute an institutional order for three main reasons: (1) Digital platforms control exposure to information. The open infrastructure and the democratization of knowledge sharing make this less obvious. Yet, given that users theoretically can access all information but are only exposed to a small fraction, platforms become gatekeepers on their own; (2) Revenue models for journalism depend on the traffic created by platforms, as platforms generate a main share of page visits (Vermeer et al., 2020). Journalist outlets' attempts to withdraw from platforms are followed by heavy financial cuts (Birkmose, 2016). Users have mostly accepted the revenue model of platforms, whereas giving access to personal

information and user data is traded for free content access; and (3) Digital platform infrastructures determine how content is created and distributed. Focus on clickable headlines, share-worthiness, and engagement drive how content is produced (even if it is not shared on platforms, e.g., Welbers & Opgenhaffen, 2018). Information diffusion on a platform, hence, determines and is determined by the meso-level of networked communication, as platforms provide the institutional order for this diffusion. Or, in the words of Gillespie (2018): "Platforms do not just mediate public discourse: they constitute it." (p. 199)

They thereby dictate the rules of *content flows* on the *micro-level* of networked communication that represents the movement of particular types of content (such as articles, videos, or social media posts) between actors (see Figure 2). We understand the flow of content as the micro-level processes, but acknowledge that they can be connected not only to the study of content, but also to exposure to and engagement with content. This is the level of communicative actions and actor constellations and, thereby, also the level where content is produced and published. D[X]IM operates on this level and describes different actor constellations, where we introduce the intermediary as a specific actor type who intermediates between other actors by providing a service for one or both actors.

These three levels are hierarchically organized and mutually dependent. If content flows change, this will ultimately affect public information dynamics. If public information dynamics change, for example, through the introduction of digital platforms, knowledge processes are affected. The total of individual content flows reveals patterns of information diffusion, illustrating how information is passed on and received within communities. These patterns provide insights into the functioning of knowledge processes and the ways in which they generate public communication dynamics. These patterns evolve either due to technological advancements or shifts in power relations; they alter and are altered by content flows. This includes both the actual content flows and the broader information diffusion that constitute and are constituted by them. In sum, D[X]IM conceptualizes intermediation at the micro-level through platform actors, treats platforms as institutional orders at the meso-level, and—following existing literature—describes platforms as intermediaries at the macro-level, though the term "broker" may be more precise. While the model operates primarily on the micro-level, its focus on communicative transactions allows a direct connection to the meso-level of information diffusion as chains of communicative acts on the micro level. As these meso-level structures evolve, they may also affect macro-level developments—an interdependence indicated by the double-ended arrows in Figure 2. Thus, the theoretical approach can be extended to explain macro-level changes, insofar as they are grounded in micro-level content flows.

Existing models of networked communication

Previous research has already engaged with the question of how knowledge processes in a networked public sphere can be modeled. Some studies arrive at a model that takes a user-centric standpoint, trying to incorporate how users perceive a platform environment and how various platform features are incorporated into users' news usage.

The Personal Social Media Ecosystem Framework (Carter et al., 2023), for example, models individuals' understanding of social media by combining interfaces and social interaction. It is located between the meso- and micro-level of networked communication and, thereby, less able to study dynamics. It is less focused on specific content flows and operates on a user-centric level, thereby being limited when trying to understand flows between users and different platform actors. Another model with a user-specific perspective is the PINGS framework (Kümpel, 2022), which describes how news experiences can be characterized (personalized, incidental, non-exclusive, granularized, and social). The framework helps to differentiate levels of analysis of platform news reception and informs effects studies. However, it is not meant to model specific content flows in a network.

The framework of platformized social cohesion processes (Schneiders et al., 2023) operates on the meso-level and explains how information diffusion affects the macro-level of

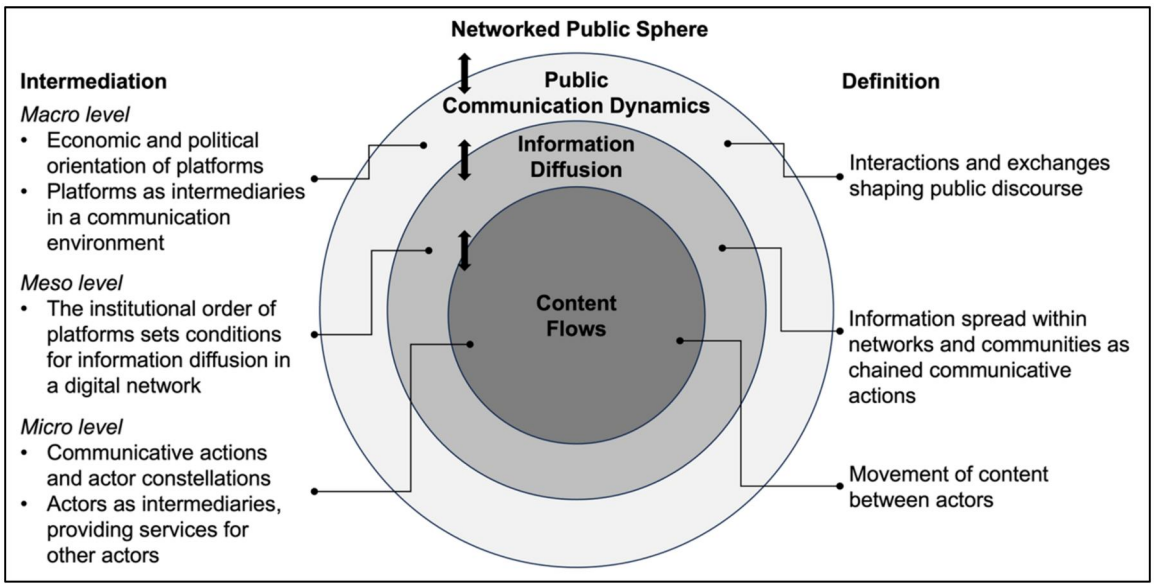


Figure 2. Layers of public communication dynamics in a networked public sphere.

public communication dynamics and the public sphere itself for the example of social cohesion processes. Similar to D[X]IM, their framework acknowledges the bypassing of journalistic actors that can be substituted by influencers or newly emerging actors but does not specify the function of these actors in single instances of content flow. These actors are also the focus of the digital gatekeeper concept (Wallace, 2018), where gatekeeping is understood broadly through selecting or contextualizing information on digital platforms, which encompasses some of the services we attribute to intermediaries in D[X]IM. Thorson and Wells (2016) also engage with different platform actors, called curators, who argue that their curating actions constitute an individual information diet on digital platforms, thereby explaining how, through sequences of individual user actions (i.e., engaging with content), this content flow is collectively established. It thereby explains how the particular function of curation constitutes content flows without integrating other functions and modeling these flows as single, communicative instances. Other research explores how information diffusion is influenced by the structure and connectivity of a network (Weber & Monge, 2011). The model operates on the level of information diffusion and differentiates three types of actors in news diffusion processes: sources (e.g., news outlets), authorities (e.g., government agencies, expert sources), and hubs (e.g., social media platforms, news aggregators). The model describes how information enters the networked sphere, but it is less interested in describing single content flows. Authorities, actors that add credibility to news, are related to our proposed function on an intermediary; however, we understand an intermediary as more diverse in the services it can provide (not only providing credibility) and type of actor, as we argue that actors other than journalists, or in the case of Weber and Monge (2011), legacy news outlets, can take the function on an intermediary.

The public sphere as a dynamic network approach (Friemel & Neuberger, 2021, 2023) comes close to the idea of modeling content flows on digital platforms and operates on two levels: actors and content, describing both as potential nodes in a network. Actors are producers, recipients, curators (similarly defined to Thorson & Wells, 2016), and isolates (not participating in communicative actions). The approach includes the dynamic development of a network as an understanding of content flows and is an important fundament of D[X]IM. Describing content and actors as parts of a network is theoretically helpful but complicates the application in empirical research. Hence, we argue that a more straightforward understanding of a network with nodes that represent actors and edges that represent the content exchange. D[X]IM thereby integrates the actor and content level proposed in Friemel and Neuberger's (2023) model.

Compared to previous research, D[X]IM has three main advantages that make it applicable to study content flows on digital platforms in empirical research. First, it *integrates content flows between communicating actors* by focusing not only on the establishment of a connection between actors but also on the transaction of content. This makes it applicable for empirical research interested in the interplay of actor and content constellations. Second, it provides a *universal description for actors* who are neither sources nor recipients but function as intermediaries. Intermediaries can qualify content flows and subsequent effects. D[X]IM, hence, can be used to determine the role of different actors in communication outcomes. Third, it helps to *model different actor constellations* over time and how communicative actions between them alter actors over time. This flexible source-intermediary-recipient reversal allows it to be adapted to (hyper-)longitudinal scenarios where the continuous stream of actions is observed.

The Dynamic Intermediary Model

D[X]IM operates on the micro-level of platform communication and models content flows on digital platforms over time.

Functions of actors in a network

Understanding public communication in the form of a network model means that roles can be attributed either exogenously (i.e., specified by the respective institutions) or endogenously (i.e., through specific interactions in the network; cf. Friemel & Neuberger, 2023). We use an endogenous approach by focusing on their *function* in the network. This is necessary because digital platforms facilitate heterogeneous acts of communication, where actor constellations result from *single instances of communicative actions* in which different network actors have different functions (Friemel, 2008, 2015; Friemel & Neuberger, 2023). To understand the function of each actor in platform communication, it is necessary to analyze single instances of communicative actions. A user, for example, can produce and publish content in one instance while being the recipient of content in another instance, but cannot publish and receive in the *same* instance. Focusing on these instances allows us to differentiate between network actors' functions in single-platform communication constellations. Determining specific functions of actors in communicative actions is an advantage when trying to model platform communication from the perspective of individual actors (or nodes in a network), as it helps to avoid the oversimplification of compressing platform communication into a single unit of analysis. Hence, while there is flexibility in the functions of actors in the communicative sequences, i.e., the list of consecutive communicative actions, specific functions are attributable in each instance at a given time point. Focusing on a single instance of communicative action in a networked communication model has several advantages. First, this bottom-up approach helps specifically think about the function of actors (e.g., journalists, influencers, artificial agents) in contemporary platform communication. Second, it integrates the user perspective on an individual level in the often community-driven focus of network analysis. Third, it provides a simplified representation of network dynamics that can serve as an analytical unit in empirical studies.

The intermediary

We propose *intermediation* as a concept to understand the re-defined role of communicative actors, such as journalists in the public sphere, to model and explain the quality and effects of content flows in a platform environment. A simple understanding of networked communication describes only dyadic relationships between two actors, represented as an edge and two nodes. Such a relationship can be intermediated. Following Simmel (1908/1992), an intermediary is defined as a third element that is positioned between two others and provides a service for each or both. With the help of an intermediary, a dyadic relationship can be objectified, criticized, evaluated, and changed (Neuberger, 2022a). An intermediary role in a network is characterized by a mediating

function resulting from the repeated forwarding of messages within the network (Friemel & Neuberger, 2023). Repeated forwarding or similar acts make the intermediary a central actor in a network (cf. Schneiders et al., 2023). The function of an intermediary, hence, is more universal than previously used terms such as curators (e.g., Friemel & Neuberger, 2023; Thorson & Wells, 2016) or authorities (e.g., Weber & Monge, 2011), as it denotes that an intermediary fulfills a service for one actor or both in a triadic relationship, without restricting what this service is. While enhancing understanding on the recipient side can be one service, contrasting positions can be another service, although this might create conflict between the source and the recipient. This relationship may be visualized as a *triad* between the source, the intermediary, and the recipient. We conceptualize intermediary actors as the third node in a triangle, with the potential to mediate the relationship or be bypassed (see Figure 1).

Taking the example of journalism, we can show that the intermediary position can result in multiple constellations, e.g., journalism moderating between conflicting positions of other network actors or as a fact-checker of information released by a third-party source. In contrast to the pipeline model, where journalism constantly intersects between a source and the audience, the function of an intermediary explicitly includes the possibility of direct network relationships (e.g., between citizen and political party), which now makes journalistic intermediaries partly optional.

Modeling content flows in these triadic relationships has three main advantages for the platform research: First, we provide a universal concept of the intermediary, which can be adapted to the purposes of the study. An intermediary is an actor that provides specific services to sources and recipients at various steps of the content flow. These services can be manifold, e.g., verifying, moderating, or curating are prominent examples of services performed by journalistic intermediaries, which are often informed by journalistic standards, norms, working patterns, etc However, given the openness of D[X]IM of who can be an intermediary and what services are fulfilled, the model is adaptable to different study purposes, such as studying the role of influencers, political actors, or artificial actors as intermediaries (see Perreault & Ohme, 2025). Further, this setup allows us to study whether content flows on platforms were successfully intermediated by focusing on different outcomes of these relationships, such as services not provided, services provided but not taken into account, etc.

This focus on functions clearly shows the focus of the model on interactional roles rather than structural effects of these functions, as we feel the former has received less attention in communication and network literature than the latter. However, we acknowledge that from a network literature perspective (cf. brokerage theory, Burt, 2007; Gould & Fernandez, 1989), not only the function but also the structural effects of intermediaries, for example controlling information flow, enabling strategic advantage, and facilitating coordination or influence, deserve closer attention and D[X]IM allows for this cumulation of power over time.

Dynamic communicative *transactions*

Lastly, what happens between the different actors in a dynamic public network on a micro-level needs to be determined. To answer this question, we can first draw from social action theory (Esser, 2007) and apply it to a dynamic networked public.

Communicative actions constitute information *exchanges* on platforms (e.g., from the journalists to a user and vice versa) rather than being one-directional (Friemel & Neuberger, 2021). Esser (2007) describes this type of communicative action as generalized exchanges over long periods and chains of indirect relationships. In the case of generalized exchange, he argues, a framework is always required to safeguard the advance payments associated with it against one-sided exploitation (Esser, 2007, p. 41). Despite not having digital platforms in mind during writing, Esser hints at the role of digital platforms in the communication process as institutions that negotiate the benefits and costs of platform communication for users (e.g., providing user data to receive information without paying money). He describes action as a form of behavior related to the development of intentions and the calculation of future consequences (cf. p. 28). However, to explain what the actors do in different social situations, it becomes necessary to include the mutual consideration of the possible actions of the other actors (Esser, 2007, cf. Reinemann, 2007).

What Friemel and Neuberger (2023) describe as information exchanges and Esser (2007) as mutual consideration have been addressed as *transactions* in the Dynamic Transaction Model (DTA; Früh & Schönbach, 1982). This model aimed at a mass media order ("pipeline model") of communication, where transactions between actors in a communication process were optional. The main focus was on media effects and selection processes. Früh (1991), when describing the pipeline model of mass communication (cf. Neuberger et al., 2023), understands the functions in a mass media communication process as static in contrast to dynamic interpersonal communication, where results of the immediately preceding act of communication directly affect the behavior of the subsequent act of communication (cf. p. 31, cf. conversational analysis theory, Searle, 1969). This updating of communicative actions is also present in a public sphere that resembles a dynamic network, where the above-described functions—being the source, the recipient, or the intermediary—of actors can only exist as *interactive relationships* due to the direct, technical connection that, once established, leave continuous digital traces. The existence of digital trace data as a result of networked communication on platforms extends the applicability of the DTA to D[X]IM. Every communicative action leaves a digital trace, which has the potential to shape actors on a platform or platforms. The fact that actors alter each other through information exchange on platforms resembles a *communicative transaction* (cf. Früh, 1991). When a network connection between two nodes is established, these nodes affect each other through ongoing information exchanges. Importantly, connections are often established automatically in a network through algorithmic preselection or previous behavior.

Communicative actions can roughly be distinguished into vertical and horizontal transactions (Früh, 1991). *Vertical transactions* take place between different levels of a system. For a dynamic network, vertical transactions can occur between different levels: in the case of D[X]IM, between the micro and the meso-level. *Horizontal transactions*, in turn, describe dependencies on the same hierarchy level, e.g., the micro level (cf. p. 126). Actors can alter each other directly in a horizontal transaction, for example, through a message, user comment, or reactions, or through user metrics information, for example, by increasing the algorithmic attractiveness

of a user to certain content (cf. Thorson, 2020. Indirect vertical transactions can impact the institutional order on the meso-level itself by leaving digital traces that, for example, inform algorithmic decision processes on the platform. Here, the micro-level is connected to the meso-level of public communication in dynamic networks (as depicted in Figure 2). D[X]IM primarily considers horizontal communicative transactions between actors. However, since transactions also mean an information exchange between the platform and the actors' constellation, D[X]IM also includes vertical transactions.

Different communicative transactions are possible in dyadic or triadic relationships. In the dyadic relationship, publication and selection of content can be understood as a transaction because a recipient's selection of information affects a source's relevance. In contrast, the publication of information affects the recipients in at least two ways. First, it changes the "algorithmic attractiveness" for future exposure of the recipient (see Thorson, 2020). This is—transferred to dynamic networks—what Früh (1991) calls *inter-transaction*, meaning a reciprocal change between two actors. In addition, the transaction of information affects the recipient insofar as the level of knowledge, an opinion about an issue, or intention can be addressed or even affected by this communicative transaction—an *intra-transaction*, meaning an internal change happening within an actor. In that sense, the source and recipient are not the same after the transaction. Notably, a transaction on both levels (vertical vs. horizontal, see Table 1) can constitute inter-, intra-, or both types of transactions.

In a triadic, intermediated relationship, the intermediation affects the source and the recipient (through providing a service), while the intermediary changes based on the communicative transaction established with the two, for example, changing the algorithmic relevance in the network on the inter-transactional level. But also, in an intermediated relationship, the intermediary changes the message distributed by the source (vertical) by conditioning the message sent and changing the recipient through the intermediation of knowledge (horizontal)—both can be understood as an intra-transaction. Third, the triadic, intermediary relationship does not only change but *is* changed through the direct transactions with the source and recipient. It also affects the recipient-source relationship as an *intermediate transaction* (see Table 1). Since each actor in a platform connection is not the same after each communicative transaction (dyadic or triadic), and each transaction conditions the behavior of the subsequent act of communication, we look at these three types of transactions that can explain what happens between the different actors in a dynamic public network.

Empirical application and research agenda

The concept of intermediation in D[X]IM provides a flexible framework for empirical studies. While not conclusive, in the following, we give examples of how to operationalize the concept to study intermediation across *actor*, *message*, *network*, and *longitudinal* perspectives. These perspectives not only guide operationalization but also form the basis for a research agenda that explores intermediaries' roles, relationships, and effects in networked communication.

Actor perspective: Services provided by intermediaries

Intermediation can be studied by defining the services an intermediary provides for the source, the recipient, or both. Derived from journalism research, phases of content production—such as investigating, checking, selecting, interpreting, commenting, presenting, and aggregating—can serve as guiding poles to study these services (e.g., Mayer et al., 2025). Beyond assessing whether these services are intended, perceived, and accepted by actors within a triadic relationship, they can also be used to examine their effects, such as knowledge acquisition or communicative responses.

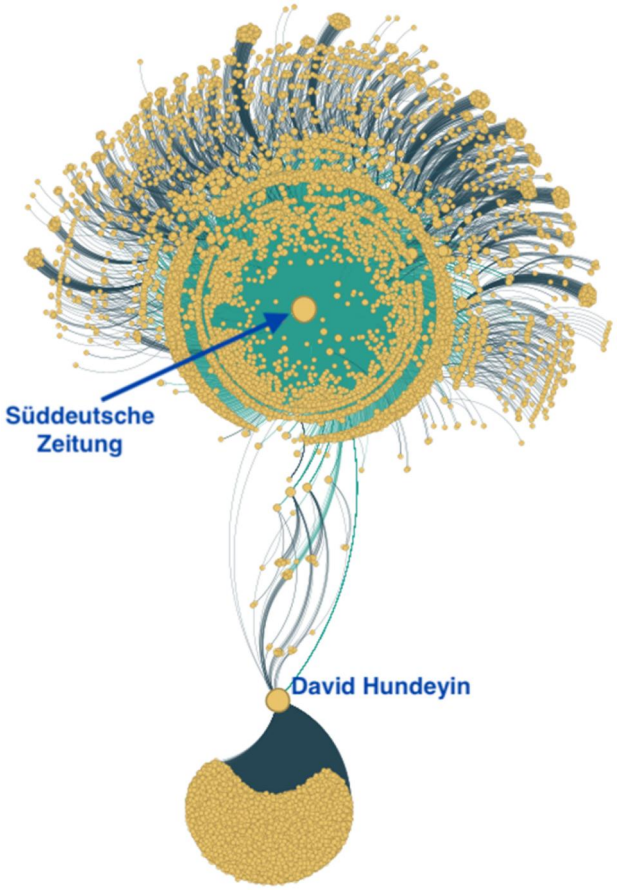
Although these phases originate in journalism, D[X]IM as a communication model can be applied to a wide range of actors, including influencers, bloggers, and artificial agents, and can adapt to specific intermediary functions like curation or fact-checking. On a platform feature basis, intermediation as an actor's centrality in a network can be identified, e.g., by the service of (repeatedly) forwarding messages (see Example 1, cf. Gaisbauer et al., 2025).

This perspective can guide research into identifying intermediaries within networks and understanding the frequency and impact of intermediated versus non-intermediated communication. For example, analyzing platform communication about climate change could reveal differences in audience engagement or knowledge acquisition based on whether messages are intermediated by influencers or received directly from political actors (parties, NGOs, activists, etc.). Research on brokerage roles in networks (see Gould & Fernandez, 1989) can also help to specify the type of intermediary, as they, for example, distinguish coordinator, gatekeeper, representative, consultant, and liaison.

Table 1. Examples of different transactions in dynamic networks.

	Inter-transaction (Reciprocal change)	**Intra-transaction (Internal change)**	**Intermediate transaction (Mediated change)**
Horizontal transaction (Micro → micro)	A link between source and recipient alters both: the recipient's exposure (algorithmic attractiveness) and the source's reach (via user metrics).	The recipient undergoes internal changes through the establishment of a link between source and recipient (e.g., increased knowledge, opinion shift).	An intermediary (e.g. a fact-checker) alters the relationship between source and recipient, influencing how the message is transmitted and processed (e.g., preventing a misbelieve for the recipient)
Vertical transaction (Micro → meso)	A network connection between two actors changes the meso-level dynamics, e.g., the algorithmic selection mechanisms by the platform.	Inclusion into a network community changes both the actor (identity formation, engagement) and the community (e.g., ideological tilt).	An intermediary (e.g., a fact-checker, etc.) alters the communication between actors in a way that impacts the meso-level differently than a direct dyadic connection (e.g., through the intermediation, the visibility of content decreases)

Example 1. (Repeated) forwarding or similar acts make the intermediary a central actor in a network.



Description: Interactions with articles from *Süddeutsche Zeitung* (a German daily newspaper) on Twitter in March 2023 illustrate how intermediaries extend the communicative reach of articles. Users shared articles via tweets (green edges) or retweeted tweets linking to the *Süddeutsche Zeitung* (dark blue). Notably, David Hundeyin, a Nigerian journalist, shared an article about Nigeria's new president. His tweet was subsequently retweeted by hundreds of Nigerian users, bridging language and community boundaries. This demonstrates how intermediaries can connect diverse audiences and influence the reach of communication through one communicative action.

Message perspective: Types and content of messages

From a message perspective, intermediation focuses on the types and content of messages communicated by intermediaries. Topics, news values, and specific formats used to provide services are key areas for analysis (e.g., Gaisbauer et al., 2025; Wedel et al., 2024). Message and actor perspectives are inherently linked (e.g., Friemel & Neuberger, 2023), as different intermediaries may prioritize varying topics, use distinct formats, or follow different news values when communicating on digital platforms.

For example, research could compare how journalists and influencers tailor messages to their audiences, examining the effects of their differing approaches on communication quality, framing, and engagement. This comparative perspective highlights the flexibility of intermediation in accommodating diverse communication practices.

Network perspective: Relationships and transactions

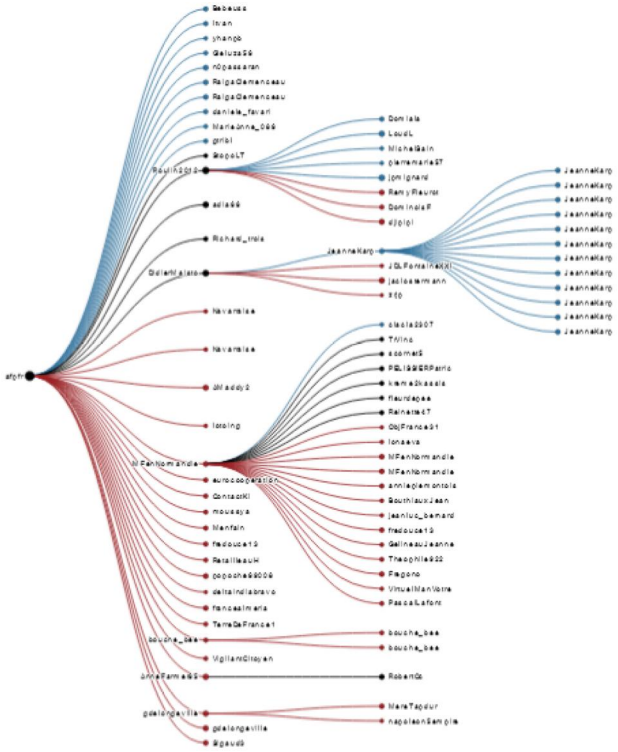
Intermediation can also be studied through network structures, focusing on actor constellations and their roles in shaping public communication dynamics. Conceptualizing edges as transactions helps to observe how relationships between actors evolve and influence network communication quality. Operationalizations include measuring how frequently journalistic information appears in networked communication or identifying intermediary roles based on repeated acts like forwarding or curating messages (see Examples 1 and 2).

Research could also explore role reversals within networks, such as recipients becoming sources or intermediaries, and how these shifts influence public communication dynamics (see Charlton et al., 2024 for an application of D[X]IM analytical categories investigate the emerging role of OSINT communities in knowledge generation and their unfolding relationship with journalism.). For instance, D[X]IM allows researchers to study how sources engage with feedback or how recipients develop opinions through communicative transactions. Building on Trilling's (2024) feedback loop perspective, D[X]IM can be further enriched by distinguishing reinforcing and dampening loops in intermediation—helping explain how content flows may either polarize or stabilize public discourse depending on actor roles and algorithmic incentives.

Longitudinal analysis

The dynamic nature of D[X]IM supports longitudinal studies using time-series data, e.g., time-stamped digital trace data. This approach enables researchers to track user activities over time and analyze changes in their roles and functions within a network (see Example 3). In particular, this unfolds intraindividual processes and facilitates a more nuanced

Example 2. The role of intermediary actors in quote cascades.



Description: Diffusion cascades created through the "quote function" on Twitter (now X) provide insights into intermediaries' structural roles. Nodes represent user profiles, and tree-like cascades emerge from quoted tweets. Root authors, such as @afpfr, often initiate these cascades, while intermediary users amplify and reframe information, extending its reach. This example demonstrates how intermediaries mediate content flows, creating new narratives or controversies (see Roth, St-Onge & Herms, 2021, for the full study).

The computational social science team at CNRS/Centre Marc Bloch Berlin carried out this work and was financed by the ERC-grant "Socsemics"[1].

understanding of the complex communication dynamics at the micro-level.

Dynamic analysis also facilitates studying how single communication actions at the micro-level influence broader platform structures and vice versa. For example, researchers can examine how algorithms shape and are shaped by user behavior or how individual communicative actions contribute to meso- and macro-level platform dynamics.

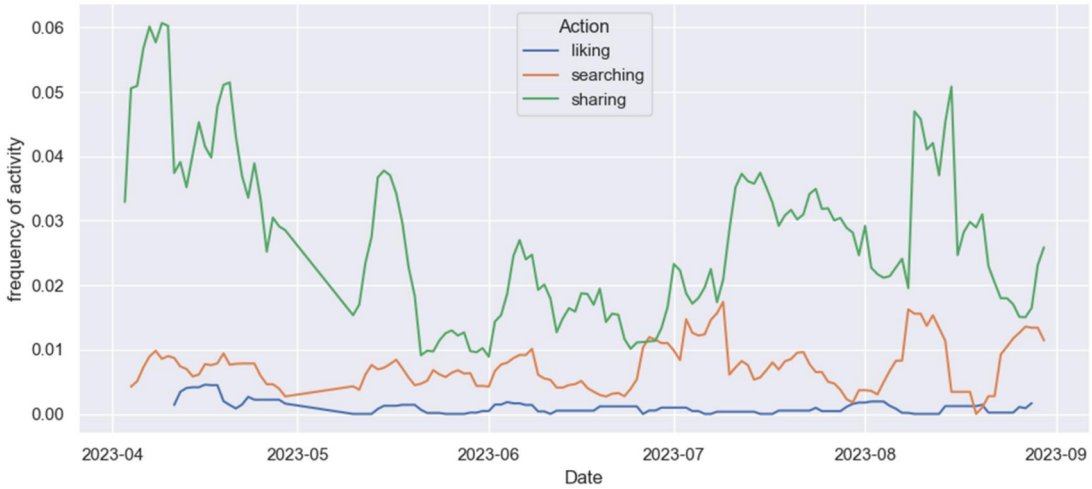
By integrating operationalization methods with a robust research agenda, D[X]IM offers a comprehensive approach to studying intermediation in platform communication. It enables:

- **Identifying Intermediaries**: Based on their services, such as repeated forwarding or curation, intermediaries can be empirically identified and characterized in networked communication.
- **Comparing Communication Types**: Differentiating between intermediated and non-intermediated communication can provide insights into the quality and effects of communication.
- **Content Transactions**: Understanding edges in a network as transactions of information integrates actor- and content perspectives that change actors.
- **Exploring Function Flexibility**: Studying function reversals reveals the degrees to which users fulfill intermediary functions in dynamic networks.
- **Tracking Longitudinal Dynamics**: Dynamic analyses uncover how user functions and communication transactions evolve over time and help to study (hyper-) longitudinal communicative actions as time-evolving sequences.

Discussion

D[X]IM improves our understanding of public communication dynamics in a platform age. It makes four major contributions. First, the triadic intermediation framework shifts the focus from the common dyadic network to a dynamic actor constellation that introduces the function of an intermediary to the common functions of source and recipient. This structure better reflects platform communication, as it is able to integrate the possibility that platform actors not only send or receive but also have the potential to provide services for other actors. The model thereby expands actor roles in a networked public sphere (Friemel & Neuberger, 2023). Second, D[X]IM strengthens the dynamic perspective that has been lacking in previous models. Describing the evolving roles of actors over time accounts for role reversals (e.g., recipients becoming sources or intermediaries). Introducing temporal and transactional dimensions demonstrates how individual communicative actions influence network structures and institutional platform orders over time. Third, D[X]IM integrates actors as nodes and content edges in a network, bridging the gap between actor-focused and content-focused models. This dual focus allows for the simultaneous study of how actor constellations and content flows shape networked communication. Through the integration of the DTA, we acknowledge that each connection is a transaction of information, either as content between actors on a horizontal level

Example 3. Change of actor functions in a dynamic network over time.



Description: A TikTok user's trajectory illustrates how roles shift over time, tracking liking, searching, and sharing behaviors. Using a 7-day rolling average, distinct user types emerge, such as those who intermediate algorithmically suggested content by sharing it or consume self-selected content. These patterns highlight how users transition between roles, providing insights into the dynamics of network communication.

(changes actors) or user metrics on a vertical level (changes platform). The model can, therefore, be applied to understand the interplay between actor constellations and content flows. Fourth, D[X]IM operates on the micro-level of content flows, which makes it applicable for empirical research, as actors' constellations, messages, and transactions can be directly operationalized.

Importantly, the model has limitations. It takes a universal approach, using an intermediary type that is not further differentiated. This means that researchers who apply it have to define the actors' functions, as they have to do for the services provided. Influencers as intermediaries, for example, may provide different services than journalists do (e.g. Maares & Hanusch, 2020). D[X]IM also argues that intermediated relationships qualify communication. To what extent a qualification is present also needs to be defined for the specific application of it, and it is also possible to study a dequalification (e.g., by missing or counter-services provided). It is, hence, important to explore the role of positionality, power resources, and communicative abilities of actors within this model, as these can widely differ.

Applying D[X]IM in its entirety is a challenge, as it needs to model longitudinal dynamics. This means new ways of analyzing communications need to be developed (e.g., Fan et al., 2025). However, the foundations of the model can also be studied with qualitative methods (e.g., Mayer et al., 2025), or only parts of the model can be studied, for example, the communicative transactions and their effects. Moreover, D[X]IM is based on a typical understanding of a digital network. Different platforms, however, have different underlying network structures. For example, Twitter (now X) relies more on frequent forwarding of messages than TikTok. Hence, the applicability of the model may vary, depending on the platform.

Conclusion

Public communication dynamics have changed due to digital platforms, which affect knowledge processes in society and make detrimental outcomes, such as a high amount of unverified information (Bennett & Livingston, 2018) or misunderstanding in communicative actions (see conversation analysis theory, Schneider, 1996) visible. How information is generated, verified, distributed, and appropriated has undeniably changed. We argue that the key to understanding this lies in the micro-level of content flows on digital platforms. Hence, we developed the D[X]IM to be able to understand and ultimately study the micro-level content flows that constitute these changes. The goal is to provide a universal model for communication research that integrates actors, messages, and outcomes of communicative transactions in dynamic public networks. While it is meant to be applicable in empirical research, it can also help communications and content creators understand and reevaluate their roles in digital communication processes by asking: What am I doing and trying to do when I engage with users and content on digital platforms? The model is also applicable to platform agents with lower than human agency, such as artificial intermediaries (Perreault & Ohme, 2025). We believe that the function of intermediaries, dynamic actor constellations, and focusing on communicative transactions can be valuable starting points for communication research to grasp contemporary public communication dynamics.

Funding

This research was funded by the Digital News Dynamics (DND) research group at Weizenbaum Institute (WI), Berlin. The WI is funded by Bundesministerium für Bildung und Forschung (BMBF), Germany, and the State of Berlin and State of Brandenburg, Germany.

NOTES

1 Project Information SOCSEMICS, Grant agreement ID: 772743. URL: https://cordis.europa.eu/project/id/772743.

References

Bartsch, A., Neuberger, C., Stark, B., Karnowski, V., Maurer, M., Pentzold, C., Quandt, T., Quiring, O., & Schemer, C. (2025). Epistemic authority in the digital public sphere. An integrative conceptual framework and research agenda. *Communication Theory*, *35*, 37–50. https://doi.org/10.1093/ct/qtae020

Benkler, Y. (2006). *The wealth of networks*. Yale University Press; JSTOR.

Bennett, W. L., & Livingston, S. (2018). The disinformation order: Disruptive communication and the decline of democratic institutions. *European Journal of Communication*, *33*, 122–139. https://doi.org/10.1177/0267323118760317

Birkmose, J. (2016). *Det komplicerede forhold mellem danske medier og Facebook [The difficult relationship between Danish Media and Facebook]*. http://www.kommunikationsforum.dk/artikler/Det-komplicerede-forhold-mellem-danske-medier-og-Facebook

Bossetta, M. (2018). The digital architectures of social media: Comparing political campaigning on Facebook, Twitter, Instagram, and Snapchat in the 2016 U.S. election. *Journalism & Mass Communication Quarterly*, *95*, 471–496. https://doi.org/10.1177/1077699018763307

Burt, R. S. (2007). *Brokerage and closure: An introduction to social capital (1. publ. in paperback)*. Oxford Univ. Press.

Carter, M. C., Cingel, D. P., Ruiz, J. B., & Wartella, E. (2023). Social media use in the context of the Personal Social Media Ecosystem Framework. *Journal of Communication*, *73*, 25–37. https://doi.org/10.1093/joc/jqac038

Castells, M. (2007). Communication, power and counter-power in the network society. *International Journal of Communication*, *1*, 238–266.

Charlton, T., Mayer, A.-T., & Ohme, J. (2024). A common effort: New divisions of labor between journalism and OSINT communities on digital platforms. *The International Journal of Press/Politics*, 19401612241271230. https://doi.org/10.1177/19401612241271230

Van Dijck, J., Poell, T., & de Waal, M. (2018). *The platform society*. Oxford University Press.

Domingo, D., Masip, P., & Costera Meijer, I. (2015). Tracing digital news networks. *Digital Journalism*, *3*, 53–67. https://doi.org/10.1080/21670811.2014.927996

Dubois, V. (2013). *Institutional Order, Interaction Order and Social Order: Administering Welfare, Disciplining the Poor. 20*. HAL-SHS. https://halshs.archives-ouvertes.fr/halshs-00837517

Esser, H. (2007). Der Handlungsbegriff in der modernen Soziologie. In K.-D. Altmeppen, T. Hanitzsch, & C. Schlüter (Eds.), *Journalismustheorie: Next generation: Soziologische Grundlegung und theoretische Innovation; [Lehrbuch]*. (1. Aufl, pp. 27–46). VS Verlag für Sozialwissenschaft.

Fan, Y., Ohme, J., & Wedel, L. (2025). *Exploring temporal dynamics in digital trace data: Mining user-sequences for communication research* (Version 1). arXiv. https://doi.org/10.48550/ARXIV.2505.18790, preprint: not peer reviewed.

Friemel, T. N. (2008). *Anatomie von Kommunikationsrollen. Methoden zur Identifizierung von Akteursrollen in gerichteten Netzwerken*. https://doi.org/10.5167/UZH-10490

Friemel, T. N. (2015). Influence versus selection: A network perspective on opinion leadership. *International Journal of Communication*, *9*, 1002–1022. https://ijoc.org/index.php/ijoc/article/view/2806

Friemel, T. N., & Neuberger, C. (2023). The public sphere as a dynamic network. *Communication Theory*, *33*, 92–101. https://doi.org/10.1093/ct/qtad003

Früh, W. (1991). *Medienwirkungen: Das dynamisch-transaktionale Modell*. VS Verlag für Sozialwissenschaften. https://doi.org/10.1007/978-3-663-10777-4

Früh, W., & Schönbach, K. (1982). Der dynamisch-transaktionale Ansatz. Ein neues Paradigma der Medienwirkungen. *Publizistik*, *27*, 74–88.

Gaisbauer, F., Pournaki, A., & Ohme, J. (2025). *Intermediation, not fragmentation: A political cartography of news sharing in the German Twittersphere*. Manuscript submitted for publication.

Gillespie, T. (2010). The politics of 'platforms. *New Media & Society*, *12*, 347–364. https://doi.org/10.1177/1461444809342738

Gillespie, T. (2018). Platforms are not intermediaries. *Georgetown Law Technology Review*, *2*, 198–216.

Goffman, E. (1983). The interaction order: American Sociological Association, 1982 presidential address. *American Sociological Review*, *48*, 1. https://doi.org/10.2307/2095141

Gould, R. V., & Fernandez, R. M. (1989). Structures of mediation: A formal approach to brokerage in transaction networks. *Sociological Methodology*, *19*, 89–126. https://doi.org/10.2307/270949

Hagen, L. M., Au, A.-M in der., & Wieland, M. (2017). Polarisierung im Social Web und der intervenierende Effekt von Bildung: Eine Untersuchung zu den Folgen algorithmischer Medien am Beispiel der Zustimmung zu Merkels "Wir schaffen das!" *Kommunikation @ Gesellschaft*, *18*, 20.

Hase, V., Boczek, K., & Scharkow, M. (2023). Adapting to affordances and audiences? A cross-platform, multi-modal analysis of the platformization of news on Facebook, Instagram, TikTok, and Twitter. *Digital Journalism*, *11*, 1499–1520. https://doi.org/10.1080/21670811.2022.2128389

Helberger, N. (2020). The political power of platforms: How current attempts to regulate misinformation amplify opinion power. *Digital Journalism*, *8*, 842–854. https://doi.org/10.1080/21670811.2020.1773888

Kümpel, A. S. (2022). Social media information environments and their implications for the uses and effects of news: The PINGS framework. *Communication Theory*, *32*, 223–242. https://doi.org/10.1093/ct/qtab012

Maares, P., & Hanusch, F. (2020). Exploring the boundaries of journalism: Instagram micro-bloggers in the twilight zone of lifestyle journalism. *Journalism*, *21*, 262–278. https://doi.org/10.1177/1464884918801400

Majó-Vázquez, S., Cardenal, A. S., Segarra, O., & de Simón, P. C. (2020). Media roles in the online news domain: Authorities and emergent audience brokers. *Media and Communication*, *8*, 98–111. https://doi.org/10.17645/mac.v8i2.2741

Mayer, A.-T., Wedel, L., Ohme, J., & Neuberger, C. (2025). Journalistic intermediation: A relational approach to exploring journalism's function and position on digital platforms. *Manuscript Submitted for Publication*.

Neuberger, C. (2022a). How to capture the relations and dynamics within the networked public sphere.? In B. Krämer & P. Müller (Eds.), *Questions of communicative change and continuity* (pp. 67–95). Nomos. https://doi.org/10.5771/9783748928232-67

Neuberger, C. (2022b). Journalismus und Plattormen als vermittelnde Dritte in der digitalen Öffentlichkeit. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie*, *74*, 159–181. https://doi.org/10.1007/s11577-022-00832-9

Neidhardt, F. (1994). *Öffentlichkeit, öffentliche Meinung, soziale Bewegungen. In Öffentlichkeit, öffentliche Meinung, soziale Bewegungen. Hrsg. Jürgen Friedrichs, M. Rainer Lepsius und Friedhelm Neidhardt*, 7–41. Sonderheft 34, Kölner Zeitschrift für Soziologie und Sozialpsychologie. Opladen: Westdeutscher Verlag.

Neuberger, C., Bartsch, A., Fröhlich, R., Hanitzsch, T., Reinemann, C., & Schindler, J. (2023). The digital transformation of knowledge order: A model for the analysis of the epistemic crisis. *Annals of the International Communication Association*, *47*, 180–201. https://doi.org/10.1080/23808985.2023.2169950

Nielsen, R., & Ganter, S. A. (2018). Dealing with digital intermediaries: A case study of the relations between publishers and platforms. *New Media & Society*, *20*, 1600–1617. https://doi.org/10.1177/1461444817701318

Plantin, J.-C., Lagoze, C., Edwards, P. N., & Sandvig, C. (2018). Infrastructure studies meet platform studies in the age of Google and Facebook. *New Media & Society*, *20*, 293–310. https://doi.org/10.1177/1461444816661553

Perreault, G., & Ohme, J. (2025). ChatBots as artificial intermediaries: Adaptation to artificial intelligence in newsrooms and hyped

implications for news audiences. *Journalism Studies*. https://doi.org/10.1080/1461670X.2025.2567894Manuscript
Poell, T., Nieborg, D., & Van Dijck, J. (2019). Platformisation. *Internet Policy Review*, *8*, 1–13. https://doi.org/10.14763/2019.4.1425
Reinemann, C. (2007). Subjektiv rationale Akteure: Das Potenzial handlungstheoretischer Erklärungen für die Journalismusforschung. In K.-D. Altmeppen, T. Hanitzsch, & C. Schlüter (Eds.), *Journalismustheorie: Next Generation: Soziologische Grundlegung und theoretische Innovation; [Lehrbuch]* (1. Aufl, pp. 47–67). VS Verlag für Sozialwissenschaft.
Searle, J. R. (1969). *Speech acts. An essay in the philosophy of language*. Cambridge University Press.
Simmel, G. (1992). Die quantitative Bestimmtheit der Gruppe: Zweites Kapitel. In G. Simmel, Soziologie: Untersuchungen über die Formen der Vergesellschaftung. Gesamtausgabe Bd. 11 (pp. 63–159). Frankfurt a. M.: Suhrkamp. (Original work published 1908).
Schmidt, R. (2012). *Soziologie der Praktiken. Konzeptionelle Studien und empirische Analyse*. Suhrkamp.
Schneider, W. L. (1996). Die Komplementarität von Sprechakttheorie und systemtheoretischer Kommunikationstheorie. Ein hermeneutischer Beitrag zur Methodologie von Theorievergleichen. *Zeitschrift Für Soziologie*, *25*, 263–277. https://doi.org/10.1515/zfsoz-1996-0402
Schneiders, P., Stegmann, D., & Stark, B. (2023). Social cohesion in platformized public spheres: Toward a conceptual framework. *Communication Theory*, *33*, 122–131. https://doi.org/10.1093/ct/qtad002
Srnicek, N. (2017). *Platform capitalism*. Polity Press.
Thorson, K. (2020). Attracting the news: Algorithms, platforms, and reframing incidental exposure. *Journalism*, *21*, 1067–1082. https://doi.org/10.1177/1464884920915352
Thorson, K., & Wells, C. (2016). Curated flows: A framework for mapping media exposure in the digital age: Curated flows. *Communication Theory*, *26*, 309–328. https://doi.org/10.1111/comt.12087
Trilling, D. (2024). Communicative feedback loops in the digital society. *Weizenbaum Journal of the Digital Society*, *4*, 1–29. https://doi.org/10.34669/WI.WJDS/4.2.4
Vermeer, S., Trilling, D., Kruikemeier, S., & de Vreese, C. (2020). Online news user journeys: The role of social media, news websites, and topics. *Digital Journalism*, *8*, 1114–1141. https://doi.org/10.1080/21670811.2020.1767509
Wallace, J. (2018). Modelling contemporary gatekeeping: The rise of individuals, algorithms and platforms in digital news dissemination. *Digital Journalism*, *6*, 274–293. https://doi.org/10.1080/21670811.2017.1343648
Weber, M. S., & Monge, P. (2011). The flow of digital news in a network of sources, authorities, and hubs. *Journal of Communication*, *61*, 1062–1081. https://doi.org/10.1111/j.1460-2466.2011.01596.x
Wedel, L., Ohme, J., & Araujo, T. (2024). Augmenting data download packages—Integrating data donations, video metadata, and the multimodal nature of audio-visual content. *Methods, Data*, *32*, 1–32. https://doi.org/10.12758/MDA.2024.08
Welbers, K., & Opgenhaffen, M. (2018). Social media gatekeeping: An analysis of the gatekeeping influence of newspapers' public Facebook pages. *New Media & Society*, *20*, 4728–4747. https://doi.org/10.1177/1461444818784302

Communication Theory, 2025, 00, 1–12
https://doi.org/10.1093/ct/qtaf025
Original Article