Political Communication in the Online World

Theoretical Approaches and Research Designs

Edited by
Gerhard Vowe and Philipp Henn

Routledge

Henn and Vowe's collection reviews and expands several of the central theories and methods involved in political communication on the internet. From gatekeeping to media influence and many other topics, this book invigorates both theoretical issues in the field. The methodological sections on topics such as data mining and social networks integrate issues that cut across the field of political communication. This book will be useful for anyone seeking deeper understanding of the field.

Jeremey Hunsinger, *Wilfrid Laurier University, Canada*

This collection offers an impressive updating of political communication theory and methods for the online world. As ever more personalized and socially networked communication dominate our political lives, researchers need to think about whether old models and methods still work and, along with what new perspectives are needed. This volume addresses the full spectrum of these concerns in impressive fashion.

Lance Bennett, *University of Washington, USA*

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Political Communication in the Online World

As a consequence of the rapid diffusion of online media, the conditions for political communication and research concerning it have radically changed. Is empirical communication research capable of consistently describing and explaining the changes in political communication in the online world both from a theoretical and methodological perspective?

In this book, Gerhard Vowe, Philipp Henn, and a group of leading international experts in the field of communication studies guide the reader through the complexities of political communication and evaluate whether and to what extent existing theoretical approaches and research designs are relevant to the online world. In the first part of the book, nine chapters offer researchers the opportunity to test the basic assumptions of prominent theories in the field, to specify them in terms of the conditions of political communication in the online world, and to modify them in view of the systematically gained experiences. The second methodological section tests the variations of content analysis, surveys, expert interviews, and network analyses in an online environment and documents how successful these methods of empirical analysis have proven to be in political communication.

Written accessibly and contributing to key debates on political communication, this bookshelf essential presents an indispensable account of the necessary tools needed to allow researchers decide which approach and method is better suited to answer their online problem.

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Routledge Research in Political Communication

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Theoretical Approaches and
Research Designs

**Edited by Gerhard Vowe
and Philipp Henn**

Dedicated to Wolfgang Donsbach (1949–2015) and
Kurt Imhof (1956–2015)

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Introduction

Political Communication Research in the Online World

Philipp Henn and Gerhard Vowe

There are currently more than seven billion mobile phones in the world—approximately as many mobile phones as there are people (International Telecommunication Union, 2014). Nearly two billion people use a smartphone, which enables them to have mobile access to the Internet ("Smartphone Users," 2014). In the span of just two years, between 2013 and 2015, the number of people using a smartphone has nearly doubled. Young people in Western societies are now online for more than four hours a day, which is twice as much time as they spend watching television and is a steep increase as compared to the amount of time young people spent online five years ago (Duggan, Ellison, Lampe, Lenhart, & Madden, 2015; Seo, Houston, Taylor Knight, Kennedy, & Inglish, 2014). In conjunction with the increase in Internet access, there has also been a fundamental change in the way political information can be accessed. It is now possible for individuals to engage in communications about political subjects in a very different manner—for example, by commenting on political online news sites. As a result of these recent changes, participation in political decisions has been transformed.

Supply and demand accumulate reciprocally, and with the rapid spread of the Internet, the "Big Five"—Apple, Facebook, Google, Microsoft, Amazon—have also increased in significance. These five companies have a combined value of about 1.7 trillion US dollars (status as of May 2015), which not only makes them economic heavyweights, but also political power factors on an international scale.

Not only has the constellation of economic actors fundamentally changed with the introduction of the Internet, but political actors now use Internet initiatives as part of their strategies. Out of a total of well over a billion dollars spent on electoral campaigns during the 2012 US presidential elections, approximately 100 million US dollars were spent on online campaigning alone (Center for Responsive Politics, n.d.). All estimates anticipate that the total budget for electoral campaigns in 2016 will increase dramatically, including increases in the proportion allocated to online initiatives.

These facts indicate that there have been fundamental changes to political communication. They reveal a small segment of the overall picture in which it is clear to see how much and how quickly our communication world has changed and continues to change into an online world.

This shift to online communication raises the question of how political communication in general is changing within this new environment and which politically relevant consequences are involved in these changes to political communication. In order to answer these questions, political communication research must first determine the answer to the following question: Can the new challenges to political communication posed by the online world be adequately addressed and answered by the traditional theoretical approaches of communication research and its empirical methods, or do the new conditions necessitate the development of a new theoretical and methodological basis for political communication research? Given this fundamental, structural transformation, it cannot be taken for granted that the theories and methods that were developed for a political communication landscape dominated by the press and radio will continue to shape the research and have a secure role in practical communication (Young & Pieterson, 2015). It is important to determine whether the arsenal of theories and methods developed and tested for political mass communication are still valid given the variety of political communication avenues now utilized online.

The aim of this book is to answer these general questions. With respect to the theoretical approaches, this investigation provides an opportunity to test their basic assumptions, to specify these approaches in terms of the conditions of political communication in the online world, and to modify them in light of the systematically gained experiences. Testing these theoretical approaches in an online world allows their effectiveness in that setting to be evaluated. The chapters on individual theoretical approaches each provide answers to the following questions: What are the basic assumptions of the theoretical approach? How successful has the approach proved to be based on empirical research investigating its effectiveness in the online world? What modifications are necessary in order to adapt the approach to suit the conditions of the online world?

The methods of empirical communication studies are also put to the test in an online environment, and the methodological part of this book is intended to document how successful the methods of empirical analysis of political communication phenomena have proved to be in the online world. In the methodological chapters, the following questions are addressed: What are the principles of the method? How successful has this method been in terms of its application to online media? And what demands does the method place on the researcher?

In answer to the question of whether traditional theories and methods continue to be suitable in the online world, the first part of this book is dedicated to demonstrating that the arsenal of theories in communication

studies is capable of overcoming the challenges of the online world in order to analyze the transformations to political communication. However, for the most part, this will require modifications to the theoretical approaches. For example, it is necessary to expand the agenda-setting approach to include new modes of agenda flow. In the second part of this book, it will be demonstrated that the methods are also capable of revealing new forms of research in accordance with the conditions of an online world. In particular, the methodological base of empirical communication research continues to be valid in the online world. But adjustments must also be made to the methods—sometimes to a greater extent, as is the case for content analysis, and sometimes to a lesser extent, as is the case for surveys. As a result, this book presents a differentiated picture from a methodological as well as a theoretical perspective.

What exactly is meant by an *online world?* This term is understood to refer to a communications world dominated by the logic of online media. This does not mean that other media have disappeared from political communication. Television, radio, press, and books, as well as forums for debate, continue to play an important role in political communication, but these media no longer determine the foundational rules for political communication. Instead, the subject preferences, actor constellations, and rhythms of online media are increasingly determining the course of political communication, with the degree of online media influence varying between countries, groups, and subjects. Synonyms for online world are the *Internet age*, or *digital era*, and included under the umbrella of online media is all media that allows communication based on networked computers. Examples of online media include the websites of organizations, social network sites, blogs, search engines, electronic encyclopedias, and many more. Political communication should be understood as all symbolic interactions that concern collective, binding decisions (Parsons, 1969, p. 352 ff.). Our understanding of political communication research arises from this, proceeding from Chapter 1 with regard to theory and from Chapter 10 with regard to methodology.

Theoretical Approaches Revisited—Chapters 1–9

In the introductory chapter of the theoretical part (Chapter 1), Philipp Henn, Olaf Jandura, and Gerhard Vowe reconstruct the *traditional paradigm of political communication research*. Political communication, they conclude, has largely been considered by scholars to be mass communication between politicians in established political organizations, journalists in mass media, and politically open-minded citizens. But this paradigm fails to accommodate the changing political communication in an online world. The authors discuss the shortcomings and blind spots of our traditional view of political communication, and outline necessary adjustments, like the need to integrate micro, meso, and macro levels of effects.

Gabriel Weimann and Hans-Bernd Brosius take a look at *agenda-setting research* in Chapter 2. They identify six basic assumptions of the agenda-setting theory, and by reviewing numerous studies, they conclude that it is still valid in an online world, although it requires substantial adjustments. There are new characteristics of the online agenda-setting, and they require new methods and research designs such as network analysis, or diffusion patterns.

Chapter 3 deals with a different aspect of agendas. Barbara Pfetsch, Peter Miltner, and Daniel Maier examine old and new dynamics of *agenda building*. They ask if the processes by which various groups bring their demand onto the public agenda have changed in online environments, and conclude that online communication complements the traditional agenda building process and offers new opportunities for new actors who can now circumvent traditional mass media.

Gatekeeping is the topic of Chapter 4. Katja Friedrich, Till Keyling, and Hans-Bernd Brosius question whether the gatekeeping approach is still adequate to explain who controls the flow of political information in the online world. They argue that two forms of gatekeeping must be distinguished: editorial gatekeeping practiced by journalists, which is still a major factor; and audience gatekeeping, which now undermines the power of the traditional actors.

Marcus Maurer and Corinna Oschatz discuss the changes in the dissemination of political information and the *process of political knowledge gain* in Chapter 5. After distinguishing two different approaches to political knowledge—an objective and a subjective approach—they discuss the role of news media for knowledge gaps online and offline. The final part of the chapter is a description of a research program that aims to integrate the objective and subjective approaches.

The *spiral of silence* is revisited in Chapter 6 by Christiane Eilders and Pablo Porten-Cheé. Eilders and Porten-Cheé first sketch out the basic assumptions of Elisabeth Noelle-Neumann's theory, then discuss whether they still hold in the online world. Next they review the empirical evidence to determine the effects online communication has on public opinion, perceptions, and willingness to speak out—including their own research on the debate on climate change and German elections. They conclude that a spiral of silence is unlikely to develop in online environments because of selective exposure in high-choice media environments that prevents people from encountering opposing views.

In Chapter 7, Marco Dohle and Uli Bernhard discuss which characteristics of online communication are relevant for presumed influences of media. By reviewing the literature and presenting the results of their own studies, they show that the *third-person effect* and *the influence of presumed media influence approach* are still valid in the online world. An outline of future research directions is given at the end of this chapter, for example with regards to the specific characteristics of online media

such as the possibility to write and observe comments on online news articles.

Patrick Donges and Paula Nitschke take a look at political organizations and search for a theoretical link between the usage of the Internet and organizational and political context factors in Chapter 8. Their solution is *new institutionalism*, a collection of approaches that is discussed and modified in this chapter. Special attention is given to the concept of isomorphism, meaning that organizations observe their environment and incorporate institutional requirements.

The approaches of the field of *media relations* are explored by Juliana Raupp and Jan Niklas Kocks in Chapter 9. They ask what the contributions of different approaches are in describing and analyzing media relations. After reviewing major theoretical approaches, they argue for a combination of institutionalist and network-based approaches. The implications that such a combined approach would have on future research are then discussed, including, for example, the need to observe new types of actors.

Research Designs Revisited—Chapters 10–17

The *second part* of the book deals with research designs in an online world and addresses the question: Are the methods and techniques used in political communication research still able to deal with this new world?

In Chapter 10, Gerhard Vowe and Philipp Henn argue that political communication research should be based on three basic *methodological principles*: causality, intersubjectivity, and incompleteness. The authors state that these principles are still valid in the new landscape of political communication research. However, they claim that while these principles should still be a guiding light for research, the changing environment does present a challenge for them—for example, the principles are challenged by the differentiation, pluralization, and acceleration of research. Conclusions for how research methods should be structured in light of the new online environment are suggested, for instance, a new balance of theory and (big) data.

Marcus Maurer, Jörg Haßler, and Thomas Holbach describe a method of *database-driven content analysis* in Chapter 11. After explaining the challenges that the analysis of websites poses for researchers, they give instructions on how to tackle these challenges. Their ARTICLe (Automatic RSS-Crawling Tool for Internet-Based Content Analysis) database, which uses RSS feeds and automatically creates HTML files and screenshots of websites to be analyzed, is one way of meeting these challenges.

In Chapter 12, Till Keyling and Jakob Jünger write about the *observation of online content*. They try to provide orientation for researchers who are less experienced with data collection on the Internet, especially with data from social network sites. Three specific ways of data collection for

the purpose of political communication research are introduced: working with raw data, access to programming interfaces, and the exploitation of user interfaces.

How to deal with vast amounts of unstructured text data is the question that Annie Waldherr, Gerhard Heyer, Patrick Jähnichen, Andreas Niekler, and Gregor Wiedemann address in Chapter 13. They describe *computational methods to mine big data*. The methods are developed in natural language processing and allow for automatic capturing of semantics in massive populations of texts. The authors discuss the potential and limitations of selected supervised and unsupervised methods for political communication research.

Uli Bernhard, Pablo Porten-Cheé, and Martin Schultze take a look at the pros and cons of *online survey research* in Chapter 14. They provide recommendations of when and how to use online surveys, provide examples of how these methods were used in recent years, and reflect on their experience with online surveys in their own research on social elites, individual media repertoires, and Voting Advice Applications.

In Chapter 15, Silke Adam, Thomas Häussler, Hannah Schmid-Petri, and Ueli Reber discuss how *hyperlink issue networks* can be identified and analyzed. They explain how snowballing techniques can be used to obtain a network, how to get a real issue network, how to understand the sociological meaning of hyperlinks, and how to use methods of social network analysis to further investigate these hyperlink issue networks.

Chapter 16 deals with the integration of *quantitative and qualitative methods in social network analysis*. Jan Niklas Kocks and Juliana Raupp describe a "flesh-and-bone" approach that aims to enrich quantitative data within network interviews. They discuss theoretical and empirical perspectives and the possibilities and limitations of an integration of these methods in an online world. They conclude that an integration of qualitative and quantitative methods promises new insights for political communication research in an online world.

Finally, Paula Nitschke and Kim Murphy take a look at *organizations as an analytical category* in Chapter 17. They argue that organizations are predominately viewed as actors in political communication research, but the increasingly ambivalent status of organizations in an online world calls for the adoption of new perspectives—for example, viewing organizations as structures or processes. Two studies with multi-methodological approaches are presented in the chapter, one on the mediatization of political interest organizations, and the other on networked media government relations in online conditions.

These chapters provide a wide range of answers that at least partially address the current challenges to theory and methodology; however, a full catalog of theoretical approaches and methods for communication studies is not possible within the scope of this book. It was equally impossible to consider the many theoretical approaches and methods

from neighboring disciplines that also explore the online world, such as theoretical approaches from an economic perspective, or methods from computer science. Concentrating primarily on communication studies does not imply a claim to exclusive agency of that particular field, nor does it imply that the contributions of other sciences have no value. Instead, it is simply a reflection of the fact that testing and comparing all theories and methods in terms of effectiveness and complementarity is not feasible within this book.

The fact that testing is focused on the communication studies theories and methods presented in this book can also be justified by considering that this book has arisen due to the work of the "Political Communication in the Online World" research group. This research group has been supported since 2011 by the German Research Society (DFG) and the Swiss National Fund (SNF). Between the years of 2011 and 2014, as an initial step, the group performed empirical tests to determine whether a range of theoretical approaches to communication research were suitable for the online world. This produced a variety of results that are presented here. This book presents an interim report of the research team's work in the form of an inventory.[1]

In conclusion, thanks are owed first and foremost to the DFG and SNF who made the project possible, in particular the reviewers who have accompanied the research from the start on behalf of these organizations. We would also like to thank all of the researchers who contributed chapters to this book. Despite their countless other obligations, all authors were prepared to invest a lot of time and effort into their contributions, coordinate with other authors, handle the demands of the publishers, and not least to keep to a tight schedule. Thanks are also owed to those cooperation partners who collaborated with the research group over the last three years, particularly the participants at the ICA Pre-Conference 2012[2] organized by the research group, and those at the national conventions and workshops conducted by the research group in cooperation with other organizations. We hope to continue this cooperation in the coming years.

We would also like to thank the collaborators who played a role in this book's production, particularly Halina Bause, Dennis Frieß, Ole Kelm, and Raphael Kösters for their support in research and editing the book. Our gratitude also goes out to Routledge publishers, particularly Natalja Mortensen and Lillian Rand, who supported and attended to this publication of our research team's inventory.

We hope this book will inspire further discussion and dialogue about whether communication studies are adequately equipped to investigate and shape the structural transformation of political communication. The fog is slowly lifting, and a faceted image is emerging that displays the ways in which political communication is changing, and how this transformation can be researched appropriately.

Notes

1 For additional information on the research team and an overview of their publications, see http://www.fgpk.de/en/.
2 See https://www.icahdq.org/conf/2012/print_program.pdf, pp. 16–17.

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Part I

Theoretical Approaches Revisited

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1 The Traditional Paradigm of Political Communication Research Reconstructed

Philipp Henn, Olaf Jandura, and Gerhard Vowe

Why Reconstruct the Traditional Paradigm of Political Communication Research?

How was *political communication* understood in previous research? This chapter will reconstruct the perspective researchers have used so far. Thus, we will identify which elements of political communication the research focused on, and how these were combined into a specific *paradigm*, a pattern of thought (Fleck, 1935/1979). This chapter is not concerned with presenting the state of empirical research. Also, it is not a summary of the following chapters, which take a closer look on specific theories and empirical evidence. Rather, the tacit premises and implicit assumptions behind the theoretical approaches and research designs will be highlighted in this chapter. Why is this necessary? Without it, it is impossible to precisely discern the changes currently taking place in research. These changes in research are driven by the fundamental changes the spread of online media brings to political communication. Identifying the starting point as precisely as possible is the only way to clarify what is currently changing the research and what a new paradigm of research might look like. Currently, we are experiencing a massive change in research: The traditional paradigm is still dominant, but new elements are already being implemented and used.

How Is the Traditional Paradigm Being Reconstructed?

This reconstruction is not easy, since the term *political communication* is generally vague in the relevant literature. Graphical representations of the fundamental relationships are rarely seen in textbooks, review articles, and handbook contributions, because they would require a precise definition of the various terms and their relationships (with the exception of McNair, 2011). Also, you will find relatively few metastudies or overviews that consider the research field as a whole (with the exception of Kamhawi & Weaver, 2003). Because of the conceptual blurring, a lot of interpretation is required to reconstruct the traditional paradigm of political communication research.

The concepts used in literature are different in many ways, but there is a *common core* that is reconstructed in this chapter. It will be referred to here as the *traditional paradigm*. The presentation of this paradigm is structured according to seven basic dimensions of communication (Dance, 1970; Merten, 1977).

Anomalies will also be analyzed, that is to say phenomena that do not fit into the traditional paradigm. These phenomena are closely connected to general trends of social change and occur in conjunction with the diffusion of the Internet. They do not show up consistently, but are always accompanied by conflicting trends and forces.

Facets of the Traditional Paradigm: Seven Dominant Characteristics

The dominant characteristics in each of the seven dimensions and the trends of change that challenge the explanatory power of the traditional paradigm are clear from the overview below.

Table 1.1 Facets of the Traditional Paradigm

Dimension	Dominant Characteristic	Trends of Change
Context: In what context is political communication positioned?	Sphere of public political communication in liberal-democratic systems	Erosion of the boundaries between the spheres
Social: Politically, who communicates with whom?	Actor constellation of mass communication: fixed roles for politicians, journalists, and citizens	Pluralization of actors, increasing the flexibility of role requirements; hybridization of communication modes
Content: What is communicated politically?	Preference for issues of public interest	Differentiation of content: differences in the preferences
Temporal: When does political communication occur?	Synchronous reception as a dominant pace setter	Individualization of the temporal structure of reception
Spatial: Where does political communication occur?	Nation-states as areas of communication	Globalization and glocalization

Dimension	Dominant Characteristic	Trends of Change
Technical: How does political communication happen on a technical level?	Broadcasting technology as the basis for political communication	Digitization: convergence of broadcasting, telecommunications and computer technology into computer networks
Causal: What are the effects attributed to political communication?	Normatively assessed changes in individual perceptions, attitudes, and behaviors induced by political communication	Integration of levels of effects: linking micro-, meso- and macro-levels to an explanatory model

Context Dimension: Public Sphere in the Liberal-Democratic System as the Dominant Sphere

In what context is political communication positioned? This first question refers especially to the *spheres* in which political communication is embedded. Spheres should be understood as expectancy patterns, sets of rules for communication. They regulate the communication, especially accessibility and observability of communication.

The base of the traditional paradigm of political communication research is a strong legal *sphere model*—not only in Germany. It is strictly divided between three spheres, each with their own logic (Habermas, 2006):

- *Public political communication* is political communication that is widely accessible (public space) and generally observable (public eye). Other areas of public communication comprise, for example, public economic communication or public sports communication.
- *Governmental political communication* is political communication where state actors decide who is allowed to observe and participate. In many areas, governmental political communication is subject to secrecy requirements and is thus located in an arcane sphere.
- *Private political communication* is political communication where private actors decide who is allowed to observe and participate.

Based on this sphere model the traditional paradigm is characterized by a *five-stage order of preference for contexts*. This results in a funnel of attention:

- In the traditional understanding of political communication, the focus is on the sphere of *public political communication*. The other

spheres play a minor role: Governmental communication is only interesting as a source (public relations of governments) and private communication only as a scope of effect.

- In the sphere of public political communication, the focus of the traditional paradigm is on *mass media communication*. Other forms of public political communication, such as public meetings in the form of party or parliamentary sessions, garner much less notice (Neidhardt, 1994).
- Traditional research follows the relevance criteria of mass media, as it focuses on *specific situational contexts* of political communication with a *high news value*, such as elections (Strömbäck & Kiousis, 2014), referendums (de Vreese & Schuck, 2014), conflicts, scandals, coups, international crises, and wars (Robinson, 2014). Other situational contexts—especially the political communication of *normal* situations—are less investigated (Blumler & McQuail, 2001).
- Traditional research focuses on the context of *liberal democratic political systems* (Ferree, Gamson, Gerhards, & Rucht, 2002). Other political systems, such as authoritarian and totalitarian systems, fade into the background (Moy, Bimber, Rojecki, Xenos, & Iyengar, 2012).
- Lastly, traditional research primarily takes the *political context* into account; little note is made of other contexts of political communication, such as the socio-cultural context (social change), the economic context (liberalization), and the scientific and technical contexts (scientification).

Long before the spread of the Internet, this narrowing of context has certainly been identified as a problem in research literature. Other contextual factors besides politics have been taken into account on various occasions (Norris, 2000; Schulz, 2014). The fixation on both liberal-democratic systems (Moy et al., 2012) and election campaigns (Nimmo & Swanson, 1990) have been criticized. Finally, this focus on *public* political communication has certainly not happened unanimously. For example, the importance of private and semi-public communication for media effects has been highlighted by Lazarsfeld in the *Two-Step Flow* (Lazarsfeld, Berelson, & Gaudet, 1944). Also, *social network research* highlights other forms of communication (Huckfeldt & Sprague, 1995; Katz & Lazarsfeld, 1955).

At the moment, the attention funnel and, in particular, the sphere model have proved inadequate in dealing with the increasingly diverse political communication relationships. There are a growing number of anomalies, that is, phenomena that cannot be explained or even perceived in the context of the traditional paradigm. This is especially evident since the practices of political communication lead to an erosion of the strict separation of spheres. Private, semi-public, public, and governmental political communication blend into one another, especially in the routine use of online media (see Chapter 9).

Social Dimension: Mass Communication as the Dominant Actor Constellation

How has research analyzed who communicates with whom politically? The question revolves primarily around which *actor constellation* research has focused on. Actor constellations should be understood as relationships that are stabilized through role requirements. Two variables affect the actor constellation:

- What *types of actors* communicate politically? In the traditional paradigm, there are mainly three types: (1) politicians in established political organizations that concentrate their activity in the public sphere, that is, intermediaries such as political parties, associations, and electoral candidates; (2) professional journalists in media organizations, in particular news agencies and television stations, press publishers; (3) and groups of citizens, that is, groups of individuals involved in political roles.
- In what *constellation* are these actors found? In the traditional paradigm, the actors are connected to each other in a relationship of political mass communication. They each take on a rigidly defined role: some politicians act as a source; a few journalists act as communicators; and a large number of citizens act as recipients (Nielsen, 2014, p. 11).

Other characteristics of the two variables recede into the background for the traditional paradigm and remain blurred. For example, other types of actors play a subordinate role: government bodies, private sector organizations that only communicate politically sporadically (such as companies), or disorganized groups of people (such as crowds), individuals in roles other than their civic role (such as consumers), households, and computers and computer networks. Similarly, other constellations play a minor role in research. These constellations are based on other modes of communication, such as interpersonal political communication ("one-to-one") or political group communication ("few-to-few") (Livingston, 2004). In these communication modes, actors switch their communicative roles. During a conversation, a participant may take on the role of speaker, listener, and observer until another takes over. The switching of roles happens quickly and often. By focusing on the role distribution of mass communication, it can be overlooked that the actors are able to take other communicative roles. Thus, citizens are not only recipients, but also sources and intermediaries; political organizations can be intermediaries or recipients; and political organizations and citizens can communicate directly and bypass the mainstream media completely (see Chapter 4).

Long before the spread of the Internet, narrowing down political communication on mass communication has been identified as a problem in the research literature: Blumler and Kavanagh (1999), for example,

recognized early on that traditional actor constellations were at risk due to the emergence of new, populist actors. Also, the increasing implementation of direct democratic elements in political systems brings relevance to other actor types and modes of communication (de Vreese & Schuck, 2014).

In the online world, the focus on mass communication is becoming increasingly problematic because the *pluralization* of actors, the *flexibilization* of role requirements, and the *hybridization* of modes of communication have all increased significantly (Castells, 1996). Previously sharply distinct communication modes are now being combined in common communication practices (Boomgaarden, 2014; de Vreese & Möller, 2014). This is being driven by the technical possibilities of online media (Schoder, Sick, Putzke, & Kaplan, 2006), but also by the extension of civic participation repertoires (Klingler, 2014). These developments cannot be adequately examined by researchers who stick to the traditional paradigm. Understanding these new actor constellations requires new perspectives (see Chapter 2).

Content Dimension: Public Interest as the Dominant Theme Preference

How has research analyzed what is being communicated politically? Specifically, what *topic preferences* have been exposed as being decisive for political communication? Topic preferences should be understood as criteria according to which facts for political communication are selected and thus raised as an issue, such as immigration or terrorism.

The traditional paradigm highlights themes that are of *public interest* and the object of *public debate*, carrying controversy and positions of values (e.g. Delli Carpini, 2004; McQuail, 2010, p. 165). What seems to be the subject of public interest is strongly filtered by the media through *news factors* that act as content selectors for media (Galtung & Ruge, 1965; Schulz, 1982).

Other possible content plays a subordinate role in research; namely issues of secret communication, assigned to the arcane sphere of the State; or issues of particular interest to companies, associations or other private actors. Also, visual messages are pushed to the edge of research by the text emphasis of political communication research (Schill, 2012). Lastly, media content with a focus on entertainment with political substance is overlooked by mainstream research.

Before the spread of the Internet, the restriction on issues of public interest has barely been identified as a problem in political communication research. On the contrary, the media are criticized because personalization (Van Aelst, Shaefer, & Stanyer, 2012) and tabloidization (Esser, 1999) keep them from accomplishing their task, namely to identify issues of public interest for the political opinion-forming process of the population (Zelizer, 2009).

At present, the focus on issues of public interest is increasingly creating problems. In an online world, less and less can be explained and predicted through this focus. Whether a political message is discussed and disseminated, depends on many factors, such as the excitement potential and humor of the content (Becker & Waisanen, 2013), or properties of the groups involved in communication. Generally, differentiation prevails: The selection of topics for political communication is detached from the common public interest and is based on group-specific criteria for salience (see Chapters 4, 5, and 6). In the traditional paradigm, it is difficult to take these tendencies into account.

Temporal Dimension: Synchronous Reception as the Dominant Pace Setter

How has research analyzed when politically communication occurs? Specifically, what *pace setters* are exposed by research as being decisive for political communication? Pace setters should be understood as those factors that influence the temporal structure of political communication processes.

In the traditional paradigm, the synchronous reception of political media content is the key to the communication process. All other stages of the process (production, distribution, and effect) are arranged around this. Thus far, research has been based on the idea of a linear communication process. Broadcast media should be broadcast and printed matter should appear in accordance with a fixed schedule. That way, synchronous reception is possible. This is how *the public* is defined (Bühl, 1982, p. 291). This simultaneous reception is a prerequisite for citizens' opinions on current issues and allows for the insinuation of a "common reality" through the "feeling of being in the loop" (Luhmann, 1981, p. 319).

Long before the spread of the Internet, linking political effects to synchronous reception was already identified by researchers as a problem. As studies have illustrated, the level of attention to certain issues is not necessarily bound to a synchronous reception of media content (Krause & Gehrau, 2007).

In an online world, this focus is no longer adequate, considering the increasing *individualization* of the reception of political communication. More and more recipients don't use the linear program. This means that synchronicity is decreasing, while the asynchronous element of political communication is on the rise. Since political media content is becoming available to individuals at any time, the basic idea of a *current* discourse in a public sphere is losing its importance (see Chapter 2). Maintaining the traditional paradigm would make the decline in synchronous reception appear exclusively as a threat. That is because individualization is seen a threat for social solidarity and for the formation of political opinions. In the traditional paradigm, chances of asynchronous reception are not considered.

Spatial Dimension: Nation-State as the Dominant Space

How has research analyzed where political communication takes place? Specifically, what *communication spaces* are identified by research as being decisive for political communication? The communication space should be understood as a territory whose limits are marked by media, such as the distribution areas of different types of newspapers or television programs.

The answer in the traditional paradigm is that the space of political communication is primarily determined by *national borders*. It focuses on the national space, which is covered by the media systems of the respective countries. Media systems are shaped by regulation in the form of national legislation. Similarly, there is a methodological focus on the nation-state. The selection of media for content analysis and of recipients for survey research is based on national boundaries of communication (Moy, Mazzoleni, & Rojas, 2012). Last but not least, the theoretical approaches of political communication research are marked by spatial reference. For example, research on polarization is very strongly dependent on the political and media systems of the country being examined (Rojas et al., 2012). In the United States, with its strict separation of powers, two-party system, and a media system dominated by private companies, this polarization is much stronger than it is, for example, in Germany, with its parliamentary system, a large number of parties, and an influential public broadcasting service. Besides, the close relation between researchers and their countries of origin makes it difficult to exchange and compare findings, methods, and theories (Moy et al., 2012; Rojas et al., 2012).

Other spaces for communication, for example local, regional, supranational, or global communication, are analytically pushed into the background. Also the comparison of national spaces with each other or with other spaces is unusual (Hanitzsch & Esser, 2012). And other limitations, such as cultural segmentation (by language boundaries) or market segmentation (by economic tiers), play a minor role compared to national borders.

In the online world, the focus on the nation-state is increasingly problematic. The diagnosis of a world society networked through the Internet is not compatible with clinging to national frontiers in political communication research (Castells, 1996). Communication spaces have recently expanded enormously through economic processes (*globalization*) and are increasingly interwoven (*glocalization*, see Robertson, 2012). The communication habits of media users have become global thanks to the possibilities of online media, in particular social network sites (see Chapter 3).

Technical Dimension: Broadcasting Technology as the Dominant Communications Technology

How has research analyzed the technological means of political communication? The variable in this dimension is *communications technology*. This includes the procedures and artifacts that enable political

communication. This question plays a subordinate role compared to other dimensions and issues in the traditional paradigm. But it has gained in importance, since both political communication itself and research in the fields of media technology, sociology of technology, and computer science have developed at a very fast pace. The technical variable now plays a role of its own, since its momentum for bringing about changes in other dimensions has been recognized (Barber, 2001; Perloff, 2014, pp. 38–41; Schulz, 2014). Thus, greater importance is attached to the evolution of media, and specifically to the rise and fall of leading media.

In the traditional paradigm, *broadcasting technology* is in the foreground, in particular the technology for production, distribution, and reception of television signals. This is reflected in many phrases used at the time: "second age of political communication" (Blumler & Kavanagh, 1999), "television age" (Norris, 2000), or "broadcast era" (Prior, 2007).

Other communication techniques move to the background. These are mainly telecommunications and computer technologies. Although newspapers and magazines are still given a strong position in the media landscape, printing technology itself has not been a topic of research, because technical changes in the printing process had no fundamental impact on the product.

Before the spread of the Internet, the focus on broadcasting was identified as a problem during the first convergence bursts, for example, with regard to the feedback channel in cable television (Katz, 2005; Negrine, 2008).

Now, in an online world, we are experiencing rapid *digitization of political communication*. The previously strictly separate areas of technology, broadcasting, telecommunications, and computer technology are converging to form new technical complexes (Storsul & Fagerjord, 2008). Thus, computer networks have become the leading media technology. This new media environment offers enormous potential both for political communication (and its actors; see Chapter 8) and for investigating political communication. The keywords are *individualization* of communicated content, *integration* of types of signs, unlimited *distribution* and *storage*, and *reproduction* without loss of quality. The traditional paradigm does not adequately provide for this. Digitization has opened up room for maneuver that was previously primarily used by communication practitioners and less by communication scholars. This is also due to the fact that the view on online media in research has become more skeptical. Threats from the convergence of media, for example with regard to data protection, are perceived as being stronger, while opportunities seem weaker (Chadwick, 2013; see Chapter 7).

Causal Dimension: Normatively Assessed Changes on the Micro Level as the Dominant Effect

What effects has research attributed to political communication? Three fundamental perspectives have emerged for the nature of the effects: an *individual* perspective (changes at the micro level), an *organizational*

perspective (changes on the meso level), and a *societal* perspective (changes at the macro level). It is also relevant how these changes relate to one another (macro-micro link) and which norms are used to assess the changes (Rogers, 2004, p. 15).

The traditional paradigm of political communication research uses an individual perspective, and therefore focuses on *changes at the micro level*, specifically on changes in the perceptions, attitudes, and behaviors of individuals (McLeod, Kosicki, & McLeod, 2009; Moy et al., 2012). This is the starting point for explanations. The focus of research is aimed at individuals and analyzes the extent to which individuals change through political communication, in terms of cognitive, affective, and conative effects. This is most evident in the core questions on media effects, for example whether television influences elections (e.g., Glaser, 1965). Usually an intentional moment is decisive: Many effects are regarded as intentional. This impact assessment is also normative (e.g., Møberg Torp, 2015). A large part of research judges effects of political communication by looking at their potential to stabilize the liberal-democratic system (e.g., Kepplinger, 2014). The media should fulfill a *public function* (Althaus, 2012; McQuail, 2010, p. 145). Political communication is to contribute to the consolidation and development of a basic liberal democratic order, in terms of cognitions (knowledge about political facts), attitudes (identification with the democratic system), and behaviors (voting and participation). Thus, political communication as a whole is meant to strengthen the legitimacy of the political system. Media and political communications are linked in this way to the common welfare (Bucy & D'Angelo, 2004; McLeod, 2001).

Other types of effects and other norms recede into the background. This is the case, for example, for effects on the meso and macro levels. For example, the extent, to which political communication leads to social integration or disintegration or—from another perspective—to plurality or conformity (McQuail, 2010, p. 91), does not play a role in mainstream political communication research. And other possible assessment factors for the effects—like deliberateness (e.g., Gastil, 2008) or efficiency (e.g., Fröhlich & Rüdiger, 2006)—are subordinate to those value-rational norms.

In the research literature, the normative orientation of the traditional paradigm has been identified as a problem in many cases, for example in more psychological research on the effects of political communication (Wirth & Matthes, 2006). This research direction separates *what is* and *what ought to be* more sharply and tries to avoid normative coloring. In addition, it has been criticized (McLeod, 2001) that political communication research at least implicitly asks media outlets to educate the recipients to become emancipated citizens. Some argue that this is a task for other institutions of socialization. In addition, the debate on fragmentation in and through the media has sharpened

views on the effects of political communication on the macro level (Mancini, 2013).

It is necessary to integrate micro, meso, and macro levels of effects. This can be done by mutual linking of the different levels to *new explanatory models*. Otherwise, dense descriptions and coherent explanations are not possible any more (see Chapter 10).

Conclusion: Where Do We Want to Go?

In summary, political communication in the traditional paradigm is seen as

- public mass communication
- between politicians in established political organizations, journalists in mass media, and politically open-minded citizens
- on topics of public interest
- with a synchronous reception
- of television signals
- in the context of the liberal-democratic nation-state and
- with normatively justified effects for individual political perceptions, attitudes, and behaviors.

These are the main characteristics of the traditional paradigm. It has facilitated significant research achievements, and still shapes today's research.

However, the shortcomings of the traditional paradigm are becoming apparent. It is increasingly clear that changes of political communication can be explained less and less via the structures postulated by the traditional paradigm: the dissolution of the boundaries between communication spheres, pluralization of communication actors, differentiation of communication contents, temporal individualization of reception, globalization of communication spaces, digitization of communication technology, and integration of effects levels in political communication.

Some of these changes are induced by the Internet; they would not occur without it. Some of these changes are only reinforced by the Internet; they would still have occurred without it at a later stage or to a lesser extent. And some other changes are independent of the Internet; they would happen even without it.

Either way, the traditional paradigm is increasingly unable to meet the challenges of a world of changing political communications. It remains to be seen what will happen when the trends mentioned above are taken into account to a greater extent. The more these tendencies of change are examined by communication research, the stronger the outlines of a new paradigm can be seen. Political communication will then be seen much more differentiated in all seven dimensions: contextual, social, content, temporal, spatial, technical, and causal. The majority of communication

scholars still stick to the traditional paradigm because they were social-
ized in it. But new cohorts of scholars are separating themselves from the
traditional paradigm. This creates a space for new perspectives. Will a
new consistent paradigm of political communication research emerge or
will a plurality of paradigms prevail?

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2 A New Agenda for Agenda-Setting Research in the Digital Era

Gabriel Weimann and Hans-Bernd Brosius

Introduction

In the second edition of *Setting the Agenda*, McCombs (2014, pp. 17–18) notes: "With the vast expansion of communication channels in recent decades, particularly the continuing proliferation of Internet sites and personalized social media, we have entered a new era of agenda-setting research that is seeking answers." He goes on to suggest three key questions that may determine the future of agenda-setting research:

1. Do online channels of communication have agenda-setting effects among the public?
2. Has this proliferation of new channels diminished the agenda-setting impact of the traditional media?
3. To what extent are there specific channel effects vs. the collective impact of a communication gestalt?

The theory's core proposition is that the salience of elements on the news agenda influences, in turn, their salience on the public agenda. The agenda-setting effect has been documented in hundreds of studies on a diversity of issues, using a range of research methods under a wide variety of circumstances. Several basic assumptions underlie the classical research on agenda-setting:

(1) The media highlight several issues and by doing so, shape the audiences' agenda or priority of issues.
(2) There is a cause-and-effect relationship between media agenda and public agenda.
(3) The public looks at news media for cues to know what is important (and what is not).
(4) Because of restricted time and space, the mass media have to select news items and by doing so, they do not reflect reality but rather filter and shape it.

(5) A key role is played by the media gatekeepers who determine media agenda.
(6) Different media have different agenda-setting potential.

Since the initial study of McCombs and Shaw (1972), the concept has become more refined and complex (Weaver, 2007). In addition to intervening factors such as individual characteristics, the political agenda, type of issue, the media involved, time lag between media and public agendas, and first and second levels, the agenda-setting paradigm is now challenged by a rapidly changing media environment.

The New Media Environment

With the rising popularity of the Internet and online social media, people have become more independent from traditional (offline) news media. Television, radio, and print media's role in conveying news is declining in favor of online/mobile media, and the Internet now constitutes the main source of news for a majority of Americans who are under 50 (Pew Research, 2011a, 2011b). With more than 1.3 million active users sharing over 25 billion web articles each month (Facebook, 2010), the relationship between social media and news consumption must now be considered as a fundamental part of our media environment. While the news media have moved onto the Internet, and their news are now available on different online platforms, the audiences, due to technological capabilities, can now create their own news stories and share them online. Subsequently, even the traditional media are integrating online platforms, posting links, promoting online versions of their contents, and citing online sources including bloggers and other social media. Yet, the new media and "old" media are often a chorus singing together, and as several studies have revealed, the major traditional media still are the dominant voices (e.g., Tan & Weaver, 2013).

The emergence of new online platforms has changed the media environment dramatically and thus has challenged the basic assumptions of the agenda-setting theory. In 2005, McCombs acknowledged that "Now, the Internet is the new frontier for research" (McCombs, 2005, p. 544). Chaffee and Metzger (2001) argued that "new technologies may give more power to people whose agendas would not normally be reported in the major mass media," and "[t]he key problem for agenda-setting theory will change from 'what issues the media tell people to think about' to 'what issues people tell the media they want to think about.'"

New Agenda for Agenda-Setting Research

We may expect reduced agenda-setting effects due to an increase in content choice, outlets, and sources available to news consumers, more

control of the contents by the consumers, and more blurred lines between content producers and content consumers. However, we may also expect some stronger agenda-setting effects since much of the social media contents and blogs, in particular, rely on coverage in the traditional media. If new media follow the cues of traditional media, then the agenda-setting power has not diminished, but has been transferred to other channels as well. Thus, traditional media could set the agenda of blogs, social networking sites, video-sharing sites, and others, which then deliver those cues to the general public in a modern version of the two-step flow. Moreover, social media may influence media agenda, thus creating the "reverse flow of agenda." Particularly due to the speed with which many social media outlets such as YouTube, Facebook, and Twitter function, they may actually have the ability to influence the agenda of traditional news outlets.

What Is Now the Media Agenda?

According to Sayre, Bode, Shah, Wilcox, and Shah (2010), traditional news sources like newspapers, television, or radio, while still important, are giving way to emerging online platforms for conveying coverage of issues and providing perspective on social controversies. Traditional media companies are also adapting some of these new online platforms and social media. Three-quarters of news consumers online said they receive news through e-mail or social network sites, and more than half use those means to share links to news (Purcell, Rainie, Mitchell, Rosenstiel, & Olmstead, 2010). These developments have created three major media formats: traditional offline, traditional online, and online social networks.

According to Weimann, Weiss-Blatt, Mengistu, Mazor, and Oren (2014), blogs are less likely to act as the originators of news in first-level agenda-setting, but instead exert influence through second-level agenda-setting. For example, blogs can act as "resuscitators" by following up on stories that the mainstream media have either failed to follow up on or have considered a low priority, thereby giving them new impetus to reemerge on the mainstream news agenda. Blogs can also act as "reframers" by challenging the mainstream media's framing of the news. Wojcieszak (2008) suggested a strengthened first-level agenda-setting as a result of Internet users turning to major media conglomerates, as well as the focus of some online and offline sources on similar topics. However a weakened second-level agenda-setting may be attributed to the diversity of the sources online describing the same issue in a different way. The interplay between old media and social media, blogs, and online news sites is becoming a genre in itself (Hennessy & Martin, 2006).

Who Sets the Media Agenda Now?

The agendas of online and offline media were found to be correlated. Intermedia agenda-setting has been studied across various media systems and platforms (McCombs, 2004). Yet, one of the most confusing results in the arena of intermedia agenda-setting is the homogenization of the agenda being presented despite the media diversification: Contrary to increasing number of sources and actors influencing media and public agendas, these developments have actually been linked to increased homogenization of both media and public agendas, rather than diversifying them (Boczkowski & de Santos, 2007; Groshek, 2008).

Several studies explored the online–offline intermedia flow, revealing how the various types of media platforms influence each other's agenda. For example, Twitter has changed the process of newsgathering and item selection among journalists. Many media outlets encourage their staffs to open Twitter accounts, using them to interact online with their public, to collect and promote stories (Gleason, 2010). Indeed, Twitter gives journalists new crowdsourcing capabilities and access to real-time information from a wide range of sources. The asynchronous, free, fast, easily accessed, and always-on nature of Twitter gives it an 'ambient' quality that offers "more complex ways of understanding and reporting on the subtleties of public communication" (Hermida, 2010, p. 1). The flow from Twitter to the media agenda has been revealed in several studies (Parmelee, 2014).

The notion of intermedia spillover was already noted in the "old" media environment (e.g., Mathes & Pfetsch, 1991). Recently, agenda-setting research has begun to examine the spillover of online, user-generated content into the agendas of professional, traditionally offline media. In one example, Meraz (2011) employed time-series analysis that revealed that weblogs contributed to setting the agendas of traditional elite media. Wu, Atkin, Mou, Lin, and Lau (2013) investigated the influence of micro-blogs on the major agenda-setting media in China in the immediate aftermath of a catastrophic railway accident. Their results suggest that "alternative online media played a decisive role in setting mainstream media agendas and providing a citizen forum on a sensitive issue that their conventional counterparts downplayed, ignored, or missed altogether" (Wu et al., 2013, p. 8).

But the flow is not one-directional; the new media and traditional media are influencing each other in an interactive way. In a study of 35 issues during the 2004 presidential campaign, Wallsten (2007, p. 580) found that "on the vast majority of issues, there was a complex, bidirectional relationship between media coverage and blog discussion rather than a unidirectional media or blog agenda setting effect." Similarly, Messner and Distaso (2008) examined the content of weblogs and their

use as sources in the traditional media. Their content analysis of 2059 articles over a six-year period from the *New York Times* and the *Washington Post* found that the newspapers increasingly legitimized online blogs as useable and credible sources, while a separate content analysis of 120 weblogs found that they heavily relied on the traditional media as sources. Thus, the traditional media and social media create what is referred to as "news source cycle" in which news are passed back and forth from media to media (see also Chapter 3).

Dynamic Agenda-Setting

As social media prosper, the sources through which we receive news, information, and opinion continue to evolve. At the intersection of new communication technologies and flow of agendas is the shift toward a more dynamic user-producer media environment (Papacharissi, 2009). The rise of the "produser" (Bruns, 2009),

> has altered conceptions of where media agendas begin and end in relation to the public agenda. Considering the vast array of options for online media consumers to engage, share, and create with varying levels of commitment and intensity, it is clear that agenda-setting processes can now regularly intersect and cross amateur and professional boundaries.
>
> (Groshek & Groshek, 2013, p. 17)

Moreover, the technological transformation has not only made it possible for audiences, but also editors and journalists, to easily and rapidly monitor the output of other media, including personal chatter on online platforms.

The dynamic nature of the current agenda-setting process may also be explained by the reduced impact of traditional gatekeepers. Unlike traditional media outlets that must rely on routine processing procedure in their effort to produce reliable, credible, and accurate reporting, independent bloggers are bound by no such codes (Meraz, 2009, p. 705). Today, many scholars question whether gatekeeping can be a relevant concept in the decentralized, new media environment where media abundance negates the role of a central news gatekeeper (Bennett, 2004; Kovach & Rosensteil, 2007; see also Chapter 4). Bruns (2005, 2009) suggested re-conceptualizing gatekeeping as "gate watching" to account for the increased power of the decentralized "produsers."

The dynamic nature of current flow of agendas is also fueled by the "hybrid media system" (Chadwick, 2013). He argues that the political process is increasingly defined by organizations, groups, and individuals who blend older and newer media in this hybrid media system. Accordingly, we have to move beyond treating the flow of agendas in traditional

and new media as inherently different and start treating them as interconnected and mutually dependent. Jungherr (2014) found that Twitter messages commenting on political parties followed different dynamics from the coverage of the same actors in traditional media. This is what he termed as "Twitter's logic of political coverage." His results clearly support Chadwick's hybrid media system, showing how new and traditional media and new media interact.

Another dynamic pattern in the new media era is the emerging relationship between the aggregate search patterns of Internet users and media coverage trends. There is empirical evidence for agenda-setting effects of media coverage on online information-seeking behavior (Hester & Gibson, 2007; Scharkow & Vogelgesang, 2011), but also for the reverse direction: News organizations often monitor and react to online search trends (Dick, 2011; Peters, 2010a, 2010b), which leads to "reverse agenda-setting." Ragas, Tran, and Martin (2014) explored the over-time relationship between US news media attention and aggregate search of the online public during the Gulf of Mexico oil spill in 2010. The results provided strong evidence of an interactive two-way effect in the transfer of salience between the media and search agendas.

Agenda-Setting or Agenda Diffusion?

The traditional conceptualization suggested that agenda-setting requires a given amount of time for the media agenda to be absorbed into the public agenda. But in a world increasingly dominated by the fast new media, the essential time lag needed for "setting" may not exist or may be too short to be measured. For the offline world, McCombs (2004) set the range of four to eight weeks for agenda-setting to take effect. The decay of agenda-setting impact is believed to be between eight and 26 weeks (Tran, 2014). However, Roberts, Wanta, and Dzwo (2002) compared online media salience (mainstream news sites) and online public salience (bulletin board discussions) and found immediate effects after just one day. The agenda-setting impact also decayed rather rapidly, after only two or three days. The immediacy and speed of online communication have shortened the time span: Online information is processed and exchanged constantly in a 24-hour cycle, often in real time. Several studies revealed relatively shorter time lags for online agenda-setting effects (e.g., Hester & Gibson, 2007). Some reported that the flow of salience online may take place within the same day (e.g., Weeks & Southwell, 2010). This is where the notion of *agenda diffusion* may appear to be more appropriate.

The notion of diffusion relies more on interactive communication, social networks, multi-step flow of communication, sharing, and promoting agendas. According to Kim and Lee (2006), agenda diffusion in the Internet is based on the following process: Online news or websites

report the important agenda in the Internet that in turn leads to spreading the agenda to more online publics. However, scholars concluded that the Internet-mediated agenda-setting or agenda building processes not always occur in consecutive order and may involve more forms of diffusion and sharing. Indeed, sharing is the most important element in social media. Social media platforms or any kind of wikis (for example, Wikipedia) or video sharing sites are especially designed—technically and ideologically—for users to share contents. This sharing is related also to the agenda-setting paradigm. Today, journalists cannot ignore the fact that the most important news on the web is the one that people are searching for. Thus, various media are trying to "move" their contents to "places" on the web where people are talking, sharing, exchanging and promoting items and opinions: the social media. At the same time, this fact is creating a shared agenda of news that can no longer be separated into a media and a public agenda, a really new (and maybe alternative) agenda-setting paradigm.

The online platforms allow for a variety of diffusion techniques. In their online postings, people present links to news articles, blogs, photos, and videos, indicating they find them interesting or important enough to share with others. On Twitter, markers of interest include a reply and a retweet. Retweeting allows users to redistribute another's message to their own personal network. More than half of American Twitter users retweet contents tweeted by others (Smith & Rainie, 2010). These retweeted messages reach vast audiences, as found in a study of 106 million tweets, revealing that each retweet reached an average of 1,000 users (Kwak, Lee, Park, & Moon, 2010). Similarly, on YouTube, one can promote the viewing and downloading of a posted video by several measures, including increasing the number of views, responding to the video or sharing it with others.

The diffusion of agendas relies on active audience members using interpersonal communication in and around social media. Thus, a new agenda-setting approach does not rely on the distinction between media (disseminators) and audiences (receivers), but rather the notion that the main effect of communication is communication. According to studies on diffusion of media information, the mass media often inform only a subset of the public, and these people then talk to others about issues they have learned about in the mass media, thus creating a two-step flow of mass communication (Katz & Lazarsfeld, 1955). In the context of agenda-setting, Brosius and Weimann (1996) argued "very little attention has been paid to the flow from the public to the media and within the public, although several studies provide empirical evidence of the public's ability to affect the media agenda" (p. 562). They went on to say that there are "several encouraging indications of the significant role of interpersonal communication in the agenda-setting process" (p. 562). Weimann and Brosius suggested a development in this context by defining

the role of opinion leaders as "personal mediators between media and personal agendas" (Weimann & Brosius, 1994, p. 325) that "collect, diffuse, filter, and promote the flow of information" (Brosius & Weimann, 1996, p. 564). Combining the classical two-step flow theory with the agenda-setting, they suggested different models highlighting the interplay of opinion leaders or "early recognizers," mass media, and the public.

Branum (2001) noted that Brosius and Weimann's (1996) description of early recognizers also applies to the actions of the filter-style bloggers who choose which stories to provide a link for and what comments to make about the stories. Tomaszeski (2006) suggested that bloggers are being sourced by the traditional media outlets, who are taking original content from them and incorporating it into their own messages to the public. The bloggers' input to traditional media places them in the role of mediators between the public agenda and the media agenda. In addition, bloggers' higher visibility to the general public places them in the role of early recognizers whose information flows to the public.

Individual Differences

There are two dimensions of the role played by individuals in the agenda-setting process: that of the actors as creators of the (old and new) media agendas and that of the receivers. Let us examine each of them. There are many types of actors involved in the agenda-setting process, ranging from journalists and editors to political figures, lobbyists, and active bloggers. The traditional agenda-setting paradigm highlighted the role of journalists and editors who operate as the gatekeepers for politically relevant information. However, as Williams and Delli Carpini (2004, p. 1208) argue, "the most profound impact of the new media environment may be the way it undermines the ability of any elite to play this central role." Online communication also opens up new opportunities for "challengers" such as civil society actors and activists who do not necessarily fit the professional standards and rules of media selection (Pfetsch & Adam, 2011). In some instances, online activists and political bloggers are motivated to push an issue into the mainstream media. Schiffer (2006) focused on the "blogswarm" agenda-setting, which refers to the ability of the blogosphere to force mainstream media coverage of ignored issues. Traditional media followed liberal bloggers pressing an issue more often than conservative bloggers. There are numerous studies that focus on the role of individual actors in blogs or social networks whose activity trigger spillovers into traditional media (Pfetsch & Adam, 2011; Chapter 3). Examining blog influence on media reports, scholars have found evidence of traditional mass media's dependence on top, political bloggers (e.g., Farrell & Drezner, 2008; Meraz, 2009).

The other individual dimension refers to differences between recipients. One key distinction in studying agenda-setting effect is that between

aggregate-level and individual-level effects. In recent years, the new media environment has sparked controversy regarding the agenda-setting effect. Bennett and Iyengar (2008, p. 708), for example, argued that

> with the continued detachment of individuals from the group-based society, and the increased capacity of consumers to choose from a multitude of media channels, effects become increasingly difficult to produce or measure in the aggregate while creating new challenges for theory and research.

While the mass media may have lost their agenda-setting impact on the aggregate level, they might still have it on the individual level or the new media have their agenda-setting influence on certain individuals. Based on the possibility that the availability of alternative news sources online reduces audiences' dependency on the traditional news media as a source of political and current affairs information, Shehata and Strömbäck (2013) tested the hypothesis that regular use of online news would weaken individual susceptibility to agenda-setting effects from traditional news media. The results largely supported the hypothesis: Individuals who use more than two online news sources regularly are less affected by the traditional news media. Thus, individuals who take advantage of their rich media environment are less dependent on cues from the traditional news media when forming their personal agenda (Metzger, 2009).

There are also individual differences among the "receivers" revealed by experimental studies. Althaus and Tewksbury (2002), for example, used an experimental study to explore whether readers of the print and online versions of the *New York Times* would think differently about the importance of political issues. According to the results, the structure of online news provides individuals greater control over exposure, thereby leading online readers to select and focus on certain items and issues, thus developing different perceptions of issues' importance than those developed by print readers. Another experimental study revealing individual-level agenda-setting compared the agenda-setting effects of online and television news (Conway & Patterson, 2008). The influence of Internet news on users proved to be weaker than the impact of television news on viewers.

If new media are so powerful in weakening agenda-setting processes, we would expect different agenda-setting effects across ages, since younger people are more reliant on newer communication platforms and social media. The findings by Lee and Coleman (2014) show that public agenda is fairly stable across generations and age cohorts despite increasing signs of media diversification and audience specialization. Coleman and McCombs (2007) also looked for age differences in agenda-setting effects due to differential media use: The differential media use of age groups did not eliminate the agenda-setting influence.

Reevaluating the Agenda-Setting Assumptions

Existing research is calling for a reevaluation of the assumptions of the agenda-setting theory in light of the new media environment. We may not currently have the full answers to these questions. However, due to accumulating research and findings, we certainly know more. The review of the new developments presented above allows for more than just speculations: It provides directions. So let us review the state of those "early" assumptions we described in the beginning of this chapter in light of the new trends and research findings.

(1) The media highlight several issues and by doing so, shape the audiences' agenda or priority of issues.

New developments and findings certainly provide a more complex assessment of this assumption. On the one hand, there are now more media outlets available including the rich variety of online sources. This may strengthen the media's impact in many ways including agenda-setting since more media are reaching their (specific) audiences. On the other hand, the new media environment is more diversified, presenting more agendas and thus reducing the potential impact of the traditional media. And yet, as our review reveals, there is a strong empirical evidence of the basic agenda flow: either directly ("traditional" media maintaining their status as major news outlets) or indirectly when new media platforms are in fact diffusing and thus promoting the issues presented by the mass media. Thus, bloggers or produsers may compete with the mass media's agendas, but very often they cite, share, promote, and diffuse these agendas. Moreover, there are numerous ways by which the conventional media are using online platforms to further present their news and issues. Thus, for example, Shehata and Strömbäck's study (2013) found that traditional news media still exert agenda-setting influence on both the aggregate and individual levels, but that these effects are weakened by use of multiple online news media.

(2) There is a cause-and-effect relationship between media agenda and public agenda.

There is still evidence of direct media effect on public agenda, but the causal, one-way relationship should be replaced by a more multifaceted and multidirectional flow. As our review reveals, several studies have documented the reverse effect when social media are influencing mass media agendas. According to Tran (2014, pp. 27–28),

> [m]ainstream mass media entities still exert their agenda-setting power, but they are no longer a sole force. Nontraditional platforms

such as political blogs, partisan and alternative online media political websites, and social media become fire starters or shapers of media agendas in subtle ways. These external media forces may even bypass mainstream media to target and influence public opinion.

Moreover, it is not a two-way street, but in fact a multilane highway when audiences are exposed to a multitude of sources, including online and offline media and/or online and offline personal communication. Thus, instead of media agenda shaping public agenda, we often see more of "agenda blending" from various sources. The cause and effect assumption is no longer valid under these circumstances of parallel agendas, short or no time lags, and reverse processes. As noted, the dynamic model is much more relevant now, integrating the notion of a "hybrid media system" into agenda-setting theory.

(3) The public looks at news media for cues to know what is important (and what is not).

Indeed, the public seeks cues for important events and developments in the news media, and this tendency is more manifested during crisis periods and key political events. Yet the new media environment provides a richer variety of sources for such cues, including online sharing platforms, lists of the "most popular" articles (MPAs) and more. Thorson's study (2008) reveals that MPAs list is not just a mirror of the day's top issues as rated by journalists, but rather, it provides the audience with a useful navigational tool for news selection. The emergence and development of user-friendly, rapid, and low-cost online content search and management tools have helped facilitate a rapid growth in the number and popularity of independently published websites, blogs, and social media that take some of the functions fulfilled by the mainstream news media. Thus, cues do come from a more complex mixture of sources, including the traditional media. Nevertheless, online news does not simply follow the lead of traditional news. News sites offer a news mix with a wider range of issues. We are moving toward a mixed news media of citizen and professional journalism across many media platforms.

(4) The mass media do not reflect reality; they filter and shape it.

Regardless of the medium, platform, or communication technology, there is always a mediated reconstructed reality (see, Weimann, 2000). Old and new media provide a selective presentation of the events, their importance and implications. The fact that there are more "mirrors" available only enhances the reconstruction potential of mass-mediated "realities" and agendas. As reviewed above, several studies highlighted, contrary to

increasing number of sources and actors, that these developments have actually been linked to increasing the homogenization of both media and public agendas, rather than diversifying them. Thus, more mirrors that reflect the same "reality" only reinforce the impact of homogenized agendas. The new media may even further promote these selective presentations by the "filter bubble" phenomenon (Pariser, 2011). A "filter bubble" is the result of the wide use of websites' algorithm that selectively guesses what information a user would like to see based on information about the user (such as location, past click record, and search history). As a result, users become a more consonant picture of the world and the important issues, which might strengthen agenda-setting effects on the individual, not on the societal level. According to Messing and Westwood (2014), social media provide readers a choice of stories from different sources that come recommended from politically heterogeneous individuals, in a context that emphasizes social value over partisan affiliation. This leads to reduced selectivity. First, because these websites and new applications display content from different news providers in a single location, users no longer need to select a news source; instead they select the story itself. Second, many of the new online sites allow readers to endorse certain items and share them with others, even when they visit a traditional news source online.

(5) A key role is played by the media gatekeepers who determine media agenda.

The need for gatekeepers in the media is clear and stems mainly from the fact that there is a need to make decisions on item selection, allocation of space, time, and resources and decisions on priorities and prominence. The gatekeeping process comprises two stages: (1) selection of items, topics, and issues; and (2) assigned prominence (amount of space or time allocated, placement in the news). In the online environment, news consumers are able to bypass traditional gatekeepers and seek information in meeting their own interests, while ignoring the intermediary processors of news (Lee, 2012). Hence, the function of gatekeeping "has shifted from the decision about what should be produced to control of what materials get to consumers and of what material they become aware" (Hargittai, 2004, p. 5). Many scholars have started to question whether gatekeeping can be a tenable theory in the decentralized, new media. However, this trend does not eliminate entirely the process and role of gatekeeping. Is there a new mode of online gatekeeping? Barzilai-Nahon (2008) proposed a new way of looking at gatekeeping, applied to all information flow including online channels. The updated look at gatekeeping is also relevant to the notion of agenda-setting. There is a need for online journalists, bloggers, produsers, and other online users to employ both stages of agenda-setting (i.e., selection and prominence) but in a different

way. Selection is required if only by the decision to present, post or relate to an issue. But selection is now done not only by professional journalists but by a vast range of produsers and active bloggers. Moreover, the prominence is now more dynamic, continuous, and determined by a wider range of actors. "Agenda diffusion" describes the process of clicking on a news item, sharing an item, forwarding links, commenting on items. As a result, the agenda itself is altered by user behavior, and users and journalists are part of a collective gatekeeping process; the audiences determine the prominence of issues (see Chapter 4).

Based on the interactive nature on the web, news stories online can be selected and emphasized by a new set of methods for filtering and gatekeeping. Online news media present their audience with the MPAs, which are derived from the number of times a news item clicked or e-mailed by other readers in any recent time span. Several studies (Knobloch-Westerwick, Sharma, Hansen, & Alter, 2005; Lee, 2012; Thorson, 2008) have highlighted the importance of user-based recommendations of news online. Particularly, MPA lists make online communication distinct from traditional news flow and bring about a different pattern of gatekeeping.

(6) Different media have different agenda-setting potential.

The new media certainly reconfirm this assumption. With the growing diversity of the media venues and channels and their differential reach ranging from only a few recipients to well over several million visits, the across-medium differences in agenda-setting processes and impact are even more significant. Online news outlets have become more "narrowcasted" to specific audiences, particularistic interests, and tastes while the audiences are more active in selecting, sharing and diffusing the news. The rise of online news outlets and social media is now associated with unique agenda-setting features and forms because of their technological characteristics (Tewksbury & Althaus, 2000). This does not rule out the role of traditional media agendas: very often, we get the emerging news items from the mass media and then conduct our own search for information, opinions, and analysis. Moreover, the distinction between the old vertical and the new horizontal are blurred: Online newspapers have merged search engines into their contents, while online postings by bloggers, produsers, or netizens present headlines and sorted stories.

As revealed by our review, there are new characteristics of the online agenda-setting flow, including intermedia agenda-setting, agenda diffusion rather than setting, reverse flow of agendas, collective gatekeeping, etc. Particularly, traditional features of issue prominence do not work on the web because of the features in which most online media present their articles (Tewksbury & Althaus, 2000). For example, the length of an

article, a central factor of determining items' importance, is not presented on web pages because most online news outlets present headlines, including hyperlinks, in which readers may access the original article page by clicking the hyperlinks.

Conclusion

The answers to McCombs' questions on the fate of agenda-setting in light of the new communication technologies are rather complex. Though the basic claim of the theory is valid today, it certainly requires substantial modifications and adjustments. The accumulating empirical evidence suggests that though the traditional media lost some of their agenda-setting potential, their impact is maintained in the new media environment and even has incorporated some of the flow into online platforms. Yet there are new modes of agenda flow to and from the traditional media, including new directions, new time lags, new intermedia influences, new roles played by individuals, and more. As we suggested, there are five developments highlighted by studies on agenda-setting in the online settings. These trends do not suggest a diminished or reduced agenda-setting impact, but rather provide a very fresh and innovative look at the process and the impact.

The challenge now is mostly methodological: Agenda-setting processes and actors in the new communication technologies require advanced methods and measures. The classical correlational analysis—be it cross-sectional or longitudinal, with or without time lag—between media agenda (mainly measured by content analysis) and public agenda (mainly measured by survey research) is inappropriate for the unfolding of the agenda flow in the multifaceted, multi-directional, rapid, and dynamic environment of the new media. This refers not only to the bigger variety of sources ranging from blog posts, YouTube clips, online political ads, bulletin boards and portals, and online news. We also need more evidence on the link between perceived importance of an issues and readiness to forward, comment, and like a news post. The measurement of public salience of issues in the new media environment provides both additional challenges and opportunities. There are various alternative methods to measure public salience online, using scrapers, search engines, etc. Indicators of public salience might be number of postings in social media, online buzz measures, search traffic density, and more.

Finally, when relating the media and public agendas, time series analysis with fixed time lags is no longer appropriate to analyze the rapid and continuous flow of salience transfer between a complex network of interpersonal channels and media platforms. While several online studies still rely on cross-sectional, aggregate data and simple correlations to account for agenda-setting effects, steps have been taken toward more stringent approaches. These include network analysis, diffusion patterns and "big

data" analyses. In conclusion, "the agenda-setting theory is still spinning today, but it certainly has many more spokes in the wheel."[1] Consequently, the new agenda for agenda-setting research comprises both the theoretical adjustments and refinements of the original paradigm as well as the development of new measures and new data analysis techniques.

Note

1 "Agenda-setting theory: helped or hindered by social media?" *Next Communication*, October 18, 2013, at: http://nextcommunications.blogspot.de/2013/10/agenda-setting-theory-helped-or.html

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3 Old and New Dynamics of Agenda Building in a Hybrid Media System

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Introduction

Public debate in contemporary society has operated on a new basis since the fundamental changes of the media system took place. Social media, blogs, and political websites created new formats of and platforms for communication, and therefore have brought about new communicators such as citizen bloggers and online reporters. Political outsiders and civic actors who previously did not have routine access to traditional mass media, so-called challengers (Kriesi, 2004, p. 196), are now able to reach a broad audience. With new actor groups and venues for influencing the audiences, the terms and conditions of *agenda building* are at stake. Whether and how processes of agenda building are affected by online communication is relevant from a normative point of view. On the one hand, the new conditions of communication encourage civil societies' political participation and yield increased power to citizens and activists. These communicators can build up alternative agendas in niches of civil society, thereby contesting the agenda of traditional mass media. On the other hand, the conditions of digital media may also create a fragmentation of public debate (Habermas, 2006) or even "polarization caused by a multitude of partisan media-shaped agendas [that] can fuel partisan fires" (Perloff, 2014, p. 17).

In this chapter, we focus on the dynamics of agenda building processes from a theoretical point of view and ask whether and how they are changing due to online communication. Following Cobb and Elder (1981) and Manheim (1987), Miller and Riechert (2001, p. 108) define agenda building as "the progression of issues—from public discussion, to media discussion, to policy making." *Political* agenda building in a narrower sense relates to the influence of media and public agendas on issues and the policy priorities of political elites (Rogers & Dearing, 1988, p. 556). The approach concentrates on (a) the definition of problems and political alternatives in the public (Cobb, Ross, & Ross, 1976, p. 138; Cobb & Elder, 1981, p. 400) and (b) the "processes by which groups attempt to move issues from their own agendas to those

of policymakers" (Denham, 2010, p. 308). Since all the steps in agenda building involve pro-active communication, the conditions of the communication infrastructure are critical. Thus, changes in actor constellations and communication channels are supposed to impact upon the very nature of agenda building.

Recent reviews of agenda building research stressed that existing models of agenda building urgently need to integrate Internet-based communication and reassess processes of intermedia agenda setting therein (Denham, 2010, p. 309; Pfetsch, Adam, & Bennett, 2013; see also Chapter 2). Moreover, the interface between media and political agendas needs to be scrutinized under the conditions of online communication environments. Eventually, scholars of political communication point out that agenda building processes are highly dependent on issue attributes and the structural characteristics of a political system in which they take place (Walgrave & Van Aelst, 2006). Altogether, these aspects provoke the question of whether the theoretical models of agenda building are still adequate to understand its new complexities in the light of radically different conditions of communication.

This chapter is divided into three sections. In the first section, we expose the classical model of agenda building as a baseline and discuss the sequence of processes through which issues move onto the political agenda. In the second section, we highlight crucial aspects of the new dynamics of agenda building in that we introduce online communication to the model. Here we ask how the processes change due to novel channels of communication and the diversity of actors. In the third section, we look at the interplay of old and new dynamics of agenda building under the conditions of the "hybrid media system" (Chadwick, 2013) that emerges through the integration of traditional mass media communication and new digital venues for political communication. We conclude that the new dynamics are characterized by higher volatility, reciprocity of communication flows, and that the former theoretical and empirical certainties no longer hold up.

Old Dynamics of Agenda Building

Political agenda building has been a longstanding area of inquiry, in which two trajectories of research can be discerned: First, general models of agenda building have focused on public attention cycles (Downs, 1991; Luhmann, 1971) and approaches of media agenda setting (Rogers & Dearing, 1988). The second strand of studies emphasizes the perspective of political actors inside and outside the political decision-making arena and their interest in raising public support for their causes (Cobb et al., 1976; Cobb & Elder, 1981; Kingdon, 1993; Manheim, 1987). Within this latter tradition, Cobb et al. (1976) propose three different models of agenda building. The government's attempts to put an issue

on the public agenda are described as the *mobilization model* (Cobb et al., 1976, pp. 132 ff.). However, there are also situations in which the political agenda of governments or parties in power can only be kept up if public debate is avoided. This strategy relates to the *inside initiative model*, which presupposes a rather hierarchical type of media control (Cobb et al., 1976, pp. 135–136).

The Outside Initiative Model

The third model, called the *outside initiative model* (OIM), is the most pertinent concept because it exceeds the narrow perspective of government communication and focuses on the interplay of groups from civil society, the media, and political decision makers in the public sphere. This model resonates with the democratic theory point of view, that participation in public debate and decision making should be inclusive and account for the plurality of actors in society (Habermas, 2006). In addition we argue that the OIM (a) has undergone the most fundamental changes and (b) can be understood as framework encompassing the other two models under the conditions of the hybrid media system.

Cobb et al. (1976, pp. 128–129) postulate four different phases in the OIM: First, the beginning of an issue to be mobilized publicly is seen in a general grievance that is shared by a number of individuals or collective actors outside the political establishment who eventually *initiate* an issue's career. The question of what kind of issues are apt to make it onto the public agenda is discussed theoretically by Luhmann (1971, pp. 16–17) who points out that issues that threaten fundamental values of society or signal a crisis are likely to draw public attention. Cobb et al. (1976, p. 130) add that "the more ambiguously defined, the greater the social significance, the more extended the temporal relevance, the less technical, the less available any clear precedent, the greater the chance that an issue will be expanded into a larger population." The initiation of an issue is highly dependent on whether it finds supporters and political entrepreneurs who advocate it and take the risk to push it into public attention. Therefore, a second major factor in the initiation phase relates to issue sponsorship and strategies of groups to carry the issue through and put resources into its expansion into the wider public (Cobb et al., 1976, p. 130). Waldherr (2014) shows that issue sponsors yield important effects on the temporal dynamics of an issue on the media agenda.

In the second phase (*specification*), the concern is translated into specific political demands. The third phase of *expansion* is most critical because outside groups need to create sufficient salience in the public sphere to attract the attention of decision makers: "Typically this is done by expanding an issue to new groups in the population and by linking the issue with pre-existing ones" (Cobb et al., 1976, p. 128). This transfer of the issue crucially depends on whether new supporting groups join the

issue coalition. Also, struggles over agenda control may emerge since not all groups necessarily agree with the specification of the original claim. In this phase, the issue ideally arrives on the media agenda and draws the attention of the general public. What we basically observe are communication activities that aim at framing the issue. Thereby framing must be conceived as a contest in which "participants maneuver strategically" (Pan & Kosicki, 2001, p. 40) and make their issues resonate with political and cultural values.

In the political agenda building literature, it is uncontested that the established media are the main "battleground" (Castells, 2008, p. 85) for civil society actors. Traditional media occupy a key position in public communication processes, which can be used by issue advocates to expand the scope of their causes (Wolfe, Jones, & Baumgartner, 2013, p. 182). Thus, for the spillover of issues onto the political agenda, the traditional mass media are still the decisive venues and a condition sine qua non of political agenda building (Gurevitch, Coleman, & Blumler, 2009). However, the traditional media produce a "cumulative inequality" (Wolfsfeld, 1997, p. 24) in favor of established political and social actors as issue advocates.

The final phase represents the spillover from the media agenda to the political agenda. However, *entrance* is by no means a predetermined result, since the issue still needs the backing of its supporters. General attention in public debate is rather a precondition for the entrance of an issue into the realm of political decision making in the OIM of political agenda building. However, public salience without impact on politics is an empty victory. If challengers do not succeed in redirecting the attention of decision makers to the inclusion of their cause into the political agenda, they fail in their mission. At the same time, if political actors do not respond to new issues from the challengers' arena, they violate the normative democratic principle of responsiveness. Gurevitch et al. (2009, p. 173) argue that the new media environment means that politicians inevitably lose their control over the political agenda, which forces them into "an increasingly responsive mode rather than the proactive, agenda-setting role they would prefer to adopt." As a reaction, they need to adapt to the broad, dynamic, and often unpredictable media environment in which they now operate by elaborating their cross-media strategies (Gurevitch et al., 2009, p. 173).

Context Conditions of Political Agenda Building

It is critical to note that media and political agenda building processes are highly context dependent (Van Aelst, 2014). For the spillover of issues onto the political agenda criteria such as obtrusiveness, institutional ownership, novelty, and the style of media coverage are decisive attributes for an issue's progress (Walgrave & Van Aelst, 2006, pp. 93–94).

National political contexts are also critical to political agenda building (Soroka, 2002; Van Noije, Kleinnijenhuis, & Oegema, 2008). For the explanation of the career of a specific issue, it is important to know how a country has set up the ways of decision making and responsibility to produce specific policies and how it deals with stakeholder participation and regulation.

New Dynamics of Agenda Building

For the new dynamics of agenda building, the available research maintains that the dynamics of the baseline model as described above has not disappeared but still remains in operation. There are good reasons for which the conventional mass media continue to be the main venue and driver of agenda building (Perloff, 2014, p. 14). The main argument here refers to the fact that search engines and most online news sites do not produce original authentic news content, but scan, gather, aggregate, and copy the coverage of traditional news outlets that they also operate online. The offerings of news companies and search engines on the Internet consist of repackaging the material of conventional news media, which in many cases are in the hands of the same companies. In addition, the majority of users search for news on the websites of conventional media companies. In Germany, 64% of Internet users visit search engines for news (where news items of media companies usually rank most prominently), 53% use websites of news magazines, 44% access websites of daily newspapers, and 42% those of TV channels (van Eimeren, 2015, p. 4). In Germany the *Tagesschau* app, which is provided by the public service broadcasting company ARD, is the most frequently used journalistic application for mobile electronic devices like smartphones and tablet computers (van Eimeren, 2015, p. 5). In contrast, the share of people who turn to user-generated political content seems to be rather low.

While the users' behavior confirms the important role of traditional media venues in agenda building, the proliferation of Internet-based communication has a complementary influence and sets off a new dynamic. From the nature of the previously described OIM initiated by challenger actors, the agenda building process necessarily starts within a small circle of supporters. At this very beginning of an issue career, a new rationale may apply: While in the traditional mass media, the initiation of issues and their expansion has been the result of a political struggle for media and public issue salience, it is now more than ever a communication task that needs to integrate the dynamics of online communication.

Role of Connective Action and Framing in Agenda Building

Online media and mediated communication impacts upon issue careers in a twofold manner. First, the quantity of possible causes and grievances

that can be turned into pressing political issues is abundant. Due to the unlimited number of channels, the number of potential issue entrepreneurs and problem constructions grows exponentially. Since access to online media and digital communication channels has a low threshold, the competition for attention has increased enormously.

Second, from a traditional agenda building perspective, the rise of an issue through communication is dependent on collective movement actors putting resources into the fight for the cause. The infrastructure of the Internet makes the early communication of issue advocates much easier, since there is no inbuilt gatekeeping mechanism or social control for issues that deserve mobilization as compared to issues that have only symbolic or spontaneous importance or do not originate in a truthful social cause. Recent research into social movements demonstrates that the mobilization of issues no longer needs to be tied to a deep rooted social cause but can be the result of rather short term spontaneous or personalized collective action via digital media or mediatized communication. "Connective action" (Bennett & Segerberg, 2012) can start rather spontaneously, but can also dissolve rather quickly. Bennett and Segerberg (2012) demonstrate in their studies on global protest events that digital infrastructure invites individualized social action without long-term commitment to a serious issue or deep-rooted social cause. In addition, the mobilizing actor does not need a material basis any more, but may appear as a virtual organization or anonymous network that only exists for the purpose of providing a virtual platform for campaigns.

The more the initiation of an issue can be separated from a serious social cause, the more complex the framing struggles become, because the multitude of communication venues and actors heat up the competition of various actors in gaining publicity of an issue.

Coalition Building Through Online Issue Networks

The Internet offers alternative avenues for civil society and movement actors to draw attention to their claims (Chadwick, 2006). Recent social movement studies maintain that challengers become active in public communication, thereby using *both online and traditional media* to sponsor their issues to the level of political decision making (Chadwick, 2006, pp. 134 ff.). In the early phase of expansion, however, it is particularly the Internet that serves as a venue of communication for challengers. The Internet is the main venue in which to build coalitions and online social movements for the mobilization of their issues (Ackland & O'Neil, 2011, p. 177; Diani, 2000). However, there is evidence that the power of these coalitions on the Internet increases if they also maintain offline relations (Ackland & O'Neil, 2011; Gonzalez-Bailon, 2009).

The teaming up of civil society organizations in online issue networks plays out in the structure of hyperlinks between websites of actors, namely

"web pages that are connected by hyperlinks and that all treat a particular issue" (Marres, 2005, p. 97; see also Chapter 15). The aggregation of links is a proxy for (a) real world social movement activism (Carpenter & Jose, 2012) and (b) "for partnerships and alliances between organizations" (Weber, Chung, & Park, 2012, p. 117).

Studies on online issue networks qualify their nature in three ways. First, the structure of online issue networks is driven by political leanings insofar as actors share partisan ideologies, which was observed in several studies on blog networks (Meraz, 2009; Tremayne, Zheng, Lee, & Jeong, 2006). In particular, one finds that intra-linking within ideological camps has been strong while inter-linking to the other political side has been weak (Meraz, 2011). Moreover, the ideological bias becomes a relevant factor of intermedia agenda setting between online communication and traditional media (Meraz, 2009; Wallsten, 2007, 2013). The ideological bias also plays out when traditional media make references to blogs. All in all, this results in coalitions that center on a particular ideologically captured frame or political position.

Second, online issue networks are characterized by the diversity of different types of actors. Shumate (2012) for example finds that online issue networks of social movements are also penetrated by other actor types including governments, corporations, other nongovernmental organizations (NGOs), and traditional media who seek to link with them in order to shape public debate. As retention and selection mechanisms are working in hyperlink networks, NGOs have a clear preference in their linking activity for other popular websites of NGOs (Miltner, Maier, Pfetsch, & Waldherr, 2013; Shumate, 2012). However, they cannot avoid actors from other sectors in society referring to them (Pfetsch, Maier, Miltner, & Waldherr, 2014).

Finally, online issue networks also adhere to the power-law principle, which means that a few sites within an issue area draw the most attention (Meraz, 2009). In addition, a number of studies demonstrate that the Internet is by no means an open and equally accessible space free from power asymmetries (Gerhards & Schäfer, 2010; Zimmermann, 2007). Moreover, online issue networks also depend on the national and political context of governance and mobilization (Pfetsch, Maier, Miltner, & Waldherr, in press). The contrary seems to be the case; in the political blogosphere for instance, a few actors gain disproportionate influence and attention (Meraz, 2009).

Provided that online issue networks do not represent a politically neutral, open access or exclusive space, the process of issue expansion into new groups must be perceived as competition for attention. This has two dimensions. On the one hand, expansion within the sphere of challengers is a struggle for issue salience on the Internet, which seeks to bind enough supporters for an advocacy coalition. On the other hand, since many actors appear in the online issue network, we may also observe severe struggles for the framing and for the ideological position on it.

The Role of the Blogosphere: Sponsors of Niche Agendas and Echo Chambers

The new dynamic of agenda building is also characterized by the advent of new actors such as bloggers and activists as initiators of issues. In the literature, there are numerous case studies that demonstrate that bloggers and lay journalists through their blogs or social media activities possess the tools to propel an issue into the mainstream. For gaining salience in the blogosphere, factors such as the reputation and credibility of the blog, veracity of the information, and novelty of the issue and the traffic it creates are relevant (Perloff, 2014, p. 16). The blogosphere and social media platforms bear the potential to constitute new communication arenas that function to create an either short-term temporary agenda or set up new, more topic-specific niche agendas (Groshek & Groshek, 2013).

According to Perloff (2014, p. 15), "bidirectional relationships between conventional agendas and agendas in the blogosphere" as well as new coalitions of "ideologically minded bloggers" (Perloff, 2014, p. 16) appear to feed reporters of mainstream media and therefore are likely to influence public and political agendas. As a result, with the help of the blogosphere a two-step flow agenda setting process occurs. Such a dynamic takes off "if source-released information to blogs first activated loyal blog followers, who then created an online stir, subsequently capturing mainstream reporters' attention" (Perloff, 2014, p. 16). Furthermore, the interaction in the blogosphere may also come to the attention of policy makers, which then produces further effects on policy agendas (see also Chapter 2).

However, the role of blogs and social media does not challenge the role of the traditional media. There is evidence that political weblogs "do not represent a radical departure from more established media of communication", but rather follow or amplify the agenda of mainstream media (Haas, 2005, p. 387). Moreover, "a small number of weblogs set the agenda for thousands of less visible weblogs" (Haas, 2005, p. 387). In the end, the blogosphere functions as "online echo chamber of mass-mediated political views" (Haas, 2005, p. 390). Studies of the blogosphere (Meraz, 2009, 2011) suggest "that though traditional media's agenda-setting power is no longer the sole influence, its influence still remains a driving, 'A-list' force in the creation of blog agendas" (Meraz, 2009, p. 701).

Old and New Dynamics and the Conditions of a Hybrid Media System

The "new dynamics" of online communication venues and practices augment the "old dynamics" of agenda building and make it necessary to not

only focus on (a) the interface between the media agenda and the political agenda but also to reassess (b) the relations between traditional media and online communication (Haas, 2005). Therefore, it is necessary to integrate both aspects into the baseline model of agenda building.

The interaction of traditional mass media and online communication in agenda building has been theorized by Chadwick (2013, p. 4) who argues that the "technologies, genres, norms, behaviors, and organizational forms" of both venues produce a new, hybrid media system. As this new media system has emerged, it has changed the relative power of actors in political and media systems and changed the nature of political communication fundamentally. It particularly "foregrounds complexity, interdependence, and transition" between media and politics (Chadwick, 2013, p. 4). Thus, in a hybrid media system larger numbers and a more diverse range of actors and interactions as well as communication channels are included into agenda building processes.

As the case studies by Chadwick (2011) demonstrate, online communication has been fully integrated into agenda building. At the same time, the traditional media engage in the debates and integrate non-elite actions and information into their own production practices and routines as weblogs and newspapers also increasingly cite each other as news sources (Messner & Watson DiStaso, 2008).

One significant consequence of agenda building in the light of the hybrid media system is that the interface between the media and political agenda has become porous and is now open for mutual interpenetration. Thus, an issue's career must be characterized by a back-and-forth dynamic between the agendas involved. This also means that the direction of the classical agenda building as outlined in the Cobb et al. (1976) baseline model can easily be reversed. For instance, by using social media or other online venues, politicians themselves interfere with the media agenda. In addition to expanding issues from the public and media agenda onto the political agenda, communication platforms such as Twitter are used by politicians to create information subsidies for journalists in traditional media (Parmelee, 2014). There is evidence that "tweets from political leaders are used by journalists in ways that suggest first- and second-level agenda building" (Parmelee, 2014, p. 434). This also means that the conditions of spillover from the media agenda into the political arena have become more volatile and open for contingent conditions in the political arena. The idealized sequence of the phases of agenda building that have characterized the old dynamics is no longer valid, and the boundaries between the phases and types of agenda building have become blurred. Therefore the OIM can no longer be distinguished from the mobilization and inside initiative model because online communication venues give rise to the mutual interpenetration of the agendas of civil society, the media, and political actors.

Conclusion

The advent of the Internet and the establishment of new channels of communication increase the urgency of revisiting the classical models of agenda building. In this regard, we proposed two major concerns of research, which are (a) the inclusion of online communication in agenda building processes and (b) the coexistence, overlap, and interaction of thereby enfolding dynamics in hybrid media environments. Referring to (a) we argued that online communication opens up venues for new communicators such as bloggers and NGOs that are in the position to circumvent the gatekeeping function of traditional mass media. These communicators now enjoy direct access to a public sphere in which they may contribute more effectively to setting the publics' and the political issue agendas.

The inclusion of online communication venues in a theoretical reconceptualization of political agenda building leads us to maintain that in addition to the still significant role of traditional mass media, a new dynamic of agenda building emerges. It is the outcome of the inclusion of heterogeneous issue advocates, rather spontaneous and personalized forms of political mobilization, the rise of new communicators such as bloggers and online activists who altogether contribute to a rising competition for the salience of their issues online and offline. However, for pushing an issue onto the political agenda, coalition building among all these diverse actors is an important prerequisite of agenda building. We argued that under the conditions of online communication the forming of coalitions has become much easier thanks to the opportunity structures of network communication. Thus, the new dynamic is epitomized in online issue networks that build up communication as opportunity structures for frame building during the expansion phase.

Online communication, on the one hand, complements the classical agenda building process and does not invalidate the general logic and sequence of the baseline model by Cobb et al. (1976) outlined above. On the other hand, the conventional pattern of agenda building through traditional mass media is no longer "the only game in town" (Perloff, 2014, p. 23). While the former dynamics of agenda building, particularly the role and the potential of traditional mass media to stimulate the spillover of issues onto the political agenda remains valid, the "new dynamics" of agenda building is triggered by the complexity of the interactions of actors and communication channels that have increased enormously. The "old" and the "new" cannot be understood as antagonists, or two worlds apart from each other. Instead, the dynamics of agenda building is embedded in a communication environment that integrates both traditional media and online communication. Thus, we find blurred and intertwined mediated communication logics that are reflected in the concept of a hybrid media system and that impose on political communication as well as on agenda building.

As a consequence, the analysis of complex processes like agenda building in a hybrid media system needs to take new phenomena into account, such as the blurring boundaries between the different phases or the mutual and simultaneous influence of the agendas of civil society, the media, and political actors (see also Seethaler, in press). Finally, we also note that the direction of influences, the order of cause and effect, and the temporal framework in which an issue surfaces on various agendas have become more volatile and ambiguous. These developments constitute also challenges for our way to address research on agenda building, because the methodology of our studies has to be adapted to the new complexities, time frames, and hybridity of media systems.

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4   Gatekeeping Revisited

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Introduction

Gatekeeping is a core concept of journalism research, with a longstanding and vivid research tradition going back into the 1950s. Gatekeeping research investigates how events and issues in modern media societies reach the audience, which information is deemed relevant and consequently published by news media, what kind of angles journalists choose to cover events, and which aspects drive the journalistic decision whether to publish a set of given information or not. By focusing on the question of which forces and logic shape the daily news, the approach addresses key functions of mass media in modern societies: In functionally differentiated societies, people rely on mediators to reduce the vast amount of information to a manageable subset of news. This is even more the case in political communication, where gatekeeping decisions have wide-reaching consequences for political decision making and information control: At the *micro level*, most citizens' knowledge of political issues, decisions, and actors is not based on firsthand encounters, but is essentially mediated. Therefore, news builds the basis upon which citizens form their political opinions. At the *macro level*, gatekeeping decisions shape what kind of political information is available within society. If news fails to cover certain political issues, arguments, or events, the electorate has little chance to know about these aspects of political life. Therefore, gatekeeping is a concept about social power and the question of who controls the (political) information available within society.

   Given the fundamental changes to media systems throughout the last two decades, we must pose the question of whether the theoretical approach still holds up to these requirements: Does gatekeeping still explain who controls the political information available in the online era? If gatekeeping is about information control, then two further questions arise. First, does the classical *regime of control* (Bruns, 2005, p. 11), predominantly exercised by professional journalists, change with the emergence of online information channels and news sources? And second, how do gatekeeping practices alter in the era of digitalization, where

new technological features such as interactivity and the multiplication of channels open up gatekeeping to new forms of participation in the news production process—and therefore describe *meso level* modifications of the gatekeeping concept?

Gatekeeping: A Multilevel Approach to Explain News Selection

The questions, how journalists come to their news decisions and who controls the information available to the public, have stimulated a vivid research tradition. By and large, these studies can be grouped according to whether they address macro, meso, and micro level factors that explain gatekeeping decisions (Reinemann & Baugut, 2014, p. 327). At the *macro level*, factors of the media system, the (political) culture, and society shape the news decision process. Most studies focus on the role of culture, press freedom, and media laws for journalistic news decisions, with particular focus on international differences of journalism cultures (e.g., Hallin & Mancini, 2004; Hanitzsch & Mellado, 2011). Further influential factors are advertisers, national features of media systems and political cultures, competition within the media market, audiences, and relationships between economic, social, and political actors (for a detailed discussion see Shoemaker & Vos 2009). Although scholars see the audience with its needs and media use habits as a decisive macro-level factor for news making, several surveys among journalists indicate that the audience is only an implicit reference for news decisions, in form of a more or less precise audience image (e.g., Hardin, 2005).

Even though audiences' needs are located at the macro level, the images journalists hold of their audiences belong to the *meso level* of influential factors shaping news production. Depending on their ideas of what the audience might find interesting and relevant, journalists emphasize certain angles and tailor the tone of news stories. Beyond audience images, the meso level encompasses all factors related to news organizations and working routines. As institutional constraints, ownership, and the editorial line shape news decisions (e.g., Demers, 1995; Donohew, 1967). Further important factors emerge from the newsroom as a social system—including the newsroom hierarchy and professional roles, co-orientation, and socialization on the job, amongst others. Economic constraints exerted on newsroom routines, which push commercialization in journalism, are allocated to this level (e.g., Patterson, 2000; Vliegenthart, Boomgaarden, & Boumans, 2011). Additional meso-level factors are editorial routines of news selection and production, such as the use of news values, quality control and editing, the placement of stories within the overall news content, and mechanical forces such as routine deadlines, space restrictions, or the accessibility of sources, information and

visuals, to name just a few (e.g., Cassidy, 2006; Gieber, 1956; Shoemaker, Eichholz, Kim, & Wrigley, 2001).

At the *micro level*, individual characteristics of journalists are seen to influence the gatekeeping process (Reinemann & Baugut, 2014). Individual-level influences trace back to White (1950), who investigated the decision routines of "Mr. Gates," wire editor of a Midwestern local newspaper. White (1950) concluded that news selection is strongly driven by personal preferences for issues. Since this seminal work, scholars have controversially discussed the importance of individual characteristics and their interplay with organizational factors. Accordingly, research focused on selection habits of individual journalists in the context of their professional roles, their position within the newsroom hierarchy, and social dynamics amongst journalists (e.g., Gieber, 1956; Westley & McLean, 1957). These authors came to rather different conclusions than White (1950), emphasizing the role of organizational structures and professional working routines.

Summarizing the insights of such models, news making must be regarded as a complex process, shaped by factors from all three levels. Gatekeeping researchers have tried to identify whether there exists a hierarchy amongst these influential factors (e.g., Shoemaker & Reese, 1996). The empirical evidence indicates that the meso level with its routines and institutional aspects, such as economic, organizational, and technological pressures, along with influences from journalism cultures and national media systems, have traditionally exerted a stronger influence on news-gathering than micro-level factors such as journalists' individual characteristics or the audiences' needs at the macro level.

Gatekeeping and Political Communication

Even though much of the research incorporates political news in their investigations of general news (Reinemann & Baugut, 2014, p. 326), there is empirical evidence that certain factors indeed play a bigger role in the gatekeeping of political news than of general news. Distinct features of gatekeeping in political journalism are located at all three levels.

At the *macro level*, three aspects are of particular relevance for the production of political news: The laws that encourage or impede journalists to release politically sensitive material and to guard their sources, the professionalization of political public relations, and the close relationships between political and journalistic elites (e.g., McNair, 2011; Strömbäck, 2008). The interplay of strategic political communication and journalism practices is primarily researched in the context of election campaigns, in times of political crises and wars. Increasingly professionalized political Public Relations and campaign communication progressively confront journalists with external attempts to manage the news: Journalists have to deal with media advisers, who control access to candidates, create

events for campaign coverage or try to shape the spin of political stories in off-the-record talks (Bennett, 2005). A similar trend toward professionalized strategic communication can be observed during political crises. Attempts by the political administration and military to control political coverage during wars, such as the infamous embedding strategy during the war in Iraq, show a measurable impact on the tone of political coverage (Haigh et al., 2006). Another line of research focuses on media deference to government in times of political crises, suggesting that journalists do not necessarily take a critical stance toward political administrations, but comment political and military action in a supportive, even patriotic tone (e.g., Bennett & Paletz, 1994). Another macro-level aspect that deserves attention is the working relationship between politicians and journalists. Wahl-Jorgensen (2014, p. 305) calls these relationships the *key paradox* of political reporting: On the one hand, journalists are expected to act as watchdogs of and advocates for the public. As such, they ought to keep a certain distance from the political elite. On the other hand, their daily work provides them with easy access to informal briefings and politically sensitive information, deeper insights into political processes, and overall close relations with politicians. As valuable such an insider culture may be, the privileged role may also promote a less critical reporting environment and more conformist political coverage (e.g., McNair, 2011).

At the *meso level*, co-orientation is one of the factors that specifically shape political news making (e.g., Donsbach, 2004). Further, political journalists adhere more strictly to quality criteria than in other journalistic subfields: Impartiality and balance, for example, push journalists to contain political debate within a more or less tightly drawn consensus, thereby privileging established political sources, whereas alternative voices are often marginalized (McNair, 2011, p. 57). These findings are complemented by news bias research that illustrates how editorial lines shape the selection of sources and the overall tone of political coverage (Hagen, 1993; Patterson, 1997). Further, the temporal patterns of news construction pushes political correspondents to rely on those political actors that are easy to reach, such as well-known politicians and media advisors, rather than searching for sources outside the center of political power (e.g., Kavanagh, 2011; Tuchman, 1978).

Also at the *micro level*, there is evidence that certain aspects influence gatekeeping in political journalism stronger than in other journalistic subfields: With one exception, individual characteristics do not impact journalistic decisions, but political attitudes do shape political newsgathering especially when it comes to decide upon the angle and which news sources to be incorporated (Reinemann & Baugut, 2014).

Even though most of the insights stemming from gatekeeping research account for both political and general news, some of the factors are of special relevance to political news production. Scholars stress that for

political journalism, the audience is even less important than in other journalistic subcultures, due to its adherence to high-quality standards in the name of the public good and a collective sense of belonging to an elite circle. The strong orientation toward the political system on all levels is seen to reinforce the insider culture and "insularity" of political reporting as a "self-contained universe" of journalists and political actors, in which audiences' needs play even less of a role in gatekeeping decisions than in other journalistic subfields (Wahl-Jorgensen, 2014, p. 309).

Gatekeeping and Online Media

The original idea of gatekeeping was developed in the context of national, analogue media systems in the 1950s and 1960s. Since then, the concept has gradually evolved along with changes of media systems, providing gatekeeping scholars with the challenge to capture how changing media environments alter gatekeeping processes in journalism. Digitalization and the Internet were said to lead to the end or "death" of gatekeeping in journalism (e.g., Kovach & Rosenstiel, 1999; Lasica, 1996). We argue that new media technologies alter rather than end the gatekeeping process in (political) journalism. Amongst the most prominent concepts that capture these online-related changes to classical gatekeeping are *gatewatching* (Bruns, 2005, 2008), *network gatekeeping* (Barzilai-Nahon, 2008), *secondary gatekeeping* (Singer, 2014), and *audience gatekeeping* (Shoemaker & Vos, 2009). Even though the concepts vary in some details, they share the diagnosis that online communication challenges the classical gatekeeping approach in two ways: At the macro level, the theoretical assumptions about the gatekeeping regime must be revised, and at the meso level, gatekeeping practices should be differentiated according to the different gates.

Alterations at the Macro Level: The Gatekeeping Regime

At the *macro level*, new gatekeepers emerge in the online-driven political news environment, amongst them independent news organizations and bloggers as well as algorithm-based news aggregators and audiences, who redistribute and evaluate political news published by journalistic gatekeepers. The new actors change the gatekeeping regime of political newsgathering and question the communication model underlying the classical gatekeeping approach. Traditionally, the process of selecting and publishing (political) information is described as an asymmetrical process, where all power to control the information available to the public resides with the journalists (Barzilai-Nahon, 2008). Online, this communication process develops into a more symmetrical one, with reciprocal communication turning news construction into a collective endeavor. As Boczkowski (2004) puts it, digitalization moves news construction from

"being mostly journalist-centered, communicated as a monologue . . . to also being increasingly audience-centered, part of multiple conversations" (p. 183). This shift is even more fundamental in political journalism with its traditionally strong insider culture and primary focus on media-government relations. Newer gatekeeping approaches incorporate the changes attributed to online communication and focus on how relationships amongst the gatekeepers involved in news selection alter in the digital era (e.g., Bennett, 2004). On the one hand, political communicators gain direct access to the audience via Twitter, blogs, or platforms like YouTube. On the other, journalists face new forms of audience inclusion, which shift the power to control politically relevant information away from journalists as primary gatekeepers. As a consequence of the changes to gatekeeping in an online environment, (political) news making must not be restricted to journalistic newsgathering only, but must be seen as a broader communication process that also incorporates users' selections and evaluations. Subsequently, the definition of gatekeeping needs to be shifted from its main focus on news selection to a wider understanding of information control within society (Barzilai-Nahon, 2008, p. 1496). A *network approach* to gatekeeping in political journalism in the online era must not only focus on the changes of gatekeeping regimes, but should also incorporate the various gatekeeping practices stimulated by the Web 2.0 environment.

Alterations at the Meso Level I: Gatekeeping as Editorial Practice

At the *meso level*, scholars look at how journalistic routines of political newsgathering change due to online communication. Even though Lewin's (1947) original model encompassed the idea of feedback slopes from recipients to gatekeepers, classical accounts modeled journalistic gatekeeping primarily as editorial practice, exercised exclusively by journalists. With the rise of online communication, this powerful position starts to elude—with measurable consequences for gatekeeping practices. Although earlier studies provide empirical evidence that journalists often resist change brought about by the Internet (e.g., Cassidy, 2006; Singer, 2005), some of the more recent literature indicates that technological innovations do indeed alter news-making practices (e.g., Bruns, 2005; Singer, 2014; Vu, 2014). Mitchelstein and Boczkowski (2009) identify four meso-level changes in journalistic practices that are at the core of academic research: Alterations in newsgathering practices, modifications in editorial workflows along with the acceleration of temporal patterns of news making, and the convergence of print, broadcast, and online operations. While most changes apply to journalism as a whole, some are of particular relevance to gatekeeping in political journalism.

The probably most fundamental alterations to gatekeeping practices at the meso level are the consequences of audience inclusion. Whereas in the pre-digital era, audience images held by journalists were an "operative fiction" (Zurstiege, 2006, p. 72) rather than a tangible factor shaping news decisions, the technological opportunities of web metrics alter the relevance of audience images for daily news decisions. Algorithms offer easy access to audience interests, measuring the popularity of stories as well as the numbers of shares, likes, and comments. Web metrics offer a possibility to learn more about audiences, but it can also be used to measure newsroom performance. But what are the consequences of a more precise audience image for editorial news decisions? Empirical research shows mixed results: Whereas MacGregor (2007) finds that click ratings lead some journalists to expand their coverage, provide additional analysis, and publish more stories of the same type, Boczkowski and Peer (2011) conclude that news choices of journalists and audience members do not intersect. These findings illustrate the tension between diverging relevance structures as hard data about what users want to read conflicts with the social responsibility ideal of political journalism to publish what is relevant for society: On the one side, political news selection is firmly rooted in normative considerations about what is newsworthy in the public interest (e.g., Jandura & Friedrich, 2014). On the other side, audience interests and needs are not necessarily guided by what is deemed relevant to society, but primarily by individual aspects of relevance. Analyzing the characteristics of news items on the most popular lists of online news websites, Shoemaker, Johnson, Seo, and Wang (2010) found that users primarily pass on stories that are odd or unusual, address normative and social deviance, and include style conventions said to increase readers' involvement with the stories. The tension between these two relevance structures also becomes visible in user comments, which often contain discrepant views to journalistic interpretations.

Beyond the changing audience images stimulated by web metrics, research indicates that audiences increasingly contribute to journalistic newsgathering (e.g., Kperogi, 2011). The digital information sent in by users as well as private blogs and special interest platforms pose additional news sources for journalists, next to professional online sources such as the websites of governments, industry, news agencies, and competing news outlets. Gatekeeping practices in the digital environment center around screening relevant sources and identifying potentially newsworthy material, which can be fed into the gatekeeping process (Bruns, 2005).

Even though digital media multiply the number of sources available to journalists, they regard the various trends of audience inclusion not only as positive developments. Rather, news workers see interactivity to be counterintuitive with traditional journalistic principles (Domingo, 2008). The empirical evidence to date suggests that even though newsrooms

incorporate interactive features and integrate user content into their news websites, they still retain their traditional gatekeeping role and see their audiences as passive consumers rather than as active co-authors of political news coverage. This is also mirrored by self-account of journalists: When questioned about the consequences online communication has for their daily work, they defend their function as primary definers of newsworthiness in the public interest. Further, they emphasize that journalism still provides audiences with trustworthy information and offers guidance on which aspects in the confusing universe of online information are relevant to society (Singer, 2010; Quandt, Löffelholz, Weaver, Hanitzsch, & Altmeppen, 2006).

The acceleration of information flows stimulated by online communication is another reason why editorial gatekeeping practices are currently undergoing changes. Especially when big events occur, online news are the first source of choice (Tewksbury, 2006). This new timeliness leads to a collapse of the twice-a-day news cycle and increases the pressure to constantly publish new information, at best in form of breaking news. Journalists regard this trend not only as a positive development. Rather, they voice concerns that digitization increases pressure on editorial workflows, as converging technologies and tightened temporal patterns demand additional labor in even less time as well as the handling of multiple media formats and technologies (e.g., Cawley, 2008; Deuze, 2004). Thus, at the *micro level*, temporal changes and media convergence are seen critically, as they increase stress on news workers.

Summarizing the large field of research, online communication does indeed alter *editorial gatekeeping* practices. The modifications mingle with traditional news making routines and standards, but they by no means stand for the decline or even "death" of editorial gatekeeping. Rather, scholars observe a gradual shift in editorial practices, whereby "the gate and the gatekeeper role neither remain intact nor are fully replaced but have become a hinge between tradition and change" (Mitchelstein & Boczkowski, 2009, p. 572).

Changes at the Meso Level II: Gatekeeping as Audience Practice[1]

Probably the most important change to news production in the online world is audience inclusion (e.g., Bruns, 2008; Singer, 2014). Forms of audience participation range from personalization, commentary and feedback, liking and sharing news stories to even producing news content itself. The various features of interactivity, scholars argue, turn audience members into gatekeepers themselves, and establish audience gatekeeping as a third channel, to use Lewin's (1947) terminology—next to the source channel and the media channel. Two approaches conceptualize gatekeeping practices in this *audience channel*. The first avenue

of research sees users as highly involved gatekeepers, who consciously cooperate with other users with the aim to produce alternative news (*collaborate gatekeeping*). The other approach focuses on what audiences do with professionally produced news in the Web 2.0 environment. This form of gatekeeping, which begins when the classical mass media process ends, must rather be labeled as *collective audience gatekeeping*, because users do not necessarily share, comment, or like content intentionally with the aim to produce a collaborative news product.

Looking at the first avenue of research, scholars put great hopes in the emergence of what they call *citizen journalism* (Allan & Thorsen, 2009) or *participatory journalism* (Deuze, Bruns, & Neuberger, 2007). Collaborative gatekeeping differs from the editorial practices in a way that communities of highly involved users actively engage in the process of searching and watching other gates, editing and commenting alternative news in a joint endeavor. The aim of collaborative gatekeeping is to offer fellow users alternative accounts of (political) events and help them to make sense of the masses of information available online by filtering the news flow, highlighting and debating salient topics of importance to the community (Bruns, 2008). Consequently, the nature of news as a result of the gatekeeping process is changing. The formerly coherent news report, published as a fixed story, transforms into a temporary, constantly evolving product, to which multiple users contribute by compiling related reports, adding further information, and commenting beyond the initial report (Singer, 2014, p. 66). Consequently, collaborate gatekeeping describes the collapse of formerly distinct practices of news production and consumption into what Bruns (2008) calls *produsage*. Along with these changes of gatekeeping practices, agency shifts from the journalistic profession to anyone interested in getting involved in this process.

However, empirical research indicates that only very few users are eager enough to engage in the production of news content. The majority rather personalizes and redistributes news stories (Singer, 2010). The types of low-involvement audience practices in Web 2.0 networks cannot be seen as semi-professional practice as described by collaborative gatekeeping. Rather, it must be seen as social practice that might serve other functions than classical political newsgathering or citizen journalism. Such *collective audience gatekeeping* practices (e.g., Shoemaker & Vos, 2009; Singer, 2014) describe audiences' news evaluation and sharing as an unplanned gatekeeping process of many individual users who act within their virtual communities. Collective gatekeeping does not result in a coherent news agenda of politically relevant information in the sense of the public interest or in an alternative agenda of news as with collaborative gatekeeping. The result of collective audience gatekeeping must be captured by the popularity (Shoemaker et al., 2010) and visibility (Singer, 2014) of political news items in the Web 2.0 environment. A news story's popularity and visibility is not carefully orchestrated by editorial decisions to

produce a coherent news product, but by the sum of individual actions based on very different communication intentions by the users who share, comment, and like the professionally produced news. Collective audience gatekeeping can thus best be defined as two-step gatekeeping process, in which initial editorial decisions to publish an event or issue as news are followed by user decisions to upgrade or downgrade the visibility and popularity of that item for a secondary audience (Singer, 2014, p. 55). This collective process of users' news judgments is on the one hand driven by individual preferences and social dynamics within the group of followers and friends, on the other hand guided by algorithms that mathematically compile the individual judgments of users or underlie recommendation systems of the networks. Thus, even if editorial gatekeeping still encompasses professional news judgment, the power to control the meaning of political events gradually shifts in social networks toward a collective of users.

Even though there is not much empirical research on this form of gatekeeping, one already can defer from the spare findings that collaborative audience gatekeeping practices in the Web 2.0 environment differ from editorial gatekeeping in a number of ways. The most fundamental difference is the fact that the steps of selection and news judgment take place in two different gatekeeping channels. In the classical gatekeeping approach, selection and assignment of relevance are integrated into the *journalistic channel* and comprise two basic steps of news production (Bruns, 2008). Against this, collective audience gatekeeping describes how users pick news items and assign relevance by liking, sharing, commenting, and forwarding them within their social network. The underlying relevance structures in social networks are thereby not necessarily driven by the normative idea of societal newsworthiness. Empirical evidence supports this assumption, obviously explains humor (Bachl, 2011) as well as the dynamics of click-rates the success of political campaign videos in terms of click-rates on YouTube, whereas classic news factors play only a minor role (Scherr, Reinemann, & Jandura, 2015). Click-rates thus may indicate that selection of political content in social networks is strongly driven by selection choices of the network community.

Conclusion and Future Perspectives

Classical gatekeeping theory rests upon research conducted in the era of traditional mass media systems, characterized by distinct boundaries between the spheres of production and consumption, spatial limitations, and restricted information about audiences. In the era of digitalization, however, some of these assumptions need to be questioned. On the one hand, new technologies undermine the power of journalism to control the information publicly available. Particularly the new forms

of audience inclusion challenge classical gatekeeping theory. One of the "most fundamental shifts in the architecture of contemporary media systems: the redrawing of the boundaries between the spheres of production and consumption" (Mitchelstein & Boczowki, 2009, p. 577) gives audiences new opportunities to question journalistic interpretations, search for, and even contribute to alternative news. Consequently, two forms of gatekeeping must be distinguished—*editoria*l and *audience gatekeeping* practices.

Looking at editorial gatekeeping, the literature to date suggests that the approach is still helpful to explain journalistic newsgathering, but gradual shifts described above should be incorporated into the concept. In the long run, the alterations described above modify the hierarchy of influential factors, which classical gatekeeping research has established. Some scholars argue that audience inclusion weakens the insider culture of political journalism, as the gradual modifications of editorial gatekeeping practices are shifting political news production away from the "insular relationships between journalists and politicians" (Wahl-Jorgensen, 2014, p. 319) by restricting the power of classical organizational factors such as journalistic co-orientation (Vu, 2014). At the same time, web metrics become increasingly relevant for newsgathering, as they serve as indicators for audience attention.

Even though the literature to date suggests that the power of (political) information control still largely resides with journalism, the new forms of audience gatekeeping especially start to undermine this strong position. However, empirical research on this type of gatekeeping is at a very early stage and not much literature has been published yet. Therefore, it is too early for a profound evaluation of the chances and risks of collective audience gatekeeping practices in the Web 2.0 environment. Scholars do not know enough about the algorithms that underlie the news sharing and recommendation functions offered by social networks. On the one hand, these algorithms can be seen as indicators of social relevance, as they lay out what other users in a virtual community like (or dislike) and consider worthy enough to be passed on to others. As such, algorithms do not only mirror users' preferences, but also influence the future dynamics of information judgment and visibility (Messing & Westwood, 2014). On the other hand, the algorithm-driven relevance and recommendation structure of Web 2.0 applications pose a challenge to mass communication research: The compositions of most algorithms are not publicly available, leaving journalists, audiences, and researchers in doubt as to whether the popularity and visibility of news items are really comprised of audiences' likes, shares, and clicks, or whether economic interests of the companies providing these services also play a role in shaping the ranking order. Here, more research and critical reflection of the actors being involved in audience gatekeeping would be needed.

Note

1 Audience practice can also be conceived at the micro level if one stresses the *individual* behavior of members of the audience. Most of the time, however, audience reactions are measured at the aggregate level.

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5 The Influence of Online Media on Political Knowledge

Marcus Maurer and Corinna Oschatz

Conceptions of Political Knowledge

The impact of news media content on recipients' political knowledge has been a central concern of research in communication studies for decades. Looking at this research, we can distinguish two almost completely different theoretical concepts. They differ in their understanding and conception of knowledge; this substantially influences the research process and measured outcomes. The first conception has roots in political science and understands knowledge as "the range of factual information about politics that is stored in long-term memory" (Delli Carpini & Keeter, 1996, p. 10). We refer to this as the *objective* conception of political knowledge because it assumes that there is an objective knowledge that should be shared by all citizens. The second conception has roots in cognitive psychology and understands knowledge as new information that "individuals actively collect, store, modify, interpret, and incorporate . . . with what they already know about the world" (Sotirovic & McLeod, 2004, p. 358). We will refer to this as the *subjective* conception because it assumes that knowledge depends on individual predispositions like personality traits, attitudes, and prior experiences (Graber, 1988). The differences between the objective and subjective concepts can be distinguished at four levels: (1) the theoretical foundation on the theory of democracy, (2) the consideration of information processing, (3) their understanding of the organization of knowledge, and consequently, (4) the operationalization of knowledge.

The Objective Conception of Political Knowledge

This conception has roots in a normative paradigm that is justified by democratic theory. Modern democracies are based on the basic constitutional principles of the sovereignty of the people. The normative paradigm implies that, in order to exercise this constitutional right, citizens require specific and accurate political knowledge to, for example, vote for political representatives and to legitimize their exercise of political

power (e.g., Althaus, 2006; Hansen, 2009). The objective knowledge conception considers the inner information processing as a black box. Consequently, this conception does not make assumptions on the organization of knowledge. In empirical studies, the researcher normatively determines what information is considered as relevant and correct political knowledge. Starting from measuring citizens' factual knowledge by more or less representative surveys, these studies try to explain how knowledge is gained over longer periods of time by regular media exposure and other variables. They theoretically assume that the likelihood of learning of at least some core elements of political information increases with the frequency of exposure to that information in mass media. Any discrepancy from what has been defined as correct is interpreted as a lack of knowledge. In general, studies based on the objective conception show that recipients who repeatedly receive political information from mass media have a marginally greater political knowledge than recipients who do not receive political information from mass media (e.g., Barabas & Jerit, 2009; Elenbaas, Boomgaarden, Schuck, & de Vreese, 2013; Fraile & Iyengar, 2014). Although these studies do not explicitly examine information processing, they find that knowledge gain is determined by various boundary conditions such as the credibility of the information source, attention to news media content, previous knowledge, and the time lag between news media consumption and recall (e.g. David, 2009; Liu & Eveland, 2005; Miller, 2013).

The Subjective Conception of Political Knowledge

In contrast, the subjective knowledge conception is not based on the democratic-theoretical ideal. It does not make assumptions concerning the social significance of political knowledge. Therefore, all individual differences are interpreted as a result of the inner processing and equally treated as knowledge. Moreover, information processing is considered the key element in research on knowledge gain. Starting from the information received, studies examine how individuals process the information and how this is related to their individual predispositions. This conception includes an organized, structured, and interconnected understanding of stored knowledge (e.g., in schemata or scripts). Empirical studies drawing on the subjective conception are interested in the occurrence of complex comprehension structures. They usually develop experimental designs and examine the reconstruction of information received in a one-off treatment instead of the long-term acquisition of knowledge through repeated exposure. In general, empirical findings from a subjective knowledge perspective show that there is only a small overlap between recipients' reconstructions of political messages and the original information received. Instead, citizens replace dissonant information with information that corresponds with their previous knowledge, but

has not been delivered in the original message (Elenbaas et al., 2013; Kepplinger & Daschmann, 1997).

Combining the Objective and the Subjective Conception

A recent approach that combines the objective and subjective knowledge conceptions to some degree is the cognitive mediation model (Eveland, 2001). On the one hand, the model remains bounded to the objective knowledge conception because it examines the influence of mass media on factual political knowledge defined as relevant before. On the other hand, it integrates variables of information processing from cognitive psychology. The model predicts that recipients who are highly motivated to inform themselves specifically on political issues in the media (surveillance gratification) will gain political knowledge on the received media content if the news media content receives considerable media attention and is processed intensively (elaborative processing). Conceptionally, this means that high levels of surveillance gratification trigger media attention and elaborative processing as mechanisms of information processing that mediate the impact of surveillance gratification on political knowledge.

Political Knowledge in the Offline World

One of the most prominent theoretical approaches to explain objective long-term political knowledge is the knowledge gap hypothesis (Tichenor, Donohue, & Olien, 1970) stating that

> As the infusion of mass media information into a social system increases, segments of the population with higher socioeconomic status tend to acquire this information at a faster rate than the lower status segments, so that the gap in knowledge between these segments tends to increase rather than decrease.
>
> (pp. 159–160)

The hypothesis consists of two separate assumptions: The first (implicit) assumption is that information distributed by mass media generally enhances citizens' knowledge. While this assumption is not explicitly stated, it is a necessary condition for the emergence of knowledge gaps. The second (explicit) assumption is that the information distributed by mass media is not equally acquired among different segments of the society. The authors argue that highly educated citizens have more advanced abilities and beneficial social circumstances for knowledge gain than lower-educated citizens. These include better communication skills, greater previous knowledge, and social contacts that facilitate discussion of public affairs. Moreover, they are more likely to select, accept, and remember political information and, finally, have a greater affinity to

print media that are supposed to deliver more factual information compared to television (Tichenor et al., 1970). Hence, they acquire relatively more knowledge than lower-educated citizens from the information disseminated in mass media. The knowledge gap hypothesis has been heavily criticized and, consequently, redefined, specified, and augmented. There are currently more than 230 studies elaborating on the knowledge gap phenomenon (Gaziano, 2010). In the light of this chapter, there are three relevant reconsiderations of the original hypothesis to explain differences in political knowledge gain: boundary conditions, the impact of motivational determinants, and the role of media type. First, four boundary conditions have been identified by the authors (Donohue, Tichenor, & Olien, 1975). Knowledge gaps close or do not develop at all if an issue is of local importance, is controversial, if the structure of the community is homogenous, or if media coverage declines. Second, beginning with Ettema and Kline (1977), motivational aspects have been discussed in the formation of knowledge gaps. It has been argued that motivational factors such as need for information (e.g., Horstmann, 1991) or perceived risk (e.g., Viswanath, Kahn, Finnegan, Hertog, & Potter, 1993) may also account for knowledge gain. The interplay between education and motivation has further been investigated by Kwak (1999) who presented empirical findings that high motivations have the ability to narrow knowledge gaps. Third, the use of disseminated information in different media types has been found to significantly influence the formation of knowledge gaps. Empirical evidence suggests that knowledge gaps between different educated social strata results mainly from the consumption of print media, while exposure to TV news has in large part been connected with the ability to narrow knowledge gaps (e.g., Jerit, Barabas, & Bolsen, 2006; Shehata, 2013).

Political Knowledge in the Online World

Since the rise of the Internet, the number of empirical studies assuming a huge impact of (digital) media on recipients' political knowledge has dramatically increased. In this paragraph, we will explain how this assumption is theoretically justified and whether this assumption is confirmed by empirical research. In order to systemize the literature, we distinguish three types of knowledge gaps (Wirth, 1997): information supply-related knowledge gaps, information utilization-related knowledge gaps, and information reception-related knowledge gaps.

Information Supply-Related Knowledge Gaps

Information supply-related knowledge gaps develop when the flow of political information increases in media channels that are more frequently used by certain segments of the society than by others. In order to explain

this type, the knowledge gap hypothesis has been advanced to the hypothesis of the digital divide (Norris, 2001; van Dijk, 2006). The hypothesis suggests that the unequal distribution of access to the Internet depends on socioeconomic and demographic conditions (e.g., wealth, education) and entails an inequality in personal and economic opportunities. It has been suggested that the digital divide reinforces and reproduces social inequalities in the offline world as digital and social exclusion may be intertwined (Helsper, 2012). In this context, it has been shown that especially well-educated and financially well-situated people actively use the Internet for information and education as well as personal development in contrast to less privileged people (e.g., Hargittai & Hinnant, 2008; van Deursen, van Dijk, & ten Klooster, 2015). Inequality in Internet access may be especially important because it has often been assumed that online media are particularly contributing to political knowledge. This assumption is largely based on technical advantages: First, online media are not restricted in space and time like their offline counterparts and can, therefore, make more space available for political news coverage than offline media. Second, their hyperlink structure allows users to quickly make use of information from different news sources. Third, online media employ multimedia and interactive elements like videos, audio content, and user comments that probably contain additional information (e.g., Steensen, 2011). But, thus far, only a few studies have empirically tested how much the content of political online media differs from the content of political offline media. All in all, they show that online media still do not completely make use of the technical advantages of the Internet. Therefore, no big differences between online and offline media are visible (Curran et al., 2013; Quandt, 2008).

Information Utilization-Related Knowledge Gaps

Information utilization-related knowledge gaps develop when some segments of the society make greater use of the increased flow of political information on the Internet than others. On the one hand, some people may completely avoid political information online, and for example, only use it for entertainment purpose. On the other hand, there may be differences in the way people use political information on the Internet leading to the fact that some gain political knowledge while others do not (e.g., Wei & Hindman, 2011; Zillien & Hargittai, 2009). One possible cause of utilization-related knowledge gaps is discussed in the fragmentation hypothesis. The fragmentation hypothesis distinguishes between fragmentation of media content and fragmentation of media use. The assumption of fragmented media content has been fuelled by the advent of the Internet, as the growing number of online information channels is accompanied by an increasing specialization of content, with websites offering different information to different target audiences (Tewksbury,

2005). If the fragmented media content is accompanied by fragmented media use, it can negatively affect the public's political knowledge. Fragmented media use results when media consumers only turn to the information disseminated in online channels that share their political point of view. Consequently, this results in different audience segments that do not share a common political knowledge as they have not received the same information through mass media (e.g., Sunstein, 2007). Fragmentation of online information use may be enhanced by algorithms used by online search engines like Google or social media like Facebook. As Pariser (2011) suggests, online users may be trapped in a so-called filter bubble, which he describes as "a unique universe of information" (p. 9) that is created by technical applications. Their web algorithm extrapolates what information an Internet user is interested in based on personal information and previous search history. Filtering all information through these personalized profiles, the algorithm predicts and selects the information the user would probably like to receive next. Consequently, users with different views on a political issue could receive different information on that issue and, therefore, may differ in the political knowledge they hold as disturbing information will not invade the safe haven of the filter bubble. But, thus far, empirical studies on exposure to political information suggest that neither the fragmentation of media use (Trilling & Schönbach, 2013a, 2013b; Webster & Ksiazek, 2012), nor the personalization of media content (e.g., Feuz, Fuller, & Stalder, 2011) are visible to a large extent. Instead, most people still rely on a large amount of different information sources when informing themselves about politics online and offline.

Information Reception-Related Knowledge Gaps

Information reception-related knowledge gaps will develop if segments of the population are more efficient in retrieving information available in online media than others. Empirical findings suggest that different segments within a developed society vary substantially in their operational, formal, informational, strategic, and communicational skills with regards to the Internet (van Deursen, Courtois, & van Dijk, 2014; van Deursen & van Dijk, 2011, 2014). Highly educated, younger, and more experienced online users outperform others in the majority of these Internet skills. It has thus been suggested that the original hypothesis of the digital divide needs to be extended to a second-level digital divide including differences in skills to use the Internet (Hargittai, 2002; van Deursen & van Dijk, 2011).

   Because many people are more or less unable to deal with the amount of information provided by the Internet, most recent empirical studies on the effects of the Internet on political knowledge do not show greater effects than those of offline media on political knowledge (e.g., Dimitrova,

Shehata, Strömbäck, & Nord, 2014; Lee & Yang, 2014; Su, Cacciatore, Scheufele, Brossard, & Xenos, 2014). In this case, the benefit of integrating the information processing perspective in the traditional knowledge gap research becomes obvious. A theoretical approach that has been applied to explain the differential impact of online and offline information channels on learning from the news is the limited capacity model (Lang, 2000). According to the model, news information processing encompasses three sub-processes: (1) during the process of *encoding*, a manageable fraction of the information that has been gathered by one's sensory receptors is transferred into the working memory; (2) *storage* refers to linking the new information to existing memory; and (3) *retrieval* is the process that reactivates stored knowledge. It has been argued that processing the information disseminated in online media requires substantially more cognitive effort than the processing of information in traditional offline media as, for example, more decisions have to be made to navigate through the web. Empirical findings indicate that the recipients engage in lower levels of information processing due to the cognitive overload. Consequently, they gain knowledge only on a few topics in which they are especially interested (e.g., de Waal & Schönbach, 2008; Eveland & Dunwoody, 2002).

Summing up all three aspects of the influence of online media on the emergence of knowledge gaps, we can conclude that there is a contradiction between theory and empirical findings. On the one hand, theories consistently assume huge effects of online media on political knowledge for several reasons. From a normative perspective, those effects can be considered as positive, because media exposure is supposed to enhance citizens' knowledge. But they can also be considered as negative, because this does not apply to all citizens to the same extent. On the other hand, empirical findings suggest that the effects of the exposure to online media are rather minimal and even smaller than those of offline media. How can this be explained? First, most studies trying to uncover the causes of political knowledge treat (online) media exposure as independent variables and fail to determine which information has actually been disseminated by those media. Because there is no content analysis data gathered, it remains unclear whether online or offline media in a given period of time distributes more relevant information on a given issue, and which may therefore contribute more to knowledge gain. Moreover, it is highly unlikely that habitual media use is the relevant independent variable causing knowledge gain. Instead, it rather serves as a shortcut for the media information an individual is exposed to. Therefore, combining survey and content analysis data would allow a more accurate examination of the impact of specific media content on the recipients' political knowledge.

Second, there is still not much known about how people exactly use political information online. This especially concerns the question of

whether or not they make use of its technical features like multimedia and interactive elements that are often quoted as the most relevant advantages of online media in the process of knowledge acquisition. Therefore, a possible reason for the absence of huge effects of online media on political knowledge may simply be that most people ignore those features and mainly use the text provided in online media. Third, most studies on the effects of (online) media exposure on factual political knowledge (objective conception) use single surveys instead of panel designs and are thus not able to uncover cause-and-effect relations. Moreover, the few experimental studies dealing with knowledge as the result of individual information processing (subjective conception) measure the effects of single news stories on recipients' knowledge, although it can be assumed that knowledge especially occurs when certain core messages are frequently received. Therefore, despite the fact that different aspects of the knowledge gap hypothesis have already been examined in the online world, more research is needed to theoretically integrate the objective and the subjective conception and empirically compare the results of field studies on long-term knowledge gain and experimental research on individual information processing. We try to solve the contradictions between theories and empirical findings in the "digital knowledge gaps" research program that will be introduced in the following section.

"Digital Knowledge Gaps": A Research Program and Preliminary Findings

The "digital knowledge gaps" research program is an integrated approach to explain the causes of political knowledge gain. It assumes that real life events consist of several single information units that can be selected by journalists, politicians, and other communicators. Because journalistic selection criteria (e.g., news factors) differ from the selection criteria of, for example, politicians (e.g., persuasion strategies), different information sources convey different information on political issues. Recipients are exposed to several different information sources, which they select due to their psychological predispositions, interest in politics, prior attitudes, etc. The frequency an individual is exposed to a certain information unit in the used media content is the most relevant predictor of individual knowledge gain. Whether knowledge gain occurs depends on intervening variables such as an individual's prior knowledge, interest, and attitude as well as their information processing strategies. This whole process is assumed to be subject to change by the growing role of online media for political communication discussed above: (1) differences in the content of online and offline media (information supply); (2) differences in the way recipients use online and offline media (information utilization); and (3) differences in the way online and offline information is processed (information reception). Figure 5.1 displays these considerations in a graphical model.
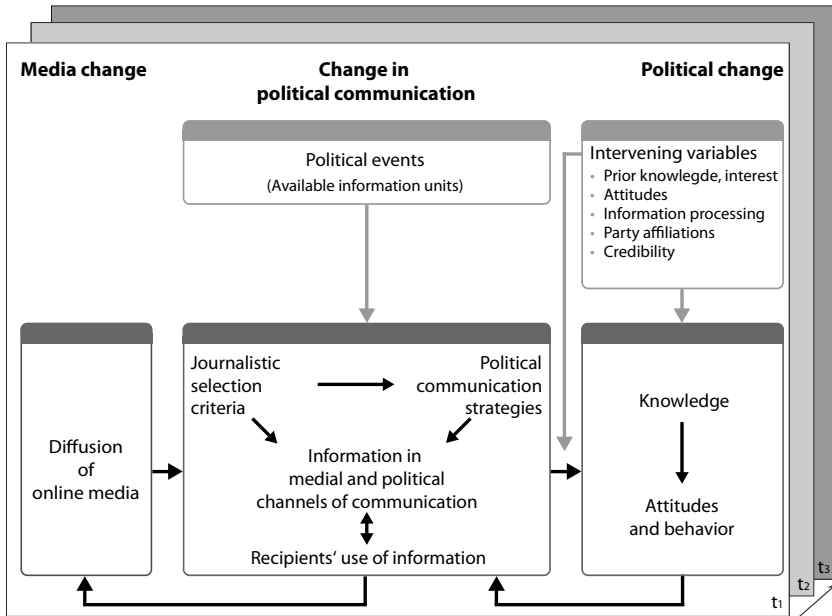
Figure 5.1 Research Model

To test this model, several empirical studies have been conducted using the political issue of climate change as an example. To do so, multiple research methods have been applied. The content of about 50 German online and offline information sources (mass media, websites of political parties, political talk shows, etc.) has been analyzed in the long-term using quantitative content analysis with the database ARTICLe (Automatic RSS-Crawling Tool for Internet-Based Content Analysis; see Chapter 11). Recipients' general media use and their knowledge gain on climate change have been examined by representative panel surveys before and after the publication of the 5th report of the Intergovernmental Panel on Climate Change (IPCC) in 2013. How recipients make use of multimedia and interactive elements on political websites and how this is connected to their predispositions has been analyzed by a combination of eyetracking and logfile analysis. The influence of exposure to online and offline media content on knowledge gain on climate change has been examined by combining content analysis and panel survey data. Finally, the role of individual information processing for political knowledge gain will be examined in a series of experiments partly conceptualized as prolonged exposure experiments.

Information Supply

Concerning information supply, our content analyses show that online media distribute slightly more information on climate change than

offline media. This holds true for the coverage on the annual climate change conferences, which we have analyzed since 2011 (Haßler, Maurer, & Oschatz, 2014) as well as for the coverage on the 5th IPCC report published 2013 (Maurer, Oschatz, & Haßler, 2015) even though online media do still not make full use of their technical advantages: On the one hand, politically relevant websites now use multimedia elements much more frequently than some years ago. On the other hand, interactive elements are still rare, and most hyperlinks do not provide additional up-to-date information, but lead to articles published earlier by the same medium (Oschatz, Maurer, & Haßler, 2014). When comparing the coverage of online and offline media with the content of official documents as indicators of real life events (e.g., official protocols of climate conferences or the IPCC report), it becomes obvious that both online and offline channels select only a very small proportion of the information available (Maurer, Oschatz, Haßler, & Schaaf, 2015). This holds especially true for the websites of political parties, presenting information in an extremely selective way resulting in content that clearly differs from the content of mass media (Haßler et al., 2014). Consequently, whether citizens will be able to gain knowledge depends on what information sources they are exposed to.

Information Utilization

Concerning information utilization, our studies on citizens' media exposure show that almost all of our panel respondents used a variety of information sources. Most of them used traditional offline media such as television news and local newspapers. Those who were exposed to information on climate change in online media mainly used the online counterparts of traditional news media. Only a minority was exposed to the websites of political parties, interest groups, or scientists when looking for information about climate change (Maurer et al., 2015). Consequently, a fragmentation of information regarding climate change caused by the diffusion of online media was not observed. Looking at online use more in detail, most people still seem to use the Internet as a more or less text-based medium. When analyzing subjects' gazes while being exposed to information on climate change on various political websites including multimedia and interactive elements, we found that a considerable amount of them neither took notice of the audiovisual material nor looked at user comments or social media statistics. When taking logfile-data into account, it even became obvious that a majority of those who noticed the audiovisual material did not make use of it. Hyperlinks were also hardly used. That held even true for those who were highly involved in the issue of climate change (Haßler, Maurer, & Oschatz, 2015). Consequently, the effect of online media is limited for two reasons: First, most people still use offline media to become informed

about political issues. Second, most online users do not make use of the technical advantages of the Internet and, therefore, miss some of the information online communication additionally provides.

Information Reception

Concerning information reception, our panel surveys show that German citizens already knew a lot about climate change prior the publication of the 5th IPCC report. Nonetheless, a considerable part of the population gained additional knowledge. This was particularly observable when the respondents' answers to open questions on the consequences of climate change before and after the publication of the report were compared. Knowledge gain was explained by the individual amount of information on the consequences of climate change every single respondent received between the two panel waves in offline media. No such effect was found for the information received from online media. The effect occurred independently from the recipients' predispositions and information processing strategies but occurred in higher educated segments of the population to a larger extent than in less-educated segments. This supports the knowledge gap hypothesis (Maurer et al., 2015). Whether this finding can be explained by recipients' abilities to use the Internet and the role played by their prior knowledge and attitude as well as their information processing strategies play for knowledge gain on climate change will be examined in a series of experiments that will be conducted during 2015 and 2016.

Conclusion

Several theories assume a huge impact of online communication on recipients' political knowledge and the emergence of knowledge gaps between different segments of the society. The technical advantages of the Internet allow recipients to easily access a huge universe of diverse information at relatively low informational costs. But, thus far, empirical research largely fails to support this assumption. All in all, we identified three possible reasons for that contradiction: First, there are small differences between the content of online and offline information sources (information supply). Second, many people use offline information sources when informing themselves about political issues or use text-based online information and, therefore, do not make much use of the technical advantages of the Internet (information utilization). Third, many people might be challenged by the amount of information they can find on the Internet and may therefore not be able to adequately process this information (information reception). These questions have not been adequately addressed in the research regarding knowledge gaps caused by online communication. The "digital knowledge gaps" research program aims to find answers to some of these questions, while others are still untapped. Dealing with

these questions is useful for at least two reasons: First, from a normative point of view online communication by the mass media or political actors can be improved in order to enhance its effects on political knowledge. Second, perhaps the information processing approach dealing with the use of online communication, which is much easier observable compared to the use of newspapers or television, gives deeper insights in individual information processing.

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6 The Spiral of Silence Revisited

Christiane Eilders and Pablo Porten-Cheé

Introduction

The "return to the concept of powerful mass media" (Noelle-Neumann, 1972) proposed a paradigmatic change in media effects research that emphasized long-term effects of consonant and cumulative media messages rather than on short-term effects of individual media messages. The *spiral of silence theory* precisely embodied this new paradigm. Given that mass media serve as persistent sources of information about the social environment in general and public opinion in particular, consonant and cumulative media messages were assumed to affect attitudes and behavior. As the theoretical framework of the spiral of silence rests on many premises that may no longer be presumed under conditions of online communication, this chapter discusses which concepts have to be reconsidered and whether the assumptions still hold. Drawing on theoretical analyses and scattered empirical evidence of a spiral of silence online, it investigates how online media shape people's selection of media content, perception of public opinion, willingness to speak out in public, and opinions.

This chapter first sketches out the basic assumptions and the architecture of the spiral of silence theory and then reviews the empirical evidence for the assumed effects. The theoretical foundation is then related to the high-choice online environment. A review of empirical studies on the spiral of silence under online conditions includes findings from our own empirical investigation of the German debate on climate change and on the Federal Election in 2013. Finally, we summarize the most significant factors affecting the spiral of silence online and suggest new directions for future research.

Cornerstones of the Spiral of Silence

Context of Discovery

The surprising victory of the Christian Democrats (CDU) in the national German election of 1965 marks the starting point of spiral of silence

research. Whereas the two camps, CDU and Social Democrats (SPD), had shown a similar level of support throughout the year, the CDU suddenly won ground in the last few weeks prior to the election, while the SPD lost about the same amount of support in that short period of time (Roessing, 2009, p. 22).

The surprising victory of the CDU contradicted what surveys had predicted before. Trying to explain this "last-minute swing," Noelle-Neumann found that, preceding the surprising change in party support, there was a considerable change in the expectations of the election victory. She showed that people had suddenly started to expect the CDU to win and, in order to avoid social isolation, they fell silent if they supported the SPD, whereas they gained confidence and spoke up in public if they supported the CDU. This reinforced people's growing impression that the CDU would win the elections and affected their voting decisions. According to Noelle-Neumann, this dynamic turned around the election outcome at the last minute. This dynamic was observed again in the 1972 elections when the SPD benefitted from the last-minute swing. Noelle-Neumann attributed the change in support for political parties before and in the election to shifts in the expectations of the election outcome (Noelle-Neumann, 1974).

The phenomenon observed in 1965 and 1972 was the empirical starting point on which Noelle-Neumann built the theory of the spiral of silence. The basic notion was first published in English in 1974. It took shape in the course of further empirical testing and identifying the conditions under which the spiraling process was likely to start. While the initial focus of the empirical work was on election outcomes, it was later broadened to include a wide range of political and societal issues. More and more issues were tested empirically, but that also meant that more requirements for the issues were introduced. Only a few issues showing particular characteristics qualified as potential contexts for spirals (Roessing, 2009, p. 77). The characteristics were later turned into a fixed set of premises that had to be fulfilled in order to spark and fuel a spiraling process (Noelle-Neumann, 2001; Noelle-Neumann & Petersen, 2004).

The type of issue was one of several specifications Noelle-Neumann introduced in the course of her further research. Another specification pertained to the role of mass media in the architecture of the theory. Mass media especially gained particular significance in the investigation of the 1976 elections in Germany. Noelle-Neumann had detected a dual public opinion with the media, especially TV, showing an opinion climate that was much more in favor of the coalition between SPD and Liberals than the majority of the citizens. Noelle-Neumann claimed that this media bias initiated a spiral of silence that finally caused the left-liberal coalition's victory (Noelle-Neumann, 1977) because the media, serving as an important source in monitoring the social environment, mislead

the audience to think that the coalition enjoyed broad public support (Noelle-Neumann, 2001).

Architecture of the Spiral of Silence Theory

The spiral of silence theory in the most general sense states that due to *fear of isolation* people monitor the *climate of opinion* via the media and other sources of information about their social environment. According to Noelle-Neumann, the monitoring is enabled by a "quasi-statistical sense" (Noelle-Neumann, 2001, p. 164). If, in the reflection of media coverage, they see themselves in the minority or sense that their opinion is losing ground, they are unlikely to express their opinions in public. This starts a process in which the alleged majority increasingly wins ground while the alleged minority loses ground. At the end of the process, the distribution of opinion has shifted in favor of the alleged majority opinion. As this shift is a consequence of perceived public opinion, which is influenced by media coverage, it is obvious that the mass media play an important role in this model (Scheufele & Moy, 2000). The mass media provide easy access to the universe of opinions beyond one's immediate environment and beyond the opinions of others accessed via interpersonal communication. For the audience, mass media indicate public opinion, even though this perception may be biased.

The spiral of silence theory can be divided into three assumptions, each relating to different effects within the spiraling process. The first assumption addresses the effect of mass media on *people's perceptions of public opinion*, the second assumption deals with the effect of congruency between perceived public opinion and people's own opinions on *willingness to speak out* in public, and the third assumption regards the effects of this congruency on individuals' attitudes and behavior, which then add up to a shift in *public opinion* on the macro level. The aggregation of individual effects on the macro level may be modelled as part of Coleman's boat (1990) (see also Chapter 10). As the spiral of silence theory brings together micro level effects and macro phenomena, it is particularly suited for applying this concept of bridging micro–macro gaps (Schulz & Roessler, 2013).

The assumed effect on attitudes and opinions is an integral part of the spiral of silence theory and has undoubtedly contributed to the great amount of scholarly attention. Nevertheless, the third assumption is disregarded in most reviews of the research tradition (see Scherer, Tiele, & Naab, 2006 for an exception) because empirical tests on the spiral of silence theory tend to stop at the second assumption, which is often considered the core hypothesis of the theory. Accordingly, willingness to speak out is considered the key variable of the theory (Roessing, 2009; Scheufele & Moy, 2000).

Noelle-Neumann introduced several premises that have to be met if the mechanism is to start. First, the issue has to be a *topical controversy* with public opinion being about to shift, so there are opposing camps that still change in size involved in a controversial debate that is being observed by a wider audience (Noelle-Neumann, 2001, p. 366). Second, the issue has to be *morally charged* so people are likely to become involved. This premise has been much discussed in the course of the research tradition, although elections, which formed the context of discovery for the spiral of silence theory, did not always fulfil this criterion (Roessing, 2009, p. 93).

Another premise is a high degree of *consonance* in the media environment. Consonance is crucial for spiraling processes—as well as for most other media effects (Peter, 2004)—because unanimous media coverage may nourish the impression of a united majority sharing the opinion expressed in the media. Individuals deviating from that opinion may fear isolation and fall silent (Noelle-Neumann, 1993, 2001). Only then may the described public opinion dynamic start. Consonance rests on the implicit notion of a mass audience. Under conditions of consonant media messages, the audience is highly integrated because they all rely on the same information repertoire. In a more pluralistic media environment, however, media messages are diverse, and media cater to different groups with few overlaps so the audience splits up into sub-audiences according to their preferences. Such fragmented sub-audiences are unlikely to see themselves in the minority; they are unlikely to fall silent and thus might mislead other observers about public opinion.

A factor closely related to consonance is *cumulation*. It represents another explanation of mass media influence on public opinion perceptions. Noelle-Neumann emphasizes that it is not one individual media message which starts the dynamic, but a cumulative stream of media messages (Noelle-Neumann, 1993). As they all point in the same direction, this reinforces the media effect that builds on consonance.

Spiral of Silence in Light of Empirical Evidence

Although there is widespread sentiment "that the theory might make sense intuitively" (Bodor, 2012, p. 2), the empirical evidence supporting the key assumptions of the spiral of silence theory is rather weak. This is indicated by several systematic reviews (Glynn & Huge, 2014; Roessing, 2009; Scherer et al., 2006; Scheufele & Moy, 2000). Most research activity was related to the second assumption of the theory. The lack of empirical evidence is commonly attributed to violations of the conditions specified by Noelle-Neumann such as the moral loading of an issue (Roessing, 2009), the disregard of the time component (Bodor, 2012; Scheufele & Moy, 2000), inadequate operationalizations of willingness

to speak out (Roessing, 2009; Scherer et al., 2006) and a misunderstanding of the incongruency or dissonance of opinions as independent variable in the effects process (Bodor, 2012). In addition, the introduction of alternative explanations such as pluralistic ignorance or looking glass effect and further perception mechanisms (Fields & Schuman, 1976; Oshagan, 1996; Taylor, 1982) questioned the assumptions and the causal relations (Scherer, 1990) in the comprehensive architecture of the theory.

Given that the spiral of silence theory is a theory of social perception (Scheufele & Moy, 2000, p. 6), the low degree of attention directed to the effects of media content on public opinion perception is particularly noteworthy. There is some evidence from experiments, but these cannot account for consonance and cumulation representing the key premises of the theory. In addition, there are findings from field studies (e.g. Eveland, McLeod, & Signorielli, 1995; Gonzenbach & Stevenson, 1994; Scherer, 1990). As the studies suffered from problems relating survey data on perceived public opinion with content analyses of the media used by the respondents, however, the effects of media use on perceived public opinion are still largely unclear.

The third assumption in the spiral of silence theory has attracted the least attention in the relevant research. While there is plenty of research on the impact of media coverage on people's opinion, this is not conceptualized as an integral part of the theoretical framework of the spiral of silence. The effect of media monitoring and perceived public opinion on individual opinion formation represents the initial focus of the spiral of silence theory. Only a few scholars have scrutinized the assumption as part of a spiral of silence study. For the most part, there is only experimental evidence which is not well suited to show the long-term effects addressed in the spiral of silence (see the review in Scherer et al., 2006). A notable exception is a combination of content analysis and panel survey study by Scherer (1990) who introduced the term *conformity hypothesis* for the respective context.

Summing up, notwithstanding the great deal of research activity on the spiral of silence theory in many parts of the world, there is weak evidence that people who see themselves in a minority do not speak out in public. Due to a comparably low interest in the first part of the spiral of silence theory, in combination with shortcomings in the study designs, evidence for the predicted effects of media content on public opinion perception is also rather inconclusive. Finally, the few studies on the third part of the theory are an insufficient empirical basis for extracting a set of sound findings.

Although empirical evidence is weak, the fundamental ideas of the spiral of silence theory remain compelling and provide a sound framework for predicting effects of media exposure on perception and discourse behavior (Schulz & Roessler, 2012). Yet the need for further refinement is obvious as many concepts and findings are opaque and not very well

tested. The contingent conditions still need to be specified, especially as media and society are continuously changing. With regard to Lakatos' (1970) notion of progressive research programs, Roessing (2009) suggests the conceptualization of further empirical and theoretical work on the spiral of silence theory as part of a comprehensive ongoing research program that aims at specifying the relations between the concepts and the conditions under which the assumed effects can be found. The prevalence of online communication is an adequate occasion for reconsidering the theoretical framework and testing it under the new conditions of online communication.

Reconsidering Public Opinion Dynamics in the Online World

Since online communication today encompasses almost every segment of the population in modern societies and since both media content and media use have undergone significant changes in the course of the proliferation of online communication (Neuman, Park, & Panek, 2012), theoretical and empirical analyses are needed to assess whether the media effects theories developed in an offline mass media environment can still be applied. This regards the underlying assumptions about media infrastructure, media content, and media use patterns as well as the question of whether the media effects predicted in these theories vanish or hold. Since the spiral of silence theory is particularly demanding and rich, it is likely to need some modifications when applied to the changing media environment. We suggest a revision of three components involved in the spiral of silence theory: the concept of consonance, monitoring public opinion, and opinion expression in public. The most debated premise in spiral of silence research is consonance. It requires revision as online communication has fundamentally expanded and diversified the available information. Since that may have consequences for audience selectivity, the revision must also encompass the concept of monitoring public opinion via the media. Another change regards the concept of opinion expression. New online platforms imply new modes and forums for speaking out and with it more ease and more options to determine size and composition of people witnessing opinion expression.

Consonance

With the advent of online communication, media content has vastly expanded. This particularly regards non-journalistic online content beyond the mass media. It is commonly assumed that this expansion also means an increase in diversity. Whereas mass media have to comply with journalistic selection and presentation criteria and journalists are known for their co-orientation within their profession, non-journalistic content

follows the subjective preferences of its producers (Dylko & McCluskey, 2012), rather than common rules for processing the information. A high degree of consonance in the mass media is therefore commonly assumed (Peter, 2004, p. 150), while consonance in non-journalistic online content is much more unlikely.

Selection nevertheless comes into the picture when looking at the audience of online media. After all, an increase in audience selectivity is the unavoidable counterpart of "high-choice media environments" (Prior, 2005). According to the paradox of online communication (Mutz & Young, 2011), more content diversity may result in a decrease of diversity in individuals' information repertoires. This notion rests on the observation that people select information according to their own ideological preferences. They aim to confirm their views through information in line with their opinions rather than putting them to a test through information challenging their opinions. Schulz and Roessler (2012) refer to this as "subjective-consonant selection" (2012, p. 352). It may be assumed that selective exposure (Cotton, 1985; Garrett, 2009; Stroud, 2008) leads to a fairly consonant set of opinions in people's individual media diets that is often referred to as echo chambers (Sunstein, 2007). In case of subjective-consonant selection, they would hardly fear isolation because they mistake the selected confirmative media content for public opinion. As a result, they would speak out in public. This would lead observers to think that public opinion is quite diverse. As these observers would not see an opinion winning or losing ground, spiraling effects on speaking out would be very unlikely on the macro level. Hence, fragmentation along ideological lines is likely to prevent spirals of silence. In short, an adaptation of the spiral of silence research for the online world, consonance would persist on the individual level even under conditions of another diverse media content online. Yet the reinforcing dynamics on the macro level are unlikely to develop, and so are shifts in public opinion.

Another plausible pattern of individual media use online is the subjective-pluralistic selection (Schulz & Roessler, 2012, pp. 352–353) that includes congruent as well as dissonant information. It takes into account that even under online conditions, individuals are likely to be reached by mass media content that is not in line with their opinions and by non-journalistic online content challenging their opinions that they did not manage or chose to avoid. In this case, we cannot assume consonance in the media environment, so spiral of silence effects—as shown above—may not be expected.

While the above considerations on selection patterns may suggest that silencing processes are unlikely, we still know little about the way media use in general and selective exposure in particular affect the composition of opinions in people's individual media diets and how that shapes the

perception of public opinion and opinion expression in public. Hence, more empirical insights are necessary in order to predict the degree and the role of consonance in the online world's media content.

Monitoring Public Opinion

For monitoring public opinion, the audience in the offline world tended to rely on the tone of mass media items, while the online audience enjoys a wider variety of cues from which to infer public opinion. These cues encompass *likes*, *shares*, and *user comments* reflecting other users' responses media items and indicating their popularities. Such popularity cues are also referred to as aggregated user representations (Walther, Liang, Ganster, Wohn, & Emington, 2012), popularity indications (Knobloch-Westerwick, Sharma, Hansen, & Alter, 2005), or social endorsements (Messing & Westwood, 2012). Popularity cues serve as additional sources of information on public opinion.

Lee (2012) showed that people perceived public opinion more coherent to their own opinion when exposed to confirmative user comments. In another study, Lee and Jang (2010) found that individuals with high need for cognition inferred public opinion from user comments. Lee and Jang (2010) explained the effects with regard to exemplification research. With regard to this line of research (Brosius & Bathelt, 1994; Lee & Jang, 2010), comments can be conceptualized as vivid even though less valid representations of the opinion climate as opposed to summary type information. Since individuals tend to process media information in a low-involvement manner, they are likely to make use of heuristics. Exemplars may be processed as representative for an opinion on an issue. They can be shown to exert an influence on both the judgment of a distribution in reality and peoples' opinions (Brosius, 2003). The integration of exemplification effects into the spiral of silence theory ties in with suggestions to shed light on the mechanism of the much-debated quasi-statistical sense (Brosius, 2003).

As a distorted selection of exemplars by the media would result in a distorted perception of the opinion climate, however, popularity cues would accordingly result in misperceptions of public opinion. This is true for user comments in particular. If the comments in online media serve as exemplars and recipients rely on them for their judgments about issues, they can be assumed to exert a particularly strong impact on opinion climate perceptions and attitudes. Summary type information, however, has also shown effects on recipients' judgments (Brosius, 2003). Hence aggregate cues such as likes and shares can also be assumed to affect public opinion perceptions. Apparently, popularity cues need more consideration when elaborating on factors influencing public opinion perception online.

Opinion Expression

In the era of mass media, most scenarios used in empirical investigations of the conditions under which individuals are willing to speak out in public were face-to-face-situations with possible social sanctions (Roessing, 2009; Scheufele & Moy, 2000). Online communication now offers numerous new ways for opinion expression in public. Individuals can reach a large audience by commenting on popular media items. This might be found in online mass media outlets or certain user platforms of the Social Web, which usually address smaller and possibly very specific audiences. Users may add their slant to online content or contribute more elaborated reflections to ongoing debates or other users' posts. While the elaborate contribution means effort and might require skills to express ideas in written language, use of the like button or sharing of an item does not need a great deal of commitment. Finally, *anonymity* has attracted a great deal of attention in the online world. Under conditions of anonymity users can express opinions without fearing social isolation. Although they may perceive themselves as part of a minority, they may still contribute to online discourse anonymously. Paradoxically, anonymity may also lay ground for spiraling processes. The lack of accountability may encourage uncivility among users. This may be assumed to increase the *moral loading* of issues. In consequence, anonymity could increase the number of morally charged issues that that can be assumed to be relevant for fears of social isolation.

Empirical Evidence for the Spiral of Silence Online

There is a growing body of empirical studies on the spiral of silence online, but evidence is distributed unevenly across the three assumptions of the theory. As in spiral of silence research in the offline world, most evidence generated in this line of research regards the second assumption, which focuses on willingness to speak out. The first assumption regarding the effects on perceived public opinion hardly attracted empirical attention. Tsfati, Stroud, and Chotiner (2014) investigated the consequences of exposure to right-wing newspapers and online media on the perception of societal support for the Israeli withdrawal from the Gaza Strip ("disengagement"). They could show that both right-wing mass media and online media exposure resulted in the perception of a low level of support for the disengagement strategy. Kim, Kim, and Oh (2014) found that the perceived support for genetically modified food in the South Korean Internet was transferred to the real distribution of opinions in Korea. However, both studies showed a stronger effect on perceived public opinion by people's own opinions. This is usually referred to as looking-glass effect (Fields & Schuman, 1976). Wojcieszak (2008) also showed such projection effects in her survey. She found that the

more users engaged in Neo-Nazi online forums, the more public support they perceived for their views (false consensus effect). In an online diary study regarding the German Federal Election (Eilders & Porten-Cheé, 2014), we also found a strong looking-glass effect, but more importantly, it pointed to a dual climate of opinion. Relying on content analyses of individually received media items, we showed that, contrary to the common belief, people received a more favorable assessment of the challenger Peer Steinbrück and his party (SPD) through the media than of Chancellor Merkel and her party (CDU/CSU). Particularly, people with preference for non-journalistic online media use over mass media use perceived more public support for the SPD than for the CDU/CSU. In contrast to these results, another diary study showed no effects of media use on public opinion perception regarding the climate change debate in Germany (Porten-Cheé & Eilders, 2015). In sum, we still know little about the effects of online exposure on public opinion perception.

Regarding the willingness to speak out, the empirical literature mainly opposes the spiral of silence assumptions. Experiencing dissonance between one's own opinion and perceived public opinion does not inhibit opinion expression (Eilders & Porten-Cheé, 2014; Ho & McLeod, 2008; Kwon, Moon, & Stefanone, 2014; Liu & Fahmy, 2011; Mayer-Uellner, 2003; McDevitt, Kiousis, & Wahl-Jorgensen, 2003; Porten-Cheé & Eilders, 2015). One of our studies (Porten-Cheé & Eilders, 2015) showed that, contrary to the silencing hypothesis, opinion dissonance even encouraged opinion expression. These findings may show that media exposure does not affect public opinion perception. Accordingly, people would not be aware of public opinion and would not see a problem to express minority opinions in public. Yet there is also some evidence to support the spiral of silence under online conditions (Gearhart & Zhang, 2013; Kim et al., 2014; Nekmat & Gonzenbach, 2013) and mixed evidence *within* one study (Yun & Park, 2011). Although the findings are mixed and although they rely on different concepts for willingness to speak out and opinion dissonance, in total, there is a lack of support for the silencing hypothesis.

Differential effects are detected for the various conditions of expressing opinions in face-to-face or online situations without real names. Our studies show that anonymity catalyzes opinion expression (Eilders & Porten-Cheé, 2014; Porten-Cheé & Eilders, 2015). This ties in with studies not related to spiral of silence research (e.g., Joinson, 2001). Yet other spiral of silence studies hardly support this finding (Mayer-Uellner, 2003; Yun & Park, 2011). Using non-journalistic online media also has an unclear effect on opinion expression: Gearhart and Zhang (2013) found evidence for a positive effect, Kwon et al. (2014) found evidence for a negative effect, and our own studies hardly found any effect (Eilders & Porten-Cheé, 2014; Porten-Cheé & Eilders, 2015). Further research is needed to clarify both the effect of exposure to non-journalistic online

media and anonymity in opinion expression on discursive behavior in online environments.

Challenges and Future Directions

The spiral of silence approach neatly ties in with other feasible middle range theories that address micro processes of perception and opinion formation under online conditions (see Chapters 2 and 7). From a political communication perspective, the relevance of the question of how the Internet changes the dynamic of public opinion formation is undoubted. It comes as no surprise that scholars have already started to investigate whether the spiral of silence theory holds under conditions of online communication. The discussion of changes in the media environment shows that the concept of consonance, representing one of the theory's crucial premises, needs to be reconsidered in the light of high-choice media environments. If individuals select information according to their ideological preferences, they are likely to encounter mostly confirming and consonant opinions. They may accordingly think public opinion is in line with their own opinion and speak out in public without fear of isolation. This means that even under conditions of consonance a spiral of silence is unlikely to develop.

As empirical studies have shown considerable support for this kind of selection pattern, we expect internally homogeneous spheres of consensus that differ between users with different ideological beliefs. This fragmentation effect prevents people from seeing themselves in the minority, suffering from fear of isolation and falling silent. Hence, it comes as no surprise that most studies could not show that opinion dissonance inhibited opinion expression under conditions of a fragmented online media use.

As the elaboration on fragmentation in the online world shows, perception resulting from individual media diets is the key to understanding when and how spiraling processes develop. Since mass media can still be assumed to reach large segments of the audience with opinions not in line with the ideological beliefs of all audience members, individuals may encounter some dissonant information via the mass media. The audience's perception of public opinion thus depends on the degree of reliance on the presumed rather consonant sets of non-journalistic online media. Hence, individual media diets need to move into focus.

Regarding opinion expression, the Internet offers low effort and anonymous venues for participation in discourse. This increases the chances that individuals, uncomfortable with the perceived public opinion, make contributions to public discourse. As a result, the diversity visible in discourse may be enhanced, thus reinforcing a willingness to speak out for other individuals who would elsewise see themselves in the minority. Thinking this idea to the end, the spiral of silence can be stopped or

slowed down through the chance of anonymous contributions of opinions deviating from the alleged majority.

With regard to the third assumption of the spiral of silence, future research should close the persistent research gap on the effects of public opinion perception on attitudes and opinions. Focusing on attitudes and opinions might also inspire further investigations of the micro–macro gap. It might even shed light on the process in which macro level public opinion is formed from micro level opinions and micro level discursive behaviors.

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7 Third-Person Effect and Influence of Presumed Media Influence Approach Revisited

Marco Dohle and Uli Bernhard

Introduction

Why do individuals support the idea of restricting certain media content or the idea of limiting the media's power in general? Why can coverage of election campaigns cause citizens to vote for a party even though they do not favor its political agenda? What motivates politicians to spend time on press relations and to generally behave in a media-friendly way? And why do individuals become politically active when their political position is not sufficiently represented in the media? There are numerous answers to each of these questions. Yet the attitudes and behaviors described can also partly be explained by the *perception* that media content or the media in general have strong influences, namely on those people who are believed to use the media content. If, for example, individuals think that media content has a strong and negative influence on other people, they might come to the conclusion that this content should be banned. Also, if people presume a great political media influence on others and perceive media coverage to be negatively biased, this could lead them to counter these presumed influences through increased political efforts.

Thus, media can gain (political) significance because people assume that *others* are (politically) influenced by them. This assumption is at the heart of the *third-person effect* (Davison, 1983) and the *influence of presumed media influence approach* (Gunther & Storey, 2003). Both are well-proven theoretical approaches; the third-person effect in particular can be considered one of the central concepts of media effects research (Bryant & Miron, 2004). However, it is still to a large extent unclear: How valid are the core propositions of those approaches when applied to the *online world*?

In order to examine the validity of these approaches in an online context, this chapter will provide an inventory starting with an outline of the central assumptions of the third-person effect and the influence of presumed media influence approach. Afterwards, the current state of research will be presented. Finally, the chapter will discuss whether the assumptions will have to be reconsidered with respect to online communication and

its specific characteristics. The focus will be on the perceived influences of political communication.

Basic Assumptions

In the past three decades, theoretical approaches that make statements about individuals' perception of media influences on others and about the consequences that follow from these perceptions have established themselves in communication research. The third-person effect can still be considered the central concept in this field. It consists of two main components (Davison, 1983). The first component is concerned with the *perception of media influences* itself; the second deals with the *consequences of presumed media influences* (as does the influence of presumed media influence approach).

Presumed Media Influences

Individuals often believe other people (so-called third persons) to be more influenced by media content than they themselves (so-called first persons) are. This first basic assumption of the third-person effect is usually called *third-person perception* or *perceptual bias*. Such differences in perception are traditionally detected by having respondents assess the influence that media content has on themselves and on other people. Thus, the third-person perception is a "relational concept" (Gunther, Perloff, & Tsfati, 2007, p. 186).

Assumptions about media influence can be the consequence of the reception of specific content (see Figure 7.1). However, it is just as possible to make such assumptions without ever having used this content: Presumptions about the influence of political videos on *YouTube*, for example, can be developed even if one has never seen content on this online platform.
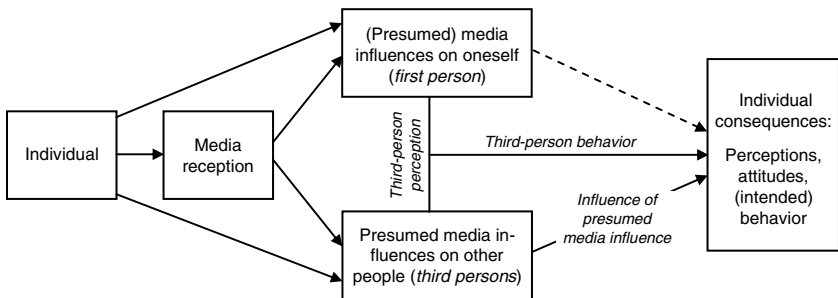
Figure 7.1 Model of the Main Propositions of the Third-Person Effect and the Influence of Presumed Media Influence Approach (Dohle, 2013, p. 20)

Different causes are thought to be the origins of third-person perceptions. A rough distinction can be made between motivational and cognitive explanations (Tal-Or, Tsfati, & Gunther, 2009). *Motivational mechanisms* result in misjudgment of influences on oneself. One such mechanism is self-enhancement (e.g., Meirick, 2005). According to this approach, people try to maintain or enhance a positive self-image. One possible way of doing so is to believe oneself, as opposed to others, to be immune to unwanted (media) influences. In contrast, *cognitive mechanisms* result in influences on others being misjudged. Thus, cognitive explanations focus on the presumed users of media content, for example on their presumed vulnerability. The influences of media reception on others can be considered so strong because, among other things, individuals draw conclusions on the basis of schemas or stereotypical notions of groups (e.g., Price, Huang, & Tewksbury, 1997; Scharrer, 2002).

Additionally, several variables have been identified as relevant to the strength of third-person perceptions. For example, the more objectionable the observed messages and the presumed influences, the worse the perceived quality of the content, the greater the perceived (psychological or social) distance to the third persons, and the more intensive the implied use of the respective content by those third persons, the greater the presumed influence on others as opposed to the influence ascribed to oneself (e.g., Sun, Pan, & Shen, 2008).

Consequences of Presumed Media Influences

The second basic assumption of the third-person effect focuses on verifiable effects of the presumed influences: When consequences arise from third-person perceptions, this is often referred to as *third-person behavior* or as the *behavioral component* of the third-person effect. However, in addition to behavior and intended behavior, the presumed influences can also affect individuals' perceptions and attitudes (see Figure 7.1).

The influence of presumed media influence approach has been established as an additional perspective. Here third-person perceptions are irrelevant; only the perception that media have (strong) influences *on other people* is important. Moreover, the influence of presumed media influence approach is primarily concerned with the consequences of the presumed media influences: "People perceive some influence of a message on others and then react to that perception of influence" (Gunther & Storey, 2003, p. 201; see also Figure 7.1). This process is not only simpler, but also less ambiguous than the assumption concerning the third-person behavior. If, in contrast, third-person perceptions form the independent variable, it is unclear how either the presumed influences on self or the presumed influences on others affect the dependent variable (Schmierbach, Boyle, & McLeod, 2008). Furthermore, it is not possible to "distinguish between those who perceive media content to have high influence on

themselves and on others and those who perceive media content to have low influence on themselves and on others" (Lo & Paddon, 2000, p. 81). For these reasons, among others, the influence of presumed media influence approach has gained in importance compared to the third-person effect.

Regardless of the perspective chosen, Tal-Or et al. (2009) have identified three general, distinguishable consequences of presumed media influences: prevention, coordination, and normative influences. *Prevention* is connected to the desire to restrict or even ban certain media content for fear that this content could have a strong and negative influence on other people (see also Davison, 1983). Individuals can also try to react to presumed media influences on others by changing their own views or behavior, hoping that these changes will help them achieve their objectives. This is called *coordination*, and it can include adaptive as well as dissociative processes. The third category, *normative influences*, is quite similar to the aforementioned one. However, these processes are to a lesser extent based on reasons of utility, but rather on the compliance with (or the willful defiance of) norms. The dissemination of these norms among other people is expected due to media coverage and its perceived influences.

Current State of Research: Presumed Influences and Political Communication

To date, more than a hundred studies on the third-person effect and the influence of presumed media influence approach have been published (for an overview, see for example: Brosius & Huck, 2008; Gunther et al., 2007; Sun, 2013; Tal-Or et al., 2009). The third-person perception hypothesis can be considered well proven (Sun et al., 2008). With respect to the consequences of the perceived influences, many fewer findings are available, and the results are also more ambiguous: The strength of the effects differs according to the dependent variables and the definition of the independent variable (e.g., Schmierbach et al., 2008). Thus, a number of studies were able to detect consequences of third-person perceptions, but some studies were not (e.g., Xu & Gonzenbach, 2008). In contrast, using the presumed influence on others only—according to the influence of presumed media influence approach—appears to be the more promising option for detecting significant consequences (Tal-Or et al., 2009, p. 108).

Presumed Political Media Influences

Many studies on presumed influences and their consequences have been undertaken in the field of *political communication*. In the following, the focus will be on those studies. Research on presumed influences of political

content is not fundamentally different from research on presumed influences in other fields. Still, there are some specific consequences of presumed political media influences. Furthermore, political media content as well as the effect of that content is often viewed with some skepticism but is not considered as fundamentally negative as content in other fields (such as pornography, advertising, or movies containing violence) that third-person research also addresses.

With respect to political communication, assumptions of strong influences on other people must be expected simply because for large parts of the population, the media are often the only possible sources of information about politics and political processes. This is probably one reason why clear third-person perceptions have been found in studies on the presumed influences of political media content. Many of those studies were concerned with presumed influences of media coverage and political campaigning during elections (e.g., Cheng & Riffe, 2008; Gardikiotis, 2008) or with presumed influences of opinion polls (e.g., Lee, 2010; Price & Stroud, 2006).

Consequences of Presumed Political Media Influences

Which consequences do result from presumed influences of political media content? Very often, this has been examined with regard to the *support of censorship* of political messages; it was found that third-person perceptions or presumed influences on others could be relevant predictors of such claims in political contexts as well (e.g., Lo & Paddon, 2000; Wei & Lo, 2007; Wei, Lo, & Lu, 2011).

Other studies have proven that presumed political media influences could have consequences that go beyond calls for censorship. For example, Rojas (2010) has introduced the term *corrective actions* to describe individual actions by which people try to correct public opinion that they think has been affected by media coverage. When viewers or readers ascribe a strong political influence to the media and perceive coverage to differ from their own point of view, they intensify their efforts to counter the presumed media influences. Their aim is to spread their own views about questions at issue among the public. Rojas (2010) has found that presumed media influences actually do have an impact on quite different forms of corrective actions, for example spreading one's own views through online media or participating in demonstrations. Barnidge and Rojas (2014) show that presumed media influences also increase the frequency of personal conversations about politics.

Voting behavior can also be interpreted as a form of corrective action. The assumption of strong media influences on others leads people to become active themselves and to counter those influences on others by participating in elections. Golan, Banning, and Lundy (2008), for example, had their respondents assess the influences of campaign ads. Results

show that the stronger the third-person perceptions, the more the spots made the respondents want to cast their votes in the respective campaigns (see also, Lin, 2014; however, for contrary effects see: Banning, 2006). Cohen and Tsfati (2009) concentrated on strategic voting: People might, for example, vote for a party hoping that it will enter the parliament and form a coalition with the party they actually favor. Such voting decisions could be based on considerations of other voters' behavior, which is presumed to be influenced by the media. As a consequence, people could try to use their own voting decisions to counterbalance the presumed media influences and the presumed behavior of others. Findings from various studies of Cohen and Tsfati (2009) support this assumption.

Especially in the debate about the mediatization of politics, politicians are frequently accused of organizing their political activities according to the demands of the media (see Chapter 9). One reason for this behavior could be "a strong belief among political elites in media impact on the electorate" (Cohen, Tsfati, & Sheafer, 2008, p. 232). Cohen et al. (2008) explored this assumption by surveying the members of the Israeli parliament about the media influences the parliamentarians perceived. In addition, they measured the parliamentarians' *media activities and media presence*. The parliamentarians' assumptions about media influence on other politicians had no consequences. The assumption, however, that the media had a strong influence on the electorate caused the politicians to intensify their media-friendly activities. This, in turn, resulted in an increased presence in media coverage.

Presumed Influences and Online Media

The Specifics of Online Communication

Why would people presume specific influences of *online* media? And why should this lead to particular consequences? After all, an early meta-analysis showed that it was irrelevant for the occurrence of third-person perceptions whether people had to estimate the influence of media in general, or the influence of newspaper, radio, or television content (online media were not included in this analysis; Paul, Salwen, & Dupagne, 2000). Banning and Sweetser (2007) instructed their respondents that the texts they were shown were either from a newspaper, a newspaper's online service, a news broadcaster's weblog or an individual's weblog. Notably, there were hardly any differences in third-person perceptions of the different versions.

However, several scholars have argued that *particularities of online media* could be relevant to the perception of online media influences and the consequences of that perception. According to Li (2008), for example, the use of online media requires more capacities than the use of traditional media; users need, for instance, certain technical knowledge or

selection skills. That is why online users could be considered more competent and consequently less susceptible to influences.

Another characteristic is the relatively high degree of activity of online media users compared to the activity of traditional media's recipients: Online users can comment on articles in online newspapers, post their opinions in forums, write blogs or create their own homepages. Simply being conscious of such activities can have an impact on the perceptions of others' susceptibility (Li, 2008). Tal-Or et al. (2009) also emphasized the fact that in many online offerings, at least part of the user communication is visible for the public: Online users see statements of other users; moreover, in newsgroups and on social media platforms users can communicate directly with each other. Thus, the audience perceives itself: It is not just the communicators who receive feedback from the audience; in fact, individual users also get insight into how other users react to media coverage. This can have an influence on the perception of one's distance from the audience. The distance can decrease if people receive a precise image of their co-audience; it can, however, also increase if recipients, for instance, realize that other users' views differ strongly from their own positions. The (perceived) distance in turn is relevant to the strength of the third-person perception. Another question that emerges from interactivity and user participation is which consequences concerning the perception of influences can be observed if, for example, a view that is put forward in user comments differs from the one in the online article to which they refer.

Online media also have characteristics that could be important for the perception of *political* media influences in particular: With regard to time and place, online media are usually assumed to increase the speed and to widen the sphere of political communication (see Chapter 1). Consequently, other people might be assumed to be even more susceptible to influence. It can also be assumed, however, that online media are occasionally attributed a more positive image than traditional media due to the unfiltered diffusion of political content (see, for example, the publications by *Wikileaks.org*). One potential consequence of this could be that online media are assumed to have influence on others that are evaluated more positively.

From a social perspective, the perception of certain segments of the online audience could result in differentiated assumptions: Online media could be assumed to have stronger political influences on young people, in particular, because online media are of greater importance in their media repertoires than they are in the repertoires of older people. Furthermore, the question of whether users draw conclusions from the fact that the online world is characterized by an obvious multitude of services requires investigation. Some services, like *Google* or *Facebook*, are extremely widely used all over the world. Yet a very large number of online services are only visited by very few people. The knowledge, or

at least the idea, of such differences could also be relevant to presumed influences. As a consequence, the presumed influences are likely to differ very much from one offering to the next (Wei & Lo, 2007).

Finally, it is to a large extent unknown exactly *which* political influences online media are actually thought to have. It can be assumed, for example, that, above all, Web 2.0 media are believed to have mobilizing effects on others; just think of reports about the role of *Twitter* in the context of political uprisings. In contrast, a political agenda-setting function (see Chapter 2) or an influence on the formation of public opinion in general is probably still more strongly connected with traditional and wide-reaching media like television or newspapers.

Current State of Research

Presumed Political Influences of Online Media

Research concerned with the formation of third-person perceptions in the online context and with the influences of presumed online influences is still in its early stages. However, there are some studies that have produced notable results so far. In the following, results of these studies will be presented. The focus remains on political communication (for examples of studies concerning presumed influences of other online content see: Jung & Jo, 2013; Stavrositu & Kim, 2014; Zhong, 2009).

Indications of the perception of the online media's political influence can be drawn from surveys conducted among the public and politicians in Germany (Bernhard, Dohle, & Vowe, in press). The results show that television and newspapers are believed to have a very strong influence on the general public and not quite such a strong one on politicians. The Internet and specific online services are thought to have less influence. In this context, "traditional" online offerings like news websites are generally assumed to have much more political influence than Web 2.0 content such as social network sites. Moreover, politicians believe online media's influence on their fellow politicians to be greater than online media's influence on citizens. The influences on self were always estimated to be the least strong. Possible particularities of online media were neither systematically measured nor varied in these studies. It became clear, however, that the presumed influences were affected by assumptions about how frequently and how intensively online media were used by the respective groups. Similar perceptions of political influences could also be detected in a survey among journalists (Bernhard & Dohle, 2014; see Chapter 14).

Sommer and Hofer (2011) examined a specific characteristic of online media, namely the possibility of leaving comments directly beneath journalistic articles. They added user comments to an article that drew attention to the negative aspects of online pornography. These comments put

into perspective the points of criticism mentioned in the article. Half the respondents were given the article including the comments; the other half only read the article itself. The participants who had read the relativizing comments believed the article to have significantly less influence on other people's moral convictions than those participants who had not read the comments. Lee and Jang (2010) came to a similar conclusion with regard to the perceptual component of the third-person effect: They found that contrary comments reduced the presumed influence on others of a journalistic article about a politically relevant issue. Finally, Houston, Hansen, and Nisbett (2011) examined the perceived impact of online comments in conjunction with web articles about American politics: Depending on the political inclination of the comments, the joint influence of article and comments was assessed differently by the respondents.

While first steps have been made to analyze the role of user comments in the formation of third-person perceptions the significance of other variables remains largely unknown. For example, the question remains unanswered if opinions about the different groups of communicators in the online world are relevant for the perception of political influences of online communication.

Consequences of Presumed Political Influences of Online Media

It has also been proven that assumptions about strong political influences of online media lead people to demand restrictions. For example, the greater the political influence they believed online media to have on the public, the more likely German journalists and members of the *Deutscher Bundestag*, Germany's national parliament, were to support demands for restrictions on the online media's influence (Bernhard & Dohle, 2014; Dohle & Bernhard, 2014). It is remarkable that, at least in the case of the parliamentarians, the *evaluation* of the specific online influences did not have an impact on the willingness to support restrictions. Apparently, politicians become generally suspicious of online media as soon as they believe them to have a great influence. It is probably the abundance of online political content and the number of (active) users—who often take part anonymously—that cause certain misgivings in politicians when it comes to online media.

However, the perception of strong online media influences can also lead to other reactions. One possibility that has already been described is an increase in one's own (communicative) efforts to counterbalance media influences on the public that are perceived to be strong and at the same time problematic. Those corrective actions can take the form of traditional political behavior, but they can also include political behavior that involves online communication (Rojas, 2010). Such online activities might be even more common than traditional offline activities because posting one's opinion in newsgroups or commenting on online articles

requires less effort than writing letters to editors or participating in pro-test meetings. Furthermore, online participation is particularly likely to take place when the content that the corrective actions addressed was also published online. Lim and Golan (2011) have examined this with regard to political videos on *YouTube*. The greater the presumed influ-ence of unwelcome videos was, the more seriously the respondents con-sidered writing negative comments or uploading videos with a contrary tenor. Apart from that, corrective actions in an online environment have another advantage that sets them apart from many other forms of politi-cal activities: They can be performed anonymously. This can alleviate or completely nullify the social pressure (or fear of isolation) that can arise when one considers one's opinion to be in the minority. Therefore, the process of the spiral of silence (Noelle-Neumann, 1974) might not begin in online environments (see Chapter 6). Accordingly, Bernhard and Dohle (2015b) demonstrate in the context of an election that the percep-tion of strong online influences on others leads citizens to increasingly spread their political opinions via online channels.

Presumed media influences can also affect the behavior of politicians: As described, Cohen et al. (2008) found that politicians intensified their media relations efforts when they believed that traditional media had a strong influence on the public. In contrast, the intensity of the German *Bundestag* members' communication through online media appears to be independent of their perception of the influence those media have on the public. At least this is the result of a survey conducted by Bernhard et al. (in press; see also Metag & Marcinkowski, 2012). This indicates that the use of *Facebook*, *Twitter*, or one's own website for political public relations might be motivated by a desire to give an unfiltered portrayal of oneself rather than by the belief that such activities will strongly influ-ence other people. However, the stronger German *local* politicians per-ceive the political influence of online media on journalists to be, the more extensively they use online channels for spreading political information (Bernhard & Dohle, 2015a). This shows that journalists seem to be a rel-evant target group of local politicians' online communication activities.

Finally, Li (2013) attends to the presumed influence of rumors that came up after the nuclear disaster in Fukushima. These rumors were spread primarily via online media in China. It was rumored that the sea-water and salt had been polluted and contaminated, and that salt was useful in limiting the effects of nuclear radiation. These rumors resulted in Chinese people panic buying salt. Third-person perceptions were one reason for this. People often did not believe the rumors, but they expected other people to take the rumors seriously and thus buy large amounts of salt. Consequently, they felt it was necessary to buy salt, too, because they feared it could soon be sold out. Such a chain of events is also possible when, for example, rumors are spread about currency depreciations or imminent bank failures. In such cases, people can be

expected to withdraw enormous amounts of money from their accounts, which can in turn have economic and political consequences. The phenomenon of rumors having lasting consequences is not new; however, via online communication, rumors can now be spread extremely quickly through innumerable channels. This can increase users' impressions of strong influences on others and possibly make these users take action themselves.

Conclusion and Future Perspectives

Are the assumptions of the third-person effect and the influence of presumed media influence approach also valid in the online world, or do they have to be modified or even rejected in that context? The number of studies is still too small to provide reliable answers to these questions. Moreover, the technical conditions of online communication, the intensity of its use, the forms of user communication and participation, and the nature of the content conveyed continue to change rapidly. All this makes it difficult to give definitive answers.

Yet the findings from studies so far, which have been presented with a focus on political communication, permit some conclusions: In most cases, studies on the presumed influence of online media reveal third-person perceptions similar to those found in studies regarding traditional media. Presumed problematic influences on others result in increased demands for restrictions in the context of online media as they do in the context of traditional media. Further consequences of the presumed influences of online communication have also been detected. All this indicates a certain robustness of those approaches. However, there is also some evidence of differences in comparison to traditional media: These differences include, for example, politician's online communication with the aim of self-portrayal.

In this context, the implications of the fact that online media considerably facilitate not only one's own participation in communication, but also that of others require further examination. Among other things, it will be interesting to see how elites, in the case of political communication mainly journalists and politicians, react to the fact that the number of communicators has been substantially extended in the online world: How influential do they believe the participants to be in political online discourses and what consequences do they draw from these assessments?

A detailed investigation of specific characteristics of online media and the role they play when it comes to the formation of third-person perceptions and to the consequences of presumed media influences also appears quite promising. Apparently, even comments on online articles, a relatively simple form of user participation, is enough to modify people's assessment of media influences. Some online platforms, such as social network sites, enable or require a permanent exchange between

users. The question of how far in such cases the visibility of other users, presumed influences, people's own use of online media, and their own active participation in online communication are interconnected remains largely unanswered so far.

In research on the third-person effect and the influence of presumed media influence, there are very few studies with repeated measures (one exception is Atwood, 1994). Such investigations will be necessary in order to find out how stable perceptions of influences are in the context of the very dynamic field of online media. Furthermore, online media are available all over the world; thus, it would make sense to conduct comparative studies between different countries or cultures. Such studies have so far also been very rare in third-person research (exceptions: Cho & Han, 2004; Müller, 2013). They could show, for example, how strong the political influence of social network sites or search engines is presumed to be and how it is evaluated in different countries. Another central aim of these studies should be to identify consequences of presumed online media influences that have not yet been detected.

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8 The New Institutionalism Revisited

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Introduction

In a previous *Handbook of Internet Politics*, Ward and Gibson (2009, p. 37) once stated, "one of the weaknesses of Internet studies is a failure to link research to existing literatures or place it within current political and social contexts." This is also true for studies on the meso level of (political) organizations in the online world. As communication researchers, we do not only wish to show how political actors use the Internet, but to also explain this usage and the differences we find in content analysis. Therefore, it is necessary to establish a theoretical link between the usage of the Internet and organizational and political context factors.

A prominent and promising candidate for such a link is the new institutionalism (NI). The NI has been developed in different socio-scientific disciplines since the early 1980s. Despite its name, the NI is not a closed or homogenous theory. The NI is rather a collection of theoretical approaches that highlights the role of institutional requirements on the structure and behavior of (political) organizations, but differ in their definition of institutions and the way they work (Tolbert & Zucker, 1999, p. 169). While the NI is common in research fields such as Organizational Communication (Lammers & Barbour, 2006) or Public Relations/ strategic communication (Sandhu, 2009; see also Chapter 9), it is not considered appropriate in political communication research yet.

In the following section, we will discuss whether the NI is a fertile base to develop a theoretical link between the usage of the Internet by political organizations and their political and social contexts. We raise the central questions of this book: How successful did the approach prove to be in empirical studies under the conditions of an online world? Which modifications are necessary in order to adapt it to those conditions?

To answer these questions, we will sketch the basic assumptions and the development of the NI, apply them first to traditional mass media, and then to online media. We will show a fruitful application of the NI with the concept of communication repertoires, suggest some modifications

on the concept of organizational fields and finally demonstrate some rejections of assumptions.

Basic Assumptions of the NI

In order to avoid misunderstandings, it is initially useful to *distinguish the NI from other approaches in institutional theory*. A common ground in all these theories is that institutions are systems of rules with relative permanence that influence individuals as well as organizations. Thenceforward, the approaches differ in their conception of the form and strength of this influence. Following Koelble (1995), we may generally distinguish three approaches in institutional theory: rational choice, historical, and sociological institutionalism. The *rational choice institutionalism*, which we find within the new institutional economics, still focuses on individuals and their strategic decisions. Institutions are defined as "the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction" (North, 1990, p. 3). Therefore, rational choice institutionalism conceptualizes institutions as "an intervening variable capable of affecting an individual's choices and actions but not determining them" (Koelble, 1995, p. 232). The *historical institutionalism* emphasize on the other hand that also preferences are shaped by institutions. Therefore institutions "play a determinant role since they shape the actions of individuals but are at times affected by collective and individual choices" (Koelble, 1995, p. 232). *Sociological institutionalism* goes even one step further. DiMaggio and Powell (1991, p. 8) summarize its core as follows: "The new institutionalism in organization theory and sociology comprises a rejection of rational-actor models, an interest in institutions as independent variables, a turn toward cognitive and cultural explanations and an interest in properties of supraindividual units of analysis that cannot be reduced to aggregations or direct consequences of individuals' attributes or motives."

The NI is a sociological institutionalism that has adapted insights from historical institutionalism, but contrasts the rational choice institutionalism strongly. Thus, the NI is contradictory to the idea of a methodological individualism that is developed in Chapter 10. The NI is more interested in organizational structures and processes than in attitudes or behaviors of individuals. For Selznick (1996) or Meyer and Rowan (1977), this is one of the "new" elements in contrast to the "old" institutionalism: the conception of formal organizational structure as institutionalized and "rationalized myth." "The formal structure must itself be seen as an adaptive product, responsive to environmental influences, including cultural definitions of propriety and legitimacy" (Selznick, 1996, p. 274).

Within the frame of the NI, we may follow March and Olson (1989, p. 160) in defining *institutions* as "collections of interrelated rules and

routines that define appropriate actions in terms of relations between roles and situations." Barley and Tolbert (1997, p. 96) compare institutions with the grammar of a language: Institutions are the rules and assumptions that make single behaviors interpretable and therefore allow social action and order. An often-cited definition derives from Scott (2001, p. 48) who differentiates institutions as "composed of cultural-cognitive, normative and regulative elements that, together, with associated activities, and resources, provide stability and meaning to social life." With this definition, Scott (2001, p. 52) also titles the three "pillars" of institutions: regulative and often legally sanctioned rules, normative and therefore binding expectations and common, cultural-cognitive beliefs that are taken for granted by the people. As a result, the above-mentioned institutional approaches differ in their view which of these pillars is the most important. The rational choice institutionalism emphasize the regulative pillar, while the NI is more interested in social norms and culturally supported constitutive schemata stressed by cultural-cognitive pillar.

In contrast to the "old" or the rational institutionalism, the NI regards *legitimacy* "as an organizational 'imperative' that is both a source of inertia and a summons to justify particular forms and practices" (Selznick, 1996, p. 274). Legitimacy as a key concept of the NI may be defined as the "generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially

Table 8.1 Three Pillars of Institutions (Scott)

	Regulative	*Normative*	*(Cultural-) Cognitive*
Basis of compliance	Expedience	Social obligation	Taken-for-grantedness Shared understanding
Basis of order	Regulative rules	Binding expectations	Constitutive schema
Mechanisms	Coercive	Normative	Mimetic
Logic	Instrumentally	Appropriateness	Orthodoxy
Indicators	Rules, Laws, Sanctions	Certification, Accreditation	Common beliefs, shared logics of action
Basis of legitimacy	Legally sanctioned	Morally governed	Comprehensible, recognizable, culturally supported

(Scott, 2001, p. 52)

constructed system of norms, values, beliefs and definitions" (Suchman, 1995, p. 574). The search for legitimacy is a useful concept to explain individual as well as organizational behavior (Bitektine & Haack, 2015). In order to gain, maintain or repair legitimacy, organizations monitor their environment and incorporate institutional requirements by *three mechanism of isomorphism* that also go along with the three pillars of institutions: (1) coercive isomorphism, which means the compliance with formal and informal pressures or cultural expectations, (2) normative pressure exceeded by professionals, for instance spokespersons, or (3) imitation or mimetic isomorphism when organizations model themselves on other organizations (DiMaggio & Powell, 1983). The concept of isomorphism does not contend that the monitoring and incorporating of institutional requirements is always successful. Campbell (2004, p. 69) uses the term *bricolage* to show that organizations may recombine more or less successful institutionalized solutions from several sources. Moreover, bricolage may include either substantive or symbolic changes, with organizations simply pretending to follow appropriate or innovative forms of communication.

Developments and Assumptions From Other Theories

Since its foundation in the late 1970s with the work of Meyer and Rowan (1977) or Zucker (1977), there has been a lot of theoretical debate as well as empirical research on the basis assumptions of the NI. While the classical texts of the NI consider organizations as prisoners in an "iron cage" (DiMaggio & Powell, 1983) of institutional requirements, the NI now has a stronger focus on *processes of interaction between organizations and their institutional environments*. The NI also has benefited from other theories in organizational communication, like Giddens's (1984) concept of structuration, the organizing approach by Weick (1979), or the Communication Constitutes Organization perspective (CCO) (Cooren, Kuhn, Cornelissen, & Clark, 2011; Cornelissen, Durand, Fiss, Lammers, & Vaara, 2015).

A first step toward the opening of the iron cage was the insight that organizations may be confronted not only with one but *many institutional environments* and that these environments may be equivocal, in competition or in conflict (Scott, 1991, p. 167). As a consequence, organizations are sometimes forced to decide and respond strategically to different institutional requirements. Oliver (1991) distinguished five possible strategies to institutional processes: acquiesce (as the classical answer of the NI), compromise, avoid, defy, and manipulate.

A second step was a link between the historical and sociological institutional institutionalism. Without regarding them as rational, the general relevance of organizational choices is no longer neglected. Powell (1991, p. 188) regards the question of "how choices made at one point in time

create institutions that generate recognizable patterns of constraints and opportunities at a later point "as the critical agenda for the NI. This question was inspired by the concept of *structuration*, which has many links to the NI (Barley & Tolbert, 1997). Giddens (1984, p. 24) uses the concept of institutions for "the more enduring features of social life," but stresses the duality of both medium and outcome of practices.

A third step was the insight that institutional requirements may not always be explicit and clear to organizations, and may be also equivocal or inconsistent. In these cases, the socio-psychological and more process-oriented concept of *organizing* by Weick and his colleagues (Weick, 1979; Weick, Sutcliffe, & Obstfeld, 2005) is useful. Organizing generally starts with unexpected and equivocal situations and means the "consensually validated grammar for reducing equivocality by means of sensible interlocked behaviors" (Weick, 1979, p. 3). A central mechanism of organizing is sensemaking, an "ongoing retrospective development of plausible images that rationalize what people are doing" (Weick et al., 2005, p. 409). Therefore, a narrative perspective has been introduced in the NI, which asks how organizational legitimacy emerges through processes of narrative construction and sensemaking (Golant & Sillince, 2007).

Another fruitful import in institutional thinking has derived from the *CCO-perspective* in organizational communication. The CCO-perspective generally assumes that communication is constitutive for any organization and portrays them as "ongoing and precarious accomplishments realized, experienced, and identified primarily—if not exclusively—in communication processes" (Cooren et al., 2011, p. 1150). Therefore, CCO is also "putting communication front and center in institutional theory and analysis" (Cornelissen et al., 2015).

One link between the NI and CCO is the *four flows model* of McPhee and Zaug (2009). The model presumes that every organization consists of four flows of communication, which may be separated analytically but not in practice. The four flows are membership negotiation (socialization, identification, self-positioning), reflexive self-structuring, activity coordination, and institutional positioning. Institutional positioning is vital for the constitution of organizations because they "exist in human societies that already are organized, that already have institutional ways of maintaining order, allocating material resources, regulating trade, and dividing labor—and, of course, that already have ways of communicating about these practices" (McPhee & Zaug, 2009, p. 41). As a result, all other communications in organizations toward members or concerning the structure or activities are linked with the organizations positioning in the world of institutions.

In summary, institutionalization is no longer regarded as a simple stimulus-response model of organizational adaption to institutional requirements. Rather, the *NI now focuses on processes of institutionalization*

as an interaction between individual and collective actors, institutional rules, and their meanings (Dacin, Goodstein, & Scott, 2002; Zilber, 2002). Recent contributions suggest differentiating between institutional logics (as the character and dynamics of field level practices), translation (introduction and implementation of ideas into organizations through symbolic and narrative representations), and institutional work (actions taken by individuals and organizations in creating, maintaining, and disrupting institutions) (Fredriksson, Pallas, & Wehmeier, 2013). With its contemporary stronger orientation toward processes and actors, the NI is also better placed to explain organizational changes in the online world.

(Traditional) Mass Media as Institutions

There is a broad literature in the field that argues that (traditional) *mass* or *news media can be characterized as institutions* (Allern & Blach-Ørsten, 2011; Cook, 1998, 2006; Donges, 2006, 2008; Ryfe, 2006; Sparrow, 1999). They are systems of rules that create normative expectations, contain mechanisms for their realization, constitute actors and influence the perception, preference formation, and structures in existing organizations. Following the aforementioned three pillars of institutions, one may say that media include normative rules in terms of binding expectations of how political organizations should behave in specific situations. Political organizations perceive a social obligation to establish relations to the media. They establish appropriate organizational structures, like press offices, and organizational routines and behaviors. Second, media involve cultural-cognitive rules that help to create shared understandings of reality that are taken for granted. Political organizations don't calculate their structures and behaviors concerning communication in economic or "rational" terms. They find it "normal" to have a press office and correspondent routines, and they also perceive that other organizations share this common belief. Third, media as institutions comprise regulatory mechanisms for their enforcement. One of these is the provision of attention: Whenever political organizations do not follow the rules that indicate the newsworthiness of an event, they do not get the attention of the media and therefore the attention of the public.

To characterize mass media as institutions with a regulative, normative, and cultural-cognitive pillar is helpful in the discussion about the *power of the media* in political communication. The source of media power is the fact that actors within society have learned to adjust and adapt to the different media logic as the "normal" way of perceiving and interpreting the world (Altheide & Snow, 1979, pp. 236–237). As Sparrow (1999, p. 10) points out, media are institutions because "they rely on set standard practices to produce political news." Cook (2006, p. 162) clarifies that "the news media as an institution occurs as consensus arises across organizations on the definition of news and on processes to make

it, but in ways that may defy efficiency." Ryfe (2006, p. 205) adopted the NI on journalistic rules and characterized them as "normative assumption or expectation about appropriate or legitimate modes of behavior." Thereby, the institutional rules of the media are continually reproduced.

In addition to the three pillars, media as institutions also include constitutive rules that create social phenomena. Media are not only mediators, but also creators of meaning. They structure societal actors' perceptions as well as their preferences, especially in those fields where they constitute the most important or dominant source of information. In the field of political communication, a wide range of actors, including spokespersons, consultants, agencies for communication, etc., has been constituted because of institutional requirements (Donges, 2006).

As mentioned above, the concept of institutional logic plays an important role in institutional thinking. In political communication research, such logic is discussed, sometimes without explicit declaration, in the literature on *mediatization of politics* (Asp, 2014). Strömbäck (2008, p. 240) for instance defines mediatization as a phase in which actors "adapt to the media logic" and later "adopt the same media logic, . . . perhaps not even recognizing the distinction between a political and a media logic." But there have also been critical voices in the literature concerning the idea of a singular media logic. According to Lundby (2009, p. 117), it is "not viable to speak of an overall media logic; it is necessary to specify how various capabilities are applied in various patterns of social interactions." Furthermore, because the media are influenced by other social institutions or system logic, such as commercialization, we cannot always be certain that observed media influences imply submission to media logic alone (Hjarvard, 2008). Furthermore, the concept of media logic is travelling in time, and especially the enforcement of online media has overthrown the idea of a single, homogenous, and well-definable media logic (Couldry, 2008; Donges & Jarren, 2014; Hepp, 2009; Landerer, 2013; Lundby, 2009). There are attempts to identify a "network media logic" (Klinger & Svensson, 2014), but it is questionable whether all social media platforms follow a single logic.

Online Media as Institutions

Within the frame of the NI, online media are not just another communication tool for political organizations, but (for most of them) an additional institutional environment. Only very few political organizations can afford to stay offline, some more to neglect social media like Facebook, Twitter, etc. Since all these social media applications are founded in the 2000s, we are still yet to witness a process of institutionalization. Therefore, assumptions of the NI such as the rejection of things like "rational strategy" in explaining organizations and concepts like coercive, normative, and mimetic isomorphism are useful to explain this process. But

there are also some points where a modification of the NI may be useful. We therefore propose an application, a modification, and a rejection on assumptions of the NI in the online world.

Application: Online Media as a Part of Communication Repertoires

In political communication research, the categories organization and communication are normally separated from each other. Political organizations are considered to use communication as a tool to reach their specific goals, or they are regarded as containers in which communication takes place. In such a perspective, online media are considered another communication tool for political organizations. Nevertheless, this perspective runs the risk of neglecting the effects of online media on organizations. Even more, within the current hybrid media system (Chadwick, 2013), political organizations no longer differentiate between their online and offline communication. Instead, they continuously integrate new forms of online communication in their *communication repertoire*. The notion of repertoires was introduced by Tilly in the 1970s and 1980s (1993), who use it to explain changes in the form of collective action in a historical dimension. Chadwick (2013) adapted the concept and transferred it to the modern media environment. Repertoires are defined as "limited sets of routines that are learned, shared and acted out through a relatively deliberate process of choice. Repertoires are learned cultural creations" (Tilly, 1993, p. 264). The concept of repertoires emphasizes that the communication of political organizations may not be viewed isolated, but always in relation to interactions within and outside the organization. These interactions usually follow certain rules, which may be stable or institutionalized, but also may change rapidly. The communication repertoires of political organizations are hence not determined, but influenced by the environment or specific situations.

The concept of repertoires stresses that collective action ranges between routines and improvisation (Passy, 2009, p. 356). Within the new institutionalism, such routines may be adapted from the environment in forms of coercive, normative, or mimetic isomorphism (DiMaggio & Powell, 1983; Mizruchi & Fein, 1999). But new routines may also arise through processes of selection and retention in practices. The enforcement of online media, first in a one-sided form ("Web 1.0"), and later in form of dialogue-oriented forms ("Web 2.0"), may be interpreted as a crash of communicative routines that force organizations for a certain time to improvise. Later, the improvised forms of the use of online media are consolidated in new institutionalized routines.

Furthermore, the concept of communication repertoire as "learned cultural creations" has a constructivist component. The emergence of repertoires requires not only a shared knowledge of actors, but also

shared scripts or narratives (Elbling, 2009). The efficiency, legitimacy, and consequences of organizational communication must be interpreted by individual actors as well as institutionalized, which implies their transformation to a common interpretation and shared understanding. Therefore, communication repertoires are always embedded in the institutional environments of actors. "Social outcomes are not emerging from pure chaos, but from a relative chaotic interplay within limits set by existing shared understandings, common scripts and narratives, and by existing social networks" (Passy, 2009, p. 357). Ocasio, Loewenstein, and Nigam (2015) also stress the role of categories in the reproduction and change of institutional logics that underlie communication repertoires.

The concept of communication repertoires is extremely useful to explain the different modes by which political organizations have entered the online world. In the phase after the introduction of online media, there were no institutionalized practices within organizations. From an organizational view, the institutional requirements were equivocal or inconsistent. Therefore, the institutionalization of organizational practices concerning online media may be explained as a mixture of coercive isomorphism (e.g., feeling the duty to have a Facebook account, etc.), normative pressure from the head of communication, or the imitation of perceived best practice models. But this mixture of isomorphism differs from organization to organization and reminds of Campbell (2004) concept of "bricolage." The institutionalization of online media is not just a simple step, but a complex process of translation from social, political, cultural, and technological requirements to organizational practices. As the concept of institutional translation indicates, the introduction and implementation of ideas into organizations also contains symbolic and narrative representations (Czarniawska, 2004; Fredriksson et al., 2013). In these processes of translation, individual actors within organizations become more important, as they assist in implementing and creating new organizational routines. Therefore, the micro–macro link between interactions within an organization and their institutionalized structure is an important question for empirical research (Gray, Purdy, & Ansari, 2015) (see also Chapter 17).

Modification: Expansion of Organizational Fields

As mentioned above, mimetic isomorphism is a key concept to explain that "when organizational technologies are poorly understood, . . . when goals are ambiguous or when the environment creates symbolic uncertainty, organizations may model themselves on other organizations" (DiMaggio & Powell, 1983, p. 151). But what other organizations are these? The "old" NI used the concept of *organizational fields* to identify "those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory

agencies, and other organizations that produce similar services or products" (DiMaggio & Powell, 1983, p. 148). Such an economic definition of organizational fields has to be translated to political organizations. In our own research, a survey among heads of communications of interest organizations in Germany (Nitschke, 2016), we first thought that policies may be an adequate equivalent to organizational fields. Surprisingly, when we asked the heads of communication which other organizations they regard as best practice models, we found that other organizations in the same policy field play a secondary role. Instead of that, mainly established and well-known organizations like Greenpeace and Campact (the German MoveOn spin-off) were stated as role models and heads of communications within organizations normally orient themselves on organizations with similar communicative requirements. These results confirm a previous study on political parties, where we found out that an automobile association and a charity organization serve as best practice models for heads of communications in party organizations, since they are regarded as successful in managing a non-declining membership (Donges, 2008). Moreover, other interest organizations were mentioned as being exemplary, as were the online-campaigns of individuals and multinational companies.

Thus, online media may also play an active part in the constitution of organizational fields. They are an additional and very helpful way to monitor other actions and communicative practices. Since online media increase the observability of all kinds of organizations, they broaden the range and frames of reference for processes of mimetic isomorphism. Therefore, the possible organizational fields in the online world are becoming much broader than before.

Rejection: The Ambivalent Role of Organizational Age

An important conclusion from the NI and the logic of isomorphism is the assumption that organizations in a similar institutional environment become homogenous in their organizational structure and behavior (DiMaggio & Powell, 1983). The first argument of this assumption is the so called "imprinting" argument, that means the idea that institutional environment of an organization becomes imprinted in the act of its foundation (Stinchcombe, 1965). Therefore, it may be assumed that organizations differ according to their age and that organizations of the same age show similar structures and behavior. In the case of online media, it may be argued that the usage of these media depends on the age of an organization. In our own empirical research (Nitschke, Donges, & Schade, 2014), we hypothesized that younger political organizations use online media like websites and Facebook more actively than older ones. Surprisingly, the opposite is true: younger organizations do not have a greater online affinity than older organizations. We found that older and

more political "insider" organizations were more often present on Facebook than the comparison groups (Nitschke et al., 2014). While over half of the older organizations on our sample founded before 1970 had a Facebook profile, less than one-third of those founded after 1990 had one. But on the other hand, younger organizations founded after 1990 established links more than twice as frequently as older organizations. We concluded that older organizations use Facebook more in a sort of "channel-agnostic broadcasting strategy" (Nitschke et al., 2014, p. 15), while younger organizations establish more links to other organizations.

Nevertheless, we assume that the imprinting argument is too simple to explain the different behaviors of political organizations in the online world. Older and well-established organizations are also able to handle the requirements of the online world, sometimes even better, because they have more resources to buy the necessary competences. Therefore, a better explanation of the quantity and quality of the usage of online media are the different forms of membership negotiation, reflexive self-structuring, activity coordination, and institutional positioning, as the flows model of McPhee and Zaug (2009) assumes.

Conclusion

The NI is one of the leading organizational theories. At its core lies the assumption that (political) organizations primarily follow institutional rules and requirements of their environments. Organizational structures as well as organizational behavior may be best explained by the organizations pursuit to gain, to maintain, or to repair legitimacy. Within this framework, online-media may be regarded as an institutional challenge that political organizations are confronted with. Using online media as (technical) channels of communication has consequences for the internal structure of organizations, the relationships to their members or to the media (see Chapter 9), the coordination of activities, and their position toward other organizations and institutions.

The NI is also still successful in the online world because it has developed toward a more process-oriented theory, defining processes of institutionalization as interplay between actions, meanings, and actors. To analyze these consequences, it is necessary to connect the new institutionalism with other process-oriented theories of organizations, like the organizing approach by Weick or the CCO perspective. Since the institutionalization of online media, and especially social media, has not been finished at all, there is a general need for such process-oriented theoretical approaches to explain this development.

The concept of isomorphism within the NI is still useful to explain how political organizations integrate online media into their communication repertoire. This integration is not a straight sequence of rational or strategic decisions, but rather a mixture of imitation, learning, experimenting,

failing, etc. Actors within organizations react and act on the basis of their receptions of an appropriate use of online media. Organizational structures and routines are established, which follow the logics of appropriateness, orthodoxy as well as instrumentally. Political organizations monitor other organizations and social movements to discover best practice models, which they translate and rationalize ex post as their strategic decisions. Online media are useful in this monitoring since they increase the observability of communicative practices.

Nevertheless, the process of institutionalization is still going on, and there is too much movement in the field to draw distinct conclusions. Therefore, the "research road ahead is . . . not simply about technology, or media, or organizations. The crucial questions are "when many forms of organizing are open to many kinds of actors, who chooses which ones, and how do their choices affect who wins and losses in democracy" (Bimber, Stohl, & Flanagin, 2009, p. 84). The NI teaches us that these choices are not made in a vacuum. To explain political communication in the online world, we still have to go back on the idea that political organizations and their institutional environments are relevant categories.

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9 Theoretical Approaches to Grasp the Changing Relations Between Media and Political Actors

Juliana Raupp and Jan Niklas Kocks

Introduction

Assessing theory to grasp the changes in the field of *media relations* is a demanding task since media relations, as a field of academic inquiry, is characterized by a diversity of theoretical approaches. Thus, the overarching question of this chapter is, What are the contributions of different theoretical approaches of media relations to describe and analyze the subject against the backdrop of ongoing media change? To address this question, the development of media relations as a field of study is briefly outlined. Then, major theoretical approaches to media relations will be presented, showing that there is not one single approach that sufficiently explains the changing relations between media and political actors. Therefore, new theoretical perspectives on media relations are suggested: Institutional and network-based approaches provide a new and fruitful way of theorizing media relations.

The diversity of theoretical approaches to the study of media relations is mirrored in diverse definitions of media relations—and even in the mere use of the term. Scholars with a background in public relations (PR) research use the term *media relations* in a practical way. On the other hand, scholars with a background in political communication instead use the terms *news management, news making*, or—as a pejorative term—*spin*. From a public relations perspective, Supa and Zoch (2009, p. 2) define media relations as a systematic, planned, purposeful, and mutually beneficially relationship between journalists in the mass media and public relations practitioners. From a political communication perspective, Pfetsch (1999) defines news management as an element of government communication, namely as "strategic variant of public information whereby political actors manage communication in order to influence public opinion by controlling the news media agenda" (p. 6). Spin, on the other hand, is pejoratively characterized as manipulation of media and public opinion and relates to professionalized forms of political public relations and election campaigning (Esser, Reinemann, & Fan, 2000). Yet still other scholars give no definition whatsoever when

investigating the phenomenon of media relations. In this chapter, media relations are defined as the communication efforts of political actors that directly or indirectly address the news media.

Development of Media Relations as a Field of Study

Media relations as a field of study has roots in two academic sub-disciplines: in public relations research and in political communication research. Historiographers of both sub-disciplines consider the development of media relations primarily against the backdrop of the rise of modern mass media. Scholars of public relations history provide evidence on the co-occurrence of the mass press and press officers; in particular, along with the rise of the popular press in the late 19th century, organizations engaged in activities to influence the media coverage (e.g., Cutlip, 1994). In public relations research, early forms of media relations are labeled press agentry, publicity, or public information. Those forms of media relations are viewed as based on mechanistic communication models and assumptions of direct media effects (Grunig & Hunt, 1984). These assumptions reflect conceptions of powerful media and the "magic bullet" model as early theories of public opinion (Moy & Bosch, 2013). With the development of public relations as a profession, findings on public opinion and media effects were incorporated in media relations practice, leading to tailored campaigns and programs. All the same, recent research in public relations history rejects the idea of a linear development of public relations from mechanistic press agentry to a research-based communications function and instead sees the development of the field in connection with a complex social context (Lamme & Miller, 2009; L'Etang, 2014). As part of public relations historiography, the variety of media relations is just being discovered.

In contrast to public relations scholars, scholars of political communication almost always adopt a normative point of view in their studies of media relations (see Chapter 1). The relations between political actors and the media are studied against the benchmark of a normative liberal democratic ideal. The issue of media relations is tackled in a broad sense, as part of the discussion on the relation of the news media to democracy and as part of democratic governance. In their textbook *Four Theories of the Press*, which was published originally in 1956, Siebert, Peterson, and Schramm (1963) set out the obligations of a free, social responsible press as the best fitting press theory for modern libertarian democracies. Among the obligations are servicing the political system by providing information and debate on public affairs, but also to serve as a watchdog against government (Siebert et al., 1963, p. 74). The four theories have been heavily criticized as too idealistic and ideological (Ostini & Fung, 2002), yet they also provide an influential normative framework for the study of the state-policy press link.

Against this backdrop, scholars particularly worry about the inter-relationship between government and the news media. Swanson (1992) recognizes the rise of a political-media complex in which "politics, the government, and news media are linked in a complicated relationship" (p. 399). Especially the rise of the television was considered with concern, as it was feared that politics become mediatized; that is "dependent in its central functions on mass media, and . . . continuously shaped by interactions with mass media" (Mazzoleni & Schulz, 1999, p. 250). This form of mediatization of politics also spawns a new form of external professionalism that further alters the way that politics deal with the media. Amongst others, Mancini (1999) describes how, as a reaction to the production requirements of the mass media, technical experts develop news management strategies. He relates the new forms of media interaction that emerge due to the professionalization of politics to the weakening of party structures and political decision-making processes. Thus, in political communication research, the field of media relations is often viewed with considerable concern, as it is seen as undermining political substance.

Theoretical Approaches to the Study of Media Relations

Media relations as a field of academic inquiry can be divided roughly into three main theoretical approaches. First, the journalist–practitioner relationship represents one field of study. Second, journalism-centered approaches like sourcing, gatekeeping, and indexing focus on the impact of public relations activities on media content. A third field of study focuses on the strategic dimension and examines processes of agenda building, framing, and relationship building.

The Journalist–Practitioner Relationship

Researchers who examine the journalist–practitioner relationship often use the metaphor of dance. It is the tango that is mostly referred to (e.g., Davis, 2009; Sigal, 1973)—a dance that is characterized by a subtle interplay between leading and following whereby the leader also follows and the follower makes the move. Reflecting on the relationship between journalists and practitioners, Gans (1979) contends, "either sources or journalists can lead, but more often than not, sources do the leading" (p. 116). On the other hand, evidence has been provided that the journalists and not their sources lead the tango (Strömbäck & Nord, 2006). Ross (2010), this time referring to rumba and not tango, even depicts the relationship between MPs and journalists as a "danse macabre"—a dance where there isn't always a said leader—and provides evidence that the partners negotiate their positions constantly, so that it is not easily to determine who leads and who follows.

Using the dance metaphor is a cipher for the study of the underlying question of the relative power of journalists and public relations

practitioners (and the politicians they represent). Studies on the mutual perceptions of the two groups indicate how the distribution of power balance is experienced by the actors. Studies on journalists' perceptions and attitudes toward public relations reveal highly negative stereotypes. Macnamara (2014), summarizing 100 years of journalist–PR relations research, gives many examples for pejorative labels for public relations practitioners, among them obstructionists, fakers and phonies, shysters, and liars. Public relations practitioners, on the other hand, show a much more collegial attitude toward their journalist counterparts (Larsson, 2009). Studies also provide ample evidence that the two professional groups rely on different norms and values (Len-Rios et al., 2009; Sallott & Johnson, 2006; Sallott, Steinfatt, & Salwen, 1998; Shin & Cameron, 2003, 2005). Unethical and unprofessional public relations activities, like efforts to manipulate journalists by embedded public relations, add to the hostile attitude of journalists toward public relations.

Processes of digital media change affect the journalist–practitioner relationship in several ways. The context and the practices of news production have changed as well as the professional identity and self-perception of journalists (Mitchelstein & Boczkowski, 2009). New forms of gatekeeping (Singer, 2014) and digital newsgathering (Van Leuven, Heinrich, & Deprez, 2013) affect journalism and result in an entanglement of professional and participatory journalism (Neuberger & Nuernbergk, 2010). Regarding public relations, one of the most visible changes is that public relations practitioners are less dependent on journalists to get their message through. The possibilities of online and social media allow them to communicate more targeted with their stakeholders, thereby circumventing the news media (Lieber & Golan, 2011; Tedesco, 2011). This will modify the mutual perceptions and the distribution of power in the journalist–practitioner relationship.

Sourcing, Gatekeeping, and Indexing

Journalism-centered approaches to media relations analyze the interplay between public relations and professional journalism from a perspective focusing primarily on the impact of public relations activities on media content.

In this context, the notion of sourcing describes approaches assuming a symbiotic relationship between news media and powerful sources (Herman & Chomsky, 1994). Public relations and professional journalism are understood as often mutually dependent and their relationship as characterized by reciprocity of interests (Davis, 2009). Public relations by focal actors have an important role in so far as they largely ground news coverage; the inherent newsworthiness of such key players forces media outlets to attribute large shares of their attention on them and to base large shares of their coverage on their actions and communications.

Processes of digital media change are sometimes attributed with the potential to alter such established patterns of power (Coleman & Blumler, 2009). However empirical evidence often illustrates that, despite considerable technological and organizational changes, patterns of sourcing have remained largely unaltered. Senior sources and public relations practitioners in intensive relationships with journalists still account for the majority of news items that are published or broadcast in major media outlets (Reich, 2009). In the case of alternative media, well-connected counter-elites play a similar role. Here political activists and well-connected pressure groups often account for central news items (Atton & Wickenden, 2005; Downey & Fenton, 2003).

Approaches that concentrate on *gatekeeping* then specifically focus on criteria and patterns of selection employed by professional journalists acting as authorities of selection (Shoemaker & Vos, 2009; see also Chapter 4). From this perspective, public relations constantly seeks to get messages into the mainstream media, to overcome the threshold to enter the public debate. Journalism selects shares of these messages based on their (attributed) informational value. Digital media change is generally attributed with the potential to erode this function of journalism, thereby altering interactions between public relations and the media (Bruns, 2009; Neuberger & Quandt, 2010). New channels and means of communication allow for the circumvention of established gatekeepers, potentially diminishing their power. Under these conditions, journalism seeks new role conceptualizations, arguably putting a stronger emphasis on the provision of guidance in a field of informational exuberance.

The *indexing hypotheses* as a third potential journalism-centered perspective on media relations then argues on the (sole) representation of elite discourse in the media (Bennett, 1990; Castells, 2013). Public debate is understood as an exclusive debate between elite positions, represented in the (elite) media and conducted in front of passive spectators (Bourdieu, 1997). New technologies have altered conditions insofar as event-driven stories have gained additional momentum and presences in the media discourse (Livingston & Bennett, 2003), yet this has generally not diminished the influence of elite actors and their positions on the mediated debate (Krüger, 2013).

Agenda Building, Framing, and Relationship Building

Strategic approaches to media relations constitute a third field of study. They focus on a strategic dimension, inter alia examining processes of agenda building, framing, and relationship building.

Agenda building is to be understood as a theoretical extension of agenda-setting approaches. It is primarily concerned with the actual building of media agendas (Lang & Lang, 1981; see also Chapters 2 and 3). From this perspective, they are considered a dependent variable,

influenced inter alia by patterns of journalistic selection and strategic communication activities by public relations professionals (McCombs & Bell, 1996). The strategies employed by actors to influence and build public agendas become a central concern of media relations research from this perspective.

In the context of agenda-setting and agenda building, digital media change is discussed as potentially fostering a tremendous acceleration of the processes involved (Sweetser, Golan, & Wanta, 2008; Weeks & Southwell, 2010). Strategic media relations face new structural conditions, largely altering the scope of actors involved.

Framing, as a theoretical approach arguably closely connected to agenda-setting (Balmas & Sheafer, 2010; McCombs, Shaw, & Weaver, 2013; critical: Scheufele, 2000), focuses on the social construction of phenomena. Framing implies selecting aspects of a perceived reality and then (strategically) making them more salient (Entman, 1993; Scheufele, 1999). From this perspective, the actors involved in media relations seek to acquire the prerogative of interpretation over salient issues. Digital media change does, on the one hand, broaden their possibilities to do so, yet also provides challenging actors with greater opportunities to contest so far established frames of perception.

Considering media relations from a perspective focusing on relationship building implies focusing on the strategic attempts undertaken by the actors involved to build and maintain relationships with their counterparts and publics (Ledingham & Bruning, 1998). Here the focus is not primarily on influencing public agendas or the perception of certain issues, but on the actual relationship between actors; strategies are necessarily strategies of interaction.

Digital media change provides all parties involved with new technological possibilities to interact with their relevant audiences, yet simultaneously they also have to cope with rising communicative demands and expectations by these groups (Kent & Taylor, 1998; Kim, Kim, Lee, Oh, & Lee, 2015; Zerfass & Schramm, 2014).

New Perspectives on the Study of Media Relations

A common feature of the approaches described so far is that they are rooted in traditional mass media and journalism research. Recently, scholars have turned to newer theoretical approaches to better understand public relations and to address issues related to the ongoing media change. Without being specific theories of media relations, newer theoretical approaches can add to the understanding of media relations in an online environment. The following section highlights two theoretical approaches, namely new institutionalism and network approaches. These approaches are by no means exhaustive; instead, they have been selected based on the assumption that they match well with each other

and as an ensemble, provide a pathway to revisit media relations theory against the backdrop of the current media change.

New institutionalism as a sociological theory of organizations considers institutional effects on organizations. Organizations are related to social and political environments and shaped by normative frameworks, rules, and cultural belief systems (Meyer & Richard, 1983; Scott, 2008; see also Chapter 8). Inspired by new institutionalism, public relations and strategic communication are now considered to be an institutional practice (Frandsen & Johansen, 2013; Frederiksson, Pallas, & Wehmeier, 2013; Sandhu, 2009; Wakefield, Plowman, & Curry, 2013; Zerfass 2009). Professional norms and best practices function as rationalized myths (Meyer & Rowan, 1977). Organizations adopt these myths and by doing so, specific practices become institutionalized, regardless of whether they are always effective. Drawing on this argument, Frederiksson et al. (2013) proposed to view public relations as a carrier and translator of institutional norms, rules, and practices. Frandsen and Johansen (2013) emphasize the constructionist and discursive traditions within new institutionalism and propose to incorporate them into the study of public relations. Next to being a theoretical framework, new institutionalism is used in empirical investigations in order to explain the proliferation and institutionalization of specific public relations practices (e.g., Moreno, Navarro, Tench, & Zerfaß 2015; Sjöström, Enbom, & Öhman, 2015; Wakefield et al., 2013).

Research on mediatization also draws on new institutionalism. In political communication, mediatization of politics refers to the influence of media in politics (Strömbäck & Van Aelst, 2013). As opposed to traditional effects research, mediatization addresses indirect effects of the media on political actors (Cohen, Tsfati, & Sheafer, 2008). From an institutionalist perspective, some scholars regard mass media, in particular the media-specific rules, norms, and practices, the so-called media logic, as institutional environment and consequently define mediatization "as a process of change wherein individuals and institutions adapt to a changing media environment" (Asp, 2014, p. 256). The media logic is then viewed as opposed to the logic of politics (Esser, 2013; Strömbäck & Dimitrova, 2011).

By applying the concept of mediatization to media relations, influences from media logic on media relations practices come into focus. Public relations influence is understood as adaptation of organizations and media relations practitioners to the institutional rules and norms of media environments (Kohring, Marcinkowski, Lindner, & Karis, 2013; Laursen & Valentini, 2015; Raupp, 2008). The digitization of communication challenges the notion of mediatization because it is not clear to what extent new media as opposed to traditional mass media operate according to specific institutional characteristics (Hjarvard, 2014; Jensen, 2013). In an online environment, mediatization implies an adaptation to

old and new forms of media logic that coexist and interrelate (Klinger & Svensson, 2014; Schulz, 2004; Strömbäck & Esser, 2014).

Recently, new institutionalism has increasingly shifted toward more process-orientated conceptualizations, drawing a stronger focus on processes of organization and actual interactions (Bimber, Stohl, & Flanagin, 2009). Furthermore, conceptualizations of surrounding public spheres now seek to integrate a network perspective (Friedland, Hove, & Rojas, 2006; Raupp, 2011). The public sphere, which can be seen as an institutional condition for organizations, constitutes not only of individuals and groups; instead, the public sphere is made up of social networks between people who are also connected to each other by technological networks. Thus, technologically induced changes drastically affect the ways in which organizations communicate with and connect to their external audiences (Schultz & Wehmeier, 2010).

These developments casts doubt on whether or not single organization approaches are still able to grasp media relations adequately. So far, public relations theories have often focused on the relationships between a single organization and its stakeholders. Yet there is substantial evidence that a networked approach is now more adequate to grasp organizational communication in general and organizational media relations in particular (Yang & Talyor, 2015).

This perspective fosters a broader understanding of organizational communication, incorporating network ties both as identifiable organizational characteristics (Borgatti, Everett, & Johnson, 2013) and foundations of important social capital (Jansen & Diaz-Bone, 2011). On a superordinate level, the construction of larger inter-organizational networks and their specific characteristics becomes a central category of analysis. This inter alia regards the distribution of strong and weak ties (Granovetter, 1983), bridges, bonds, and structural holes and—maybe even more important—the strategies and tactics employed by organizational and individual network nodes (Yang & Talyor, 2015).

Under the conditions of digitization, media relations exist as networks of interaction and communication. Political actors and news media either constitute network nodes or even sets of nodes within the greater network of media relations.

Admittedly, institutional surroundings still impinge on organizational communications, especially in some specifically constrained political fields (Kocks & Raupp, 2014). Yet the acceleration and diversification of communication induced by digital media change leads to an ever-increasing importance of a network perspective within media relations research.

Within this new approach, media relations are no longer to be considered as simply the (institutionalized) relations an actor maintains with media outlets and individual journalists. They are to be understood rather as an entirety of network ties. Accordingly, media relations research must no longer focus on institutional surroundings

shaping specific organizational communications, but on networks of political communication as such. Digitization breeds acceleration and diversification and ultimately fosters the interconnectedness and mutual dependency of actors within these networks. Organizations and media outlets constitute specific actors within such networks. Analyzing and understanding their relations requires the adoption of a network perspective.

The Study of Media Relations in the Online Environment

This chapter set out to assess the contributions of different theoretical approaches of media relations to describe and analyze media relations against the backdrop of the ongoing media change. The current media change is altering the way that we theorize media relations in several ways. In the research project "Media Relations Online," we combined and applied institutionalist and network-based approaches because we contend that they provide a helpful starting point for further theorizing on media relations in the online world. We depict organizations as embedded in an environment that is constituted by institutional rules and norms, and by other organizations that are embedded in their respective institutional environments as well. Thus, from a structural point of view, the environment takes on a network structure, and next to this, the environment is not just a given, but entails a material, symbolic, and normative dimension. From this follows that instrumental approaches to media relations fall short in understanding the symbolic, rhetoric, and discursive aspects of strategic communication. This is marked by a rejection of the "Grunigian paradigm" in much recent public relations scholarship (Dühring, 2015). Rather, traditional notions of the management or even control of media processes are overhauled by the diversification and acceleration of mediated communication.

The theoretical approach that was suggested here has far-reaching implications for the study of media relations. The most important implication is that the very object of traditional media relations has changed. Public relations practitioners and journalists are no longer the only actors involved in media relations. In an online media environment, media relations comprises relations to journalists as well as to stakeholders and to the broader audience. The relations are not unidirectional but mutual, with a constant shift of influence from one side to the other. A second implication is that media relations are no longer to be seen as a mainly tactical endeavor to influence or even control the media presentations of political actors. Rather, media relations must be understood against the backdrop of continuous organizational adaptation processes. By practicing media relations, political actors and organizations adapt to a dynamic institutional environment and thereby shape this environment. The values and professional norms of practitioners and journalists are

constantly renegotiated and enacted, thereby leading to new standards of what is seen as "effective" media relations.

From a normative point of view, the new constellations of actors and the multiple digital and traditional channels for the distribution of information and opportunities to interact with groups and individuals make media relations much more complex. It will become more difficult to assess the implications of media relations practices for democracy because the actors and the influence they exert are more difficult to recognize. A core challenge in diagnosing the possible effects of media relations for democracy and civil society is the precise identification and analysis of relationships among actors who jointly create publicity for political organizations.

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Part II

Research Designs Revisited

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10 Fundamental Methodological Principles for Political Communication Research

Validity Even in the Online World?

Gerhard Vowe and Philipp Henn

Why a Contribution to Fundamental Methodological Principles?

Which fundamental methodological principles could and should be agreeable within political communication research? And are they still valid under the conditions of a world that is increasingly influenced by online media? The objective of this chapter is to outline a *methodological profile* for political communication research by answering these two questions. These answers can provide guidelines for political communication research that can be followed even in light of the contemporary upheaval.

Methodology should be understood as the theoretically based formulation of the "rules of the game for research" (Opp, 2014, p. 22; translation by the authors). It does not concern substantial theories, or individual research techniques, but rather the institutional structure for research (North, 1990). Research rules help researchers to determine the central expectations for their work, while providing more or less clearly the principles upon which the research can be based. In this way, researchers have a common ground from which to generate and share their research.

How authoritative can the rules of the game for research be? For political communication research, as well as for other social sciences, a *pluralism of methods* is characteristic. The spectrum ranges from weakly standardized procedures like expert interviews, to strongly standardized procedures like automated content analysis (see Chapter 13). This plurality is necessary in order to respond to the variety of issues that arise in the course of political communication research (see Graber, 2004). However, this plurality must be embedded within a *methodological framework* that provides a reliable foundation for all scholars carrying out political communication research. This framework is composed of general, fundamental methodological principles. The claim is that these principles are valid for the social sciences in general, and as such, these standards can also be applied to interdisciplinary fields like political communication research

wherein the divergent methodological traditions of political science and communication studies are combined. As long as political communication research is understood as belonging to the social sciences, these methodological principles can also be applied to political communication research in general, although they should not be relativized for individual countries, problem fields, or researcher groups (for a different perspective, see Reinemann, 2014, p. 11).

The *validity* of these principles, however, is in no way self-evident. Even determining which criteria to use for comparing theoretical approaches is a matter of debate within the social sciences, and there is still no generally authoritative catalog of fundamental methodological principles for either political communication research, or for the social sciences.[1] It is also not currently clear that scholars with different backgrounds rely on the same canon of methodological standards. For example, it is not clear whether scholars with a system theoretical background and scholars with an action theoretical background, or representatives of explanatory and interpretative approaches, and application-oriented and basic research-oriented researchers are all using the same standards. However, the aim for all manners of approach should be to reach a minimum level of agreement about research standards. An important step toward reaching this goal is the proposal of a set of fundamental methodological principles. This proposal is not authoritative for either political communication research, or for the authors of this book, and therefore does not claim to offer a methodological model that is currently accepted and practiced by all parties. Instead, in this first step, the aim can only be to elucidate and systemize what has previously served as a benchmark around which research has been oriented, mostly on the implicit level, for a large segment of the research. This proposal must then go on to achieve validity within political communication research, and thus does not represent common knowledge, but rather presents a normative guideline. This proposal requires intensive discussion within the scientific community, as well as empirical testing followed by relevant modification.

We will develop our proposal in two stages: First, an outline for a fundamental methodological model for communication research will be presented. Given how research conditions have changed with respect to the online world, this foundational model will be challenged accordingly and must defend itself; this will be considered in the second stage.

Which Fundamental Methodological Principles Should Guide Political Communication Research?

The structure of the fundamental model (see Table 10.1) is built with respect to the three *foundational dimensions of communication* (Dance, 1970; Merten, 1977). Within each dimension, a different research perspective is dominant. This results in three *fundamental methodological*

Table 10.1 An Overview of the Methodological Foundational Model

	Perspective of Research	Fundamental Methodological Principle	Specific Rules of Procedure	Challenge Posed by Online World
What? Content dimension	Research as an explanation	Causality	Micro–macro link	Differentiation
Who? Social dimension	Research as a network	Intersubjectivity	Monitoring by the scientific community	Pluralization
When? Temporal dimension	Research as a process	Incompleteness	Interdependence of theory and empirical research	Acceleration

principles each with their own *specific rules of procedure*. These principles are a guideline based on (1) explanation through *causal models* in the form of micro–macro links, (2) *intersubjective validity* through seamless monitoring by the scientific community, (3) *incompleteness* of the research process in a temporal sense through the interdependence of theory and empirical research. These principles are based on the theories of Max Weber (causality), Immanuel Kant (intersubjectivity), and Karl Popper (incompleteness).

Research as an Explanation: Orientation on Causality

In the content dimension, research is seen as an *explanation*. This addresses the objective of research, which is to deliver resilient explanations of relevant phenomena using descriptions and to serve as a prerequisite for prognoses. Within political communication research, this means first and foremost the ability to explain relevant political phenomena such as voting results, changes in willingness to participate, and international conflicts.

What does explanation mean? From a cognitive perspective, research is meant to be focused on revealing relationships of cause and effect in the most general terms possible. Causality is used as a mode of explanation here, which is not entirely self-evident since functional explanations are also possible. This focus on causality implies, additionally, a clear separation between causal effect statements and value judgments (Adorno et al., 1976; Habermas, 1971).

How should causal explanations be structured? A number of proposals have been made to address this issue. Our proposal builds onto the concept of *methodological individualism* (Udehn, 2002). This model of

sociological explanation offers a useful perspective for political communication research. The designation *methodological individualism* goes back to Joseph Schumpeter (1908, p. 88), who intended to set methodological individualism apart from philosophical and political individualism. Max Weber (1968) elevated this model to the foundational rule for sociological explanation and grounded this in action theory.[2] *Methodological individualism* means that social phenomena of any kind are explained by referring back to *individual actions*. Families, organizations, states, and nations are conceived of as being the interrelationship of individual actions. Reproduction and alteration of social structures on all levels, and in all areas, is explained by individual actions, not the other way around. This is because individual actions can be analyzed and serve in their part to explain all social facts. The basic social element is *the action*, that is, any behavior to which meaning is attributed. Therefore, it is the actions that are key to the analysis of all social phenomena, rather than the system, history, or fate.

On this action-theoretical basis, a formalized explanatory model was generated that systematically unites the micro level of individuals with the macro level of social structures in a *micro–macro link* (see Figure 10.1). David C. McClelland (1961/1976, p. 47) is most likely responsible for the invention of the "bathtub" in 1961 with which he illustrated the classical example from Max Weber of how the relationship between Protestantism and capitalism can only be explained by referring back to individual attitudes and ways of behaving. This was then elaborated by James S. Coleman (1990).[3] Hartmut Esser (2000, p. 414) chose it to be the core of his "explanatory sociology," which provides a model for all social sciences.

According to this model, the course of sociological explanation has as its foundation the link between the macro, or structural, or collective level and the micro, or actor, or individual level. If political communication research is to contribute to the explanation of political macro phenomena, according to methodological individualism, it can only do so by referring back to individual actions; that is, by using the micro level. In order to provide such an explanation, the following five steps
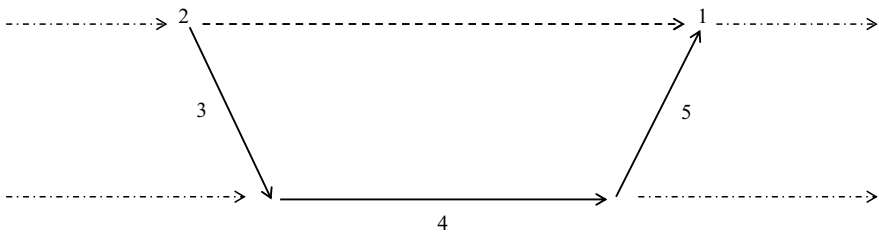
Figure 10.1 Model of Sociological Explanation: Micro–Macro Link

must be followed: (1) First, the *political macrophenomena*—for example, the electoral victory of a presidential candidate—must be identified. This step constitutes the explanandum. (2) The political macrophenomena is then positioned in relation to a *communicative macrophenomenon*—for example, positive media coverage about a candidate's performance in a TV debate. It is assumed that a relationship exists between these two macrophenomena, in this case between the tenor of media coverage surrounding the TV debate and voter approval, which is supported by plausibility, or correlation. However, an explanatory relationship only exists if a connection is established between both variables on the micro level. (3) As a result, in this next step, it must first be determined whether the voters were aware of the media coverage as well as what their perception of it was. Or, more generally, how the given situation was perceived, and what influence that perception had on the subsequent action. (4) The next step is to then explain how individual perception of media coverage influences individual voting. (5) Finally, it must be determined how election results arise from a body of individual votes—more broadly: How an outcome arises.[4]

For each of the last three steps, basic rules can be formulated in accordance with various approaches within the social sciences (Esser, 1993). All of these basic rules involve combining concepts in if-then statements. From these declarations about causality, theories can be constructed with varying degrees of validity. The basic rules are as follows:

- *Macro–micro link* (3): basic rules for individuals' ability to perceive communicative macrophenomena ("situational logic"). Cognitive psychology approaches are applicable here. For example, in this case, it is useful to understand how the information offered by the media is received by an individual against the backdrop of their mental models. Framing theory is an example of an accepted rule for determining situational perception (Scheufele, 1999).
- *Micro–micro link* (4): basic rules for understanding individual, internal processes, that is, the relationship between individual motives, cognitions, and emotions on the one hand, and individual intentions to act and actions on the other hand ("logic of selection"). An established rule for understanding these processes is *rational choice*, wherein alternatives for action are evaluated according to anticipated consequences, and the actions that are selected are those that fare best during individual cost-benefit calculations—that is, those that maximize the multidimensional benefits, and/or minimize the cost (Baurmann, 2002, p. 130; Vowe, 2015). However, there are other rules that can be implemented as well that are grounded in cognitive psychology, or behavioral economics.[5]
- *Micro–macro link* (5): basic rules for the transformation of individual actions into a collective result for which an explanation is sought

("logic of aggregation"). In this step, the process of statistic aggregation is an established rule for determining how individual action results in a collective outcome. However, more complex rules could also address how collective outcomes result from the relationships of individual actions, and thus the macrophenomenon in question can be understood as the consequence of the intended interaction of individual actions (for example agreement on one standard for distributing Internet addresses as the result of negotiations between interest groups); or as an unintentional collective consequence of individual actions (for example, the crisis of quality newspapers as a result of individual choices for alternative supplies of information); or even as the irrational collective effects of individual rational actions (for example, the problem of free riders; Olson, 1965).

When these three steps are considered together, it becomes clear that they do not represent a micro approach, but rather a combination of the micro and macro levels. Accordingly, no question should be answered solely on the micro level. Structural conditions and structural effects must always be integrated. Just as explanations should not be made solely on the micro level, they also cannot be limited to the macro level; rather, this approach calls for both levels to be incorporated within the explanation of a phenomenon.

Research as a Network: Orientation on Intersubjectivity

Within the social dimension, research is understood as a *network of researchers*. Researchers are not monads; they are connected with other researchers through cooperation, competition, and conflict. Among the multitude of functions fulfilled by scientific communities, professional monitoring of research stands out (Kuhn, 1970, p. 174). Only through this monitoring can the intersubjectivity of findings be guaranteed. The network of researchers must guarantee that research results live up to their claim to intersubjective validity.

What is understood by the term intersubjectivity? It is understood as a socially defined form of objectivity (Habermas, 2005; Kant, 1787/1996; Kneller, 1981; Schurz, 2006, p. 27). Since research objects cannot be examined independently of research subjects, it is impossible in principle to perceive situations in a completely objective manner having excluded all subjective influences. However, it is likely the case that perceptions can made at least somewhat less subjective by ensuring that they conform to standards of intersubjectivity. In order to do so, a "universal communicability" of the statements in which a perception is expressed is entailed; this is the external "touchstone" (Kant, 1787/1996). Universal communicability means that statements must be communicated in such a way that every competent person can be convinced of their logical and empirical

correctness. This manner of resolving the subjectivity of perceptions through communication is necessary to ensure the truth of statements, but it is not sufficient. There remains a high degree of uncertainty as to the degree to which statements are contaminated by interpretation.

Intersubjective validity is achieved through essentially unlimited *transparency*, which enables scientific communities to seamlessly monitor all stages of the research process. Any exception to transparency must be justified, perhaps in reference to privacy. This requirement for transparency is not restricted to a single group of research techniques, for example those that deal with numerical data; even so-called qualitative methods should and can produce results with a claim to intersubjective validity as long as the research process is monitored properly (Denzin & Lincoln, 2011; McGowan, 2014, p. 286). These rules apply to the entire research process from design right to publication, starting with precise *rules for quotations* in order to ensure that personal intellectual property and the intellectual property of others are clearly differentiated; then continuing with precise *accountability* for data collection and data analysis, which make replication possible; and finally, ending with the requirement to present *published arguments* in a clear and unambiguous manner. This network of control is divided by disciplines, with some overlap between them. It is not appropriate for members of other disciplines, research managers, or the general public to be in a position to control particular aspects of the research process. Instead, general indicators must suffice to this end. Monitoring occurs more as collaboration within individual professions. Specific rules and procedures have been developed for this purpose, as exemplified by the review process for scholarly journals. The *autonomy* of scholarly research rests on this capacity for seamless monitoring: Only when the research is demonstrably in a position to secure the intersubjectivity of its findings itself is it possible to defend against external control.

Research as a Process: Orientation on Incompleteness

In a temporal context, research is regarded as a *process*. This dimension is concerned with method in its actual sense; that is, the rules governing research procedure. There are two conceptions of the research process: (1) the process can be conceived of as an *evolution* in which theories develop through variation and selection. Those theories that perform well are the ones that survive. This process of selection cannot be planned, only explained after the fact. (2) The research process can also be understood as the *course of a plan of research*, which involves proceeding step-by-step (see Punch, 2014, p. 5). For both points of view, the third fundamental principle—incompleteness—which is developed in the following section, is decisive.

What is understood by incompleteness? "Incomplete" is used here in the temporal sense, meaning "endless."[6] Both an individual project as

well as research as a whole should remain open as a matter of principle, meaning that no results should be prescribed. It is, in principle, impossible to know in advance what the result of research will be. Any results are only provisional, and should continue to be inspected throughout the entire research process. Researchers can only continue to approach the truth in an unending process. Although a hypothesis can always become more probable, it is never entirely certain (Popper, 1968). Incompleteness is a distinguishing characteristic of modern science and is distinct from scientific views that seek to conclude matters in a variety of ways, be it the scholastics with their static system of teaching, or the field of applied research with its orientation on practical goals.

To make incompleteness concrete, the interplay of theory and empirical research has been established. Hypothetical statements are derived from a theory and formulated in such a way that they can not only be tested in terms of logical correctness, but also be empirically tested according to clearly defined criteria. The aim of this is not to confirm these hypotheses, but to refute them: the stronger the logical and empirical test, the better. Throughout the course of the critical testing, the theories can either be defended, or else they will fail when held up to the rigorous, systematic scrutiny—fully or partially in either case. This allows for the specification of theories and the further derivation of statements for empirical testing. Thus, testing theories is more significant for the progress of science than generating theories.

The fundamental principle of the process is step-by-step procedure. As a rule, scientific progress comes into being not through breakthroughs, revolutions or conquests, but step-by-step through elimination of errors, as a refutation of conjectures (Klee, 1997, p. 131; Kuhn, 1970, p. 2; Lindblom, 1959; Popper, 1957, pp. 64–70; Popper, 1963).

Of course, none of the three fundamental principles are consistently observed in everyday research, making it impossible to exercise control seamlessly. For example, the stimulus material for experiments is not documented and cannot, therefore, be evaluated. Controlling all stages of research would require far too much effort, so a certain amount of trust is invested in researchers. Even the basic principle of complete causal explanation through the micro–macro link cannot and need not always be followed. There are research questions for which incomplete explanations are sufficient, or even necessary, such as in instances where there is no access to the micro level. When this is the case, it is necessary to seek out pragmatic solutions, and it is often useful to identify proxies for causal factors. Even the interdependence of theory and empirical research is not consistently maintained. For example, there is a tendency to prefer working on confirming a hypothesis, rather than refuting it, and findings that do confirm a hypothesis are preferentially published ("publication bias," Carpenter, 2012). It is also the case that many sufficiently confirmed hypotheses are no longer called into question and are instead

taken for granted. Nevertheless, these principles can serve as points of reference. Pragmatic decisions reached during everyday research do not change the guiding function of the fundamental principles in any way.

Challenges to the Fundamental Principles Due to Altered Conditions for Communication

Against this backdrop, the question for the second stage becomes: To what extent should the three fundamental principles be adhered to even under altered conditions for communication? The structural transformation of political communication has also resulted in profound changes for political communication research. The scope of research objects has changed, with online media playing an ever-increasing role in political communication. In addition, working methods have also changed; online media, as a cluster of instruments for research, is also increasingly influencing scientific communication. The two intertwine and put the fundamental methodological principles to the test.

These challenges involve both opportunities and threats, and thus require a high degree of adaptability on the part of researchers.

Differentiation of Research: Challenges to Causality

To what extent do online media constitute a challenge to the precept of centering research on causal explanations?

In order to answer this question, it is necessary to consider that in the online age, *differentiation* is increasing within political communication research. The spectrum of research content is broadening in the following ways:

- Expansion of the spectrum of *research goals*: The scientification of communication practices has led to a focus on solving practical problems within one segment of research, while solving basic problems is relegated to the background. For this segment of research, solving practical problems is at the forefront, while solving fundamental problems remains in the background. This reciprocal interchange between application and research is driven by the diffusion of online media. Online media offer a powerful platform from which research and application can proceed faster, with less expense and with more flexibility.
- Expansion of the spectrum of *research objects*: In an increasing online world, more communication modes can be examined in contexts that were previously inaccessible, such as, for example, interpersonal online communication.
- Expansion of the spectrum of *theoretical approaches*: Due to the ubiquity of online media, many disciplines are incorporating online

media into their analyses. As a result, theoretical approaches from economics, psychology, and computer science become a part of the total spectrum of theoretical approaches.

This expansion of research content poses a threefold challenge to research centered on seeking general causal explanations above all else. As a result of the expansion of the *research goals*, solving practical problems, which entails a focus on the specific applications of research, can take precedence over solving foundational problems: It is only important to know *why* insofar as this leads to knowledge of *how*. Communication research as a whole becomes more functional through this process. A growing segment of research is being driven by the requirements of practical political communication and making the conception and evaluation of campaigns ("political marketing," Kozolanka, 2015) and the development of prototypes ("design thinking") its primary focus. One potential consequence of the expansion of the spectrum of *research objects* is that more factors and their interrelationships must be considered during the search for explanations, which makes it difficult to reduce the number of tangible causal relationships down to a few that are most important. The expansion of the *spectrum of theoretical approaches* can also lead to the development of more research models that are not unifiable and not mutually transferable such as models based on action theory, system theory, and network theory.

These changes all represent a challenge to the logic of the micro–macro link, which is often much too complicated to effectively meet the objectives of applied research where it is not always necessary to look for explanations at the micro level. In many cases, it is sufficient to investigate correlations on higher levels in order to arrive at suitable, realistic solutions. This is the case, for example, during campaign design.

From a theoretical perspective, the theory of social networks represents a particular challenge to the micro–macro link, since the basic elements do not consist of individual actions but rather interactions, or acts of communication. For those who view the world as a network, it is difficult to make recourse to individual actions as a foundational explanatory element.

These challenges involve both opportunities and threats. On one hand, an increase in differentiation is viewed as an increase in divergence—that is, a loss of cohesion between researchers and the focuses of the research. Thus, expanding the spectrum of research goals brings with it the risk that "should" statements in the form of practical targets exert a stronger influence on the research process. On the other hand, this increase in differentiation is seen as a gain in diversity, which provides more explanatory opportunities given that it can open doors to areas for empirical investigation that were previously closed. For example, this differentiation allows for the examination of interpersonal political communication,

or the evaluation of campaign effectiveness. However, recognizing casual explanation as the fundamental principal is a necessary precondition for making use of this opportunity.

What conclusions can be drawn from these challenges? Causality should remain the central focus of research since it continues to be a suitable method for reducing complexity even in an online world. When it comes to solving practical problems, it is necessary to concentrate on explanations, too. It is certainly of interest to discover statistically significant relationships—for example between the amount of humor and the viral success of political messages—and this knowledge maybe sufficient for generating messages, however, this does not fully explain the relationship. A theoretically exacting explanation would require an examination of individual behaviors, that is, it would have to refer back to the motives and actions of users. Only then will a theory result from the relationship between phenomena.

In this process of theory building, the opportunities within the challenges can be taken advantage of. New relationships and approaches can be integrated into a multi level explanatory model, particularly the categories and techniques of social network analysis (see Chapters 16 and 17). A micro–macro link can thus form the foundational structure for causal explanations for and within online communities. There is a significant need for development in this regard.

Pluralization of Research: Challenges for Intersubjectivity

To what extent do online media present a challenge to the precept of guaranteeing seamless monitoring by the scientific community?

Two problems are significant to consider when answering this question: an *individualization problem* and an *arcane problem*.[7] Both problems are associated with the tendency toward *pluralization* in political communication research, which is driven by the diffusion of online media. Not only is the circle of actors within political communication becoming broader and more heterogeneous, but the same is true of the circle of actors who research political communication. This pluralization contains threats and opportunities for the precept for research monitoring by the scientific community, and thus presents a challenge to the fundamental principle of intersubjectivity.

First to address the problem of individualization. The use of online media in political communication makes it possible to tailor messages to individual user characteristics. This entails learning from the (re)actions of users in order to adapt more precisely to individuals. By so doing, media content is thus multiplied, changing based on the individual user. This contains both threats to and opportunities for intersubjectivity. The *threat* is that, for example, the content analysis of search engine results is not easy since results vary depending on user and point in time, and

thus the reproducibility of findings is sharply limited and must be ensured through elaborate collection and storage of materials (see Chapter 11). This difficulty results in the loss of one of the great advantages of media content analyses as compared to other data collection procedures, namely the low reactivity of methods—for example, newspaper articles remain the same no matter who examines them, when, or where. Media content analysis can no longer assume low reactivity of the methods, given that measurements are becoming more relative (see Chapter 11; Hine, 2011).

On the other hand, online communication also offers opportunities, such as the following, for ensuring intersubjectivity:

- Opportunities for *data collection*: Communication behaviors can be determined from device use and no longer need to be obtained in surveys, which increases the reliability of usage data (Prior, 2009). Compared to traditional procedures for data collection, online media offer clear gains in validity and reliability. Online surveys and observations allow for a more stringent control of data collection in certain aspects than the traditional procedures do (see Chapters 12 and 14) particularly when it comes to collecting and evaluating qualitative data—for example, data for ethnographic field studies (McGowan, 2014).
- Opportunities for *cooperation*: Cooperation with other researchers can proceed in a more intensive, traceable, and simple manner, for instance, by using collaborative knowledge platforms. Different methods can be combined for improved quality control. Even automatic alarm systems for scientific misconduct are conceivable.
- Opportunities for *publication*: Open access allows for the rapid publication of results that are widely available (Kuhlen, 2010). Dissemination of results can occur in a more individualized manner.

The *arcane problem* is more serious. Political communication research is not exclusively driven by academic researchers. This has become especially true with the diffusion of online media. Researchers working for platform operators (e.g., search engines or social network sites), users (e.g., administrations or parties), and security organizations (e.g., police or intelligence agencies) develop instruments tailored to their goals in order to use online media for political communication. The best example is the algorithms that Google uses in order to personalize services (Stross, 2008). Another example is the processes that intelligence agencies employ for monitoring, which evaluate large quantities of data from social network sites. These activities generate innovative problem solutions that are also significant for political communication research in general. The *threat* this poses for intersubjectivity is that in the field of political communication, this segment of research and development will evade control by the scientific community and remain in an arcane

private, or government area. Not only is it not possible for the scientific community to use this proprietary knowledge, but the community also cannot evaluate its quality, or control its creation. The responsible parties are not inclined to make their research results public to the professional community. For companies, this is justified in light of competition from other companies who may benefit from the results of their research. For intelligence agencies, the justification lies in rivalries with and oppositions to other intelligence agencies. Thus the need for transparency of research is undermined, and a significant segment of innovative research contributions remains opaque. However, the expansion of research and development facilities also creates *opportunities* for research. A powerful trend toward explicitly targeting secrecy has emerged within the Internet community (keyword *open source*), with staff and knowledge from the secret sphere being increasingly transferred to the public sphere (keyword *whistleblower*).

What conclusions can be drawn by comparing the threats and opportunities associated with the two problems? Overall there is no reason to doubt the validity of the standard of intersubjectivity. For the *problem of individualization*, clear advantages for intersubjectivity are gained through the use of online communication. The *arcane problem* should be solved by integrating research actors who are not subject to the precept of transparency into professional communications. It is important not to fight against researchers who work for Internet companies, but rather to convince them that the more successful path for them in the long term is to integrate into the scientific community. In the case of academic research, however this integration requires becoming more open to the communication culture of researchers in companies, which is heavily influenced by the Internet. In order to take advantage of opportunities for cooperation, academic researchers must make use of network-based communication, must communicate more creatively, in a more flexible manner, and on a more global scale. If integration is unsuccessful, the gap between academic basic research and private applied research will widen, in part because a growing number of resources in the form of technologies, financing and young talent are being diverted toward private research areas that are more dynamic as a result of being less regulated.

Acceleration of Research: Challenges for Incompleteness

To what extent do online media present a challenge for the precept of keeping the research process open through the interdependence of theory and empirical research?

In order to answer this question, it is important to consider that the popularity of online media brings with it the *acceleration* of political communication research. This is the result, first, of the fact that the field of investigation changes more rapidly now than it ever has before.

Second, the tempo of professional communication accelerates when efficient online instruments become pervasive; the online *mediatization* of scientific communication is an independent accelerator. On the micro level of individual research projects, the acceleration finds expression in all stages of the process of research, as can be illustrated by the growing number of publications. On the macro level, it is expressed by an overall transformation of political communication research, as illustrated by the increasingly rapid change of scientific themes and positions. Here as well, there are both threats and opportunities presented by the acceleration of political communications research. The following two threats in particular must be considered:

- *Threat of data-driven development*: Up until now, the interdependence of theory and empirical research has been the motor of development, with equal weight given, in principle, to each part. Currently there is some indication that *big data* results in an overabundance of data and that empirical research is losing its footing. There are increasing numbers of representatives for the position that useful knowledge could be generated by, above all else, evaluating the mass data being generated within the networked world. They argue that prognoses can be possible even without theory ("end of theory," Anderson, 2008; "new kind of science," Wolfram, 2002). The possibilities presented by data sets are appealing, while the necessities of theory drive researchers away (McGowan, 2014, p. 281). Thus, big data results in theory-driven explanation losing significance within research, while data-driven application gains ground.
- *Threat of fragmentation*: Not all political communication researchers accept this accelerated tempo of the research process, and as a result, differences in speed and means of communication are already becoming apparent, concentrated into different scientific cultures that vary above all according to subject and age group (Albrecht, Herbst, & Pscheida, 2014). This fragmentation is associated with higher selectivity; the increasing number of publications being offered in political communication research results in a decrease in demand.

There are also opportunities for knowledge growth through online communication. It should be welcomed that the evaluation of mass data can enable the discovery of patterns and the exploration of unknown fields. In addition, acceleration allows for the more efficient use of resources as the individual stages of the research process can be condensed. Researchers can concentrate on the more demanding aspects of research, which include:

- *Production of new knowledge*: The infrastructure has become more powerful, particularly its calculating capacity. Faster and more flexible publication forms are available.

- *Testing of new knowledge*: Monitoring can be carried out quickly and more comprehensively and errors can be corrected faster and more sustainably.

What conclusions can be drawn by comparing the threats and opportunities? There is no apparent reason to depart from the precept of incompleteness through the interdependency of theory and empirical research. Even big data does not signify the end of theory (Mahrt & Scharkow, 2013). Significant theoretical progress will continue to occur through empirical tests, and this will enable the new dynamics to be fully utilized.

Conclusion: Methodological Principles Still Valid and Require Further Discussion

Research in political communication is changing as quickly as the Internet is changing. From a content perspective, the goals, objectives, and approaches of research are differentiating; from a social perspective, the constellation of actors performing research is pluralizing; and from a temporal perspective, research is becoming more accelerated. Challenges arise for each of the following three fundamental methodological principles: (1) causal explanation through micro–macro links, (2) intersubjective validity through monitoring by the scientific community, and (3) incompleteness of the research process through the interdependence of theory and empirical research. The challenges involve both threats and opportunities. After being put to the test, the methodology of the social sciences, and thus of political communication research can emerge stronger than before, so long as the subsequent development of research methods is structured in such a way that threats are minimized and opportunities are strengthened.

The main conclusion reached by weighing the opportunities and threats is that the online world is built on science and technology—more so than any other media world in the past. Demands on the quality of knowledge within political communication research, and thus the resilience of its methodological framework, are correspondingly high. Even with altered conditions for communication, the three principles should be maintained. Research should continue to be oriented on causality, intersubjectivity, and according to the precept of incompleteness. Discussion on the challenges has not given rise to any argument that contests the fundamental principles; however, these principles must defend themselves in everyday research practice.

Where is there a need for action? Certainly, the application of the principles must be adapted to the altered conditions—in the future more so than today given that the methods are changing quickly due to rapid innovations. While more method-induced challenges will emerge from the online world, political communication research is not sufficiently equipped to handle them since the perceived value of methodology is too

low. In order to constructively make use of the challenges, the community of political communication researchers should reflect more deeply on methodological questions. One impetus for reflection could be the desire to reach an agreement about fundamental methodological principles. If a framework of principles exists that is capable of generating consensus, this framework could and should bear more weight in the education of young researchers, but also in the self-organization of political communication research. Such a framework would be also be necessary in order to be able to sanction research behavior as either positive or negative.

Now is the time to examine a proposal for how to reach agreement on basic principles—a task which cannot be achieved without dialogue. Through deliberative processes within the scientific community, the extent to which it is possible to agree upon fundamental principles and the ways in which to make them operational must be explored. What is more, the scientific community involved in political communication research will only preserve itself in the extent to which methodological standards are lived, criticized, revised, and strengthened.

Notes

1 However, there are detailed and codified rules for individual fields (e.g., American Psychological Association, 2010).

2 His definition of sociology can be applied in general to the social sciences: "Sociology [. . .] is a science concerning itself with the interpretive understanding of social action and thereby with a causal explanation of its course and consequences" (Weber, 1968, p. 4).

3 Coleman (1990, p. 326) extends the actor spectrum with "corporative actors," organizations and households. In this model, a meso level can also be integrated, and macrophenomena are then explained by referring to meso-phenomena, such as changes to organizations or social networks. According to the micro–macro model, however, this would then need to be explained further on the micro level. As a result, there are then three levels of relationship ("imbedded systems", Esser, 1999, p. 19). In this way, for instance, two-step flow (Lazarsfeld, Berelson, & Gaudet, 1944) could be modeled. Individual perception and behavior is then imbedded in a specific social environment, for instance social networks (Granovetter, 1973).

4 Further examples are the relationship between the diffusion of online media and the growing demand for control of online media (see Chapter 7); the explanation of the changes of media agenda and audience agenda (see Chapter 2); or the broadening gap of knowledge between information poor and information rich (see Chapter 5).

5 The value that motives carry in terms of actions, for example, can be tested through regression analyses, and supplemented by interpretative processes thereby minimizing the blind spots of each method.

6 According to Weber, scientific progress continues "to infinity" (Weber 1918/1946, p. 138; see Huff, 1984, p. 45). Popper uses the concept of fallibilism, referring to Charles S. Peirce (for the history of the term see Hetherington, n.d.).

7 There is also the problem of autonomy. The circle of those who want to take part in the control of communication research is expanding. The possibilities

of online communication allow interest groups to observe research much more closely and attempt to utilize this research to their ends. For example, interest groups are taking interest in research on topics like AIDS, and climate change (see Chapter 15; Haßler, Maurer, & Oschatz, 2014)—fields that are heavily investigated in political communication research. This creates the risk of producing echo chambers within political communication research (Sunstein, 2001) wherein the adherents of a given scientific perspective remain amongst themselves, and external groups influence the standards for research. As a result, political communication research could lose autonomy.

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11 Database-Driven Content Analysis

Marcus Maurer, Jörg Haßler, and Thomas Holbach

Introduction

Without a doubt, the Internet is continually gaining in significance for political communication research. Besides many other consequences already discussed in the theoretical chapters of this book, the growing importance of online media for political communication also gives rise to consequences for *content analyses* of political media coverage. Those usually take particularly wide-reaching mass media such as leading nationwide newspapers and news broadcasts into account, either because they consider them to be representative of the entire media system or because the content analyses are meant to be the basis for effect analyses and thus selected media must be used by many of the respondents. This is why there are many reasons for including online media in content analyses nowadays. Since it can safely be assumed that the reach of political online media will continue to grow, it is highly probable that, in only a few years' time, media content analyses without the inclusion of online media will be inconceivable. Content analyses of online media appear to be very promising at first glance. As these media use standardized programming languages and codes and are available in digitized form, it is theoretically possible to automatically capture huge amounts of text ("big data"; Hopkins & King, 2010; McMillan, 2000; see also Chapters 12 and 13). This would also enable fast and inexpensive analyses because it does not require human coding. Even though efforts have been made to develop programs for automatically coding online contents for some time, the possibilities of such processes are still rather limited. Topics of news coverage can be identified with the help of word recognition software (e.g., King & Lowe, 2003), and even recurring sentence structures and their contents can be captured using grammar parsers (e.g., de Nooy & Kleinnijenhuis, 2013). However, for more complex analyses, like for example of the tone of an article and argumentation strategies within an article, manual coding still is the gold standard (Lewis, Zamith, & Hermida, 2013; Van de Kauter, Breesch, & Hoste, 2015). While recently several tools for the automated analysis of web content have been developed, there still is a

need for developing tools for the automated storing of web content for manual content analysis. This is why, in the present article, we would first like to address the greatest challenges involved in manual content analysis of online media: the *ephemeral* and *dynamic* nature of online contents, their *multimediality*, their *hypertextuality*, and the fact that online contents are increasingly offered in customized form. Afterwards, we will introduce a new system for archiving websites that will do away with these problems (for a description of other systems see Haßler, Maurer, & Holbach, 2014). The ARTICLe (Automatic RSS-Crawling Tool for Internet-Based Content Analysis) database, which has been developed for this purpose, offers the possibility of manual coding by human coders, but can also be complemented by automatic data processing and coding systems.

Challenges of the Content Analysis of Websites

Ephemerality and Dynamics

The Internet is characterized by ephemerality and quick change. This is true both for the available websites in their entirety and for individual articles within web services (Koehler, 2002). As, in online media, many new articles are published and older ones removed or updated in the course of one day, it is considerably more difficult to establish the total population and samples and also to save the articles. Karlsson and Strömbäck (2010) have shown that on the websites of some daily newspapers articles are not featured on the homepage for more than five hours. For instance, the website of Swedish daily paper *Aftonbladet* changed its top article on the front page 13 times during one day. This is particularly problematic for analyses of online contents if only the articles featured on the homepage are analyzed for reasons of research efficiency. Depending on at what time of day the data are analyzed, the findings will be completely different. That is why, like television or radio broadcasts, websites need to be recorded for a content analysis in order that they can be coded at any time. However, those records must be made on a regular basis for the short-term changes on the websites to be taken into consideration.

Multimediality

Multimediality describes the convergence and integration of the traditional offline media—print media, radio, and television—into a new web-based media format (Paulussen, 2004). In addition to the written text, online features can also include audiovisual material like animated graphics, picture galleries, audio clips, and videos. Most online media do not make full use of those possibilities yet, but they do increasingly deploy those resources (Quandt, 2008; Van der Wurff et al., 2008). This

makes the content analysis of websites more complicated for two reasons (e.g., Sjøvaag, Moe, & Stavelin, 2012): First of all, it must be clearly defined which components of websites are to be examined when composing code books. The main question here is whether the coding of contents shall be limited to the central written article of the web page or whether multimedia elements should also be included. If the latter is the case, it must be decided whether such content should be treated as independent pieces or as parts of the written article. In doing so, a difference must be made between multimedia elements that belong to one particular text and others that are embedded in all the written articles (e.g., streams of the most recent television news broadcast on the broadcaster's website). If the multimedia elements are also to be examined, this constitutes a special challenge in archiving websites since it must be ensured that they are also recorded. Ideally, the saved pages should be made available to the coders in the exact same form as in the online version, including all multimedia elements.

Hypertextuality

Hypertextuality refers to a meshed structure that interlinks different objects in the Internet with the help of hyperlinks (Oblak, 2005). A large variety of additional information that is made immediately available to the recipients through a click on the hyperlinks can be provided alongside articles in online media. In theory, this could also include links to other media, to the websites of political parties, nongovernmental organizations, or other organizations. Yet empirical studies have shown that the vast majority of links in online media lead to older articles from the same medium (internal links) in order to keep users on their own website (Quandt, 2008; Ureta, 2011). The hyperlink structure causes two main problems in the content analysis of websites: Recording the hyperlink structure and archiving the websites. The first problem is primarily one of capacity. In theory, it is technically possible to save all websites referred to up to a predefined link depth, starting from a single website. However, if the link depth is great, this process requires a lot of time and memory capacity because, due to cross-linking, the number of websites to be saved is multiplied with every level of link depth. The second problem, as with multimediality, is that the hypertext structure must be preserved when archiving the websites.

Reactivity and Personalization

By means of special algorithms, online content can be customized for individual users by the providers. Thus the viewing of certain articles will result in the same website favorably displaying articles with similar content if consulted again by the same user afterwards (Pariser, 2011).

Gauch, Speretta, Chandramouli, and Micarelli (2007) differentiate between three levels of user-based customization: data collection, profile construction, and using this information and those profiles in technology or application. So far, there are hardly any empirical data about what consequences algorithms and individual user behavior have on the presentation of websites visited before. With social network services like Facebook or Twitter, the possibilities for individualization are basically unlimited. By means of the "friends" selected and channels followed, an individualized newsfeed can be put together. In the case of search engines like Google, users obtain different results depending on their previous search queries. Something similar is conceivable for the editorial content of online media. For instance, online media could use algorithms to generated customized homepages for individual users, where articles are displayed the more prominently the more they correspond to previous user behavior. Moreover, in extreme cases, political news sites might provide users only with information fitting to their individual political positions leading to a fragmentation of the public (Sunstein, 2007). The individualization of services is a substantial problem for online content analyses because different coders will receive different contents. Thus it will neither be possible to define the total population and samples nor to file the data consistently. The problem is even aggravated in the case of content analyses that only take into account the most prominently displayed articles for reasons of research efficiency, because it is no longer possible to determine the best placed article independently from the user.

Processes for Saving Online Articles: Advantages and Disadvantages

In order for these problems to be solved, the basic requirement is that the websites are saved so that the coding can take place at any time. There are numerous different methods for saving and archiving websites so far (Karlsson & Strömbäck, 2010): taking screenshots, saving them as PDF files, downloading entire websites manually, using downloading programs (so-called crawlers, offline browsers or web spiders), and accessing via RSS feeds. We will briefly discuss the advantages and disadvantages of these processes in the following.

Screenshots and PDF Files

Taking screenshots is a relatively simple process. The websites to be analyzed are visited manually and saved as image files, for example, in PDF format. This can be done either prior to the coding or within the same work step as the coding. The process is technically not very sophisticated, but it also has several drawbacks: for one thing, saving all the individual websites by hand is awfully time-consuming; for another

thing, screenshots cannot adequately reproduce either multimedia elements or hyperlinks. Hyperlinks might, in the best cases, be discernible, for example, if they are marked by underlined or differently colored passages in the text. However, the contents connected to such links cannot be found, because they cannot be clicked on in a screenshot. Multimedia elements cannot be shown either because image files are usually static. As a consequence, motion pictures will be displayed as still images so that it cannot be discerned whether the website features video files or simple images. Taking screenshots also does not offer a way to get around the personalization of web services. All this is also true, in a similar form, for saving websites as PDF files. Yet in newer PDF versions, hyperlinks can be shown. If the reader moves the mouse over a link, the URL that the link refers to will be displayed (mouse-over effect). This way it is usually at least possible to capture which websites an article is linked to, even if one cannot view the pages directly. However, another problem can occur when saving websites as PDF files if a printable version of the respective websites is offered in the form of a PDF file with reduced layout. Those printable versions often contain only the text of the article on the website (Karlsson & Strömbäck, 2010). In this case, the articles can only be archived in such a way that they are detached from their context and appear in a neutral layout. So, all in all, this method is only a good option if solely written contents and possibly images shall be analyzed.

Manually Downloading Websites

Manually downloading websites is an option that also takes into account the websites' multimediality and hypertextuality. When using this method, the websites to be analyzed are saved, for example, as HTML files. Usually, the browser used in this process will automatically set up a folder structure in which, for example, pictures can be filed so that the website will look exactly the same when opened offline as if it had been accessed online. Embedded video and audio clips need to be downloaded manually. Hyperlink structures remain visible with this method; mouse-over effects for hyperlinks embedded in the text and in pictures remain available so that the link's target is usually recognizable. It can generally be chosen up to which link depth websites shall be saved. So with the manual saving of websites, it is ensured that all elements of websites are available for coding. Still, there are two substantial downsides to this process: First, it takes a lot of time since all pages to be coded need to be saved manually. The actual saving process itself does not take very long, but it needs to be repeated for every single article on the website as, without an additional downloading program, only the currently opened article can be saved at a time. Second, there is no way of getting around the personalization of websites with this method either.

Downloading Programs

Currently, a number of programs that strongly facilitate the process of saving websites are available on the Internet. So-called web crawlers, offline browsers, or web spiders access websites automatically and save them in different formats. Two freeware programs that are frequently used in communication research are HTTrack and Wget (e.g., Karlsson & Strömbäck, 2010; Small, 2007). HTTrack offers users the option to enter a website's URL and define a link depth. The crawler will then automatically save all publicly available areas of the website requested as well as all elements of the link targets up to the set link depth. The websites can be viewed offline with identical layout and content as well as the same functionality regarding hypertextuality. Video and audio clips, however, need to be saved manually. Things are similar with Wget. Some professional, paid programs like Offline Explorer or Teleport also include archiving of multimedia contents. The authors of the present paper have not yet tried out the functionality of those programs themselves. With respect to the personalization of sites, it cannot be ruled out that, with web crawlers, websites are saved in a customized form. The IP address and, for instance, the operating system of the computer on which the sites are saved are visible to the website providers. With HTTrack, some of the information that is sent to the website providers can be adjusted and manipulated, but still, there is no way of making really sure that the content saved is independent from the user.

Saving RSS Feed Reports

The only process that avoids the problems of reactivity and personalization of websites to a large extent is saving RSS feed reports. Many website providers offer RSS feeds that are usually automatically compiled by the content management system. They serve essentially to inform users about updates on the websites. This can either be done by means of short entries or by providing the new article as a whole via the RSS-Feed. The articles appear in the RSS feed in reverse chronological order—so the newest is shown at the top. Thus RSS feeds are independent from the (customized) website display. As RSS feeds are produced for all the new articles published on a website, the articles will all be saved in the RSS feeds irrespective of whether they are displayed for individual users at all and, if so, where they would be placed on the website for them. This way, all articles that are featured anywhere on the website can be analyzed. In the case of effect analyses, this does not solve the problem that individual users get to see and read different articles. However, this problem also occurs, for instance, in the content analysis of daily newspapers, where also all articles are coded even though it is obvious that the recipients will only read some of them (and that this differs from one individual

Table 11.1 Pros and Cons of Current Processes for Saving Online Articles

Downloading Method / Challenge	Dynamic Nature	Hypertextuality	Multimediality	Personalization
Screenshots	Captured by frequency of saving	Not captured	Not captured	Dependent on algorithms
PDF Files	Captured by frequency of saving	Captured by newer PDF versions	Not captured	Dependent on algorithms
Manual Downloading	Captured by frequency of saving	Captured	Captured	Dependent on algorithms
Downloading Programs	Captured by frequency of saving	Captured	Captured with some programs	Dependent on algorithms
RSS Feeds	Captured by frequency of saving	Not captured	Not captured	Independent from algorithms

to the next). However, the reports usually only feature the main written article and are not presented in the actual formatting of the website. It depends on the website provider in how far hypertextuality and multimediality remain available. In some cases, RSS feeds include images. What is always the case is that a link leading to the website version of the article is embedded in the text of the heading. Multimedia elements, on the other hand, are usually not available in RSS feeds.

In a comparison of the pros and cons of the different methods, it becomes clear that none of them currently fulfills all the requirements (Table 11.1). The problem of personalization of websites is only solved in the case of saving RSS feeds, which, on the other hand, are so different from the original online versions of the articles where formatting is concerned that for example multimedia elements cannot be captured. This is why we would like to propose an integrated solution that combines the advantages of the different approaches and, at the same time, structures and facilitates the coding of online contents considerably. For this purpose, we have developed the ARTICLe database.

Database-Driven Content Analysis

The ARTICLe database automatically creates HTML files of the websites to be analyzed, takes screenshots in JPG and PDF formats and, in addition, downloads multimedia elements like videos and audio files fully

automatically. The websites to be analyzed are accessed via their RSS feeds. The feeds are used as indexes, in which all the latest articles are listed irrespective of their placement within the web service. The system accesses the articles automatically through the hyperlinks leading there and at once saves copies of them automatically. Thus, the articles are saved in the same formatting that is visible to online users, and not as they appear in the RSS feeds. This way, their layout and the editorial context are retained. The database approach can be illustrated by means of three working steps: adding material to be examined, (automatic) saving, and access by the coders.

The first step is *adding* the material to be analyzed. In order to capture all articles that are published on a website, the database uses RSS feeds. The RSS feeds are provided by the website operators and contain all articles that are published on the website as a whole or in one of its sections (e.g., politics, domestic news, economics, foreign news). Every article appears in the RSS feeds, showing at least the headings and, most of the time, also the first paragraph of the respective articles. Usually, the date and time the article was published on the website are also included. The articles are listed in the RSS feeds in reverse chronological order, so if a new article is published, it will be added as the first entry at the top of the updated RSS feed. In addition to the individual articles within the RSS feed, the feed itself also has its own URL. Any website that provides RSS feeds can be saved automatically with the help of the database. So, in a first step, the URLs of all the RSS feeds from all websites in the sample selected are entered into the database. Once the RSS feeds are captured by means of their URLs, an individual name can be given to every feed within the database. The names of the feeds as given by the website operators can also be used.

In the same step, the configurations for the recognition of multimedia elements and articles that are longer than one page are set. Recognition of multimedia elements and subsequent pages works on the basis of a list of keywords that is compiled manually beforehand. If one of those keywords is used in an article, the database will indicate that there are videos, audio clips, or articles with more than one page. To use this function, one first needs to find out which commands are used in the source codes of the websites to be analyzed to embed videos or audio files or to split longer articles up into several pages. If, for example, a website frequently includes videos directly from YouTube, it could suffice if the database sought for the word *youtube* in the source codes. In the case of articles with more than one page, phrases such as *page 2* or *next page* might be used (Figure 11.1). If the respective keywords occur in the article's source code, the database will display corresponding symbols that indicate that the article includes multimedia elements or that the article has more than one page. As a rule, multimedia elements and subsequent pages of longer articles are saved automatically.

Figure 11.1 List of Feeds with Tags for Multimedia Recognition

The second step is *saving* all articles on the websites to be analyzed. The process is fully automatic, but should still be constantly monitored to ensure that no articles are lost due to technical problems. In this step, all articles are saved via the RSS feeds. There is a new saving process every two hours. To avoid entering the same articles twice, the system checks for matches in the publishing date and time as well as in the headings. Articles with the same heading and publishing time are not saved a second time. It would, in theory, also be possible to have existing article entries replaced in every saving process. However, this would make the saving process take longer and require much more computing capacity. Articles with content that is updated throughout the day usually receive updated timestamps. Thus they will be saved again even if their heading remains the same. Thanks to this, it is easy to capture the rate of changes for the articles. If the changes within articles are irrelevant for the research question, users can determine whether they want the first or the latest versions of the articles to be considered in the coding process before the coding takes place. The saving of videos and audio clips embedded in the article as well as of all the pages belonging to articles that are longer than one page is also done automatically.

All articles saved are listed in a table in reverse chronological order (Figure 11.2). This table contains—from left to right—the name of the RSS feed that the respective article is from, the dates of publication and of the saving of the article, an automatically assigned ID number, the title or the heading of the article, icons with hyperlinks to the online version of the article on the original website and to the HTML, JPG, or PDF version of the article saved, one field for manually uploading files (e.g., videos or audio clips), and one field for icons showing whether there are any multimedia elements or subsequent pages. This database view also serves as an interface for the coding of articles. The last two columns of the table give the coders the chance to add comments, mark the article as coded or deactivate it. Articles marked as coded are listed in the database in yellow highlighted lines; deactivated articles are displayed with struck-out text and can be deleted from the database by the administrator if need be. If an error occurs during the automatic saving of multimedia elements or subsequent pages of longer articles, it is possible to manually add such

Figure 11.2 Saved Articles in the Database View

files to the articles in question. In addition to the articles included in the RSS feed, the database also saves screenshots of the start page of the respective website that the RSS feed is from. This enables, for example, analyses of the dynamics of start pages, which are, however, not connected to the RSS feeds and consequently not person-independent. An updated version of the database will, simultaneously with this step, also regularly capture how many times each article was shared on Facebook, Google+, and Twitter and how many "likes" it received on Facebook in case such information is available from the original website.

The third step is *access by the coders*. Even if content analyses that include complex categories still frequently require manual coding, databases can help make web contents available and reduce the effort for research and coding considerably. The coders have access to the articles archived on a server through the database's password protected online user interface or directly through their university's intranet. The server is based on a MySQL database and uses PHP pages to display the online user interface. The articles are presented to the coders in the form of a table, from which they can retrieve written texts, videos, and audio clips. Here that can also document their work's progress. As the database is made available on a server, the coders can perform coding at any time and from anywhere. For each article, they first check whether the predefined selection criteria apply and whether the article should be coded. If this is not the case, they can deactivate the articles. If the selection criteria apply, they start by coding the non-dynamic contents that are saved in the database in the form of HTML, PDF, or JPG files. Those archived files exactly reproduce the versions of the article available online. The archived HTML and PDF files also allow for coding hyperlinks since the link targets can be seen if one moves his or her mouse over the hyperlinks (mouse-over effect). In those formats, the embedding and placement of dynamic multimedia elements like videos and audio files can be shown, but they cannot be played or viewed. That is why within the database, the multimedia elements, which have been saved separately, are also displayed in the same line as the articles that they were embedded in. The coding of the written article is followed by the coding of videos and audio files that might be featured. Once the manual coding is completed, the

coder can mark the article as coded. This way the progress of the coding work can be followed up in real time. If the coders encounter any problems or have any questions, they have the possibility to leave a comment concerning the article in question. In essence, this method does not just combine all the advantages of the present processes for saving websites; the database structure provides a user-friendly coding interface at the same time.

Summary and Discussion

The increasing significance of the Internet as a medium for political communication results in content analyses of online media becoming more important. However, online media are different from offline media in many respects: The ephemeral and dynamic nature of their contents, the multimediality, the hypertextuality, and the reactivity and personalization of articles pose problems for those who want to conduct analyses of online content. By now there is broad agreement on the fact that the ephemeral and dynamic nature of websites can only be dealt with if the websites are saved on a regular basis—in a similar way as in the case of analyses of television and radio broadcasts. Those are recorded and archived so that coders can perform the coding at any time and place and so that it can be revealed which material the content analyses were based on.

There are various processes for saving websites, which can be more or less helpful depending on your research interest. With small sample sizes, it might be sufficient to save screenshots of the websites. More complex analyses with larger samples might soon exceed the time one has available for saving and coding if this method is used. In such cases, automatic saving and archiving of the material to be examined is more useful. There are a number of programs and applications for this, some of which are available for free. Yet not all web crawlers, offline browsers or web spiders reproduce multimedia contents and hyperlinks. Furthermore, the findings from such studies are based upon the particular display of the website and are thus influenced by the personalization of websites.

In order to solve the problems mentioned above, the present chapter recommends a method that combines the advantages of manual archiving with the benefits of automatic savings and, at the same time, also avoids reactivity and personalization. Thanks to the fact that RSS feeds as they are provided by the website operators are used as indexes of all articles currently available, all the articles will be archived regardless of their placement within the website. The RSS feeds serve only as a starting point for saving the articles, which are accessed via the links within the feeds and then saved. Afterwards, all the articles are made available for coding in the form of a table stored on a webserver. From there, they can be opened in HTML, PDF, or JPG formats. The first two

of these formats allow for the coding of hyperlinks or manually opening the websites targeted by those links. In addition to that, every line of the table includes multimedia elements like videos and audio clips if they were featured in the article, and the coders can open those files directly. Finally, the database's user interface makes it possible for the coders to document the progress of their work by marking coded articles, crossing out such articles that are not part of the population, and leaving comments.[1] This also enables a continued monitoring of the content analysis's progress. Thus far, the ARTICLe database has successfully been used in a large project on the influence of political information in online and offline media on recipient's political knowledge (see Chapter 5).

There are hardly any downsides to the great advantages of database-driven content analysis. Due to technical problems or uncommon file formats, in some rare cases certain website elements, multimedia elements in particular, might not be saved automatically. This is why random checks should be made regularly during the saving process. Moreover, the articles saved should be deleted after the coding has been completed. We recommend this, first, because the articles take up a lot of storage capacity and, second, because mass media contents must not be stored permanently in some countries, for example, Germany. Furthermore, they must, of course, not be used for purposes other than research. All in all, the combination of databases and webservers with web crawlers and user interfaces provides exceptional possibilities for saving and analyzing online articles.

Note

1 The user interface is available at https://article.publizistik.uni-mainz.de/feeds/view/. Please contact the authors to get further information on how to use the database. A publication of the source code on the platform github.com is currently planned.

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12 Observing Online Content

Till Keyling and Jakob Jünger

Introduction

Online communication makes the interaction of individuals, organizations, and companies visible—because this interaction leaves data trails, or even consists of data itself. It is no surprise, therefore, that social scientists also work intensively on collecting online data. How the techniques used can be methodologically and epistemologically localized, however, is still unclear. As a result, working with online data is widely perceived as a challenge: "Social science methodologies are not prepared to analyze online media. New or modified methods are needed if online media are to be studied" (Shoemaker & Vos, 2009, p. 131). This uncertainty is also reflected in the variety of terminology proposals. On the one hand, automated content analysis or observation are mentioned in reference to established concepts, but on the other hand, independent concepts such as computational social science (Lazer et al., 2009), web mining (Thelwall, 2009), or digital methods (Rogers, 2010) come into play. This chapter follows on from this discourse and, based on a few fundamental distinctions, attempts to provide orientation for researchers who have been less "tech-savvy." Here we focus on the activity of data collection, primarily with reference to the World Wide Web, which includes examples originating in the Social Web. In the first part of this chapter, we attempt to demonstrate several basic features and differences in the collection of online data. We then discuss three specific ways of collecting data: working with raw data, access to programming interfaces, and the exploitation of user interfaces. The challenges that arise here are subsequently discussed in research logic terms. Thus, based on our experience when collecting online data in the field of political communication research, we aim at giving a basic overview as well as hints for researchers with similar goals.

Basic Features of Online Data Collection

Methods for the collection of online data can initially be localized in different dimensions, independent of their technical implementation (see Table 12.1).

Table 12.1 Dimensions in the Collection of Online Data and Examples

		Raw Data	APIs	User Interfaces
Research object	Provider	Different log files	Different APIs	Different web pages
	User	Author of article in Wikipedia database	Author of Facebook post	Author of forum post
	Message	Article in Wikipedia database	Content of Facebook post	Content of forum post
	Function	Access by mobile vs. desktop devices	Facebook post containing images vs. text	Mobile vs. desktop web site
Analysis perspective	Process	Time line of page visits	Time line of like count for Facebook post	Diffusion of online news
	Structure	Link network between Wikipedia articles	Network of followers on Twitter	Hyperlink network between blogs
Data level	Data	Wikipedia article text	Message text of Facebook posts	Content of web pages
	Metadata	Time a Wikipedia article was modified	Time a posting was created	Author of page in HTML meta tag
Abstraction	Aggregated metrics	–	Like count for a Facebook post	Number of users online in a forum
	Non-aggregated metrics	Request time in log files	List of users who liked a Facebook post	List of users online in a forum
Reactivity	Reactive data collection	User-based panel data	–	Scrape view count of YouTube videos
	Non-reactive data collection	Server-based log files	View count of YouTube video	Scrape data from websites without user generated content

Structuring	Weak structuring/ standardization	Browser information in log files	Content of Facebook comment	Content of web pages
	Strong structuring/ standardization	Request time in log files	Like count	Microdata in web pages (e.g., RDFa)
Availability	Volatile data	Temporary access/interaction logs	Tweets in Twitter Streaming API	Cumulated view counts on YouTube
	Stored data	Article in Wikipedia database	Posts in Facebook Graph API	Versions of Wikipedia articles

First, the question about the *object of investigation* needs to be asked: Interaction on websites vary between message-centered and user-centered practices. While the focus at Wikipedia is on the production of texts, self-expression, and orientation toward people plays a central role on social network sites (Boyd & Ellison, 2007, p. 219). Accordingly, observation can be primarily centered on actor or message, or also include both perspectives. On Twitter, for instance, posts on certain topics can be recorded, and communication between selected users, or networking with other actors on the platform, can also be observed. Moreover, different web services such as Facebook and Twitter can be compared with each other, whereby the providers would rank as the object of investigation.

Based on various objects of investigation, sociological *analysis perspectives* can be distinguished.[1] A message-centered study is often aimed at the descriptive or functional analysis of communication content collected on an on-off basis, the characteristics of which are studied for example in relation to the topics or language use in comments made on Facebook, Twitter, or YouTube (e.g., Thelwall, Sud, & Vis, 2012). An examination of links between different texts or relationships between users, however, leads to network-analytical studies of structures. This raises the question, for example, of how powerfully social movements are interconnected (e.g., Ackland & O'Neil, 2011). Statements on processes can also be the target of analysis such as the development of click rates over time (e.g., Susarla, Oh, & Tan, 2011). As a rule, however, these levels are interconnected. The question of the communicative behavior of users can for instance imply what content users communicate, which relationships between users become visible through content redistribution, and how content gains in popularity over time.

Closely related to the object of investigation and the object of analysis is the *data level*. A distinction is made here between first-order data and metadata as second-order data: Such metadata describe interactions with content or the conditions that created them and can be produced either manually (e.g., keywording) or automatically (numbers of clicks). The availability and the importance of such data are directly determined by the structure of the platform, that is, metadata cannot be produced or observed at random by researchers. In the Social Web in particular, they are usually only provided in *aggregated form*. It cannot always be established which specific user contributed to an aggregated metric at what particular time. Metadata mostly arise as digital behavior trails in the course of social processes, that is, without the active engagement and thus the control of researchers (Diekmann, 2007, p. 653). These data are produced within the framework of platforms and are also limited thereby, for example, because on Facebook "likes," but no "dislikes," are possible.

Using observational methods, the *role of non-participating observer, the covert observation situation*, and the *temporal relation* of this process are generally regarded as advantageous. The objects are usually unaware of

being scientifically observed, so bias—as in the case of self-observation or also participating observation—does not occur. In this sense, the method is non-reactive, because the measurement of data by the researcher has no direct influence on objects of observation. On Social Web Platforms in particular, however, a further methodological peculiarity arises: Some metadata such as click counts, rankings, and similar are not only accessible to third parties such as scientists, but also to users of the platform itself, especially when these data are publicly displayed. Users, however, get their bearings from these metadata; a process known as social navigation (Lünich, Rössler, & Hautzer, 2012).

Furthermore, the collection of metadata remains a *highly standardized* method if the possibilities of a platform enable a procedure to be fixed in such a way that it can be carried out in the same way for all objects of investigation. This ceases to apply, however, when there are changes to the metrics at the platform. In this respect, documentation of the collection method becomes particularly important so that comparable data can be acquired at all. At the same time, in contrast to communication content that first has to be prepared by researchers for further analysis, metadata are available in *highly structured* form. The *availability* of data also depends on the platform, especially regarding differences between the time period under investigation and the time when data is collected. Possible means of automating the process enable continuous and comprehensive data collection. At the same time, digital provision and recording of the data also enable subsequent collection if these are made available via the platforms.

The following methods for automatic collection of online data entail special aspects that should be considered in the context of the research question. Depending on the method, this involves reactive or non-reactive collection, in order to access volatile or persistent data, strongly or weakly structured data, and aggregated or non-aggregated data. In particular, the object, analysis, and data levels all need to be coordinated. The data are not always available in such a way that they can be usefully related to a research question.

Methods of Automated Data Collection

Online communication is characterized by the fact that data are digitally produced and disseminated. Even though people are seated on both sides of the machines, digital data processing takes place in between. On the World Wide Web, data exchange takes place via the HTTP protocol (Fielding et al., 1999). This technical basis enables automatic or semi-automatic methods to be used for data collection that, compared to purely human data collection, enable not only efficiency, but also higher reliability. Which specific procedures are available depends on the specific provider. Roughly speaking, three areas can be differentiated here.

Raw Data

Within the technical infrastructure of a web service, usage data are frequently generated. These include log files, in which access to webpages is recorded. Log files like these can be created automatically on the server and, depending on the configuration, contain the IP address of the user computer, the time of access, the address of the requested page, and various other data. For example, an entry in an Apache access log file looks like this:

```
127.0.0.1—[10/Feb/2015:13:55:15-0700]    "GET    /myp-
icture.png HTTP/1.1" 200 2425 "http://www.example.
com/start.html" "Mozilla/5.0 (Windows NT 6.1; WOW64;
rv:35.0) Gecko/20100101 Firefox/35.0"
```

Applications such as Piwik or Google Analytics are also used, and these run directly in the user's browser and transmit usage data to the server. Functions for evaluating and processing the data are also provided by applications like these. In addition, the individual hits are aggregated in such a way that the access frequency of every single website can be determined. Navigation patterns can also be determined from this. With regard to analysis of log files it is problematic, however, that personal data cannot be collected without the consent of the user in some countries. Without relating different requests to the same individual user, however, evaluation opportunities are limited.

An alternative to log files, which only ever refer to one server, are user-based panel data (Bermejo, 2005). Here, users agree to having a program run permanently that records their data use and passes it on to the panel operator. The advantage of this is that socio-demographic characteristics of the users can also be taken into account (e.g., Danaher, Mullarkey, & Essegaier, 2006). With the consent of the user, the data traffic can also be rerouted via proxy servers (e.g., Stefanone & Gay, 2008). It is these very user-centered approaches, however, that must be classified as reactive processes, as it may well be that those observed adjust their usage patterns to this special situation.

Access logs usually contain only metadata, and no communication content. When users create content and interact with a website, the data thus generated are however saved in databases by a Content Management System. And there are indeed databases that can also be downloaded for research purposes. Wikipedia, for instance, regularly makes its complete database available.

Programming Interfaces

Some providers offer special interfaces (APIs) for data access. These interfaces are not designed primarily for research purposes, but allow one's

personal website to be linked to other applications. In this way, the content, and functions such as the Facebook "like" button, can be integrated into other websites or mobile applications, so that users make indirect use of APIs. As a rule, commercial and scientific use is regulated by special "Terms of Services," which can also prevent publication of such data (Puschmann & Burgess, 2013). The data are usually provided in XML or JSON format. The characteristic features of these formats are that they structure the data and can also be read by programs as well as humans. For example, Facebook provides the following almost self-explanatory JSON data (abbreviated) as a representation of the Amnesty International page:

```
{
"id": "111658128847068",
"about":   "This   is   the   official   page   for   the
International[. . .]",
"can_post": true,
"category": "Non-profit organization",
"checkins": 1630,
"company_overview":   "This   is   the   official   Facebook
page [. . .]",
"founded": "1961",
"has_added_app": false,
"is_community_page": false,
"is_published": true,
"likes": 654131
[. . .]
}
```

The API-provider controls in detail which data can be accessed and how they can be accessed (Marres & Weltevrede, 2013). This means that not all the data desirable for research purposes are available. For access control, three main mechanisms are used. First, the number of requests within a given period of time is limited. Twitter, for example, limits the number of searches to 180 requests per 15 minutes.[2] Second, not all data are always fully available. For access to real-time data, Twitter even operates two interfaces. The free access option comprises only an estimated one percent of all public tweets, whereby actual utilization depends on how specific the query is (Morstatter, Pfeffer, Liu, & Carley, 2013). Access options are further limited by privacy settings. As a scientist, one is subject to the same access restrictions here as any other user. Third, there are limitations that predefine the type of access. For one thing, API operators define fixed endpoints, to access tweets, Facebook pages, or users. For another, the returned data fields are also defined. Facebook, for example, provides information on what other pages the operator of

a Facebook page "liked," but not vice versa, that is, by whom the page itself is "liked."

For research purposes, access to these interfaces can take place in very different ways. Some of the data can be accessed directly by entering the appropriate address in the browser. However, the data then have to be manually extracted and further processed, which is troublesome, especially with a large number of objects of investigation. These steps can be significantly simplified with scripts that have been specially adapted to the interface, but then require appropriate programming skills. Finally, programs specifically geared to the retrieval of APIs such as Facepager[3] can be used. Principally, programs that specialize in the monitoring of social media are also worth considering, provided the procedures they use are sufficiently transparent within the research context.

User Interfaces

A special form of interfaces is the user interface, which, unlike the programming interfaces just discussed, does not primarily serve machine–machine interaction, but also enable human–machine interaction. Services such as Facebook, Twitter, and YouTube, which are essentially based on the interaction between users, necessarily provide user data on this level of the user interface. The user interface here is usually a web browser, which displays webpages delivered from the server at a user's request. Since every single one of these webpages is based on standardized access mechanisms (HTTP) and data formats (HTML or XML), it is relatively easy to extract data on this presentation layer in a targeted manner for research purposes. This procedure of extracting data from webpages for further processing outside their original context is known as *web scraping*.

Web scraping is based on the information stored in the source code of webpages that arises from the direct call-up of a URL: "Scraping refers to a specific application of information extraction, as it provides a way of extracting specific fields or data elements not from individual data-bases, but from pages on the Internet" (Marres & Weltevrede, 2013, p. 5). It starts on the level of device-specific content representation, whereby information relevant to the research question has to be filtered out of these relatively unstructured data. It is only during the process of these "boilerplate removals" that structured information comes to light. The following, much abbreviated excerpt from the mobile Facebook page of Amnesty International highlights the need for this data preparation:

```
<table class="l bo bp bq br">
<tbody>
<tr>
[. . .]
<td class="m bs cb">
```

```
<div class="cc">
<div id="u_0_2" class="cd">
<span class="ce">Amnesty International</span>
[. . .]
</div>
<div class="cl">
<span class="cm cn">Non-Profit Organisation</span>
</div>
</div></td>
</tr>
</tbody>
</table>
```

The visibly hierarchical structure here facilitates the necessary preparation, but in this case, it primarily represents a visual rather than logical page structure. Nevertheless, individual elements of the data structure can be clearly addressed and thus extracted. In this example, the name of the organization is clearly identifiable—bracketed with a "ce" span tag.

One disadvantage of web scraping is that any change made to the user interface also involves a change in the scripts. Some webpages require complex scripts in order to provide authentication or to retrieve dynamic content via AJAX.[4] In addition, more comprehensive data collection sometimes places great strain on the server. Legally, too, web scraping is not without its problems, depending as it does on the laws of individual countries. Indeed, website providers frequently refuse to accept automated access to their services. Many providers do not tolerate this "impolite form of automated data collection" (Marres & Weltevrede, 2013, p. 6) and prevent it by blocking, which is why large-scale data collection via web scraping can only be realized with great effort, if at all. Web scraping also represents a reactive process, if the automated "visit" to a resource results in changes to its retrieval statistics (e.g., number of clicks).

Comparing Different Types of Methods

Significant differences exist between the three collection methods in terms of scope and completeness of the data, accessibility, and the effort required to collect it. Thus, for example, the number of retrievable comments on a Facebook post when accessed via an API may differ significantly from the comments displayed in the browser. Essentially, providers of web services control the data on all three levels, but to varying degrees. For instance, the raw data are rarely made available for scientific evaluation. In contrast, access via APIs, though not primarily designed for research purposes, usually allows generous and, above all, pre-structured data access. The data output on the user interface level, that is,, usually

in the browser, are necessarily available for automated data collection. They do not always represent the best choice, however, since collection involves relatively high expense and effort. While the pre-structured data of an API can be quickly retrieved and processed further, raw data first need to be aggregated, and data also need to be extracted from the presentation layer. The amounts of raw data here are usually very large: For example, the German-language Wikipedia comprises at least three gigabytes. In view of misappropriation, retrieval, and preparation of HTML pages require detailed analysis of the provider's system often need to take into account a great number of technical details.

As a rule, therefore, the decision for or against a particular method is determined solely by the existing temporal and cognitive resources and by provider-dependent accessibility of data. This situation has far-reaching consequences in the research context, because quite pragmatically it also entails a temptation not to work with the required data but instead with the data that are more easily accessible, all of this at the expense of validity in the operationalization of theoretical constructs. The high number of cases that can be achieved via automated processes promises more solid evidence at first glance. One should however always weigh up whether working with smaller numbers of cases, and examining them more carefully, might not be better. From the point of view of statistical inference and measurement theory, no proportionately greater benefit is expected from larger samples.

Research Logic of the Collection of Online Data

The flow of online data collection consists of a multi-stage process of selection and reduction of data that is integrated into the traditional research process of theory development, operationalization, data collection, and data analysis (e.g., Bryman, 2012). Like any collection of data, that of online data is a *mediated process of measurement*: No direct access to empirical reality is possible, and especially in terms of the online world there are often a variety of actors and technical structures involved in the process of "data co-production" (Vis, 2013, p. 3). Especially during the current "big data" frenzy, one can readily form the impression that automation of data collection and the resulting fully comprehensive datasets would provide unfiltered access to social reality, because in contrast to surveys or manual content analysis, "man as a source of error" has largely been eliminated. Even more radical is the assumption that the data speak for themselves, thus rendering any theories superfluous (Anderson, 2008). In fact, the scope of datasets and variables alone results in a different perspective on the study of reality; this is not however due to the "immediacy" of the data, but simply lies in the possibilities of exploratory analyses of ever newer datasets and subsamples (Mahrt & Scharkow, 2013, p. 26).

Access to social reality enabled by the abovementioned methods thus only *appears* to be unfiltered, as long as the filters and selection stages remain hidden to researchers. In Figure 12.1, we have attempted to designate components that are essential where online data collection is concerned, on the way from social, sensuous reality to the dataset. When one observes the left side of the pyramid, the conceptual part of the research process becomes clear: Researchers make statements about the world on the basis of data. The right hand side shows the methodological part of the process: With the help of special tools, the interfaces of a platform are accessed. On the three levels, concept and method constitute their own realities respectively, based on the excerpts and selections of the level beneath. The consequences of these constitution and selection steps for the research process are explained in more detail below.

World and Platform

On the lowest level, a generally reasonable use of the (Social) Web has to be assumed: By interacting with the interfaces of a platform, people provide significant input, which is duly processed and transformed by that platform. The result of this processing is either based on the input of others or forms a basis for further interactions. Human–machine interaction thus leads to human–human interaction, the conditions, implementation, and consequences of which are the object of social scientific analyses.

Even at this point, problems of *representativeness* may arise: Selection of objects under investigation is generally done by observing a single platform and its users. Beyond these users, conclusions drawn about
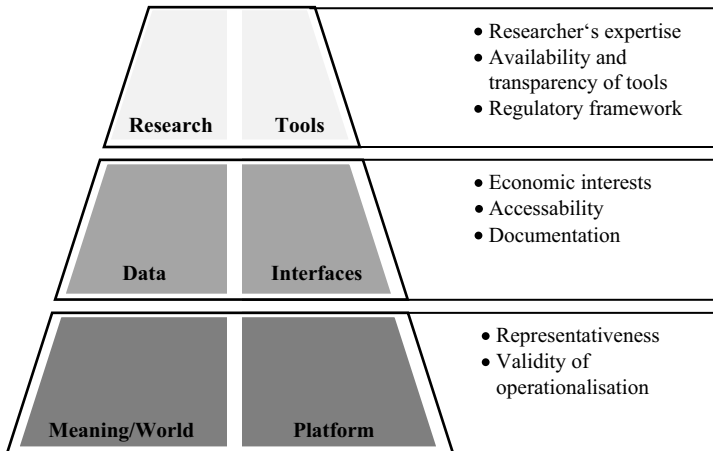
Figure 12.1 Basic Problems at Different Stages in the Process of Online Data Collection

other populations do at least require justification, particularly if this involves a comparison with "offline" populations (boyd & Crawford, 2012; Mahrt & Scharkow, 2013). Moreover, it cannot be guaranteed that behavioral data and messages are actually traceable to human activity, rather than being the result of spambots, click farms, fake accounts and other automated mechanisms (Baym, 2013). Insofar as these cannot be perceived as part of the reality under investigation, such phenomena have to be methodically considered and discussed. The validity of aggregated metrics (e.g., click counts) is particularly affected here; their origin cannot always be clearly ascertained. Researchers are therefore encouraged to describe the structure of these metrics as detailed as possible, and to disclose any distortions.

The *construction of meanings* is directly determined by the user interface of a platform. The architecture (codes, algorithms, interfaces) of a platform largely determines its logic in terms of interaction capabilities, content visibility, or the form of communication (Schmidt, 2009). Twitter thus restricts messages to 140 characters, and Facebook's lack of a "dislike" function leads to debates among users at regular intervals. As part of the operationalization of theoretical constructs, therefore, it has to be made clear why and for what purpose the available data on a platform can be used, and how far comparability—between "favorites" on Twitter and "likes" on Facebook, for instance—can be assumed.[5] Mass data collection has made a large amount of (secondary) data available about users' activities on Social Web platforms; the question as to their motives, however, remains largely unanswered (Mahrt & Scharkow, 2013, p. 25). The importance of highly standardized, platform-specific interaction possibilities such as liking on Facebook is clearly affected here. This "datafication" of behavior results in a larger amount of data that can be easily evaluated statistically, but this is accompanied by an increase in its "decontextualization" and a corresponding decrease in content analysis options for researchers. Baym thus calls for critical reflection, especially with regard to indicators that have been provided by platforms and can no longer be resolved:

> As metrics, especially visible metrics, rise as vectors for assessing worth, we need to remain keenly aware of the inherent multiplicity of meanings they collapse, the contexts in which they are embedded, and, perhaps most importantly, the depth of what they do not reveal. Claims based on analyses of social media data must be closely scrutinized with an eye toward what they omit, how they may be skewed, and how far they over-reach.
>
> (Baym, 2013, p. 12)

Platform-specific metrics in particular can lead to an "availability bias" (Mahrt & Scharkow, 2013, p. 27). Instead of a systematic and

theory-driven operationalization, selections are made from the over-supply of existing metrics that are justified only later, if at all, and are regarded as valid indicators of theoretical constructs. An indication of such "convenience strategies" is the discrimination of visual information (images, video clips) in favor of textual or numerical information (Vis, 2013). Since visual content is more of a challenge to code automatically and manual content analysis is more complex, such information would be examined less frequently.

Data and Interfaces

The interaction of users and a platform yields data that are processed and stored by the platform. Interfaces determine which of these data, and in what form, are available for scientific processing. At this level, a reduction of information takes place, for example regarding the provision of such data by the operator of a platform. A further criterion is the visibility of data and its potential for manipulation: While some behavioral data are publicly visible, some are only accessible after login and are protected by privacy settings, or are sometimes only available to platform operators. As companies operating within a market economy, platform operators are interested in the capitalization of user and behavioral data (e.g., O'Reilly, 2005), so they do not take the neutral stance of a scientific observer. Karpf describes this *conflict of interest* between scientific and economic, normative calculation in his "Law of online data" as follows:

> There is an inverse relationship between the reliability of an online metric of influence and its financial or political value. Any metric of digital influence that becomes financially valuable or is used to determine newsworthiness will become increasingly unreliable over time.
> (Karpf, 2012, p. 650)

In the public nature of these "market information regimes," Webster (2011, p. 50) also sees a risk of susceptibility to manipulation and regards the origin of these data as a political process that brings with it a bias. *Public visibility* and economic value thus impair the quality of data, whereby here, too, aggregated metrics are more affected than meaningful messages that are produced or manipulated with greater effort. Restricted access to parts of the data pool can also lead to a scientific "digital divide," if the research departments of platforms such as Facebook and Twitter as "data-haves" can all access raw data, while external scientists have to content themselves only with the data that has been made available (boyd & Crawford, 2012; Bruns, 2013; Burgess & Bruns, 2012).

The access interfaces provided (especially APIs) are thus "data intermediaries" in the research process. Not only accessibility but also

transparency is scientifically problematic here. The very documentation of APIs does not necessarily stand up to scientific criteria, because limitations or sampling algorithms are not disclosed, for example, so sampling become the real problem (Gerlitz & Rieder, 2013; Zhou et al., 2011). Sampling problems like these generally arise on the Internet because a complete overview of the basic population often seems impossible due to a lack of data indexing (Mahrt & Scharkow, 2013, p. 23). Long-term collections are also faced with the problem of *reliability and volatility of interfaces*: In the course of an investigation, API failures or restructurings can occur (Vis, 2013). APIs, usually free of charge, are simply not dedicated to the primary objective of scientific data collection. As a result, without appropriate consideration for the data, compliance with standards or data completeness cannot be claimed.

Tools and Researchers

All the aforementioned methods relied on automatic, mechanical data collection. Unlike manual content analysis or collection, technical components (tools) thus come to the fore; they carry out the collection and can be controlled by researchers to varying degrees. The tools used also depend on the *researcher's expertise*. Here, the clarity and the "black box" character of such technical components tend to vary (Bruns, 2013). Researchers with a high level of technical knowledge and complete control over their collection tools are ideal here: They have to understand how APIs function, have a mastery of programming languages, and be able to author the algorithms used for the collection themselves.

It is likely that only a few researchers, especially in the social sciences, have the necessary expertise to develop their own tools. The relevant skills then have to be brought on board, and control relinquished as a result. Alternatively, ready-made programs are used, which can *vary widely in level of abstraction and disclosure of procedure*. Commercial collection tools, in particular, can be used—for example, in the area of social media monitoring. These are not usually designed for scientific applications, however, and thus may only be appropriate under certain conditions:

> [S]ocial research makes itself reliant on platforms, methods, devices for data processing, data formats, that have been developed in contexts and for purposes that are in many ways alien to those of social research.
>
> (Marres & Weltevrede, 2013, p. 13)

Basically, the lower the degree of freedom and the transparency of such tools, the more critically the resulting database needs to be considered.

In addition to the technical requirements, *regulatory framework conditions* also need to be taken into account. With regard to the use of APIs

in particular, researchers enter into a contract with the suppliers that regulates the use of data. Even if data is extracted by web scraping from publicly accessible websites, legal (country-specific) barriers exist in relation to privacy and copyright. Finally, the mass processing of personal data can raise ethical problems, regardless of contracts and codified law. Even if scientific research is generally regarded as a legitimate concern, access to data by scientists nearly always represents an intrusion into the privacy of the persons who are behind the data—because a decontextualization takes place here that users of Internet applications do not necessarily expect. Scientific use of such data thus always brings the privacy as contextual integrity (Nissenbaum, 2004) into question.

Summary

The "datafication" of human behavior associated with the spread of the Internet in general and the emergence of Social Web Platforms in particular, offers new and exciting opportunities for collecting and analyzing human behavior data, in particular for social science research. We began by working through basic characteristics of this "digital observation methods," which may also be able to provide more precise localization in future descriptions of methodologies. Specifically, three approaches for accessing online data—use of raw data, web scraping, and API queries—were roughly outlined and their specific limitations briefly explained. Moreover, this chapter focuses on general methodological challenges during the collection of online data: in the third section, we have pointed out a few key issues arising most especially in the context of online data that have scarcely been discussed yet in terms of both theoretical and practical research. There continues to be a lack of standards with regard to, for example, reliability and validity of the database or the description of the procedure, which often seems to be ignored with references to numerically large datasets. Our "pyramid" provides a suggestion for depicting future applications, and any challenges, problems or limitations, in a systematic form, in terms of methodological criticism that is standard for traditional collection methods as well as providing fuel for further discussion. At the same time, we hope we have given scientists as yet unfamiliar with "digital methods" an impression of the strong as well as the weak points of those methods, and helped them to make decisions about when or under what conditions these new collection methods actually represent a reasonable enhancement of established procedures.

Notes

1 Kosala and Blockeel (2000) regard web mining methods in a similar way, distinguishing between web usage mining, web structure mining, and web content mining, but mixing up the object of investigation and the goal of analysis in the process.

2 https://dev.twitter.com/rest/public/rate-limiting
3 https://github.com/strohne/Facepager
4 Instead of scripts, automated web browsers can be used in such cases (e.g., Selenium, see http://www.seleniumhq.org/); these interact with websites like users, but according to a predefined scheme.
5 Less critical, in contrast, is the comparison of access statistics from log file analyses or links between websites, insofar as they are not platform-specific. In the case of collection of online data, the debate about standardization is still in its infancy (Bruns, 2013).

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13 Mining Big Data With Computational Methods

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Introduction

The age of big data poses enormous challenges to traditional methods of empirical research (boyd & Crawford, 2012; Mahrt & Scharkow, 2013; Tinati, Halford, Carr, & Pope, 2014). This is experienced everyday by communication researchers who seek to analyze political discourses online. They have to deal with a seemingly endless amount of web sources. Content is produced at an ever-increasing rate, leading to massive amounts of text documents to be analyzed. Furthermore, texts are mostly unstructured and available in a variety of formats such as webpages, blog posts, or tweets. We experience an increasing volume, velocity, and variety of information that Laney (2001) summarized as the three *Vs* of big data. Additionally, online content is growing more complex as it is interconnected through hyperlinks or hashtags (Booz Allen Hamilton, 2013).

For this kind of web data, it is increasingly difficult to apply established methods of manual quantitative content analysis. Problems start with defining units of analysis, identifying basic populations, or drawing representative samples before even proceeding to coding the data (for more challenges to online content analysis see Chapter 11).

A different approach to analyzing text has been developed in computational *natural language processing* (NLP) (Feldman & Sanger, 2006; Heyer, Quasthoff, & Wittig, 2006; Manning & Schütze, 2003). NLP text mining methods allow the automatic capture of the semantics of texts in unstructured corpora. Massive populations of text documents can be analyzed with limited effort so that drawing restrictive samples is no longer necessary. Not surprisingly, more and more communication scholars explore the possibilities of these computational methods (e.g., Scharkow, 2013; Stieglitz, Dang-Xuan, Bruns, & Neuberger, 2014; van Atteveldt, Kleinnijenhuis, & Ruigrok, 2008).

The aim of this chapter is to present the state of the art in text mining methods and discuss potential applications and limitations for political communication research. We proceed by introducing the basic approach

of NLP, before we present an overview on specific methods of text mining. We conclude by discussing implications and future perspectives for political communication research.

Text Mining and Models of Semantics

The broad set of methods to semantically structure (very) large amounts of unstructured text data is referred to as *text mining*.[1] A crucial decision for text mining applications is how to model semantics of text. Turney and Pantel (2010, p. 141) refer to semantics as "the meaning of a word, a phrase, a sentence, or any text in human language, and the study of such meaning." In NLP, three types of semantic processing models may be distinguished: patterns of character strings, logical representations of entity relations, and distributional semantics.

Patterns of Character Strings

In computational environments, text is basically represented by character strings as primary data format. The simplest model to process meaning is to look for predefined patterns in these character sequences. Imagine for example the sequence "United States" occurring in a text document as representing "the country United States of America." By extending this single sequence to a set of sequences, for example {"United States," "Germany," "Ghana," "Israel," . . .}, we create a reference to "a country." Such lists of character sequences representing meaningful concepts, also called *dictionaries*, have a long tradition in communication science (Stone, Dunphy, Smith, & Ogilvie, 1966). By using a formal language for search and replace operations (regular expressions) and elaborated dictionaries, it is possible to model very complex concepts even with this rather simplistic approach. In practice, however, the success of this approach heavily depends on the skills and experience of the researcher developing such dictionaries.

Logical Representations of Entity Relations

A much more ambitious approach to processing semantics is the employment of logic frameworks, for example, first-order logic or description logics such as OWL,[2] to model relations between semantic units represented by linguistic patterns. Logical connectives and quantifiers are used to combine such units into a knowledge base, also called formal ontology, which allows for reasoning. As basic example imagine a set of two rules (1) *x is a red car*, and (2) *all cars are vehicles* as a formal ontology. Then, querying for *all red vehicles* would yield the result *x*, although the knowledge base only contains explicit information about the red car *x*.

Setting up a formal set of rules and connections of units in a complete and coherent way, however, is a time consuming and complex endeavor. Probabilistic models for automatic semantic parsing can be utilized to support generation of such rule sets (Beltagy, Erk, & Mooney, 2014). But up to now, quality and level of granularity of such knowledge bases are insufficient for many practical applications.

Distributional Semantics

Distributional approaches to processing semantics are based on the "bag of words" assumption that frequencies of terms in a document mainly indicate the meaning of its content, that is, "words that occur in similar contexts tend to have similar meanings" (Turney & Pantel, 2010, p. 148). Order of terms in contrast is less important and can be disregarded. This is certainly not true for most human real-world communication, but works surprisingly well for many NLP applications.[3]

The *vector space model* (VSM), utilized initially for Information Retrieval (Salton, Wong, & Yang, 1975), encodes counts of occurrences of single terms in documents (or other context units such as sentences) in vectors of the length of the entire vocabulary of a modeled corpus. If there are *M* different word types in a collection of *N* documents, then the counts of *M* word types in each of the documents leads to *N* vectors that can be combined into a *N x M* matrix, a so-called *document-term matrix* (DTM).

The construction of a DTM is usually achieved with a sequential process chain called *preprocessing*. First, sentences and single terms (tokens) are identified before eventually deleting certain tokens, so-called stop words,[4] which do not contribute much to the meaning of a text. Furthermore, it may be useful to unify variants of terms expressing the same meaning by stemming (removal of suffixes of terms by language specific rules) or lemmatization (transformation of inflected forms to their dictionary form).

For online sources initial extraction and cleaning steps are necessary. These are often referred to as *web scraping* (Munzert, Rubba, Meißner, & Nyhuis, 2014). This encompasses the task to identify the relevant textual parts from a crawled HTML-page. Content units such as title and body text of a blog article have to be separated from menu link texts, sidebar content, or advertisements. Depending on the structure of the webpage, this can be a very tricky task involving lots of heuristics.

Once a document collection is encoded in a numerical DTM format, it can be used as an input to many NLP applications. In the following, we introduce some applications that promise to be useful particularly for online political communication research. Thereby, we mainly focus on methods from the approach of distributional semantics because these have proven to be most efficient.

Text-Mining Applications

As is known from data mining, we distinguish unsupervised from supervised methods for data analysis. While unsupervised methods help to explore structures in large amounts of unknown data, supervised methods take into account external knowledge to train machine-learning algorithms.

Unsupervised Methods

The following methods are data-driven approaches identifying previously unknown patterns and structures emerging from the data themself. Thus, they support an inductive research strategy.

Term Extraction

For any document, or collection of documents, we can identify key terms by applying statistical measures (Archer, 2009). The method of so-called *difference analysis* compares the frequencies of terms in the target corpus to frequencies in a reference corpus consisting of general texts of the same language without a bias to any topic.[5] Comparisons to more specific reference corpora are also possible. For example, if we are interested in comparing agendas and positions of two politicians or parties, we can directly compare corpora consisting of their speeches with respect to the key terms used. Scharloth (2013) conducted such an analysis to reveal differences of language use between candidates Angela Merkel and Peer Steinbrück during the 2013 campaign for German federal elections.

Difference in term usage is based on a statistical test that measures the amount of surprise when observing term frequencies in the target text with respect to the reference text after normalizing the overall size of both texts. Dunning's log-likelihood ratio test (Dunning, 1993) has proven to deliver good results. In effect, we get a ranked list of terms that significantly differ in their frequency with respect to the target and the reference text (Rayson & Garside, 2000).[6]

Analysis of Significant Co-occurrences

Although speakers usually assume that single terms already express a meaning on their own, following the approach of distributional semantics, this meaning should be seen as a function of surrounding contexts in the overall system of language. This can be achieved by evaluating *significant co-occurrences* of words within texts on the level of whole documents, paragraphs, or sentences.

Instead of just counting frequencies of co-occurring terms, co-occurrence analysis calculates the statistical significance of each and every

co-occurring pair of words. This approach is based on the assumption that only pairs of words that exhibit a significant joint occurrence within a corpus indicate a salient context of usage. In practice, several statistical measures for co-occurrence significance can be used (Heyer et al., 2006), but for most cases, Dunning's log-likelihood has again proven to deliver best results (Bordag, 2008).

Having selected a word of interest, its significant co-occurrences can be depicted as a network of word usages or a list of all significant co-occurrences (see Figures 13.1 and 13.2 for examples). Visualizing its meaningful interactions with other words in a given collection of texts results in a global view on the semantic context of a word (Heyer et al., 2006, p. 134 ff.). Co-occurrences of different sub-collections of a corpus can also be analyzed comparatively to reveal semantic changes across time, space, sources, or topics.

From the perspective of communication research, such co-occurrence networks can be interpreted as frames in the sense of likely associations or interpretations (e.g., Hellsten, Dawson, & Leydesdorff, 2010; Miller,
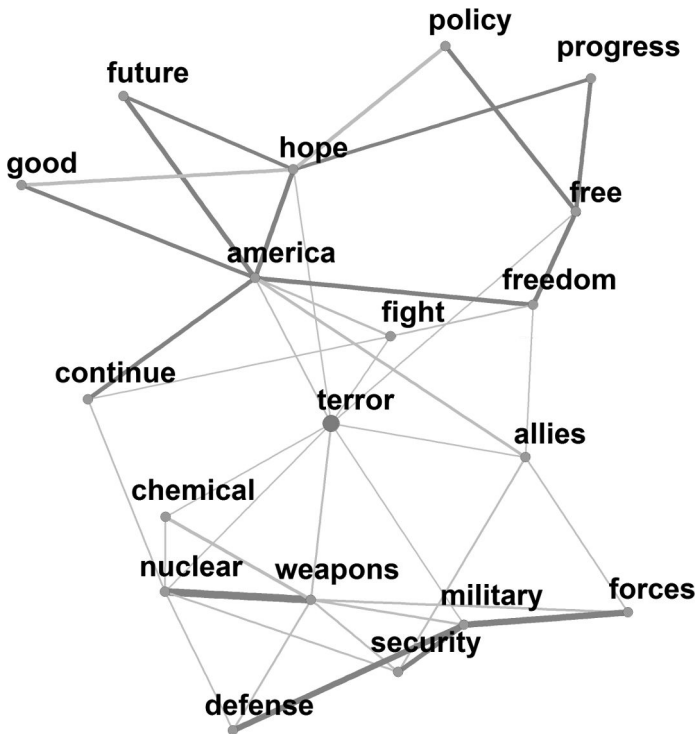
Figure 13.1 Co-occurence Graph for the Word *Terror*. The Graph is Based on the State-of-the-Union-Address Corpus (Woolley & Peters, 1999). The Thicker an Edge, the More Significant a Co-occurrence Is.
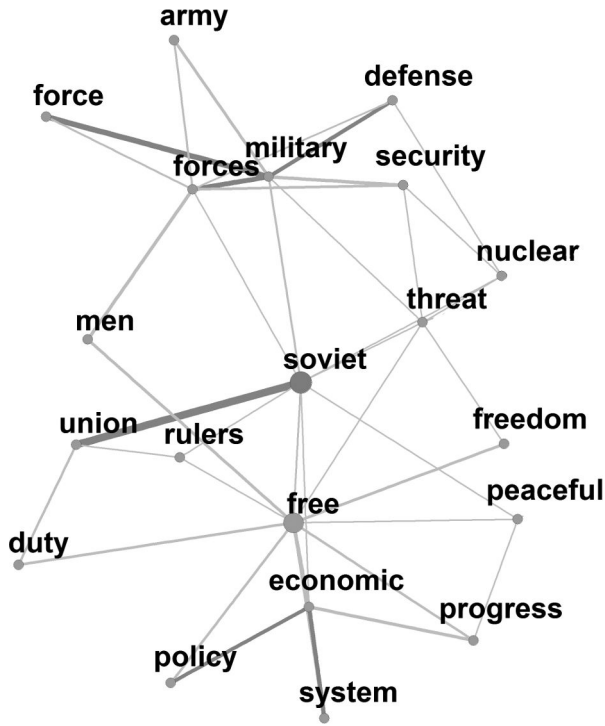
Figure 13.2 Co-occurence Graph for the Word *Soviet*. The Graph is Based on the State-of-the-Union-Address Corpus (Woolley & Peters, 1999). The Thicker an Edge, the More Significant a Co-occurrence Is.

1997). Van Atteveldt (2008) has developed a similar approach to measure so-called associative frames. He calculates the conditional probability of one concept occurring in the context of another concept and depicts these relationships in semantic networks. However, focusing only on conditional probabilities and not on significance emphasizes terms that are highly dependent from each other, but not necessarily terms that occur more frequently in the corpus.

Topic Models

Another unsupervised method that makes use of co-occurring words in documents is topic modeling (Blei, Ng, & Jordan, 2003; Steyvers & Griffiths, 2005). A topic model is a Bayesian probabilistic (graphical) model. It defines an artificial document model describing how the words in the documents get into their place. Instead of using a frequentist approach (as in co-occurrence analysis above), we adopt a Bayesian approach: We suggest an initial guess about the structure of the model, the *prior*, and then define the likelihood of the data under a

certain model structure. This method is called *latent Dirichlet allocation* (LDA).

In a topic model, two *latent factors* form its structure and may be interpreted as (1) the *topics* themselves, and (2) the *documents' topic proportions*. Our prior belief (the initial guess) about document collection structures in general is the following: We assume that each topic (to be understood as a semantic class of words) will be characterized by only a small subset of the vocabulary. In turn, we also expect only a few of the hypothetical topics to be present in each document. The appropriate prior distribution for both factors is the Dirichlet distribution.[7]

By updating the prior under the influence of data, keeping the data likelihood high, we arrive at a *posterior* belief about the model structure. We can now explore the posterior distribution and derive sets of words as semantic categories. Note that the connections between words identified by topic models are *latent*, that is, not observed directly. This is a distinctive feature compared to co-occurrence analysis. Using a topic model, we can reveal a latent semantic connection between words, even if they never occurred in a document together. The connection is simply built by other terms both words have co-occurred with across the document set.

We can also use this posterior belief to make inferential statements about previously unseen data. This is the key benefit of this line of thinking. Using word co-occurrence analysis alone, we could never deduce any information about a pair of terms that was previously unseen in the referential corpus. Note, however, that the probabilistic nature of topic models demands a thorough inspection of model outcome and checking of the models in use (Gelman & Shalizi, 2013).

To exemplify, we examined the State of the Union addresses and speeches to Congress held by the US President since 1900 that are publicly available online (Woolley & Peters, 1999). We present selected findings related to the key terms *soviet* and *terror*. Figures 13.1 and 13.2 show co-occurrence networks for both of those terms respectively. The thicker an edge, the more significant a co-occurrence is (i.e., we observe such a pairing considerably more often than we would expect by chance). Figure 13.3 shows a comparison of the relative word frequencies for both terms, that is, their relative frequency proportions over time. Finally, Figure 13.4 shows an example outcome of a topic model on the data described. We selected topics that contain either *terror* or *soviet* in their top 25 words (when sorted by probability in that topic).

Quite interestingly, considering co-occurrence and relative frequency analysis alone, we would deduce that the President stopped talking about *soviet* and right after that started to talk about *terror* in the same manner as he spoke about *soviet* before. Both terms show similar word co-occurrences with terms such as *military, forces, security, defense*, or *free*. Mentioning of the term soviet ceased in the beginning of the 1990s
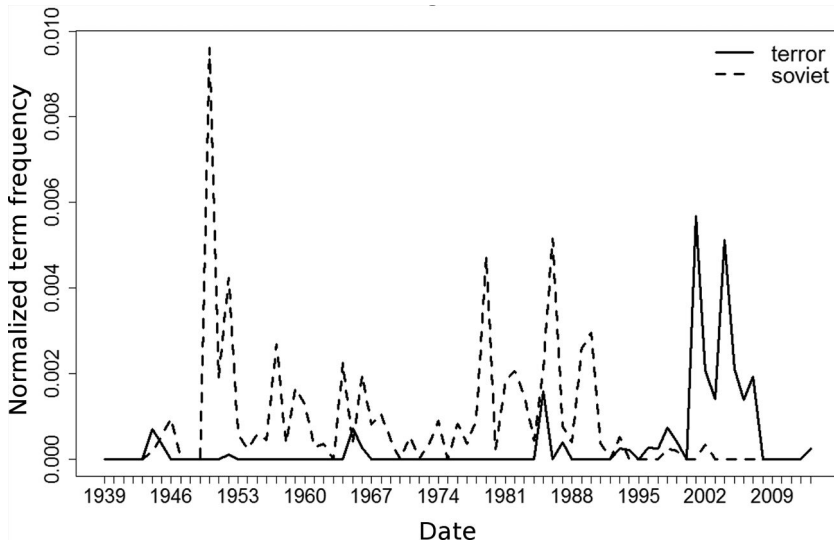
Figure 13.3 Frequency Plot for the Words *Soviet* and *Terror* in the State-of-the-Union-Address Corpus (Woolley & Peters, 1999). The Frequencies Are Normalized for Each Year by the Yearly Total Amount of Tokens.

Topic 1 ...	Topic 8	...	Topic 10	...	Topic 22	...	Topic 35	... Topic K
	soviet 0.0492		america 0.0250		nations 0.0574		world 0.0815	
	nuclear 0.0490		weapons 0.0195		free 0.0459		free 0.0326	
	union 0.0366		iraq 0.0195		world 0.0276		nations 0.0248	
	peace 0.0273		world 0.0194		freedom 0.0221		power 0.0217	
	arms 0.0234		terrorists 0.0173		europe 0.0209		peoples 0.0186	
	agreement 0.0223		security 0.0148		economic 0.0199		peace 0.0173	
	treaty 0.0172		people 0.0132		communist 0.0185		people 0.0142	
	security 0.0139		american 0.0126		security 0.0170		human 0.0138	
	international 0.0136		nuclear 0.0121		aggression 0.0156		problems 0.0092	
	nations 0.0129		terror 0.0119		military 0.0155		freedom 0.0090	

Figure 13.4 Sample Topics Created by an LDA Model of 50 Topics. The Model Is Based on the State-of-the-Union-Address Corpus (Woolley & Peters, 1999) Confined to Documents since 1900. Model Parameters Have Been Fitted to the Data.

when the Soviet Union dissolved. The term terror experienced a surge at the beginning of the 2000s just after the 9/11 attacks.

However, adding topic model analysis, we see that *soviet* and *terror* were *not* discussed in the same way (see Figure 13.4). Topic 8, 22, and 35 show the usage of *soviet* in different semantic contexts. Topic 8 is about the Non-Proliferation Treaty between the Soviet Union and the United States; Topic 22 and 35 are about US concerns about communism in the world in general that is assumed to pose a threat. Here the term *soviet* is not central to the debate but appears as just one of the communist nations talked about. This helps us to distinguish the different peaks in relative

frequency of *soviet* that we observe in Figure 13.3. On the contrary, topic 10 about *terror* is clearly confined to the concept of terror as coined since 9/11. We can deduce that neglecting the semantic category a certain word co-occurrence belongs to may lead us to false conclusions. With topic modeling we have a ready-to-use tool to enrich our findings semantically.

Communication researchers are just about to discover the opportunities of topic modeling. First of all, topic models are a promising way of estimating the salience of topics in the corpus—a classic task of manual content analysis. For example, Evans (2013) uses topic modeling to identify issues discussed as "unscientific" in American newspapers between 1980 and 2012. However, the clusters of semantically connected words a topic model identifies need intense inspection and interpretation on the part of the researcher. Whether it is appropriate to interpret them as substantive topics or issues in the sense of political communication theory cannot be guaranteed. In some cases, the word clusters might describe more specific sub-topics, or even frames (Maier, Waldherr, Miltner, Jähnichen, & Pfetsch, 2015; van Atteveldt, Welbers, Jacobi, & Vliegenthart, 2014).

Besides the analysis of topical structures of text corpora themselves, topic models might also be helpful in earlier stages of the research processes, e.g., identifying populations of relevant text documents on an issue. A keyword-based search in a document collection may be enhanced with a topic-based exploratory search that can recommend documents with similar thematic structure. This is particularly helpful if the issue of interest cannot be fully described by a catchy keyword or phrase.

Supervised Methods

Supervised methods in machine learning (ML) rely on the inclusion of external knowledge to infer models on the data. This external knowledge usually consists of a set of categories and assignments of these categories to a set of training data entities, for example, documents. Based on this knowledge, we can decide to which category a new, so far unobserved document belongs. This process is called *text classification* and is a deeply investigated problem in NLP. It can be useful for a variety of purposes. A type of well-known applications to almost every Internet user are spam detection systems that automatically identify junk emails.

For text classification, different ML algorithms have been successfully used. Two of the most common approaches are *Naive Bayes* (NB) and *Support Vector Machines* (SVM; Joachims, 1998). For each document, both algorithms provide a decision of either 0 or 1 regarding whether a document belongs to a category or not. For coding systems of more than one category, the process can be modified to enable *multiclass classification* (exactly one label needs to be selected for each document), or

multilabel classification (one or more labels could be selected for each document).

Document Classification for Content Analysis

An interesting ML application for communication research is the classification of whole documents such as newspaper articles into thematic categories. Scharkow has conducted exemplary studies with both SVM (2012) and NB (2013) algorithms. He showed that ML works to classify newspaper articles into rather rough categories such as economy, sports, interior, and foreign politics.

The supervised process of ML text classification resembles the manual process of content analysis. The ML classifier first is trained on a manually coded sample to learn to correctly assign predefined codes to documents. The process infers the coding rules on its own by identifying discriminating features for each category from the training data. To make this work, training data need to be coherent, complete, and disjoint with respect to the classes defined, that is, at least one and not more than one category definition must apply to every context unit. Also, training data should include as much variety as possible for any category.

Besides a considerate process of training data generation, several adjustments can be made to optimize ML classification. These include feature engineering[8] and optimal feature selection strategies.[9] The resulting ML algorithm may be considered as a trained "naive coder," which can now be applied to any (sub-)set of text collections comparable to the training dataset.

After classification, for each document of the collection, we have a decision whether it belongs to a category or not. This allows for an evaluation similar to inter-coder reliability tests. Assuming a large set of training data, we can split this into two halves and train the ML algorithm on the first set. The second set is then used for automatic classification. Now we can compare the predicted and the actual labels of the documents, and assess *precision* (share of correctly identified positive labels for a certain category) and *recall* (share of positively identified documents on all existing documents of a certain category). We can also compute reliability measures such as Cohen's Kappa between human and ML raters. As training data most often are rare, manually coded sample sets are usually not split into halves, but into k folds for k-fold cross-validation.

Active learning procedures can help to compile optimal training datasets that require less examples, but provide higher classification accuracy (Settles, 2010). Lemke, Niekler, Schaal, and Wiedemann (2015) applied such a process to classify paragraphs from newspaper articles containing the category "economized justification of politics." Training of a SVM classifier was initialized by a manual set of 220 paragraphs that were identified as good examples for the category of interest. This set was

then augmented in seven iterated active learning runs of the classifier, each run providing 200 new paragraphs with a positive classification of new unknown texts. Manual evaluation of these 200 results by the research team lead to new high-quality positive and negative examples to enrich the training set. The final training set after seven iterations consisted of 653 positive and 1,749 negative sample paragraphs, resulting in a F1-measure = .613 for 10-fold cross validation on this training set.[10] Similar to Cohen's Kappa, or Krippendorff's alpha, one strives for values of .7 or above. For complex content categories this might be hard to achieve, but it is actually accomplished for more clear-cut distinctions.

For example, Colleoni, Rozza, and Arvidsson (2014) successfully trained an ML classifier to (1) identify political tweets in a US Twitter corpus and (2) distinguish Democrat vs. Republican political orientation of the tweets. They report an F1-measure of .79 and higher for 10-fold cross-validation on their training set. Their study also shows that it is possible to apply text classification to smaller context units such as short sentences. However, it has to be considered that these units provide rather little information to an ML algorithm that makes it generally more complicated to train an efficient algorithm.

Sentiment Analysis

Another example application for supervised classification is *sentiment analysis*, the identification of subjective information or attitudes in texts (Pang & Lee, 2008). It may be realized as a ML classification task assigning either a positive, neutral, or negative class to a document set narrowed down to a specific context beforehand (e.g., using a topic model). Classification then allows for the tracking of attitudes in these documents over time in a reliable way.

Especially text data of online communication became of recent interest for automatic detection of sentiments in election contexts. Johnson, Shukla, and Shukla (2011) analyzed around 550,000 Twitter posts on Barack Obama and cross-correlated their findings with national survey data on popularity of the president. Their findings suggest that short-term events affecting Twitter sentiments do not necessarily affect the President's popularity significantly. Tumasjan, Sprenger, Sandner, and Welpe (2010) computed plausible sentiment profiles of politicians and parties of the German parliamentary elections in 2010 by analyzing more than 100,000 tweets. Interestingly, they also found that mere frequency of mentioning major parties pretty accurately predicted election results.

Information Extraction

As mentioned above, supervised classification not only works for complete documents. It also applies to single terms or sequences of terms

fitting into a certain category. Sequence classifications such as part-of-speech tagging, syntactic parsing, or named entity recognition (NER) leave behind the "bag of words" assumption by taking local context terms into account. These procedures are not useful for political communication analysis as such. They rather constitute useful preprocessing steps to filter desired contexts for analysis. Part-of-speech tagging, for instance, can be used to filter document contents for certain word types before any subsequent text mining application. Term extraction or topic models then can be realized by just concentrating on nouns or verbs.

Syntactic parsing splits sentences into coherent sub-parts and reveals their syntactic relations. This may be applied to identify desired subject–object relations ("In America, you watch Big Brother" versus "In Soviet Russia, Big Brother watches you!") or to build discriminating features for document classification. Kleinnijenhuis and van Atteveldt (2014) use parsing information on news coverage of the Middle East conflict to distinguish speech acts expressing Israel as an aggressor against Palestine or vice versa.

Last but not least, named entities (such as person names, organizations, or locations) can be extracted and classified to identify actors in texts.[11] These can then be related to structures of extracted meaning such as certain language use measured by significant term extraction.

Conclusion

This short overview has shown that communication scholars can profit immensely by opening up to computational methods of text mining based on NLP. Computer scientists dispose of an array of suitable tools for the purposes of content analysis. Because they allow semantic analysis of vast corpora of unstructured text, these methods are particularly interesting for political communication researchers studying online content. Apart from the aforementioned additional efforts in the preprocessing steps, the methods can be readily applied to online corpora as to any other digital text corpus. However, until now there exist hardly any standard software solutions that are applicable for the ordinary communication researcher without any further technical know-how. Therefore, it is crucial to strengthen interdisciplinary cooperations with computer scientists in order to profit from the latest developments.

Table 13.1 gives an overview of how text mining specifically enhances the traditional toolbox of content analysis. Dictionary approaches (which have not been further elaborated here) and supervised classification are closest to the traditional, deductive logic of quantitative content analysis. However, there are (still) severe limits to the interpretative knowledge and abilities of supervised machine-learning. Up to now, rather complex concepts such as frames have not been coded with sufficient accuracy, although it has to be admitted that these constructs also pose high

Table 13.1 How Text Mining Contributes to the Toolbox of Content Analysis

Research Strategy	Methodological Approach	
	Quantitative	Qualitative
Theory driven/ deductive	Quantitative content analysis Dictionaries Supervised classification	
Data driven/ inductive	Term extraction Co-occurrence analysis Topic modeling	Qualitative content analysis

Note: Traditional methods of manual content analysis are written in italics.

challenges to inter-coder reliability of human coders. In contrast, the coding of rather broad topics and attitudes (such as sentiments or political orientation) can be successfully delegated to computational algorithms. Also named entity recognition works reliably to identify specific actors or organizations in a text corpus.

Inductive, unsupervised methods such as significant term extraction, co-occurrence analysis, and topic modeling add a completely new approach to the common toolbox of content analysis. While following a quantitative, statistical approach, they are inherently data driven and inductive. Therefore, they are particularly valuable for exploratory purposes that have been traditionally pursued with manual qualitative content analysis for only small samples. For instance, topic modeling does not search for pre-defined topics, but structures the whole corpus in terms of emerging topic clusters. The same is true for co-occurrence analysis: Unexpected associations of words might appear during analysis. However, in any case, the found structures need intensive interpretation as well as plausibility checks. Researchers have to be very familiar with their text corpus including its thematic and temporal context to be able to validly interpret statistical topics as issues or co-occurrences as frames. Otherwise, they risk to overinterpret methodological artefacts.

In our view, one of the biggest potentials of text mining approaches lies in the many possibilities of combining different supervised and unsupervised methods (and our overview is far from exhaustive). For example, first identifying actors with named entity recognition and then connecting them to their significant co-occurrences, related topics from a topic model and sentiments from a machine-learning classifier will bring us closer to the end of automated discourse and frame analysis. At least we can answer questions such as: Who says what with which sentiment in what context? We can answer these questions not only on the document level, but also on the level of paragraphs and sentences, which draws us near the analysis of claims, statements, or arguments.

Of course, computational content analysis cannot be of the same depth as manual analysis. The big advantage of text mining is that we gain an overview on the content of vast text corpora with limited efforts. This is particularly interesting for comparative analyses when we want to juxtapose slices of the text corpus. Here, traditional content analysis entailing sampling and manual coding soon becomes very extensive because samples of sufficient size have to be drawn for every relevant sub-population. When working with large network, data researchers might even be interested in the content data of each node (actor) in the network. This is relevant for instance for studying the topology of hyperlink networks on the Internet (see Chapter 15) in terms of content: What do people post on the Web and how are they connected? Getting this information for every node in the network would be impossible without relying on automated methods (Maier et al., 2015).

Finally, there are also many possible combinations of automated and manual methods of content analysis. Semi-automated content analysis systems combine the "best of both worlds" (Wettstein, 2014). They interact with human coders, propose plausible codes and continuously learn from their final coding decisions (see also Wueest, Clematide, Bünzli, Laupper, & Frey, 2011). Text mining also proves to be helpful for identifying relevant text documents from large data bases to prepare an in-depth manual content analysis (Waldherr, Maier, Miltner, & Günther, 2014).

Notes

1 This is the main difference to data mining. While data mining methods can only be applied to extract knowledge from structured data in databases, text mining methods apply to unstructured text.
2 OWL—Web Ontology Language, see http://www.w3.org/TR/owl2-overview/.
3 The complete loss of information on word order can be mitigated by observing n-grams, that is, concatenated ongoing sequences of n terms instead of single terms while creating a DTM.
4 Stop words are highly frequent, functional terms in language unspecific to a certain topic, for example, *a, the, is, are, have*. For many NLP applications, it is recommendable to ignore them.
5 Large collections of textual data such as the data of the Leipzig Corpora Collection (LCC) have proven to be quite suitable for that (Biemann, Heyer, Quasthoff, & Richter, 2007).
6 The software WordSmith tools (http://www.lexically.net/wordsmith) provides a well-known implementation of this term extraction method.
7 A prior distribution is a distribution that produces the distribution of interest from a random draw. In our case, a draw from the Dirichlet distribution produces a multinomial, that is, a point on the simplex.
8 Feature engineering includes decisions about the information needed to accurately identify categories: Are word counts sufficient, or do I need more information such as combinations of word types or syntactical features?

9 In optimal feature selection, we decide which of the extracted word or syntax features are discriminative for a category.
10 The F1-measure is the harmonic mean between precision and recall defined above. It ranges between 0 and 1.
11 A well-matured reference implementation of a Conditional Random Field approach to Named Entity Recognition is provided by the NLP group of Stanford University (Finkel, Grenager, & Manning, 2005).

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14 Survey Research Online

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Introduction

Among the tools of political communication research, *surveys* have always been part of the mainstream. Since the Internet has pushed through, online surveys are obviously one of the most recent variants of collecting data at the micro level. In the following, *online surveys* are understood to be self-administered online questionnaires where respondents read questions from digital devices and manually record responses (Vehovar, Lozar Manfreda, & Koren, 2007, p. 271). Basically, we may distinguish non-probability and probability-based surveys (e.g., American Association for Public Opinion Research [AAPOR], 2010; Couper, 2000).

Online surveys reduce workload and expenses at several levels of the research process and have thus made access to individual data much easier. At the same time, the possibility of recording data easily is connected to the risk that problematic aspects might be ignored. This tension characterizes the debate on the use of online surveys in social sciences. This article contributes to this debate. It is meant to shed light on the use of online surveys in *political communication research*. The guiding question is: How can online surveys be used fruitfully in political communication research? To answer this question, *advantages* and *disadvantages* of web-based surveys are discussed first. Second, the results of a *database inquiry* are presented, to show under which conditions online surveys are used for research on political communication. Then, three *examples* of current political communication research demonstrate how the possibilities provided by online surveys may be used and how limitations can be appropriately dealt with. The final section sums up the article's essential contributions.

Advantages and Disadvantages of Online Surveys

Online surveys provide both the researcher and the respondents with numerous advantages but also show disadvantages. This will be discussed

in the following (for an overview, see also AAPOR, 2010; Couper, 2000; de Leeuw, 2012; Evans & Mathur, 2005; Maurer & Jandura, 2009; Tourangeau, 2004; Vehovar et al., 2007; see also Chapter 16).

Advantages of Online Surveys

One of the biggest advantages of online surveys is their comparably *low cost*. Contrary to telephone or personal interviews, no interviewers must be paid for. Online surveys also do not incur expenses on postage or other kinds of shipment. Additionally, conducting online surveys hardly requires any infrastructure; a computer connected to the Internet is sufficient for recording data online. Furthermore, the administrative effort for online surveys is low: No interviewers must be recruited, trained, or coordinated, and there is no need to print questionnaires to make them ready for shipment and to dispatch them. All this makes online surveys much cheaper than other ways of surveying. For the money spent on 1,000 personal interviews, 86,000 people can be interviewed online (Iyengar & Vavreck, 2012). Moreover, expenses are mostly independent of the number of interviewees.[1] Thus, online surveys are particularly suitable for carrying out studies involving large numbers of respondents.

Another advantage is that data may be recorded quickly and are immediately available after completing the field research. Contrary to other kinds of written surveys, answers can directly be exported into a format suitable for statistic packages. This not only saves time but also improves the *data quality*, as mistakes during transformation are ruled out. Furthermore, regarding data quality, online surveys offer a number of further advantages. Contrary to personal interviews, on the Internet, it is not possible that the interviewers might influence their interview partners. Due to the answers being given anonymously, in comparison to personal or telephone interviews, online surveys are less prone to socially desired answering behavior (e.g., Chang & Krosnick, 2009; Taddicken, 2009). This effect occurs even in comparison to written surveys (e.g., Joinson, 1999; for contrary findings, see e.g., Hancock & Flowers, 2000).

The possibility of implementing complex filters relatively easily improves the quality of the data of online surveys. Furthermore, such surveys ensure that questions are answered according to the sequence intended by the researcher. Context effects or other sequence effects can be minimized by randomizing both the sequence of questions and the sequence of possible replies in case of nominal scaled variables. In addition, participants can be automatically informed that they have not yet answered all questions. Thus, missing values can be reduced. Finally, respondents who gave random or otherwise invalid answers can be detected by the time they spent on answering the questionnaire, which can be automatically recorded for each respondent.

One important advantage of online surveys is that *multimedia elements* can easily be included. It is of particular relevance for communication research that media stimuli (texts, videos, photos, audio contributions, etc.) can be presented to the respondents. It is easily possible to present the participants with several randomized variants of stimuli. Thus, online surveys can be particularly well connected with *experimental designs* (Vavreck & Iyengar, 2011). This provides an enormous potential, particularly for communication research. Moreover, split-ballot experiments can also be carried out with the help of online surveys as subjects can easily be randomly assigned to different versions of the questionnaire. Additionally, online experiments make a participant's presence in the research laboratory in most cases unnecessary. Participants are able to receive media stimuli connected to the survey at their own computers—and while independently deciding about their time does not only simplify the process, it also increases the external validity. Furthermore, in case of online-based experiments, it is easier to recruit broad parts of the population—and not only the often-recruited university students.

All the aforementioned advantages of online surveys are taken from the perspective of the researcher, but there are also *advantages for the respondents*. The most important one is the possibility to answer the questions in a temporally and spatially flexible way; for example, on the laptop or smartphone. For personalized online surveys it is also possible to interrupt answering and to finish the questionnaire another time.

On the whole, it becomes obvious that online surveys enjoy many advantages. However, some of these advantages do not exclusively refer to online surveys. For example, in telephone interviews, it is possible to easily implement filter questions or control the sequence of the questions. In the case of mail interviews, the interviewer does not influence the respondent and the latter may fill in the questionnaire when and where they like. What makes online surveys special, however, is that they combine the advantages of telephone and mail interviews while furthermore showing genuine advantages of their own, such as low costs and the possibility to include media stimuli. Therefore online surveys can be characterized as "marriage of low cost and high capabilities" (Tourangeau, 2004, p. 792).

Disadvantages of Online Surveys

However, the advantages of online surveys as they have been shown most of all for measurement are contrasted by considerable disadvantages in the fields of *coverage*, *sampling*, and *non-response*. Consequently, some online surveys show limitations when it comes to the quality of data. How grave these problems are depends on which population is intended to be covered by the survey. In case of representative surveys, for example, there is a considerable *coverage error*, because not everybody is online.

For example, in Germany, the estimated Internet penetration rate was 84%[2] in 2013. In particular, older people with a low degree of education are connected to the Internet less than the average, so that there still is a first-order digital divide in many countries (Hilbert, 2011). Furthermore, despite being connected to the Internet, not all these people want to be interviewed online.

Closely connected to this is another grave problem with regards to *sampling* (van Selm & Jankowski, 2006). Strictly speaking, one can only draw conclusions from a sample to the population if each member of the population has the same specifiable probability to get into the sample. As already mentioned, however, it is not possible to make an online sample of the overall population. Even if everyone were online, there would not be any register of e-mail addresses or other contact data to draw such a random sample (Couper, 2000).

As alternative, commercial market research institutions often recruit online panels according to fixed quotas. However, by definition these panels include only people who are online and willing to be interviewed several times via the Internet. Despite quotas and weighting procedures, the descriptive socio-demographic distributions are considerably different from representative surveys (Chang & Krosnick, 2009; Yeager et al., 2011). Thus, such samples are not suitable for reporting representative distributions. Concerning special populations, however, sampling is less problematic. If a list of the population exists, including e-mail addresses (e.g., in case of surveys among university students), a sample can easily be drawn or a total population survey can be realized. If there is no such list, it is possible to, for example, reach back to anonymous interviews, in order to recruit at least a random selection of website visitors. However, only very few people participate in such non-list-based surveys, furthermore there is the possibility of multiple participations.

Another disadvantage of online surveys is the higher share of *non-responses* among the participants. A meta-study by Lozar Manfreda, Bosnjak, Berzelak, Haas, and Vehovar (2008) showed a response rate that was on average 11% lower compared to mail or telephone interviews. The high response rates reported for online surveys are often based on online samples of market research companies. However, by definition, they include people who are rather willing to respond. Thus, for a fair comparison of response rates, the initial non-response at the time of recruiting the panel would have to be included as well (de Leeuw, 2012). Another kind of online survey is anonymous interviewing on websites, realized in the form of pop-ups or layer-interviews when opening or leaving a site. In this kind of survey, every n-th user is randomly invited to participate. Thus, the population consists of those using a particular website during a given period of time. However, non-response is highest for such anonymous surveys: the response rate is estimated to be far less than 10% (Gräf, 2010).

After all, the previously mentioned advantages in *measurement* are contrasted by disadvantages. Due to the absence of an interviewer, questions are usually answered more honestly, but questions and respective answers must be formulated very carefully, because possible misunderstandings cannot be clarified (Evans & Mathur, 2005). Moreover, the researcher cannot control whether the questionnaire was actually completed by the target person. This is particularly problematic when interviewing elite groups like politicians, because it cannot be checked if their employees have completed the questionnaire. When organizations are questioned on a meso level (see Chapters 8 and 17), it often cannot be determined who exactly has spoken on behalf of the organization. Finally, possible programming errors (e.g., wrong filtering) can produce grave mistakes, which must be ruled out by way of intensive pre-tests.

Finally, from the point of *view of respondents*, the excessive use of online surveys for market research purposes might inhibit participation. Consequently, online surveys—as well as telephone interviews—have a bad image among respondents, resulting in low response rates. Another disadvantage for respondents results from surveys, which cannot be scaled according to the different screen sizes of mobile phones, tablets, notebooks, or big screens. In case of devices with small screens, they cannot be filled in, or only with great difficulty.

Preliminary Conclusion: When and How to Use Online Surveys

As becomes obvious from the section above, possibly the gravest problem of most online surveys is that they do not allow for *representative samples*. Representative surveys require that recruitment happens randomly via telephone or face-to-face, after which the part of the population that is ready to participate is interviewed online. The other individuals should then be interviewed by mail, on the telephone, or face-to-face. Such offline recruitment procedures guarantee the best data quality. However, such complex procedures are comparably rare, as the cost advantage of online surveys is then mostly lost. Consequently, online surveys are less suitable for studies that should allow for representative statements on the entire population, for example election polls. In contrast, the advantages of online surveys have full effect if it is about concluding on a clearly determined special population, with all individuals being connected to the Internet and contactable (Maurer & Jandura, 2009). Examples are surveys among university students, employees of a company, or members of parliament. In such cases, randomized samples are possible that meet every scientific demand; even complete surveying of such specific populations is relatively easy.

Communication research often focuses on the relationship between variables. As such studies are not predominantly interested in representativeness and often show similar results compared to other survey

modes (Bieber & Bytzek, 2012), non-probability online surveys are suitable for such questions (AAPOR, 2010). This holds even more as online surveys are particularly suitable for detecting *causal relationships* (see Chapter 10). On the one hand, due to the comparably low costs, data can be easily recorded in *panel designs*. On the other hand, especially in the case of communication research, online surveys are very suitable for *experimental inquiries*, as different (media) stimuli can be easily integrated into the survey and be randomly attributed to the participants. Then, detecting differences between experimental groups is more important than representativeness. Thus, for communication research, online surveys probably offer the biggest potential in multi-wave data recording and in conjunction with experimental designs.

The Use of Online Surveys in Political Communication Research

Communication research shows a "natural" affinity toward the Internet as well as online applications (Zerback, Schoen, Jackob, & Schlereth, 2009). It is thus not surprising that the discipline applies online surveys much more frequently than neighboring social sciences such as psychology, sociology, or political science (Zerback et al., 2009). But how often and in which ways are online surveys used in political communication research? To answer these questions, journal articles in English have been systematically retrieved from the communication research's database *Communication and Mass Media Complete*. All articles meeting certain search parameters[3] were manually categorized, according to the question if they make empirical use of online surveys and in which ways samples were achieved. This way, a total of 70 contributions were identified (see Figure 14.1).

When looking at the data, it comes as a surprise that in the context of political communication research online survey-based studies started only in 2005. If this finding is connected to the study by Zerback et al. (2009),[4] who, for the period 1997–2006, identified a considerable number of online survey-based studies in communication research, it seems as if online surveys were initially of significance for other research fields of communication research than political communication. However, the data show an increase of online surveys in political communication research. Most online surveys are based on *probability samples* (56%), thus allowing for conclusions from the samples on the respective populations. Online surveys relying on *self-selected samples* from undefined populations (21%) are the second most applied. *Quota sampling*, applied to reduce self-selection biases in the samples' compositions was applied less in web-based surveys (14%). However, both self-selected and quota samples allow for only limited conclusions on the populations. A very small share of the studies (6%) sheds light on not clearly defined
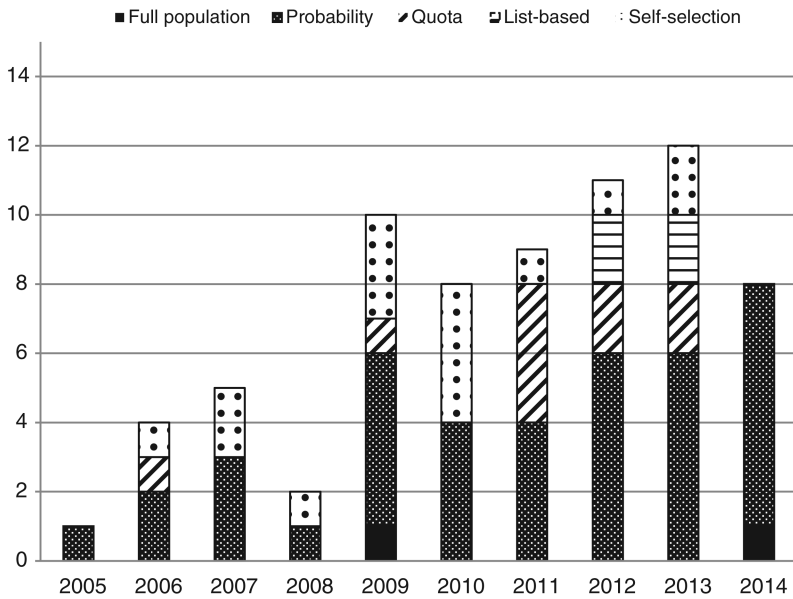
Figure 14.1 Sampling of Online Surveys in Political Communication Research (Total Number of Studies)

populations, such as lists of political activists (*list-based samples* of diffuse populations). After all, *full population studies* (3%) play hardly any role for political communication research. Among the group of articles referring to probability samples, the majority (54%) referred to the total (adult) population of the respective countries where the study was carried out. Other than one might expect only 18% of these online surveys relied on student samples. Referred to the total number of online surveys, those among students made up 29% of the studies.

The literature research showed that in political communication research online survey-based journal publications are found only at a comparably late time but that they have become more common in recent years. The literature research did not include non-English studies, nor any other articles published in other scientific media than journals. Possibly, publications not subject to peer reviewing rather relied on convenient samples.

Practical Examples of Online Surveys in Political Communication Research

In the following section, examples of the application of online surveys for political communication research will be presented from a problem-centered perspective. On the one hand, this is meant to exemplify

how the *potentials of online surveys* can be reasonably used to gain telling data. On the other hand, it illustrates how *limitations* are dealt with.

Online Surveys Among Social Elites

Interviewing *social elites*, for example, politicians, is often problematic, as it is difficult to contact them personally and as they have hardly any time to spend. Thus, telephone interviews are often out of question. Apart from expensive mail interviews, online surveys are a suitable alternative in this case. They allow the respondents to keep full control of their time when answering the questionnaires. Moreover, in many cases, online surveys also allow for samples that are representative for the respective population. Usually the members of elite groups are Internet users, and often the e-mail addresses are available.

For the example presented here, German *local politicians* were surveyed online in 2013 (Bernhard & Dohle, 2015). For this purpose, the e-mail addresses of all members of the city councils of 49 out of Germany's 63 biggest cities were collected. However, cities where the addresses of politicians could not be found online were left out. This limits the representativeness of the findings. The council members were contacted via e-mail and invited to fill out an online questionnaire. Two reminders were sent by e-mail: After two and after six weeks since the first contact respectively. On the whole, 608 councilmembers participated in the survey; the response rate of 25% is about the same as with other surveys among German politicians. This way, it was possible to collect telling data how politicians in German cities use online media (see Chapter 7).

Things become more difficult if the population of an elite group is not as easily accessible as in the above-given case, for example when surveying all professors or physicians in a country. In such cases, it is recommendable to seek access via respective professional associations. However, this is only an auxiliary solution; full representativeness of elite-groups cannot be achieved this way. For example, in 2012, in cooperation with Germany's biggest two journalist associations,[5] *journalists* in Germany were interviewed online about, among others, their attitudes toward media regulation and presumed media influences (Bernhard & Dohle, 2014; see Chapter 7). These two associations, representing a large proportion of the entire community of German journalists, called on their members to participate in the survey via e-mail. A total of 2,168 journalists actually participated. An exact response rate cannot be given. On the one hand, there is no information about how many members were reached by e-mail; on the other hand it is unknown how many journalists were contacted twice because they were members in both associations. This way, it was not possible to collect data that were representative for the special population of all German journalists. However, as relationships between variables were in the focus of interest, this limitation is less significant.

Recording Individual Media Repertoires Via Online Diaries

In many cases surveys measure the habitual use of TV, press, blogs, and other media. In this context, individuals often overestimate their real media use (Prior, 2009). This problem is increased by the multiplication of the media on offer, providing users with the possibility to compose their *media repertoires* from many different types of media. These circumstances present methodical challenges to studies that test media effect theories under externally valid conditions. One possibility to record media repertoires are *online diaries*. This term refers to recording individual behavior at regular intervals over a limited period of time (Bolger, Davis, & Rafaeli, 2003) by way of an online survey.

Here the use of online diaries for the assessment of the *spiral of silence theory* under online conditions in two studies is sketched and the advantages and disadvantages of this survey method are discussed (Eilders & Porten-Cheé, 2014, regarding a German electoral campaign, and Porten-Cheé & Eilders, 2015, regarding the climate change debate; see also Chapter 6). If one takes spiral of silence theory's premise of media use seriously, its assessment requires to know about the individual media repertoires of a broad variety of media users who may receive different pictures of the opinion climate. For this purpose, potential study participants were recruited from members of a commercial online panel and from visitors of topically relevant social network sites and blogs, applying short online surveys. Only individuals using at least one type of media regularly, being politically interested and aged between 18 and 50 were invited to participate in the online diary study. People meeting the quota criteria received daily online diaries via e-mail where they were asked to record their media use concerning certain topics, both online and offline, over a period of one week. To provide comparability between the participants, only the data of those were taken into consideration who recorded their media use for each of the seven days and furthermore filled in a final questionnaire. Among other variables, the perceived opinion climate and the willingness to speak out were measured in the latter survey. The applied quota sampling aimed at analyzing media users exclusively in order to conclude from their media repertoires on their perceived opinion climate. This goal was most of all achieved in two online diary studies, however the samples included also non-users of media (11% and 25%).

Two crucial aspects support surveying media use by way of online diaries. First, online diaries allow for a comparably easy recording of the variety of visited websites (by way of copy and paste while using online media). Paper and pencil diaries or surveys would hardly be suitable for this. Second, designing the diary for an online environment allows for measuring media use as closest to the respective situations of use as possible. This way allows ruling out potential individual recall deficits and overestimations of one's own media use. Applying online diary

designs thus improves the measurement of media use. However, for the time being, online diaries have been hardly applied in communication research. This is certainly due to the effort required for carrying out data collection and analysis. On the one hand, the attrition of the participants is a problem, making regular contacts and appropriate incentives almost inevitable. On the other hand, one must deal with a complexity of data that can be arbitrarily scaled. For the here-presented examples, the used media items were collected according to the online diary entries and made subject to a quantitative content analysis. For example, one of the studies recorded 2,114 situations of media use by 444 participants, which had to be cleaned, appropriately recoded and aggregated for data analyses. This effort can be partly reduced by applying closed questions on media use in the online diaries.

Online Surveys on the Analysis of the Effects of Voting Advice Applications (VAAs)

Voting Advice Applications (VAAs) like the German *Wahl-O-Mat* are Internet applications for political information in the run-up to elections. Such tools are based on similar functional logics: They compare users' positions toward issues to the response patterns of parties or candidates running in the election. Based on this, they show which party or candidate is closest to the respective voter when it comes to these issues.

VAAs may be considered a special kind of political communication. Typical questions in this fast-growing research field are concerned with the socio-demography and political attitudes of these tools' users (Marschall & Schultze, 2014) and the effects of using VAAs on voting behavior (Marschall & Schultze, 2012) and political knowledge (Schultze, 2014). In the field of communication research, it is of particular interest how the use of these tools is related to general patterns of individual political communication (Hanel & Schultze, 2014). The vast majority of results published on VAAs are based on various online surveys.

Regarding the Wahl-O-Mat, most related data is collected from exit polls after each use in the following way: After using the tool, every n-th visitor is selected randomly and asked to answer questions regarding socio-demography and attitudes toward Wahl-O-Mat. The survey on the 2013 German Federal Election, for example, randomly selected every 20th user by way of a layer window when leaving the website. With this kind of survey, there are no serious problems in the fields of coverage or sampling, as basically all VAA users can be contacted online and are randomly selected. However, the high rate of non-responses is a problem. Slightly less than every 10th user invited to the exit survey did actually fill in the (short) follow-up questionnaire. Furthermore, there is a systematic bias, as politically interested and highly educated users participate in such surveys more often, as can

be shown by a comparison with data from other multi-topic surveys (Marschall & Schultze, 2014). Thus, exit surveys are problematic when studying how VAA use affects voting behavior. On the one hand, interviewees must—under the immediate impression of using the tool—tell about how the tool has allegedly influenced their behavior. Thus, such statements are not very reliable: If the self-reported effects are checked in surveys later, considerable differences appear (e.g., Walgrave, van Aelst, & Nuytemans, 2008). On the other hand, the biased structure of the participants, caused by self-selection into sample, is a problem studying the effects of VAAs: Precisely those characteristics such as political interest and education, which make people participate in the exit survey, also influence voting behavior and political knowledge, the crucial variables of the analyses.

Thus, a more suitable alternative for the analyses of the effects of these tools is not reaching back to exit surveys but to multi-topic surveys carried out independently of the use of VAAs. Such online surveys have been realized in the form of quota samples in the context of election studies and in cooperation with commercial panel providers. They have the advantage that, apart from users, a reference group of those not using the tool can be distinguished and that one does not depend on the potentially biased users' self-reported effects immediately after using VAAs (Marschall & Schultze, 2012).

The methodically best way of tracing effects caused by using VAAs, however, are online survey experiments. In such designs, the manner of using or not using VAAs can be manipulated systematically by the researcher (instead of self-selection into treatment). Combined with multi-wave surveys, it is then possible to compare users to non-users and analyze the users over the whole period, both before and after the treatment (Garzia & Trechsel, 2013). As an alternative, complex weighting, such as entropy balancing, could be applied to work against the problem of self-selection (Gemenis & Rosema, 2014). By considering a potential self-selection into treatment and sample (Pianzola, 2014), online surveys combined with experimental designs and complex weighting are fruitful for analyzing this special kind of political communication.

Conclusion

The rise of the Internet has made online surveys increasingly more important for data collection. However, when it comes to political communication research, one may state a certain backlog demand as the number of published studies using online surveys is still rather limited. After all, how can online surveys be used fruitfully in political communication research? Online surveys provide the possibility of interviewing a large number of respondents without much effort and costs. Thus, they are very much suitable for the establishment of panels. The inclusion

of multimedia content is another particular advantage. The disadvantages regarding coverage and sampling can be at least partially balanced by applying mixed methods and/or quota criteria for recruitment. For some research questions the method's disadvantages are less substantial. Actually, more than half of the relevant studies in the field of political communication research are based on probability samples and allow for unrestricted inferential-statistic conclusions.

Insights into current research projects demonstrate how political communication research may make use of the advantages of online surveys. Online surveys are suitable for studying social elites who want to decide flexibly about when they participate. Sometimes the researcher must be ready for the long haul: Even under online conditions, one should be ready for several recruitment attempts and a long period of surveying. Furthermore, under conditions of a changing media environment and differentiating media repertoires, online diaries, as a special kind of online survey, are recommendable for recording individual media use. Apart from much effort for implementation and analysis, the attrition of participants in online diary surveys is considered another problem of this kind of survey. More than ever, incentives for and support of the participants prove to be necessary. After all, the use of online surveys for shedding light on the use and the users of VAA is obvious, as it covers this new way of political communication within its own media environment. The biggest challenge for making valid statements on the effects of these tools is to adequately consider self-selection into sample and into treatment. For this, survey experiments and weighting are applied.

Generally speaking, possibly the biggest potential of online surveys is the connection with experimental designs. This holds particularly for communication research in general and for political communication research in particular. Furthermore, it is recommendable to combine online surveys with other methods. As shown, content analyses can provide ground to gauge the online media contents used that consequently may affect recipients' cognitions and behavior. While asking the recipients *in* the environment of online media use, online surveys may provide valid measurements. Altogether, the potential of online surveys for political communication research is far from being exhausted.

Notes

1 This does not hold for commercial online access panels that offer incentives to the participants.
2 http://data.worldbank.org/indicator/IT.NET.USER.P2
3 Journal articles (conference papers were not considered) meeting the following search parameters in full text were collected: "political communication" *or* "political" *and* "online survey," "web survey," "web-based survey," "online questionnaire," "web questionnaire." There was no chronological limitation. A complete list of the researched articles is available on demand.

4 Zerback et al. (2009) additionally surveyed two German communication journals, however only few in English. Consequently, the data allow for a comparison only with strong limitations.

5 *Deutsche Journalistinnen- und Journalisten-Union* (German Union of Journalists, approximately 22,000 members) and *Deutscher Journalisten-Verband* (German Federation of Journalists, approximately 38,000 members).

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15 Identifying and Analyzing Hyperlink Issue Networks

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Introduction

One of the central features of online communication is its interlinked character (e.g., Napoli, 2008). Thereby hyperlink research is particularly interested in those links that connect different domains, whereas links within a domain are less relevant as they serve the internal website navigation (Thelwall, 2006). In general one can distinguish between two types of hyperlink studies: On the one hand, network science works on large-scale hyperlink studies that analyze all links and thereby search for the structural properties of the global World Wide Web. By doing so they have uncovered interesting properties like the small-world nature (on average how many clicks does it take to reach all other pages?) or the power-law distribution of the web (linking is concentrated on few high popularity nodes accompanied by "long tails" of marginal actors) (e.g., Barabási, 2003; a short summary De Maeyer, 2012). On the other hand, social science is concerned with the sociologically meaning interpretation of a link and thus focuses in their studies on a fraction of the overall World Wide Web (Thelwall, 2002). Hyperlink studies originating in social sciences assume that hyperlinks are "intentional communicative choices" (Shumate, 2012): "To link is to recognize . . . [S]imilarly, non-linking is a sign of non-recognition, or, more radically, is an act of silencing through inaction" (Rogers & Marres, 2000, pp. 156–157). Our approach of identifying and analyzing hyperlink issue networks is part of this latter line of research.

To allow this type of hyperlink studies to increase our understanding of societies, we need to deal with the limitations of current methods in Internet research (Rogers, 2013). Thereby sociologically driven hyperlink studies suffer from four deficits: First, they often analyze networks among predefined actors (e.g., among bloggers), whereas online communication is constituted by the interconnectedness of different actor types; second, those hyperlink studies that claim to generate issue networks hardly deal with the noise in these networks; third, hyperlink studies still struggle to understand what a link actually means (e.g., support or critique) and

thus such studies have, fourth, difficulties in employing social network measures that are based on the differentiation of links according to their meaning, for example, alliance or brokerage analyses. This is where our research comes in. In this chapter, we present a method of how to identify and analyze specific hyperlink networks, namely issue networks that are constituted by actors not a priori defined, that only contain actors that deal with the issue under consideration, for whom we have sociological meaning of their hyperlinks and whose properties regarding alliances and brokerage can thus be analyzed by means of social network analysis.

To do so, we proceed in four steps. We start by locating our conception of hyperlink issue networks in the wider realm of sociologically driven hyperlink studies followed by a step-by-step guide of how to identify and classify such networks. We then examine one such hyperlink issue network exemplarily by means of social network analysis. Hereby we concentrate on such measures that explicitly require an understanding of the meaning of a link, that is, whether it contains support or critique. Finally, we discuss the strengths and shortcomings of our approach and the implication for future research.

The remainder of this chapter will use one specific hyperlink issue network, based on the linking activities of US climate change civil society organizations, to make this methodological contribution more tangible. The climate change issue in the United States is an ideal case for illustration as it is a highly contested issue that is both highly amenable to analysis and equally shows how important it is to base the investigation on the meaning of hyperlinks. Moreover, as it is a highly salient, global issue, sampling a meaningful part of the web inductively is a challenging task. Contestation in this field runs between climate advocates that stress the anthropogenic contribution to climate change, warn about its negative consequences, and call for immediate action, and the countermovement that to varying degrees questions one or several of these propositions. The data were collected in June 2012.

The Locus of Issue Networks in Hyperlink Research

Hyperlink studies that aim to understand the sociological meaning of links are confronted with two challenges—on the level of selection and of interpretation. Regarding the former, it is important to distinguish actor-driven from issue-driven selection. Researchers that follow the *actor-driven approach* select a specific, pre-defined fraction of the Internet (e.g., the American blogosphere, Korean politicians, non-governmental organizations listed, university students of a specific institution), and conduct hyperlink studies among the pre-defined actors (for summaries De Maeyer, 2012; Park, 2003). Although this deductive approach has the advantage that network boundaries are clearly defined, it cannot say anything that goes beyond the pre-defined set of actors and in a certain

sense thus misses the unrestricted flow of communication that characterizes the online world. Beyond, this approach precludes finding new actors and thus requires very clear-cut knowledge on network boundaries before the field phase. *Issue-driven selection processes*, in contrast, are more inductive as they seek to identify those actors that shape the issue field under consideration through the very links that connect them. These approaches are based on a snowball sampling logic and thus create an issue network that potentially includes all different types of actors depending on their linking behavior (e.g., Bennett & Segerberg, 2013; Rogers & Ben-David, 2008). Furthermore, such an approach requires less a priori knowledge about the relevant network boundaries as the specification of the boundary becomes part of the analysis. This allows gaining an issue-focused access to the Internet, which is a precondition for research that is based on issue-focused theories such as the advocacy coalition paradigm, the contentiousness of specific policy debates or issue-specific framing. However, issue-driven studies so far are faced with the problem of how to ensure that the actors in the network are those who explicitly deal with the issue under study. Our approach deals with this challenge as we add both an indexing step, which extracts the issue-specific part of the networks, and a content analysis step that allows gathering the relevant attributes of each actor.

This last step is particularly important if we want to interpret the meaning of a link that runs between two actors. To do so, structural information on linking must be complemented by surveys, in-depth interviews, observations, or website contents (Park, 2003). As observations, interviewing and surveys are difficult to carry out for larger networks and in the latter two interviewees are likely to struggle with problems of remembering, our approach aims for a systematic combination of hyperlink and content analysis of the actors' webpages that are included in the network. Such a content analysis can reveal—according to the question posed—different information about the actors: that is, their location (national or transnational), their belonging to a group (government, nongovernmental organizations [NGOs], blogs, etc.), their political positions, or the frames they make prominent. Consequently, we interpret the meaning of a link based on the attributes of the actors that are connected by each link. While this chapter will mainly focus on relationships of support and criticism, the method can be applied to any other relationship of interest; for instance the actors' degree of transnationality, their mutual orientation toward actors of the same group, etc. We have chosen this focus because we regard it as fundamental: Its neglect has been shown to be responsible for the mismatch between survey-based offline networks and hyperlink networks (e.g., Carpenter & Jose, 2012). Further, the distinction between support and critique relations lies at the core of what constitutes an issue: This is contestation between camps that internally support each other while struggling with the opposite site.

Identifying and Classifying Hyperlink Issue Networks

In the following, we present a method[1] of How to generate and classify hyperlink issue networks, whose actors are not defined a priori, in which all actors actually deal with the issue under consideration, whose edges can be meaningfully interpreted, and whose properties can be analyzed by means of social network analysis for instance in terms of alliances and brokerage roles. To do so, a step-wise computer-assisted procedure is proposed.

Step 1: Definition of Starting Points

Before any study can crawl the web to generate a hyperlink network, starting points have to be defined where the crawler software starts its search. Deciding on starting points is crucial to any network generation as it shapes the results obtained. The researcher has to decide on the number of as well as the type of actors that serve as starting points (NGOs, governments, bloggers, etc.) and whether to include only actors with similar positions on an issue or with different ones. In order to make useful decisions here, some considerations are in place. If researchers pick many starting points, they can be confident not to miss out important parts of a debate. However, depending on the crawler settings (see step two) a high number of starting points goes along with large networks and more noise—a challenge when trying to interpret the sociological meaning of the generated issue network. Beyond, research conducted in a comparative perspective might put further restrictions on the number or type of starting points.

Care has also to be given to the types of actors that function as starting points of a crawl as different actors display different linking behaviors (e.g., Rogers, 2013): government actors tend to link to other government actors; NGOs are more open in their linking behavior; corporate websites do not link at all, yet their interest representatives do; academic sites link to their partners. In addition, studies show that the more powerful are less active in this respect (e.g., Rogers & Marres, 2000). Further, linking studies have observed a tendency that links are more likely to be placed among like-minded sites (for a summary of research on links reflecting political homophily and political affiliations De Maeyer, 2012). Consequently, depending on the research question posed, different types of actors are appropriate starting points.

Finally, the decision has to be taken whether to include actors with similar positions as starting points or whether to select those with contrasting positions. So far, the similarity strategy dominates the field (e.g., Bennett & Segerberg, 2013; Rogers & Marres, 2000). The resulting networks are often interpreted as a common coalition or camp. This focus on like-minded actors might be a wise strategy if one does not

have the possibility to distinguish the sociological meaning of the links. With like-minded actors as starting points, we might reduce (not avoid!) misinterpretations that result from the mixture of critique and support links within a network. However, if we have the possibility to actually interpret the evaluative tone of links (e.g., by adding content analysis), starting with actors of different positions might be more interesting. It is here that hyperlink issue networks reveal a full picture of the political conflict showing not only alliances, but as well the linking and brokerage among the conflicting sides.

When a general strategy for defining starting points is taken, we suggest combining different sources to actually decide on the exact starting points. Thereby, Google searches (for which the previous search history is deleted) based on appropriate key words that describe the issue field under study can be combined with a literature review and expert interviews. In the case of the US climate debate, this triangulation led to eight starting points.[2] We have chosen civil society organizations as starting points as we have a theoretically driven interest in networks originating in civil society (Pfetsch, Adam, & Bennett, 2013). Beyond, these organizations are well suited to start hyperlink research as with their broad linking behavior networks are obtained that include civil society actors, but as well other actors like media organizations or political institutions. We have opted to include the webpages of four countermovement actors and four climate advocates as we are interested not so much in the linking behavior of as in the interaction between the two camps.[3]

Step 2: Crawling—Generating a Hyperlink Network

From each of the selected starting points, one takes one webpage that most centrally deals with the issue under consideration and feeds it as a "source seed" into a web-crawling software. Web-crawling software helps collecting all hyperlinks within a domain as well as those that point to other domains. Thereby crawlers just follow links being blind to the content of the pages they collect, which results in hyperlink networks whose constituting actors do not necessarily deal with the issue under consideration.

For our purpose, we have used Govcom.org's *Issue Crawler* (http://www.govcom.org/scenarios_use.html) (Rogers, 2010). Despite its name, also the issue crawler collects all hyperlinks, and not only those that run between actors that deal with the issue under consideration. Using crawler software requires to decide on the crawling procedure, the crawling depth within a website, and the crawling width to other websites (in the language of the *Issue Crawler*, this is called *degree of separation*). In general, we can separate crawling procedures that follow a snowballing logic and thereby trace all hyperlinks from crawling procedures that only incorporate more important actors, that is, those that are linked to

by a minimum number of other actors. Both approaches have contrasting strengths and shortcomings. Snowballing allows for finding smaller and more marginal actors (an important asset knowing about the strong power-law properties of the World Wide Web), it is thus more open to the volatility of the issue field, it is sensitive to reveal cross-camp linking (and thus fits when starting points with contrasting positions have been chosen), and it is less susceptible to disrupt the logic of network generation if those actors are deleted from these hyperlink networks that do not deal with the issue. These points are at the same time the weaknesses of the alternative approaches, which aim to identify the important actors in the field. However, snowballing has the disadvantage of producing large networks, thus it allows for fewer starting points and less crawling width, and it usually produces more "noise," that is, it includes actors that do not deal with the issue, and thus it increases the necessity to "clean" the networks compared to approaches that focus on important actors. The chosen crawling procedure and source seeds finally decide on how far one lets the crawler follow the links within a website and to other websites.

For our analysis of climate change in the United States, we collect all internal URLs of the website that are two hyperlinks away from the source seed (crawling depth = 2). From all these internal webpages the crawler collects all outlinks, that is, all hyperlinks that point to external webpages, which results in a primitive snowball network structure made up of star configurations around our source seeds. In order to get a full network, the crawler therefore performs a final iteration within the existing network to determine the hyperlinks that run between all those webpages that are now part of it (degree of separation =1). Pre-studies for our case have shown that snowball samples with a degree higher than 1 result in an amount of data that is hardly interpretable and that contains huge amounts of noise. The resulting hyperlink network has its origin in US civil society's climate change webpages (source seeds), but allows for inclusion of all types of actors (e.g., media organizations, government institutions with national or transnational scope) to whom these civil society organizations link.

Step 3: Indexing—From Hyperlink to Issue Networks

As web-crawlers are blind to the question of whether the included pages actually deal with the issue under consideration, one needs to separate relevant from irrelevant pages. To do so, web-indexing software is employed that determines whether the keywords with which an issue has been defined are present on the crawled pages. If at least one of the keywords appears, the webpage is retained in the network. If none of the keywords is present, the webpage is discarded and all of its incoming and outgoing links are deleted from the network. Indexing then guarantees

that what we have generated is a hyperlink *issue* network in the proper sense of the term.

For our analysis of climate change in the United States, we have used the *Visual Web Spider* as an indexing tool (http://www.newprosoft.com/web-spider.htm). All crawled pages have been indexed for the keywords *global warming* and *climate change* (in English and German).[4] From 26,664 pages originally in the network, 12,947 pages were identified as relevant in the sense that they deal with the issue climate change.

Step 4: Coding—Classifying Actors in Issue Networks

Before one can start to systematically classify the content of webpages that constitute the issue network, some data preparation needs to be done. First, all relevant pages have to be stored in an archive to allow for (later) classification (see Chapter 11). To do so, we use the software Wget (http://www.gnu.org/software/wget/) that is able to retrieve complete webpages. Second, the aggregation of webpages is necessary if the researcher is interested in actors' respectively organizations' online communication patterns and not in communication structures among single webpages. As each actor/organization might use several sub-domains (weblog.greenpeace.org, oceans.greenpeace.org) from its main website (greenpeace.org) and additionally separate domains for campaign websites (savethearctic.org, cleanourcloud.com), we ascribe all of these domains to the general actor/organization (Greenpeace International). This produces a network structure where actors/organizations are nodes. Further, it reduces the workload for classifying actors in issue networks: 12,947 pages in our crawl belong to 1,224 domains and 1,071 organizations/actors.

The classification of these remaining 1,071 organizations/actors in our network helps us understand the sociological meaning of hyperlinks, which is derived from the attributes of the actors that are connected by a link. Neither surveys (problem of questionnaire return) nor observations (case numbers are too high) are likely to yield complete attribute information on these organizations/actors. We therefore suggest a quantitative content analysis of the actors'/organizations' webpages. In general, by means of content analysis, quite substantial and fine-grained information can be obtained. However, as the networks turn larger, such a fine-grained approach gets costly and labor intensive (as long as we do not rely on automated forms of content analyses). What we would like to suggest here is a short and basic coding scheme to classify the type of actor, the location where they are most active (scope), and—most importantly—the position the actor puts forward in a specific issue field. If we know this basic information for each actor in the network, we see whether a link connects actors of the same type, of the same scope and
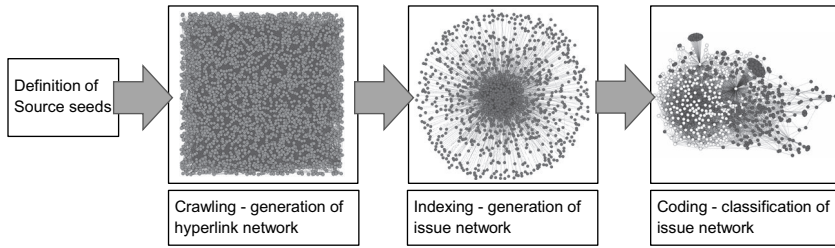
Figure 15.1 From Hyperlink to Issue to Classified Issue Networks

of the same position (which we interpret as support links whereas links running between actors of different positions are interpreted as critique links).

In our study on climate change, each actor/organization within the network has been classified (see codebook on http://goo.gl/wfSmyA) manually according to its issue position, actor type (political actor, socioeconomic pressure group/trade union/corporations; non-profit civil society, media, citizens/blogger), and actor location (i.e., country of main activity). For the issue position, we distinguish climate advocates, explicit countermovement actors and implicit ones, if a skeptical position is merely implied. Finally, an actor was classified as ambivalent if both positions are explicitly stated. Where no definite perspective could be determined, we coded "no position." All information was usually found on the "about us" page or a similar section of the website. The guiding principle of coding is to take the actor's perspective and classify them according to their own views. The media are a special case here as their "about us" section rarely contains the necessary information, and we therefore classified at least three editorial articles in our issue field sampled from each organization's website to determine their position. The coding has been conducted by two coders. Based on the coding of 30 webpages, the coders agreement with the master coding was satisfactory (Krippendorff's alpha [Type] = .90; Krippendorff's alpha [Country] = .93 and Krippendorff's alpha [Position] = .89). Figure 15.1 schematically summarizes our four-step approach.

Analyzing Hyperlink Issue Networks—Alliances and Brokerage

The data collected represent a hyperlink issue network where the nodes are actors/organizations—that is, civil society actors, media organizations, bloggers, corporations, economic interest groups, or political institutions—connected by the arcs, that is, the hyperlinks that run between them. Thereby the arcs have a direction as hyperlinks point from

an origin to a destination site and a value as more than one hyperlink might connect two sites.[5] We code the attributes for all actors in our network, that is, actor type, geographic location and political position on the issue, and we use these attributes to interpret the meaning of hyperlinks. In this analysis, we concentrate on the distinction between support and critique links, positing that links running between actors with similar positions indicate support, whereas those that connect actors of different positions represent critique relations.

To analyze such hyperlink issue networks, we can draw on the methods of (social) network analysis (e.g., Borgatti, Everett, & Johnson, 2013; Wasserman & Faust, 1999). Network analysis focuses on the relational aspect, the structure, which is shaped by actors but which also shapes the actors' behavior. By doing so, it turns away from the idea—predominant in social science research and constituting a core assumption of standard statistics—that actors are independent from each other (Wasserman & Faust, 1999, pp. 4, 7). Putting the interdependence among actors into focus is all the more important as issue fields are constituted by the relationships among the involved actors.

Network analysis is a rapidly growing field where strong methodological progress is combined with developments in computer software (e.g., Pajek, UCINET, Gephi, visone, network packages in R). It has led to an abundance of network statistics and applications. In the following analysis, we will focus exemplarily on the question *of how conflict is structured within an issue* field. We divide this question into two sub aspects: First, if conflict divides actors according to their position, we should find more arcs running between those who share a position than between those of opposing camps (principle of homophily). Second, we concentrate on those linkages that connect the two camps; more precisely, we search for those actors that act as brokers between the camps.

In the following, we illustrate how conflict is structured in the issue field of climate change originating in the United States. The network that is analyzed contains 1,071 organizations/actors that are connected by 6,015 hyperlinks. Our content analysis reveals a clear-cut position regarding climate change of 795 of these actors (the rest has an ambivalent respectively no position). These 795 actors (406 are climate advocates and 389 belong to the countermovement) with 3,905 hyperlinks are the basis for the following analyses (reduced hyperlink network). In this network, 35% of the actors are citizens/bloggers, 32% are classified as media organizations, 26% belong to civil society, around 5% to politics, and 2% to socioeconomic actors. This focus on actors with a clear-cut position is necessary, as we want to shed light on the conflict and polarization structure within the issue field. Figure 15.2 gives a visual impression of this hyperlink issue network.

In a first step, we analyze the question of whether actors with similar positions connect more strongly (principle of homophily) than with
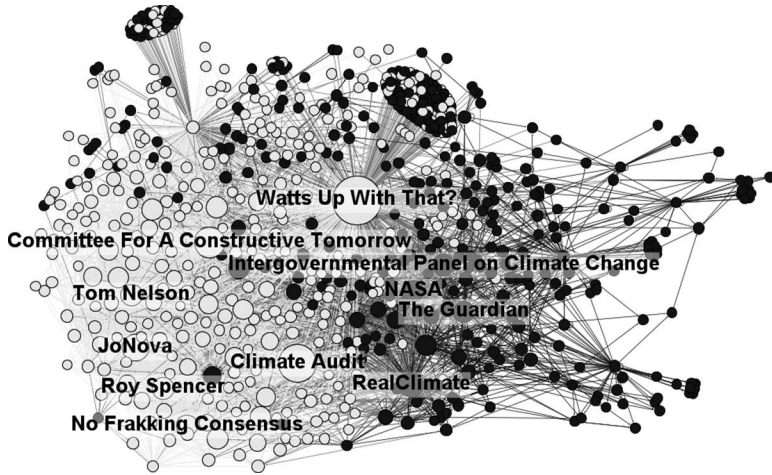
Figure 15.2 Climate Countermovement vs. Climate Advocates in the US Hyperlink Network

Note: Basis: N = 795 actors, 3,905 arcs, June 2012. Node size proportional to indegree. Nodes: black = advocates, white = countermovement

actors of different positions. To get a first idea whether homophily is an important property of the network, we calculate the outdegree distribution of climate advocates and the countermovement toward the same groups. We can summarize these outdegree distributions by employing Krackhardt and Stern's (1988) E-I-Index. To calculate this index, we subtract the number of internal links, that is, links connecting actors of the same position, from the number of external links (links running between actors of different positions) and divide the difference by the total number of links (internal and external links). This results in a figure that is standardized between –1 (indicating that links only connect actors with the same position) and +1 (indicating a linking pattern that solely connects actors of different positions). The results show that the climate change countermovement has a tendency to more strongly link to their allies (E-I = –.26). However, for climate advocates in the United States, we cannot confirm the homophily principle (E-I = –.03).

Finally, to judge the strength and statistical significance of the principle of homophily within our network, we add QAP-correlation (Borgatti et al., 2013). How important is "having the same position" for understanding the linking patterns in our network? QAP correlations allow correlating data matrices, in our case the reduced matrix of the original hyperlink network with a matrix that records for each relationship between two actors whether they have the same position (similarity matrix), and calculating statistical associations like Pearson's r.

In contrast to standard correlation analyses, the QAP correlation takes into account that our observations are not independent. Our results show a weak, positive but highly significant homophily effect (r = .04***) that structures the conflict. However, as the correlation is quite small (which is in line with the E-I indices), we can conclude that the conflict is as much structured by what is happening within alliances as between them. This finding strongly supports our approach to go beyond studying the relations between actors of the same position and focus on the overall issue field.

Finally, we are interested in those actors that broker the relationships between the camps (Gould & Fernandez, 1989). An actor is a broker if he or she mediates between two others, that is, if he constitutes the only link between these other actors. For our purpose, we are only interested in those brokers that connect actors of different alliances. Following Gould and Fernandez (1989), this is the gatekeeper and the representative. The former receives links from actors of the other alliance whereas the latter transmits the hyperlinks from the own to the other camp.

From the 406 climate advocates in our network, 77 act as gatekeepers and 26 as representatives; whereas from the 389 actors of the countermovement, 67 act as gatekeepers, and 112 as representatives. However, these numbers boil down if we only take into account brokers that are responsible for 90% of the respective brokerage relations: on the side of climate advocates, we can identify 12 gatekeepers and 8 representatives. Interestingly, the same actors occupy both roles. The most prominent among them are online outlets of traditional media (The *New York Times*, BBC, *The Guardian*) as well as prominent bloggers (RealClimate, DeSmogBlog). On the side of the climate countermovement, there are 8 gatekeepers and 8 representatives that are responsible for 90% of the respective brokerage relations with again a substantial overlap between both roles. On the countermovement's side, there are blogs (Watts Up With That?, Climate Audit, C3 Headlines, JoNova, Tom Nelson) and think tanks (The Heartland Institute, Committee for a Constructive Tomorrow) that connect the debate to the other camp. This brokerage analysis shows that there are only a few focal points between the camps, who moreover differ substantially: on the climate advocates' side, classical mass media play a prominent role, whereas on the side of the countermovement, it is blogs and think tanks that connect both perspectives.

Strengths and Weaknesses of This Approach

By combining crawling and indexing software, we are able to generate hyperlink issue networks in which only those actors are involved that actually deal with the issue under consideration. The first strength of our approach is thus to reduce the noise in issue networks making networks better interpretable. As actors are not a priori defined in such issue

networks, the approach is able to find and include less established and new actors, to integrate different types of actors and to reduce the necessity of knowing all relevant actors before the field phase starts—the second contribution of our approach. As a consequence hyperlink research in this vein can be connected to theories with an issue-focus, for example, of public spheres/counter spheres, or the political process (e.g., advocacy coalitions, policy cycles).

The third contribution of our approach refers to the interpretation of links. We have developed a method of how a systematic content analysis of actors' attributes can be used to interpret the meaning of links, that is, differentiate between support and critique relations. This allows us a broader perspective on issue networks. Researchers so far have primarily chosen actors with similar positions as starting points and then have interpreted the resulting networks as alliances, groups, or camps (without knowing whether there are also critique links in the network). As the core characteristic of an issue is its contested nature, we suggest starting with actors of different positions, while collecting information on the nature of links. In this vein, we can observe cross-camp linking that is as crucial to understand an issue's conflict structure and how it evolves as the linking within one group. By doing so, we are able to broaden the spectrum of applications from network analysis (fourth contribution) that can be employed—applications like brokerage or positional homophily that are all based on the distinction of support and critique relations.

However, our approach is not without limitations. As all hyperlink studies—which select a fraction of the World Wide Web—the type and number of source seeds selected influence the networks obtained. Beyond, network generation is also strongly dependent on crawler settings (e.g., snowball sampling or another logic, the crawling depth and breadth). We hope to have contributed to start a discussion on pros and cons of different approaches and therefore contribute to finding best practices for and more transparency in research publications. An additional problem is posed by social media platforms, which are both nodes in the issue network and networks themselves and therefore technically and conceptually difficult to integrate in the approach presented. Finally, despite coding the general attributes of actors in the network, we do not know the actual content of their webpages.

Where should we head in the future? First, regarding data collection, we suggest combining hyperlink studies with forms of automated content analysis that might make the interpretation of hyperlinks more reliable and allows digging deeper into what is actually happening on a website. However, it needs to be shown whether automated forms of content analysis can reliably measure central variables such as the actors' positions. Second, hyperlink analysis should fully exploit the measures available in network analysis. For each research interest network measures need to

be carefully selected. While we have, for example, focused on the brokers between camps, an analysis of the hubs and authorities in the network would reveal other central actors that are important for both camps but play no active role within the debate (e.g., the Intergovernmental Panel on Climate Change). Thereby, for certain types of analyses data reduction (e.g., Borgatti et al., 2013, p. 252 ff.) might be necessary. It is appropriate if (a) the algorithms cannot deal with a large or scattered network (e.g., when applying exponential random graph models); if (b) the network structure is overly determined by the source seeds; or if (c) the researcher has a theoretically driven interest to focus on specific actors or parts of the network only. We would suggest applying these steps after data collection as this leaves intact the logic on which the network was built. Third, we suggest that hyperlink studies should focus more strongly on the evolution of networks in time. The dynamic nature of these networks has hardly been studied (for exceptions Park, Kim, & Barnett, 2004; Shumate, 2012) although web-crawlers offer an efficient way to repeatedly generate networks and thereby present an advantage over offline studies. If we look at the dynamic evolution of hyperlink issue networks, we may understand how the contestation of issues changes, which actors become involved—which ones drop out, how alliances evolve, and how their cross-alliance communication fluctuates in the online world. If we link then hyperlink network variables (e.g., changes in centrality, cohesion, reciprocity) with data from other sources, we may learn more about the relation of online and offline spheres: to what degree do offline characteristics (e.g., contentiousness) determine linking patterns and to what degree can network variables explain outcomes (e.g., mass media coverage) in the offline world?

Notes

1 This method has been developed in the course of the project "The impact of challengers' online communication on media agenda building—a comparison across countries and issues" part of the framework of the research group "Political Communication in the Online World," sponsored by the Swiss National Funds and the German Science Foundation.

2 The restriction to webpages from eight different online actors is due to the procedure we have used to generate the hyperlink networks: Pre-tests showed repeatedly that more than 10 starting points resulted in an exponential growth of noise in the data.

3 US countermovement starting points: http://heartland.org/issues/environ ment, http://www.climatedepot.com, http://wattsupwiththat.com, and http://www.c3headlines.com. US climate advocates starting points: http://www.climatecentral.org, http://www.greenpeace.org/usa/en/campaigns/global-warm ing-and-energy, http://www.worldwatch.org/climate-energy, and http://www.worldwildlife.org/climate/index.html.

4 Beyond, we have excluded social media websites as well as social news and other online services as they are platforms rather than actors in the sense of the term as it is employed here.

5 For the analysis of the data, we have dichotomized these weighted networks as technical features of a webpage (e.g., a link embedded in a blogroll) strongly determine the weights of the arcs.

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16 Flesh and Bone or the Integration of Perspectives in Social Network Analysis

Jan Niklas Kocks and Juliana Raupp

Introduction

> *"Qualitative researcher: 'Many people these days are bored with their work and are . . .'*
>
> *Quantitative researcher (interrupting): 'What people, how many, when do they feel this way, where do they work, what do they do, why are they bored, how long have they felt this way, what are their needs, when do they feel excited, where did they come from, what parts of their work bother them most, which . . .'*
>
> *Qualitative researcher: 'Never mind.'"*
>
> —*John Van Maanen (1983)*

Despite various approaches to an integration of methodological perspectives, qualitative and quantitative research often still appear to be separate perspectives or even paradigms in political communication research (Brannen, 1992). This is especially the case in the salient field of online research. Assessing the current state of research there, one finds a dichotomy between quantitative and often partially digitized research designs on the one side and a considerably smaller number of qualitative ones on the other.

This also holds true for social network analysis in online research. So far, the majority of approaches in this direction has been of a predominantly quantitative nature, with only minority arguing toward qualitative perspectives (Hollstein, 2011). Technological developments, inter alia in the fields of data mining and web crawling, have the potential to give even more momentum to such developments. The future appears to belong to quantitative paradigms and to computer-generated big data (Batagelj, 2011; Mayer-Schönberger & Cukier, 2013).

However, there are still arguments against a strict separation of quantitative and qualitative paradigms in political communication research. These consider delimitations to be rather artificial than scientifically justified (Creswell, 2014). In some cases, such arguments also concern approaches of social network analysis (Haas & Mützel, 2008).

Apart from this, the new and still relatively unexplored field of political online communication often also causes problems when approached by purely quantitative methods, especially in the field of social network analysis. As experiences from our own research in the field of political media relations show, largely invisible organizational processes often lead to results that appear hardly expressive; some findings even seem to be contradictory (Kocks & Raupp, 2015). We find that an adequate integration of quantitative and qualitative methodology is able to cope with these problems of social network analysis in online contexts and thereby argue for the (continued) importance of integrated qualitative perspectives in the online age in this chapter.

Originally coined in the field of ethnological research (Schweizer, 1993; Stegbauer & Rausch, 2009), the concept of "flesh and bone" provides an analytical perspective that integrates quantitative and qualitative perspectives into social network analysis. Here, quantitative data provide a resilient structure of bones—an analytical skeleton—that is then supplemented often also and reinforced by qualitative data acting as flesh. The combination of both forms the analytical body; the network becomes an organic entity (Birtchnell, 2014).

As indicated, we consider this a promising perspective for social network analysis in the online sphere. Despite all current trends toward digitized big data approaches, we still see room for social network analyses integrating a more qualitative (deep-data) foundation. When not utilized in a mere cosmetic way, qualitative data have the potential to enrich quantitative analyses (Bryman, 1992; Kelle, 2008); this especially holds true when networks in so far under-researched areas are to be explored (Hollstein, 2011).

In this chapter, we seek to reflect on the challenges of network research in the field of political communication online and on the potential a "flesh-and-bone" paradigm offers for research in the online sphere. We consider networks as a field of analysis and discuss theoretical and empirical perspectives, seeking to argue about the possibilities and limitations of an intensified integration of these in the online age. In accordance with our own research, we focus primarily on the integration of perspectives within network interviews yet also see the potential a flesh-and-bone perspective might have for differently substantiated network analyses.

Background: Networks as a Field of Analysis

Networks as fields of analysis are considered mainly as specific methodological and mathematical research objects. But networks are also subject to theoretical consideration, even though theory building on networks is less developed than empirical social network analysis. The main theoretical premise, on which social network analysis is based on, can be summarized as follows: Social life is best understood not by looking at

individual actors, but at the patterns of relations between the actors, be they individuals, organizations, or institutions.

This premise implies a criticism of the mainstream "variable sociology" that takes individual behavior as its starting point (Freeman, 2004). In contrast, social network analysts seek to grasp the nature of a social configuration by examining relations and patterns of relations between the constitutive entities of the configuration. Thus network theory belongs to the family of structural theories, as opposed to action theoretical approaches.

Network analysts focus on networks as structural entities and are interested in the network properties and their effects. In contrast, action theoretical approaches would focus on the formation of networks; in this case, networks are considered the result of actions. Borgatti and Lopez-Kidwell (2011) characterize the latter approaches as *theories of networks*. Genuine *network theories*, on the other hand, aim to explain network effects, and only those theories are explicitly based on the methodology of social network analysis (Borgatti & Lopez-Kidwell, 2011).

Networks in Political Communication Research

In political communication research, network theoretical thinking has gained ground with the advent of the Internet. Network theory and analysis provide new approaches to the study of old questions of political communication like the power question. Traditionally, the question of power is tackled in relation to individual characteristics of those who are in power, and to constitutional and legal preconditions. From a network theoretical perspective, the question is reformulated as how the (communicative) power of social actors relates to their network capabilities. Castells' vision of a network society includes the notion that technological information networks lead to the empowerment of the civil society. Via horizontal networks, people engage in what Castells (2007) calls "mass self-communication" and by doing so, engage in insurgent politics. Van Dijk (2006) emphasizes the interrelation between technological media networks and social networks. Networks function as a mode to communicate, but also as a structuring and organizing principle. Bennett and Segerberg (2012, 2013) further develop this thought by contending that in the digital age, political protest reached a new level by taking on the form of connective—rather than collective—action, which in turn leads to an empowerment of less organized actors. Thus, a network perspective addresses shifts in power relations within political elites and between political elites and citizens.

The network-specific approach to the examination of power is further substantiated with the notion of social capital. From a network theoretical perspective, social capital is related to the theory of the "strength of the weak ties" thesis that was formulated by Granovetter (1973).

The stronger the tie between two actors, the more likely it is that the two actors will have ties with actors similar to themselves. New information is unlikely to emerge from this close set of relations. Bridging ties—relations between actors who are connected to each other by a single and thus weak relation—are a potential source of novel information. The strength of the weak ties therefore is more novel information. Burt (1999) describes a similar network effect in his theory of structural holes. Here, too, the non-redundancy of ties is a decisive factor for the accumulation of social capital as a network effect.

Network theories have in common that they draw conclusions from network paths: the connection and disconnection, as well as the proximity and distance between actors. The fact that those network theories—others could be added—are developed from the empirical measuring and calculating of connections leads to a certain mix up between theory and methodology in network research, as Borgatti and Lopez-Kidwell point out: "A frequent confusion about network research has to do with where theory ends and methodology begins" (2011, p. 49).

Applying network theories and approaches to the field of political media relations raises different issues. Examining the degree and the quality of connectedness helps to analyze how information and power are distributed between political actors and media actors. Actors who possess relevant connections—like non-redundant bridging ties—will likely possess new or exclusive information, which equals social capital. In the online public space, the existing connections between political and media actors are enhanced by new possibilities of connectedness. In the traditional public sphere, those actors who had access to the mass media were powerful (Bennett 2003; Davis, 2003). These actors receive media attention, their points of view become publicly heard, and other actors refer to those points of view. The consequence of this is that the members of the political elite engage in a monologue (Davis, 2000).

In the online public space, access to the news media no longer is a prerequisite for political importance. Online media provide, at least in principle, a better access for all actors to the public space by bypassing the traditional media (Gurevitch, Coleman & Blumler, 2009). However, this accessibility does not automatically imply more deliberation. Papacharissi (2009) quite rightly points out that the virtual space does not equal a virtual public sphere: "A new public space is not synonymous with a new public sphere, in that a virtual public space simply enhances discussion; a virtual public sphere should enhance democracy" (Papacharissi, 2009, p. 236).

Nonetheless, online communication opens up new scopes of action for political actors and citizens alike. Applying network theories to the study of political communication and media relations calls for a broader perspective on the relations between political actors, citizens, and the news media. Traditionally, relations between media and political actors are

based on a trade-off: Information is exchanged for attention (Fengler & Ruß-Mohl, 2008). In the online world, there are new options to build connections, and as a result, new constellations of actors develop, for example between bloggers, journalists, and politicians, which in the long run can lead to a new distribution of social capital.

Summary

To sum up, networks are a field of analysis in political communication research in theoretical as well as in empirical respect. While the theoretical premises of social network analysis have been developed long before the advent of the Internet and social media, they gain new topicality with the new technological infrastructure. Regarding the field of political media relations, network theory prompts research to focus on the bigger picture of media relations as a set of relations not only between the media and political actors, but also between citizens, bloggers, and other gatekeepers.

The complexity of such relations and interactions between actors calls for methods of data collection that substantiate a bigger structural picture and at the same time also allows for insights into actual patterns of interactions. Network analysis in the field of political media relations is predestined for flesh-and-bone approaches. Network interviews as a primary source of data can be conducted on various analytical levels, potentially providing both structural data and in-depth qualitative supplementation. The following now seeks to discuss empirical perspectives and specifically on analytical possibilities and levels of analysis within such network interviews.

Empirical Perspectives

Politics and the media now constitute neighboring and mutually dependent fields (Mazzoleni & Schulz, 1999). From a network perspective, we conceptualize political media relations as communication networks between these fields. Political actors and those from the media sphere are to be understood as nodes in these networks, ties between them inter alia stem from exchanges of information (Raupp, Kocks, & Schink, 2014). Analyzing organizational communication in general and political media relations in particular now requires taking these ties as well as the overall network into consideration, leading the focus of analysis away from a mere organizational perspective (Yang & Talyor, 2015).

A Need for Social Network Analysis

Technological change potentially affects all areas of politics and political communication (e.g., Coleman & Blumler, 2009; Wright, 2012); this

also holds true for the specific sub-field of political media relations. Yet so far the alterations that technological change induces in this sub-field are largely under-explored. Taken together, these developments create a necessity for social network analyses of political media relations online.

Now network analyses in the online sphere often focus on the linkages between (political) online presences or on semantic networks online (e.g., De Nooy & Kleinnijenhuis, 2013; Miltner, Maier, Pfetsch, & Waldherr, 2013; Schultz, Kleinnijenhuis, Oegema, Utz, & van Atteveldt, 2012; see also Chapter 3). Yet actor-based social network analysis continue to provide an important perspective for political communication research (Kilduff & Brass, 2010).

Whenever social network analysis focuses on actors—either of individual or organizational nature—questions circle around methods of data collection. Analyses of network structures can either be based on primary sources (e.g., collected by surveys or observation) or on secondary sources (e.g., registers or member lists of political associations and clubs; e.g., Krüger, 2013).

Network Interviews

In accordance with our own research, the focus here lies on the collection of network data by network interviews in which either individuals as individual nodes or as representatives of organizational nodes are interviewed. As indicated, network interviews are just one of many methods of data collection for social network analyses, yet since they hold some clear advantages when considered from a flesh-and-bone perspective, that is, one focusing on the integration of qualitative data, they are our primary field of interest.

In principle, there are at least three potential ways of conducting such network interviews: Face-to-face, by telephone, or with online questionnaires. Each of these methods has specific advantages and disadvantages (see Table 16.1):

Online interviews are highly cost-effective, even when large populations are targeted, and are hardly affected by any interviewer-effects. The possibilities of modern software solutions significantly reduce

Table 16.1 Methods of Data Collection for Social Network Analysis; Based on a Comparison by Borgatti, Everett, and Johnson (2013)

Method of Data Collection	Elicitation of Rich Data	Sensitive Issues	Interviewer Effects	Administrative Costs	Potential Errors
Online	–	–	+	+	+
Phone *(CATI)*	+/–	+/–	+/–	+/–	+/–
Face-to-face	+	+	–	–	+/–

potential errors in the transformation and evaluation of collected data and allow for immediate analyses (Couper, 2000). Yet this convenient method also has clear disadvantages. Since it is not possible to actually monitor the interviewee, some members of the target population (e.g., elite actors) could potentially have others fill out their questionnaires, leading to a massive decline in the overall validity of the collected data. Furthermore, while being highly adequate for standardized questionnaires, online survey tools have considerable shortcomings in collecting rich in-depth data (e.g., through open questions). Collecting sensitive data, for example on ties within communication networks, is also potentially problematic.

Personal (semi-structured) interviews conducted in a face-to-face setting are very demanding in terms of administrative costs, especially when diverse populations are targeted. Administrating and transferring data is relatively prone to errors, and the face-to-face interview situation generally tends to yield a higher amount of interview effects than other approaches, especially those based on online survey methods (Duffy, Smith, Terhanian, & Bremer, 2005). Yet at the same time semi-structured face-to-face interviews foster the elicitation of very rich data, allowing for open and follow-on questions; additionally, they create a setting in which potentially sensitive issues, such as for example the actual construction of communication networks, can be evaluated more effectively (Borgatti et al., 2013).

A third possibility for conducting network interviews lies in the application of computer assisted telephone interview methods (CATI). Interviewing the target population by telephone often constitutes a good compromise between the two methods discussed beforehand. CATI provides data that are potentially richer than those deriving from online questionnaires, and it is also more adequate for collecting data on sensitive issues. At the same time, the risks of potential interviewer effects and data errors are considerably lower than in personal interviews; the same holds true for the overall administrative costs (Borgatti et al., 2013). Empirical experience shows that telephone interviewing even functions in studies that target elite populations, such as for example leading political actors (Jahr & Edinger, 2008).

The actual adequacy of an interview method for data collection is then always highly dependent on cultural and social contexts (Church, 2001); there is no convenient one-size-fits-all solution. Applying social network analysis to a context of political media relations here means targeting positional elites as organizational representatives and individual interviewees. With a target population that is limited in size and at the same time characterized by a high status and also with a need for in-depth data including rich additional information, social network analysis of political media relations arguably either calls for face-to-face or CATI methods of data collection.

Types of Data

Both methods permit a semi-structured layout of instruments, combining open and closed questions and potentially enriching structural data with qualitative in-depth information. In principle, these forms of network interviews enable the collection of various forms of data; among these one inter alia finds:

- structural network data (i.e., network structures);
- attributions of influence within actual networks;
- channels of interaction within actual networks; and
- supplementary data, for example focusing on:
    - perceptions of change; and
    - organizational structures.

Structural network data allow for the identification of both strong and weak ties between actors (Granovetter, 1973, 1983), for finding bridges, bonds, and structural holes. On a superordinate level, it takes the entire network into consideration, leading analysis away from mere organizational perspectives (Yang & Talyor, 2015).

Measuring attributions of influence permits supplementing networks of information with an influence dimension, a category that is especially central for analyses of (political) media relations (Bernhard & Dohle, 2014; Davis, 2009; Dohle & Bernhard, 2013; Maurer, 2011). Concordances and dissonances between (different forms of) centrality and attributions of influence can be identified this way. Are those actors that are in regular exchange with others also perceived as highly influential? In how far do bridging or bonding positions or a high level of close or between-ness reflect in an influence dimension? The integration of an influence dimension yields potentials to answer such questions within social network analysis (Kocks & Raupp, 2015; Valentini, 2010).

Evaluating channels of interaction then permits measurement of the actual impact of technological change in communication networks. In how far are media relations a digitized phenomenon? Are specific sub-networks characterized by the utilization of specific (new) means of communication? Supplementing data concerning actual communicative exchanges with information about channels of exchange again enriches network data, thereby helping to answer such questions.

Apart from these questions focusing on structural data, grounding ties and then enriching them with additional information, network interviews also hold potential for additional items focusing exclusively on supplementary in-depth information.

Here questions might circle around perceptions of technologically induced change. How do the actors involved perceive the effects of digitization on the networks they inhabit? Which importance do they attribute

Potentials of a 'flesh and bone'-approach

Explanation
explanation of the existence / non existence of
ties; esp. if these findings appear contradictory

Enrichment
supplementation of ties with further dimensions
such as attributions of influence or perceptions
of inter alia agenda-setting capabilities
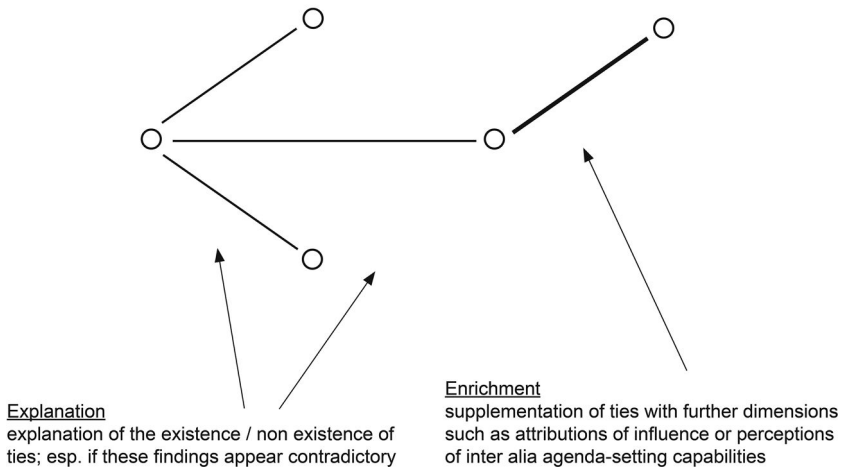
Figure 16.1 Potentials of a Flesh-and-Bone Approach to Social Network Analysis

to new channels and how far is that reflected on a level of actual communicative exchanges? Do they see new actors entering their established networks? Furthermore, especially with regard to organizational communication, the organizational structures of the actors involved into the analyzed networks may be taken into consideration.

Network interviews permit the collection of a large variety of data, ranging from purely structural data up to in-depth information concerning perceptions of and reflections on processes of technologically induced change. Depending on the specific research interest, network interviews enable the enriching of otherwise largely structural network data by specific in-depth data.

Considering Further Levels of Analysis

There are yet more levels to be bridged. The discussed methods of data collection within network interviews directly substantiate network analyses on a micro level of analyses. Arguably, they are also able to ground analyses on an organizational level. This would enable them to bridge different levels of analysis (Quandt & Scheufele, 2011).

In the case of political organizations coined by clear hierarchical structures, it is easily possible to attribute data collected by interviewing an individual who accounts for the organizational communication to the organization as such. Linking media outlets to journalistic interviewees potentially poses larger problems, primarily due to institutionalized statutes of journalistic autonomy within these organizations. Arguably,

the online age has even lead to a further dissolution of clear functional boundaries here (Pörksen & Scholl, 2012). Again, there is no one-size-fits-all solution to this empirical problem. Possible solutions could however lie in the accumulation of data from several (ideally all) leading political correspondents for each media outlets or by targeting main editorial offices only (Kocks & Raupp, 2015; Kocks, Raupp, & Schink, 2014; Raupp et al., 2014).

Conclusion: Toward Flesh and Bone?

The proliferation of digital means of communication has doubtlessly altered the structural conditions for political communication in general and for political media relations in particular. The now ubiquitous online media influence the ways in which politics and journalism interact.

This also affects the actual structure of networks of communication in this field, rendering social network analysis an important paradigm for political communication research in the online age. Computer generated data, for example concerning semantic networks in the online sphere or connections and affiliations within social network sites, constitute an important foundation for such analyses and yet, as the preceding reflections have illustrated, there is still a substantial need for primary data collected inter alia by interviews with relevant communication professionals.

Supplementing structural network data with additional information concerning the actual communicative exchanges, but also underlying perceptions or organizational structures, (still) constitutes a promising perspective for political communication research in the online age.

The advent of digital technology yields great possibilities for computerized big data approaches (Mayer-Schönberger & Cukier, 2013), yet this does not render deep data or mixed approaches futile. Combining structural data with (qualitative) in-depth data fosters the exploration of a constantly developing field of communication. In the online age new issues become salient, and technological, organizational, and societal developments potentially affect networks in the field of political communication.

As theoretical reflections underline, the basic structures of networks alone do of course provide valuable insights into the ways in which political media relations function. Structural data thereby function as a resilient bone structure of research. Emerging fields of research such as media relations networks under online conditions may however require a supplementation of such structures by additional deep data. This then functions as flesh, rendering the resilient bone structure an organic entity.

Network interviews allow for an integration of such levels. While they are not necessarily the ideal method for the collection of large-scale data—primarily due to reasons of scale and scope—they hold great potentials to unite resilient structural data and valuable in-depth information.

Furthermore, they also hold potential for the integration of individual and organizational perspectives of analysis. Admittedly, this area still demands further research, especially to solve questions of organizational immutability.

Network interviews are a demanding method of data collection. Acquiring high-quality data substantiating network analyses requires careful planning and the employment of adequate methods. Yet they still hold great potential for substantiating empirical insights into areas of political communication that are directly affected by technological change and the proliferation of new means of communication.

Outlook

So far, we have discussed the possibilities that an integration of qualitative and quantitative perspectives holds focusing on network interviews. This is in accordance with our own experiences from the past years of media relations research (see also Chapter 9). Yet such integrative approaches—subsumed here under the notion of "flesh and bone"—might not be an exclusive domain of this method of network data collection.

Applying a flesh-and-bone perspective to social network analyses based on network interviews is an obvious possibility, especially since this method allows the simultaneous collection of structural and supplementary data, providing flesh and bone at the same time. Yet this perspective is not necessarily limited to this methodological approach and could, pending further research, also be integrated into analyses based on different sources of network data, both of primary and secondary nature.

The online age has often altered political communication and also yielded new and promising possibilities for online political communication research. Yet, as we have argued, it has not rendered qualitative paradigms futile. Integrating them into the wider body of (digitized) quantitative research still promises new insights and therefore constitutes a fruitful perspective for communication research in the online age.

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17 Organizations as an Analytical Category
Conceptual and Methodological Challenges

Paula Nitschke and Kim Murphy

Introduction: The Ambivalent Status of Organizations as an Analytical Category

There is an inherent contradiction in the analysis of political organizations. On the one hand, an organization is an actor that engages with other organizations. On the other hand, organizations are themselves structures in which individual actors communicate. Thus political organizations have been described as hybrids (Schimank, 2001, p. 35) or as being "both micro and macro" (Taylor, Cooren, Giroux, & Robichaud, 1996, p. 3). This dual characterization of organizations as *actors* and *structures* can, in addition, be complemented by the notion that organizations are also the outcomes of *processes* of communication (Donges, 2012). Each of the three elements highlights one "organizational face." First, the "(corporate) actor" face highlights that organizations are capable of acting, which means that their behavior can be analyzed, for example, regarding the goals or motivations of their actions. Second, the "structure" face emphasizes that organizations, on the one hand ineluctably include human agency and therefore individuals that bring in their perceptions, attitudes, experiences, and interests. On the other hand, the actions carried out by individuals are constrained and enabled by organizational structures (Giddens, 1984). Third, the "processes" face brings in the original idea of the sociology of knowledge, namely the process-oriented view on institutions as a permanent process of institutionalization through communication (Berger & Luckmann, 1966). On the meso level, this means that organizations cannot simply be seen as summations of interests and steady structures, but as an ongoing processes of institutionalization through communication.

This diagnosis of the "multiple faces" of an organization does not mean that an organization behaves like a shape-shifter and changes its nature from time to time. It simply highlights the ambivalent status of organizations as an analytical category, which means that the study of organizations can be approached from different analytical levels or viewpoints.

However, in the field of political communication research the organization-as-actors perspective dominates (Donges & Jarren, 2014, p. 181). Although there have been fruitful imports from organizational theory

into political communication research, with process-oriented theories of organizations gaining importance (see Chapters 8 and 9), researchers tend to focus all too often on organizations as corporate actors. As a consequence the complex relationships between organizations and individuals are neglected. This one-sided focus has problematic consequences as it greatly influences the whole array of research questions that researchers apply. Moreover, it seems that the dominance of the organizations-as-actors perspective also fosters the preferences of researchers for specific—often quantitative—methods. For example, in the field of Internet research on political interest organizations a considerable body of research employs quantitative content analyses to categorize organizational behavior (e.g., Lovejoy & Saxton, 2012; Merry, 2011; Nah & Saxton, 2013; Nitschke, Donges, & Schade, 2014). Thus we see a tendency in the field toward research designs that use quantitative methods to analyze the publicly visible communication behavior of an organization, but fail to shed light on the organizational dynamics and communication processes in which individual actors participate in organizations (for a similar argument see Chadwick, 2011). In our opinion, political organization research should move beyond the organizations-as-corporate-actors-only approach and develop multi-methodological research designs that take into account the ambivalent status of organizations as an analytical category. This is true for political organization research in general, but even more so for the analysis of organizational communication under the conditions of today's online world.

In the following chapter, we aim to show how the ambivalent status of organizations as an analytical category can be addressed, both conceptually and methodologically. We will begin by outlining a number of conceptual challenges that arise for researchers in the analysis of political organizations in the online world. The first section, therefore, looks at the changes in how individuals participate in organizations and the blurring of organizational boundaries, as well as the increasing individualization of organizational communication induced by online media. Section two seeks to show how these conceptual challenges can be addressed within research designs using a number of different methods. We present two different studies that utilize multi-methodological research designs allowing for the analysis of organizations from multiple perspectives and different levels of analysis.

Conceptual Challenges: Blurred Boundaries and Individualized Organizational Communication

Boundaries of Organizations: Changing Conceptions of Membership and Participation

The question is not new: Where is the distinctive line between an organization and its environment? However, over the last two decades, there

has been a renewed interest in boundary issues and the study of boundary "blurring" in organization studies. Although the phenomena of boundary blurring could be approached from multiple perspectives (for an overview, see Paulsen & Hernes, 2003), from the viewpoint of communication studies the driving forces can be identified in the increasingly accessible communication technologies in general and more specifically in the ever-increasing pervasiveness of online media.

In their path-breaking work on collective action in an era of technological change Bimber, Flanagin, and Stohl (2012; Bimber, Stohl, & Flanagin, 2009) discuss how online media weaken boundaries of all kinds, which are relevant for collective action in organizations. They describe how online media blur the line between the private and public sphere and also the line between the private and public communication of an individual. In an environment where such boundaries are permeable and easy to cross, the collective action efforts of organizations to overcome those boundaries and to solve the problem of free riding become less important. As a consequence "the *choice* to participate in collective action efforts is no longer the sole useful rubric to understand collective action" (Bimber et al., 2012, p. 62; emphasis added). On a less abstract level, this means that it is easier for individuals to participate in organizational activities and to benefit from organizational resources without being a formal "member" of the organization. One does not have to be a member of Doctors Without Borders to attend a webinar on Ebola, engage in discussions on Facebook, or retweet calls for action and donors. Thus "membership" may remain as a formal category to describe one, still important, source of monetary resources for political organizations. But "membership" loses its status as one of the primary concepts for drawing the distinctive line between an organization and its environment.

Of course the diagnosis of blurred lines between members and non-members in the "online world" does not mean that in the "offline world" it has been impossible for non-members to participate in organizational activities. But since the participation costs become marginal and less visible for possible participants, online communication opens up easy ways to communicate, engage, and interact with the organization (Bimber et al., 2012). Online media draw in non-members and lead them to take part in the organization. This aspect is a point of contact between collective action theory and the Communication Constitutes Organization (CCO) perspective in organization studies. McPhee and Zaug (2009) describe such communication processes of engagement and interaction with the organizations as a process of membership negotiation. In their perspective membership negotiation is one of the four types or "flows" of communication that add up to the phenomena of formal organization. When we combine this notion with the processes described above, we see how substantial the structural changes induced by online media are. Online media easily include non-members in communication processes

that are constitutive for organizations and formerly used to be the domain of organizational members.

Drawing Conclusions From Individual Data on Organizations

With individual communications becoming more prominent in the study of organizations' online communications, researchers face a number of new challenges. The emergence of new forms of organization and political participation has made it increasingly difficult to differentiate between individual and organizational communication. The very nature of organizations has changed "the notion of the mass organizational model has been challenged by the individualization of participation within organizations," and this includes new forms of individual participation "collective organizational participation is still taking place, albeit in different and sometimes more ephemeral forms than before" (Ward & Gibson, 2009, pp. 27–28).

Even though much of the literature on online media, participation, and organizations focus mainly on newer forms of collective action many of the observations are also true for formal organizations. One of the questions facing researchers in the analysis of the online communications of, for example, political parties and government organizations, is how and when to attribute the communications of an individual to the communications of an organization. For example, do individual social media pages of political actors represent their own personal communications, or the communications of a political party, or the government of which they are members? Bimber, Flanagin, and Stohl's (2005) notion of private to public boundary provides a valuable theoretical approach for researchers in differentiating between the private and public communications of a political actor that is part of a collective effort "individuals maintain a realm of private interests and actions. When they make these interests or actions known to others in some way, they cross a boundary between private and public realms" (pp. 377–378).

While this goes some way to identifying the transition from private to public communications, the question of when these can be attributed to an organization requires further understanding. Taylor and Cooren (1997, p. 409) pose the question "how is an organization constituted as an actor?" and argue that communication becomes explicitly organizational in nature when an organization finds expression in an identifiable actor, and the actor is recognized as a legitimate representative of this organization. According to this logic, communication is always organizational even if it appears on the surface to be simply personal communication or interpersonal exchange. According to them, "we always speak not just for ourselves, but for our organization" (Taylor & Cooren, 1997, p. 432). This is particularly relevant for the analysis of the online communications of individual political actors. It can help researchers overcome

a number of ambiguities that arise in connecting individual communications with political or government organizations. In this way, researchers can make a number of decisions around what individual data to include and what to exclude in the analysis of organizational communication.

Digital technologies lead to organizations and individuals adopting highly personalized, socially mediated communication processes in their collective action efforts (Bennett & Segerberg, 2012). With organizations taking on new forms, there is a need to identify the borders between different types of collective action efforts that are emerging among social movements. According to Bennett and Segerberg (2012), there are two different types of logic at play. These are connective action and collective action, with the former characterized by personalized content sharing across digital networks. In reference to Castells, they say that "the emerging alternative model that we call the logic of connective action applies increasingly to life in late modern societies in which formal organizations are losing their grip on individuals, and group ties are being replaced by large-scale, fluid social networks" (Bennett & Segerberg, 2012, p. 748). In analyzing the online communications of political organizations and key actors within those organizations, this means not only updating established empirical methods to take account of networked communication, but also adopting a multi-methodological approach in order to take account of such personalized, socially mediated communication processes, and to explain how they fit within organizational communication.

Methodological Challenges: The Case for Multi-Methodological Research Designs

So far we have put into focus a number of conceptual challenges that arise in the analysis of organizations in general, and discussed how the micro–macro relationships in organizations become even more complex in today's online world. In the following section, we focus on the methodological challenges arising therefrom and present two multi-methodological research designs that aim to address the ambivalent status of political organizations as an analytical category.

Capturing Multiple Faces of Political Organizations by Means of Triangulation

In the following section, we show how the triangulation of different methods can help to move beyond the organizations-as-corporate-actors-only perspective. We will demonstrate the advantages of a triangulative approach by referring to a research project that analyzed the mediatization of political interest organizations under online conditions (Donges, & Jarren, 2014; Nitschke, Donges, & Schade, 2014). The basic assumption of the study was the notion that the Internet and especially social media platforms form one challenge confronting political interest

organizations. The study was therefore guided by the question of how political interest organizations react to the increasing pervasiveness of online media. In order to answer this question, a triangulative design was realized. In a first step, a quantitative content analysis was conducted, and the online communication behavior of the interest organizations was categorized. In a second step, the content analysis was followed by qualitative interviews.

Quantitative Content Analysis: Analyzing the Corporate Actor Face

The quantitative content analysis was conducted in the form of a functional analysis. Together with classical content and hyperlink analysis the examination of functional features is the dominant method when it comes to the analysis of political websites (Schweitzer, 2008, 2010). The functional content analysis examines the absence or presence of a number of website features that are usually summarized in different communication dimensions. Although different studies consider different website features, and there is no exhaustive catalog of relevant categories, many studies focus on dimensions such as information dissemination, interactivity, addressing of target groups, transparency, and access or usability. A common method of data analysis is the calculation of indices to compare the level of activity of different communication dimensions and the level of activity between different websites. In the example study, the websites and the Facebook profiles of 116 German-based interest organizations were analyzed regarding the level of activity in several communication dimensions. Since the study draws on the presumption of new institutional theory that organizations in a similar institutional environment become homogenous, we also asked how political and social context factors influence online communication and the level of communication activity of organizations situated in different contexts was compared.

Although the content analysis produced important results, for example, differences in linking and mobilization behavior between interest organizations from different policy sectors, we decided for two different reasons to conduct additional qualitative interviews. First, content analysis is suitable to approach interest organizations from the organization-as-corporate-actor perspective since the categorization of communication behavior allows one to draw conclusions on organizational aims and goals. Still it does not allow for the analysis of the relationships between individual actors and organizations, their structures, and communication processes. Second, even if organizations are conceptualized as corporate actors, acting on the basis of explicit goals and strategies, the categorization of behavior only allows one to *draw conclusions* on their motivations. However, the researcher cannot know if those conclusions are consistent with the ideas that the organizations have themselves about their goals and motivations. Thus the qualitative interviews were motivated by the

aim to address the micro–macro relationships in organizations as well as by the aim to validate the findings from the content analysis.

Selection of Organizations and Interviewees

When interviews with organizational representatives are conducted, the researcher needs to make two decisions: He or she first needs to select the organization and then the interviewee since, obviously, an organization cannot be interviewed. In the example study, we selected the organizations on the basis of the content analysis, and both high and low performers—regarding the level of online activity—were included in the sample. The interviewees were then selected based on the formal job titles that were given on the organizational websites. The decision from which hierarchical level the interviewees should be selected is crucial. It is likely that individuals at different hierarchical levels also perceive the same matters differently because their daily tasks are different and accordingly they act on the grounds of different structures of relevance. Therefore the researcher needs to decide on which experiences he or she is most interested and he or she needs to select the interviewees accordingly. In this mediatization study, the heads of the divisions for online communication were selected. In those cases where no such specialized division existed, the heads of the general communication departments were selected. We decided on this senior hierarchical level since the heads of the divisions have a comprehensive view of all online activities.

Qualitative interviews: Analyzing Relationships Between Individuals, Organizations, and Communication Processes

In the interviews, we focused on the specific genesis of the online communication patterns that were observed in the content analysis and asked the interviewees to elucidate the dynamics and processes that preceded them. During the interviews, we explicitly referred to the results from the content analysis and asked the interviewees to comment on, or to interpret, specific findings. To facilitate the process of interpreting and commenting by the interviewees, several charts and graphics that depicted findings from the content analysis were used. Thus the interviews were not only a follow up to the content analysis, but were rather tightly connected to it. This systematic integration of different data sources in the process of data collection is one of the benefits of triangulative research compared to single method approaches, or other forms of mixed-methods research.

In order to highlight the relationships between individuals and organizations, we focused on the relevant groups and individuals inside the organizations, their interactions, and motives. Moreover, we asked for the anticipated recipient groups of the online communication. To gain a better understanding of the communication processes, the interviewees

were asked for detailed descriptions of their everyday workflows and the existence or non-existence of formal rules related to online communication. Triangulation proved to be a worthwhile approach with regards to the aim of highlighting the complex micro–macro relationships in organizations. Due to the openness of the qualitative interviews, it was possible to find empirical evidence for the changing nature of membership and participation in political organizations that were described in the preceding theoretical section. We found that the concept of membership should be accompanied by another concept for that we use the term *advocatist* (Nitschke, in prep.). The term addresses individuals who are not formal members of the interest organization, but part of its "inner circle," because they belong to the group that is being advocated and actively participate in online or offline action. We did not have the concept "advocatist" in mind when we started the study; rather, it is grounded on the interview data and emerged when we asked the interviewees for the anticipated recipient groups of their online communication. The majority of interviewees referred to the membership of the organizations as most important recipient group but had problems distinguishing it from this much broader group of people being advocated, interested individuals, and supporters. The quantitative content analysis also analyzed the addressing of target groups, but could not cover this aspect since it focused on classical target groups like press and media, donors, or members of the organization.

Regarding the validation of the results from the content analysis, the triangulation revealed that the content analysis in many cases overstated the importance of explicit goals and strategic considerations as underlying motivations for the publicly visible communication behavior. Many interviewees stated for example that the launch of social media activities was not motivated by strategic decisions in terms of "in-order-to" considerations, but based on the perception that a social media account is a "must-have" because other interest organizations are already present on the social web.

Organizations as Actors and Structures: New Approaches to Established Methods

In a second research project, which examined networked media government relations in the context of the technologically induced media change, a research design was created that incorporated both the organization-as-actor and organization-as-structure perspective. At the center of the study is the research question: How has the structure of media government relations changed under online conditions? The study viewed organizations both as actors who engage directly with other organizations (in this case media and government organizations), but also as structures in which key individuals act and whose actions are constrained by organizational structures. The researchers employed a quantitative online content analysis of

the websites and social network pages of executive government organizations combined with semi-structured interviews with individual representatives from media and government organizations. In addition, social network analysis was utilized to map the changes in media government relations under online conditions. The network was realized by drawing from the quantitative and qualitative data from both the content analysis and interviews (see Chapter 16 for further information on the "flesh-and-bone" approach to social network analysis). The following section will outline the value of this "two-perspective" approach, along with a particular focus on how the research design connected different levels of analysis; that is, relating individual data to the organization. While research designs should be multi-methodological in order to widen the "organizations-as-actors" perspective, research methods, such as content analysis, also need to be updated in order to take account of the increasingly prominent role of individual communications in the analysis of organizations.

One of the clear advantages to employing a variety of research methods, in particular a mix of quantitative and qualitative methods, is that they allow us to explore convergence and divergence between two or more datasets and thereby add validity to the results (Myers, 2014). According to Benoit and Holbert (2008, p. 615), "research that relates to other research—reinforcing, integrating, elaborating—can provide greater breadth and depth to our understanding." It also allows us to interpret data across different levels of analysis. Within the first phase of this study, which examined networked political media relations, it was found that interviewees' assertions that a number of new online actors are playing a more pronounced role within media political networks proved to be unfounded within the network analysis. While interviewees perceived a high degree of integration within media political networks, the final network analysis revealed exclusive networks with traditional media and political organizations at the center and online media organizations on the outer edges of the network (Kocks & Raupp, 2015). This example highlights the value of a multi-methodological approach employing qualitative and quantitative methods; it can help to bridge gaps between perceptions and practice. In a similar vein to the triangulation approach outlined in the previous section, each of the methods allowed the researchers to support or disprove data gathered from one method against data from another method.

The effect of new digital technologies has been to make the boundaries between public and private domains more fluid (Bimber et al., 2005), with organizations and individuals adopting highly personalized, socially mediated communications messages. This raises the question of how to methodologically relate individual data to organizational data within the organizations-as-actors perspective. Stohl and Ganesh describe the dilemma faced by researchers when they write "[they] are members who decide to act on their own without the sanctioning of the organization still acting as members" (Stohl & Ganesh, 2014, p. 736). For example,

should the personal Twitter page of Italy's Matteo Renzi with almost two million followers be considered the communications of an individual, or the communications of an organization? This study takes the view that it is organizational in nature, in particular when an organization finds expression in an identifiable actor (Taylor & Cooren, 1997). While the preceding section provided examples from the first phase of the project, which focused on networked media political relations, the second phase of the project, specifically examines media government relations in the online world. The second phase employs the same multi-methodological approach, but introduces new elements to these methods to take account of the influential role of individual communications not just within government communications but within organizational communication generally. Within the content analysis instrument, a number of new categories are included, such as, official organization social network pages and official and non-official individual social network pages. The instrument includes those communications that are explicitly organizational, for example, the organization's official Facebook and Twitter page linked from the organization's homepage. But it also includes the individual social network pages of political actors within those organizations, such as, the government spokesperson or head of government communications, the prime minister, and a range of government ministers. Many of these individual social media pages contain an ambiguous mix of government, party political and individual personal content. In terms of the content analysis design, this requires not only clearly defined categories within the content analysis instrument, but also well-thought out definitions and rules around which social network pages belong to which categories and for what reasons. These individual pages are broken down further and categorized according to whether they are official or non-official. For example, non-official social network pages are defined as those that contain explicit political party references (such as party logos) within the cover image, the profile picture, or a link to their political party in the information section. These different categories raise the potential for collecting large amounts of rich and varied data, but it can also cause the content analysis codebook to become lengthy and overly complicated. Researchers must decide whether it is feasible to collect such large amounts of data within one codebook or whether a number of codebooks are required, and also the number of social network sites that can be realistically analyzed.

As outlined above, research designs must also be updated to take account of the increasingly prominent role of individual communications. Not only are online communications of an increasingly individualized nature, but they are also increasingly networked—what Bennett and Segerberg (2012) refer to as "connective action" (personalized messages in communications networks). According to Young and Pieterson (2015, p. 95), "theories of interpersonal influence have evolved from linear transmission models, to two-step models, to multi-stage diffusion models, and

most recently to a more holistic network framework." Research designs need to be updated so that they move beyond linear understandings of interaction (Young & Pieterson, 2015), and instead focus on interactive networked communication in the study of online communication (Gurevitch, Coleman, & Blumler, 2009). For these reasons, the study also proposed using the online content analysis and interviews with key communicators to enrich the data collected for the social network analysis. For example, the content analysis can provide new opportunities for data collection in particular around the extent to which political organizations and individual political actors are connected to each other online, and also what groups or individuals they allow into their network. In addition, a networked approach within interviews can allow researchers to collect vital data in relation to which media organizations political and government organizations are engaging with online.

Conclusion

Political organizations are by their very nature ambivalent as a category of analysis. They are both micro and macro and this contradiction cannot be resolved. Therefore the aim of this chapter was not to decide whether it is more suitable to conceptualize political organizations as a corporate actor *or as structures* in which individuals communicate *or as outcomes* of processes of communication, but to demonstrate the benefits of research strategies that take into account multiple "faces" of organizations, and use multi-methodological research designs to analyze the complex relationships between individuals and organizations. But how successful did the mixed-methods approaches prove to be in coping with the inherent contradiction in the analysis of organizations? More so, how successful did they prove to be in facing the challenges of the online world?

We think the multi-methodological approaches proved to be worthwhile since they produced important results that couldn't have been achieved with the aid of one research method or one analytical perspective alone. For example, the interviews helped to obtain a clearer picture of the relevant groups and individuals inside interest organizations and their interactions and motives. On the other hand it seems that the structural dynamics and processes that underlie their interactions are not fully covered in interviews. This is easily explained since the interactions of individuals are always enabled and constrained by knowledge that is practical in nature and not directly accessible to the consciousness of actors (Giddens, 1984, p. 4). Therefore, we believe that we still need to develop a more extensive methodological toolkit to analyze those praxeological aspects. Possible research strategies include participant observation and group discussions, or what seems to be particularly promising, a triangulation of quantitative web analysis and qualitative methods in detailed case studies.

Moreover, new research approaches are required to take account of the increasing, but often ambivalent, role of individual communications within organizational communication. Political communication research needs to go on to develop detailed definitions that make it possible to decide which communication activities are organizational in nature and which are not, particularly in the analysis of the online presences of political organizations. The increasing role of individual communications within organizations reaffirms the need for multi-methodological research designs that can connect different levels of analysis.

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Conclusion

Political Communication Research in the Online World

Philipp Henn and Gerhard Vowe

To what degree do changes in political communication due to the rise of the Internet necessitate changes to theoretical approaches and methods as well? How strong and in which direction, therefore, should political communication research change, if the field of research is also changing? These are the guiding questions of this book.

It is not possible to give a single, comprehensive answer to this question. On one hand, it is not necessary to change everything that has evolved over decades of research and undergone countless tests (Reinemann, 2014a), but on the other hand, it is also not possible for everything to remain as it is; theoretical approaches and methods must be modified to a lesser or greater extent. The bottom line—as becomes clear over the course of the book—is that the theories and methods of political communication research can, for the most part, stand up to the test presented by a new media environment with varying need for modifications.

Each theoretical chapter of this book names a set of particular challenges to the *traditional approaches* of political communication research that result from the online world. These challenges can be linked to trends of change across the seven dimensions relevant to political communication research as outlined in Chapter 1 (see Table 1.1).

The *erosion of the boundaries* between the public sphere, the private sphere, and the governmental sphere of political communication creates particular challenges to the approaches of agenda-setting (Chapter 2), agenda building (Chapter 3), and gatekeeping (Chapter 4) since these approaches fundamentally assume a strict separation between the spheres.

The *pluralization of the actor constellation* within political communication presents a problem for almost all theoretical approaches (Chapters 2, 3, 4, 6, 8, and 9) since all of these approaches are based on the fundamental assumption of stable actor constellations with a limited number of actors whose characteristics and behaviors are well known. This is no longer the case in the "disordered" new media world.

To a lesser extent, the *differentiation of content* within political communication is a challenge, too. All theoretical approaches, whether

agenda-setting (Chapter 2), agenda building (Chapter 3), gatekeeping (Chapter 4), approaches to political knowledge (Chapter 5), the subjective effects of media (Chapter 7), or the spirals of silence theory (Chapter 6) are faced with the difficult task of dealing with a spectrum of content for political communication that is significantly broader than was the case in the traditional media world. This presents a "stress test" for these approaches.

The increasing *individualization of the reception* of media in political communication creates problems for approaches to political knowledge (Chapter 5), the theory of spirals of silence (Chapter 6), and approaches to the subjective effects of media (Chapter 7). This is due to the fact that it is becoming less realistic to assume that recipients make use of a similar media repertoire and thus constitute an audience for media messages in the traditional sense. This is a significant issue for these approaches given that the assumption of a general public—which is becoming noticeably less stable—is a foundational condition for them to function effectively.

All of these challenges are met with modifications to the theoretical approaches as outlined in the individual chapters. Thus, it has been determined that actor models and the thematic criteria of relevance for traditional approaches must be more flexible in order to accommodate the pluralization of actor constellations and the differentiation of content. The degree of modification varies from approach to approach. On the innovative end, the spectrum of changes to theoretical approaches is limited by the spiral of silence approach for which a "reboot" is recommended (Chapter 6). On the conservative end, the spectrum is limited by the approach of subjective media effects whose foundational structure emerges strengthened from the test (Chapter 7). The other theoretical approaches that fall between these extremes can be classified based on the degree of modification required.

What is the result of the tests conducted in this book with regard to the introduced methods of political communication research? These too are challenged by the new opportunities and necessities of the online word, as is evident in the unanimous tone of the contributions on methods within this volume.

Chapter 10 named three general challenges to methodology that result from the changes to political communication research. These challenges arise from the pluralization of research actors, the differentiation of research content, and the acceleration of the research process. All of these challenges constitute opportunities and threats that have manifested themselves in various ways within the research. Three problems, for which methodological solutions were sought in the second part of this book, stand out above all:

(1) *Big data problem*: The acceleration of research involves the risk of *data-driven development* in which the relationship between theory

and empirical research threatens to be thrown out of balance (Chapter 10). The *quantity* of available data alone presents a technical and methodological problem—particularly for network analyses. Additionally, the data offer endless possibilities for linking and evaluation. This challenge is accompanied by the problem of understanding the *meaning* of this mostly unstructured data and determining the interconnections therein (Chapters 15, 16, and 17). For instance, it is not clear exactly what the links between the websites of actors in issue networks mean or reveal when considering network data alone. Therefore gathering, organizing, and evaluating data places enormous demands on researchers. The individual chapters outline how these demands are met (Chapters 12, 13, and 15). It is apparent in all cases that it is necessary to reconnect with the theories and thus the explanatory goal of research. A new balance of theory and empirical research is implicated by the conditions of large quantities of unstructured data.

(2) *Individualization problem*: In connection with the pluralization of actors, it was discussed (Chapter 10) that, within political communication, it is no longer possible to assume a small number of basic types of actors who produce and receive stable messages. A methodological reaction to the enormous increase of freedom in production and reception is required. Smart data storage (Chapter 11) and careful selection of respondents for surveys (Chapter 14) constitute the partial methodological solutions presented for this problem within this book. Certainly, there are a number of other possible solutions, particularly in the area of content analysis of Internet communication.

(3) *Hybrid problem*: A third methodological problem was discussed in conjunction with the differentiation of content for communication. As a result of this differentiation, the spectrum of research objects expands since differing modes of political communication must be integrated into analysis in an online world (Chapter 10). In order to be able to suitably investigate the *hybrid forms* of mass communication and interpersonal communication, individual and organizational communication, and human and machine communication, more efficient and flexible methodological procedures and instruments are required. In the method chapters, this is expressed above all through various proposals for combining methods more intricately and diversely, for example by uniting more qualitative methods with more quantitative ones (Chapter 16). This allows for just as much expansion as targeted variations of network analysis in which methodological facets can be combined, such as the reconstruction of actor networks and issue networks (Chapter 15). Finally, traditional methods such as content analysis and surveys should be combined in more varied ways, which is possible as long as the methodological opportunities of online communication are utilized (Chapter 17).

Over all, with regard to methodology, the challenges to political communication research presented by the online world have been addressed sustainably. This process principally involves not only minimizing methodological threats, but also making use of methodological opportunities in order to solve the three problems identified. Accordingly, the answer to the methodological challenges is not only comprised of making adjustments to methods, such as in the case of the survey method (Chapter 14), but also includes implementing innovations that result, above all, from the opportunities of big data. This innovation requires cooperation with researchers from other disciplines, particularly computer science.

Overall, there has been an impressive expansion of the theoretical and methodological spectrum for political communication research. The previous methods are not obsolete, and the theoretical approaches have not lost value; they can and must be applied in the future since the questions they aim to address are in no way resolved. Additionally, the online world offers opportunities for testing and further developing modified theoretical approaches with innovative methods. With these renewed methods, the approaches can become well equipped to face the tests of the online world.

This book presents an *inventory* of theories and methods for political communication research that have been tested for their validity in the online world. This inventory must remain incomplete however, as there is multiplicity of theories and methods—such as framing or experimental designs—that could not be addressed within the book, as well as more questions that remain to be answered. It was not possible to address the question of how the theories can be connected with one another in a similar manner to the methods, where their interfaces are, and where increased performance can be achieved through complementarity as this is only partially possible within the context of individual representations. The question of how the organization of political communication research has changed in the online world also remains entirely unaddressed. These changes concern every individual stage of the research process—from information gathering and staff recruitment to publication and public relations. It is also necessary to carry out intensive testing of the proposed methodological base (Chapter 10). Discussing the catalogue of foundational methodological principles and their implementation would be a feasible way of ensuring that the community of political communication research consolidates and continues to develop.

This book is merely the interim summary of a research program that is far from concluded. It has taken on the structure of an inventory of theories and methods for political communication research in the traditional form of a book. This does not constitute an end result. The inventory must be further updated; for example, there should be more experience using the tested approaches, and it should be evaluated in

order to identify weak points in the theories and seek out possibilities for eliminating them. Additionally, the inventory can be expanded by introducing further approaches and methods. For example, the framing approach or the theory of news values could be addressed. To this end, a framework and exemplary variations for its completion are now available. This update does not necessarily need to take the form of new editions to the book, but it could also occur in the form of an interactive online platform—theories and methods in "permanent beta" mode. Given the rapid development of the field, a large amount of exploration will also be required in the future. Routine application of procedures based on well-confirmed theories will be the exception.

The next step is to have more interlocking of the theories with one another. The key word here is *network of theories*, which entails accurately describing theories and identifying interfaces that can then be used for hybrid forms of theoretical approaches.

At present, not only political communication itself, but also political communication research and its relationship to other disciplines is being organized in new ways. If communication researchers do not take advantage of the opportunities that are available, the core of political communication research, which has been shaped through historical development (see Reinemann, 2014b), will be marginalized, and approaches from other disciplines—such as computer sciences, or economics—will assume control (for political communication research as a multi-disciplinary field, see Lin, 2004). This would represent a loss of opportunity for shaping political communication. However, this shaping power requires that the gap between academic and applied research be bridged.

We are only in the beginning stages of development. There is much more to be done. The keywords for future developments in research are ubiquity of the Internet, the Internet of things, big data, and semantic web. While a prediction as to how matters will continue to develop within the thematic scope of political communication cannot be ventured—it is not possible for the scientific disciplines to make forecasts about themselves—one thing is clear: Online-related political communication research must make serious efforts and changes in order to keep up with the rate of change within political communication, to maintain its ties with other relevant sciences, and to in this way accommodate the challenges involved in the structural transformation of political communication.

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