DEEP MEDIATIZATION

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To my son Levi Daniel

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INTRODUCTION

Popular media frequently presents us with fictional characters like Mia, a young woman living in the year 2037: one morning, Mia is woken from a deep sleep with friendly words spoken by Ben, her artificial companion. Ben is an artificial intelligence software application existing primarily in 'the cloud'. Mia can access Ben at all times through her smart watch, her mobile phone and other devices. Mia also lives in a 'smart home': when she enters her bathroom, the lights turn on automatically; at the edge of the mirror is displayed a curated stream of updates and messages from her social media accounts as well as a selection of health information and personal metrics including her heart rate, the quality of her previous night's sleep and how many calories she burned during the previous day. The food in her kitchen is prepared automatically; artificial meat is cultivated in bioreactors and the refrigerator is automatically filled from purchases made online. Mia travels to work on a high-speed train. If she wants to move through the city more privately, she can do so in an autonomous electric car. She works in a support center for autonomous vehicles and it is her job to commandeer a simulator to control a driverless lorry through busy city centers when human support is required. Mia

only has to work four hours a day thanks to the productivity benefits afforded by robotics and artificial intelligence technologies. In their free time, Mia and her friends enjoy virtual reality experiences, travelling to faraway places, perhaps to an outpost on Mars for a drive over the Red Planet's undulating dunes.

The scenario above was originally recounted by two journalists writing in the German news weekly, *Der Spiegel*, in collaboration with futurologists from the Ars Electronica Future Lab. The article positions itself as an 'optimistic vision of the future, though, not necessarily the most realistic'.[1] Despite the oft portended risks and harms associated with mass digitalization, the authors here are more concerned with 'the opportunities offered by the future', based not on their 'unrestrained imagination' but, rather, on suggestions inferred by 'current research' to offer a vision of the future that reflects current innovations in media technology.

There are several reasons why I have begun this book with Mia's story. First of all, Mia's everyday life demonstrates what a deeply mediatized life might look like. Some of the features described in the scenario are already part of our lives today: while Ben's functionalities are more extensive than current assistive technologies, we already have similar companions embedded in our smartphones, our smart watches and in other smart devices; they can be seen in Amazon's Alexa, Microsoft's Cortana or Apple's Siri. They are already capable of logging our appointments, we can dictate messages and emails, search for information and make purchases using simple voice commands. These companions already 'live' in 'the cloud' and it seems that we might be well on the way to a scenario akin to the one described above.

But this scenario is also interesting in terms of what is does *not* address – namely, the potentially problematic aspects of a life so richly augmented by always connected media technologies. For example, these artificial companions continuously collect data on us while we use them. In many cases, the automated analysis of these data is the core business model behind their manufacture. Technologies such as those that control vehicles and other equipment via simulation interfaces are already common in more professions than we might think. But again, it is not made clear in *Der Spiegel*'s vision of the future in which areas simulation control are currently most widespread and

if we were to investigate its use more thoroughly we would find that their predominant field of use is in the American military and its control of Unmanned Aerial Vehicles (UAVs).[2] On the one hand, therefore, Mia's story is perhaps not so different from contemporary life where digital media and technology already saturate everyday life. In the context of media and communications research, this increasing 'entanglement' (Scott & Orlikowski 2014: 873) of our social world with pervasive media technologies can be referred to as deep mediatization. On the other hand, *Der Spiegel*'s tale of an everyday life simply made better and more efficient thanks to digital technologies remains myopic of the possible negative ramifications of a life molded by deep mediatization.

This utopian description of a technological future is consistent with many mainstream depictions of media-related change that present us with their imaginaries of possible futures. Journalists and futurologists alike promise a 'brave new world' made possible through media technology. Their world is 'white', it is 'clean' and just 'better', because it is created by 'white', 'clean' and 'better' media technologies. We can trace these myths back to the beginning of digitalization. As early as the 1950s, 1960s and 1970s, tales were told of digital media technologies that would bring a plethora of 'positive' transformations to society, we would engage with a 'new economy' (Alexander 1983), for example, and live and interact with each other in 'virtual communities' (Rheingold 1994).

In this sense, deep mediatization is not simply 'produced' by technology companies and 'appropriated' by users. It is also imagined by various actors and driven forward by visions such as those described above which often adopt positive future scenarios. We are dealing here with a highly dynamic and multilayered process.

FROM MEDIATIZATION TO DEEP MEDIATIZATION

Mediatization, a concept often harnessed by the social sciences and cultural studies, refers to an experience everybody is acquainted with in his or her everyday life: technological communication media saturate more and more social domains which are drastically transforming at the same time. More specifically, mediatization refers to the relationship between the transformation of media and communication on

the one hand and culture and society on the other (Couldry & Hepp 2013: 197). With reference to everyday experience, it can be said that mediatization has 'quantitative' as well as 'qualitative' characteristics.

Quantitative observations are concerned with media's ever-increasing proliferation through society. They can be measured temporally (media were once only available at certain times of day; they can now be accessed 24 hours a day), spatially (media in the past were often static; they are now accessible in more and more places) and socially (our social practices become entangled with and augmented by a variety of media) (Krotz 2007a: 96). Some media scholars have argued that media have become so pervasive we can refer to the 'mediation of everything' (Livingstone 2009: 1).

A qualitative analysis of mediatization focuses its attention, both empirically and theoretically, on the specific consequences of this saturation of everyday life by media and to what extent this affects social and cultural change.[3] But mediatization research does not deal with the effects of individual media content, rather, it is more concerned with the ways in which society and human practices are transformed more generally by media's ability to mold and shape them. Mediatization can therefore be understood as a 'sensitizing concept'.[4] A sensitizing concept 'gives the user a general sense of reference and guidance in approaching empirical instances' (Blumer 1954: 7) and draws their attention to (present) phenomena in culture and society. On these terms, mediatization 'sensitizes' us to fundamental transformations we experience in the context of today's media environment, and this occurs in three ways in particular: the historical depth of the process of media-related transformations, the diversity of media-related transformations in different domains of society and the connection of media-related transformations to further processes of modernization (Lunt & Livingstone 2016: 465).

A more recent focal point within mediatization research is media's digital character and a need to rethink the whole idea of mediatization because of it. While initial contributions on this matter have been fairly general in tone (Finnemann 2014, Miller 2014), the discussion has intensified and become more specific as digitalization has advanced the processes of mediatization. The reasons for this are multifaceted. Mediatization research has become aware that media is characterized less by the dominant influence of one (digital) medium

but more about the differentiation of highly connected digital media and how this affects communication. The focus has shifted, therefore, to life's 'polymedia' (Madianou 2014: 323) character and the 'media-manifold' (Couldry 2012: 16) nature of today's media environment. Against this background, and in order to understand how media shape the entire scope of social domains, it is necessary to consider digital media in terms of their interrelatedness with each other. Furthermore, mediatization research is attentive to the fact that digital media are not merely means of communication. By virtue of being digital, they are at the same time means of generating data while they are used for communication tasks. These data are used as a source for various forms of automated processing which has become a fundamental part of the construction of our social world.

To emphasize, digitalization has seen us emerge into a new stage of mediatization which we can identify as *deep mediatization*. Deep mediatization is an advanced stage of the process in which all elements of our social world are intricately related to digital media and their underlying infrastructures (Couldry & Hepp 2017: 7, 34). As previous research has shown, mediatization is not a linear process, it occurs in various 'waves' of fundamental change to the media environment. If we look at the past few hundred years, we can identify at least three primary waves of mediatization that have affected society in quite startling ways: mechanization, electrification and digitization.

Mechanization refers to the changes in media practice and distribution engendered by mechanical processes typically exemplified by the invention of the printing press in the 1400s as well as more modern mechanical media such as the typewriters and cameras that came along in the 19th and 20th centuries. Electrification is concerned with the development of electronic media over the course of the 20th century; to a large extent, radio and television are the first things that come to mind, but we can also think about technologies such as the phonograph and the telephone. We can plainly see that, through processes of 'remediation' (Bolter & Grusin 2000), older technologies are refashioned into new ones; just as photography remediated painting, the electrical powered off-set printer, and eventually the photocopier, remediated Gutenberg's press; the typewriter was refashioned into the electric typewriter and the computer keyboard, cinema into television and so on. The most current wave of mediatization is digitalization,

which stimulated the trend toward increasing datafication.[5] Media are increasingly computerized and objects not previously considered as media, a car, for example, are made media by virtue of their digital connectivity. Since these digital media are now software-based and can be automated by means of algorithms – rules for operation, such as those laid down in computer programs – they are no longer simply communicative tools, they also act as generators of data demonstrating clearly how the advanced stage of deep mediatization is firmly grounded in media's digitization.

The waves of mediatization described above are intrinsically contradictory and have manifested themselves as the consequence of forces beyond themselves at different stages throughout history. However, it is clear that media's pervasiveness in our lives is made possible largely as a consequence of them being refashioned into the digital realm. These software-based media are shaped in a wide variety of digital devices. 'Radio' as a medium, for example, is no longer tied to the radio set. With a variety of software solutions, we can use a whole range of digital devices to listen to the radio. Some still look like radios (the digital radio as a discrete device), some are representations on our screens through specific software (a radio app on a smartphone) and we can apply the same principle to television, telephony and the entire breadth of media services and devices we make use of.

Deep mediatization presents a challenge to mediatization research as it must incorporate the analysis of algorithms, data and digital infrastructures. Investigating algorithms becomes necessary because in a state of deep mediatization facets of the mediated construction of the social world occur through automated data processing. The classification of data, for example, on certain consumer groups when shopping online or personal recommendations based on download histories must be analyzed in a different way compared to political discussions on talk shows, for example.[6] Attention needs to be paid to the digital infrastructures that underpin contemporary media.[7]

As mediatization is a concept that sensitizes us to the more recent changes in digital media we must rethink its current research paths once again because we are forced to further integrate analytical concepts that address questions of algorithms, data and digital infrastructures. In light of this analytical requirement, the term deep mediatization also resonates with various other uses of 'deep' such

as 'deep learning' (which is understood as a new level of automated learning processes based on algorithmic processes) or 'deep analytics' (which is applied to data mining). The use of deep mediatization as a term is, therefore, deliberate because it is the stage of mediatization in which the analysis of algorithms, data and artificial intelligence become crucial to our understanding of the social world.

TRADITIONS AND PERSPECTIVES

With my focus on deep mediatization, I position this book within a certain perspective of the discourse on mediatization. In doing so, I will refer to two lines of thought that can be distinguished in previous and current research, these are the institutionalist and the social-constructivist traditions.[8]

The institutionalist tradition on mediatization arose from mass communication and journalism research. Research carried out in this tradition focuses on the role media – understood as a 'semi-independent institution' (Hjarvard 2013: 21) – play in influencing other areas of culture and society that are apparently external to it, a process that often harnesses the metaphor of 'media logic'. Originally developed by David Altheide and Robert Snow in 1979, media logic theory describes the influence discrete mass-media formats have on other areas of society such as politics or religion. More recently, media logic has been utilized more broadly and is often pluralized so that as an analytical tool it may consider the existence of numerous media-related dynamics.[9] Media logics, then, act as 'a metaphor and shorthand for the various modi operandi that characterize the workings of the media' (Hjarvard 2017: 11). Approaches to media logics refer to the operationalization of media forms (genres, framing etc.), the logics of organizational rules (work routines, decision making) and the logics of media's technological affordances (the material characteristics of devices and platforms, etc.). In harnessing the media logics metaphor, media influence is not conceptualized as a more-or-less direct effect but is instead considered as a more complex process of interrelating logics: non-media institutions (in the fields of politics, religion etc.) have their own 'logics' which in turn have the potential to work against media logics which can result in a certain inertia and resistance against a changing media environment.

The social-constructivist tradition finds its origins in media practice research with a focus on media use as well as media production. It emphasizes the role of media in the communicative construction of social and cultural reality and mainly explores mediatization from the perspective of the everyday (Knoblauch 2013, Krotz 2014). Researchers in this tradition investigate how social practices change when they are entangled with media. Here, we can see another way of theorizing the influence media may have which moves beyond the idea of media logics and the direct influences of media's materiality. Media influence is conceptualized as an 'institutionalization' and 'materialization' of social practices (Couldry & Hepp 2017: 32). When it comes to individual media, institutionalization refers to a stabilization of the patterns of communication and of expectations in the process: we know how a certain medium is typically used for communication, we communicate with the help of this medium in that way and we expect others to do the same. This goes hand in hand with materialization, which means that such patterns are themselves inscribed in the media technologies and the (digital) infrastructures that accommodate them. Messenger software, for example, materializes a certain way of 'talking' through its software-based user interface. Institutionalization and materialization are not, however, a one-way street. Each social domain (community, organization etc.) already has its own orientation in everyday practice which is partly supported by media's processes of institutionalization and materialization and partly challenged by them. One can take the family or school as an example. Many of their constitutive practices are now subsumed by digital media. We can look at the practice of creating family albums, which is replicated in the structuring of corresponding photo software, or the digitized school administration system, which replicates the organizational structure of the school. At the same time, the constitutive practices of family and school are challenged by digital media when direct family communication at the dining table is confronted with the parallel communication of children using their smartphones or when the school's organizational communication shifts to messenger services that are beyond the control of the organization. The social-constructivist tradition of mediatization research is concerned with reconstructing the dynamics of these changing conditions of social construction without assuming certain logics from the outset.

Perhaps we are witnessing a convergence of these two traditions and related perspectives. This convergence might have its cause in the latest changes in media technologies which have implications for both traditions: as digital media saturate various domains of society and as they are closely entangled with each domain's practices, it is difficult to assume that media are 'semi-independent institutions' as they are considered in the institutionalist tradition. Digital media are entangled with the practices that produce institutions in such a way that it is hardly possible to juxtapose media logics with institutional logics. At the same time, we must also bear in mind that investigating digital media does not simply mean that we research everyday practices and the communicative construction of society at the level of media use, but we should also bear in mind the role played by large corporations such as Alphabet, Amazon, Apple, Facebook and Microsoft and the infrastructures that they (and others) build. At this point, the original social-constructivist arguments need extending by, among other things, giving greater consideration to the role of institutions in the 'making' of deep mediatization.

In general, it would be misleading to equate the term mediatization in one or both of these traditions with a closed theory of media change. At this point it is helpful to remember again the argument that mediatization is a 'sensitizing concept', that is, it sets out to sensitize us to current social transformations. As such, the term cannot stand on its own as a self-contained theory but another point of view might be more helpful: Mediatization is a sensitizing concept around which various researchers have gathered, researchers who are interested in an empirically based investigation of the significance of the role media plays in the transformation of culture and society. What these researchers have in common is that they are looking for approaches that go beyond simple models of effect and try to see the current change in a more long-term, historical perspective and across various media.[10] From this point of view, the term mediatization refers to an open, ongoing discourse of theorizing social and cultural transformation in relation to media and communications.

Within this discussion, this book takes a position that Nick Couldry and I have described elsewhere; one of 'materialist phenomenology' (Couldry & Hepp 2017: 5–8). Like Raymond Williams (1990) with his idea of 'cultural materialism', we emphasize that it is fundamental

for any analysis of media and communication to consider *both* the material and the symbolic. In times of deep mediatization, the consideration of both is likely even more urgent than was already the case with television which Williams referred to in his work: The 'materiality' of today's media concerns not only the various devices, cable networks and satellites. As I already emphasized above, since today's media are largely software-based, it is important to consider that complex tasks can and most likely will be 'moved' to algorithms. It is necessary, therefore, to think much more rigorously about the materiality of media and to also pose questions on which kind of agency is involved and at what times. A *materialist* phenomenology scrutinizes media technologies and infrastructures through and on the basis of contemporary communications.

Despite the important role played by data and algorithms, questions of *human meaning* and *sense-making* are still a central issue for any analysis of social construction. Financial products that make up much of today's globalized stock exchanges, for example, are often completely based on processed data and are wholly intangible without a visual, computer-based representation of the processed data.[11] But the processed data is only given significance as a financial product through the attribution of meaning, meaning given to it by people. For this reason, it is important not to lose sight of the symbolic: the construction of meaning in times of deep mediatization. The material *phenomenology* approach means understanding that, whatever its appearance of complexity and opacity, the social world remains accessible to interpretation and understanding by human actors. Indeed, it is a structure built up, in part, through those interpretations and understandings.

One of material phenomenology's key concerns should be the respective actors involved, whether they be individuals or supra-individual actors such as corporations and collectives.[12] To accommodate this concern this book explores mediatization from an actors' point of view: Mediatization is not a process that just 'happens'. While this process involves a variety of technologies and some of the most complex infrastructures in history, it remains one made by humans who give it meaning: *individual actors* as single humans, *corporative actors* as organizations, companies and state agencies as well as *collective actors* as communities or social movements. Adopting an actors' point of view on deep mediatization means trying to gain an

understanding of how mediatization takes place where a variety of actors intersect.

Deep mediatization is characterized by the extent to which the practices of these different actors are *entangled* with digital media and their infrastructures (Scott & Orlikowski 2014). As media saturate the various domains of society, they have also become part of the practices through which these social domains are constructed. Practices perhaps not considered media-related in the past are becoming media practices.[13] In the office and the laboratory, at school and at university, with family or among friends, our current practices are characterized by the fact that we also conduct them with and through media. This foregrounds one particular situation that is revealed by deep mediatization; that practices involving physical activity – handiwork, cleaning, driving, cooking and so on – are closely interwoven with practices of communication (Reichertz 2009: 118–220). When we do things together, we coordinate our actions and orientate our knowledge through communication, and we project our goals through communicative means. With the entanglement of general social practices with media, the separation between communicative action and physical action becomes blurred. The analytically more interesting question is probably more one of how the two refer to each other – and physical practices become media practices as well. A good example for this is the automated tracking of walking, cycling and sleeping by the help of smart watches.

By tracing a material phenomenological route through our analysis, we can understand deep mediatization as a process of *recursive transformation* (Couldry & Hepp 2017: 216–218). Recursivity, a term whose origins lie in logic and computer science, indicates that rules are reapplied to the entity that generated them (Kelty 2008). We sustain it and make necessary adjustments when problems arise, by replaying once again the rules and norms on which it was previously based.[14] Today's recursivity is heightened in an environment characterized by deep mediatization and many forms of practice now involve the use of software and its associated algorithms that do their work through recursive functions.[15] Since software must operate in the wider space of connection even apparently simple acts carried out by social actors depend on many levels of recursion. The transformation of society becomes a *deeply* recursive one: rules for how something should change are inscribed into data processing algorithms which are reapplied to the social phenomena they collect data on and through

these recursive loops they are themselves an influential factor in the transformation of social phenomena.

THE CHAPTERS OF THIS BOOK

It is from this point of view that the arguments that follow will flow. If this introductory chapter has provided an initial presentation of the concept of deep mediatization and situated it within further mediatization research, the chapters that follow aim to elaborate in more detail the processes involved in deep mediatization's social and technological formation and attempt to grasp it empirically.

Chapter 2, 'The making of deep mediatization', begins from an actor-centered perspective and sets out to discuss the emergence of deep mediatization. In this chapter, corporate actors (tech corporations and governments) as well as collective actors (the various pioneer communities that have advanced the development of technologies) are harnessed as key points of interest. My main concern is to show that the 'making' of deep mediatization cannot be reduced to the activities of large companies and governments, as is often the case made by a political economy approach to the media. We are already dealing here with a recursive interplay of corporate and collective actors and can only grasp the emergence of deep mediatization if we are acquainted with these dynamics. At its current stage, this interplay has led to five quantitative trends: the differentiation of a variety of end devices as media, their intensifying connectivity through the internet, the rising omnipresence of these media through mobile communication technologies, an accelerated pace of innovation and finally, the emergence of datafication.

Chapter 3, 'Media as a process', argues that it is impossible to grasp deep mediatization without an appropriate concept of media. My main concern in this chapter is to understand media as a process; media are not simply 'there', but they arise in the ongoing process of institutionalization and materialization of communication. Looking at media in this way sheds new light on the discussion on 'media logic'. It becomes clear that media's processual character became most significant at the moment they became digital: based on algorithms and infrastructures, they are generated in narrow recursiveness loops and exist in a state of continuous 'beta'. While media mold the social

world through their institutionalization and materialization, we would be indulging in a certain reification if we were to speak of fixed logics as inert properties of media. Rather, one must sharpen one's eye to the processes playing out in their development and use, especially since digital media's capacity to shape the social world never stems from one single medium. We are confronted with a media manifold which is concretized by media ensembles within different social domains and in the media repertories of individuals.

Chapter 4, 'A figurational approach', discusses my principal approach to deep mediatization. Put simply, figurations are exemplary constellations of humans such as can be found in families, communities, organizations or around certain media. My main argument in this chapter is that if we want to understand deep mediatization, our analysis should not start with media themselves but by comparatively analyzing the figurations of different social domains. However, today's figurations are comprehensively interwoven with digital media and their infrastructures. When it comes to society, the main argument of such an approach is that its transformation is best understood as a process of recursive transformation which we can name re-figuration: of a structural change of figurations as well as their interrelatedness to each other in which digital media and infrastructures speed up the loops of recursivity. In sum, a figurational approach has close links to a 'non-media centric perspective' which first analyzes human practices and then the role digital media and infrastructures play within them and the transformations that can occur as a consequence.

Chapter 5, 'Deep mediatization's re-figuration of society', focuses on societal change as a process of transforming figurations and their interrelatedness to each other. The main topics include the changing interrelatedness of figurations through myth, data and infrastructures, the transformation of existing figurations such as organizations (which are discussed through the examples of public debate and news production) and communities (which are discussed through the example of local and transnational families) and the emergence of new figurations (platform collectivities, connective action and global financial markets). Across these examples we are dealing with the 'activation' of the media ensemble for individual figurations and how automation and communicative robots become part of their social construction.

In all, my aim with this chapter is to show that deep mediatization is at the same moment a transformation process that 'works' across figurations but has its particularities in relation to the specificities of figurations.

Chapter 6, 'The individual in times of deep mediatization', flips the perspective of figurations as whole to the embedding of the individual within them. Here I will discuss the consequences of involvement in a multiplicity of figurations and how this shapes individual news repertoires and media practices. One particular change that takes place at the level of the individual is that the digital traces he or she leaves across different figurations are accumulated in the form of 'data doubles'. Such data doubles are highly ambivalent, an individual's data double provides opportunities for surveillance by companies and corporate actors as well as for the 'interveillance' of each other in partnerships, groups or communities. But data doubles also can be a resource for managing and changing one's own life course as the example of self-tracking shows. The particular foci of this chapter are, therefore, the ambivalences of deep mediatization for the individual and the question of how far this relates to a changing social character or habitus.

The conclusion of this book, Chapter 7, is entitled 'Deep mediatization and the good life'. In this chapter, I discuss deep mediatization from a normative point of view. While the 'making' of deep mediatization was closely related to the idea of forming a generation of digital natives which would change the world for the better, the analysis within this book has demonstrated that it is a highly contradictory meta-process of change. But despite these issues, it would be a mistake to assume that the process of deep mediatization could simply be 'switched off'. Therefore, we are confronted with the question of what form deep mediatization *should* take to make a 'good life' possible under the conditions it produces. Here, I refer to the *Gestaltung* of deep mediatization – a German term I use to address the impending formation of mediatization in a normatively better way.

My hope is to be able to give a general insight into the discussion on deep mediatization with this compact volume. My aim is to explain the ambivalence of deep mediatization as a process we are all confronted with, albeit in different ways. It is only possible to form this process of change in a productive way if one deals with it analytically

and precisely. This book is sets out to provide an inspiration toward achieving that goal.

I do not see this book as a standard introduction to a scientific field. This would be difficult, even impossible, to achieve as research into deep mediatization is only just beginning to find its feet. My aim with this book is to invite the reader to an emerging discussion. With this in mind it may be helpful to consider this book alongside a number of other publications: those interested in mediatization in general will find access to this discussion through introductory publications such as the monograph by Stig Hjarvard (2013), a handbook edited by Knut Lundby (2014a), an anthology by Frank Esser and Jesper Strömbäck (2014), a book I wrote myself (Hepp 2013) and the publications of the Mediatization Section of the European Communication Research and Education Association (Driessens et al. 2017, Thimm et al. 2018b). These titles do more than enough to provide a clear yet thorough introduction to the *general* discussion on mediatization.

As mentioned above, this book aspires to be much more specific in that it is about providing access to the idea of *deep* mediatization. As this discussion is mostly about an advanced stage of mediatization in which questions of algorithms, data and digital infrastructures are relevant, new interdisciplinary relationships will emerge and this book encourages media and communications research to engage with a range of fields including software studies, sociology of technology and science and technology studies. If anything is brought to light by deep mediatization and digital media's entanglement with so many facets of social and technological life, it is with a certain urgency that the field ought to bridge the gap between itself and an ever-increasing number of academic disciplines.

At its core, my arguments are closely related to a series of other publications I have written with various colleagues. In *The Mediated Construction of Reality* (Couldry & Hepp 2017), Nick Couldry and I developed the concept of deep mediatization and the basis for a *figurational* approach to its analysis. From the research network *Communicative Figurations*, a number of other publications have been published, namely the anthology *Communicative Figurations: Transforming Communications in Times of Deep Mediatization* (Hepp et al. 2017b), a thematic issue on digital traces in context (Hepp et al. 2018b) and another thematic issue on social constructivism in media

and communications research (Hepp et al. 2017). Our aim in these publications was to operationalize research on deep mediatization and I will refer to them frequently.

NOTES

1 See, www.spiegel.de/wirtschaft/deutschland-in-der-zukunft-wie-wir-2037-leben-werden-a-1183331.html (accessed: May 1, 2019, author's translation).
2 Another vivid fictional account of this kind of working environment is portrayed in the film *Eye on Juliet* (2018), in which the main character, Gordon, works as a spider drone operator and supervisor of a Middle Eastern oil pipeline. See, http://eyeonjuliet-themovie.ca (accessed: May 1, 2019).
3 For a general discussion, see, Lundby (2014a).
4 With regard to this argument, see, Jensen (2013: 206).
5 In our book *The Mediated Construction of Reality*, Nick Couldry and I discussed the possibility that a 'new wave of datafication is under way within the wave of digitalization' (Couldry & Hepp 2017: 41). Extending our original reflections, my following argument is that we best understand datafication as one of the trends within deep mediatization, which, in turn, is a consequence of digitalization.
6 See, for example, Beer (2016) and Gillespie et al. (2014).
7 See, Bowker et al. (2010), Parks & Starosielski (2015b), Karasti & Baker (2004) and Mosco (2017).
8 Göran Bolin (2014, 2017: 19–24) and Knut Lundby (2014b) distinguish three traditions of mediatization research: in addition to the institutionalist and social-constructivist approaches mentioned above, a technological one. However, I share with André Jansson (2018: 2–3) the argument that while we can distinguish a technological perspective in principle, it has not emerged as an independent tradition in mediatization research.
9 For an overview, see, Strömbäck and Esser (2014a) and Thimm et al. (2018b).
10 See, among other publications, the discussion on the mediatization approach in the journal *Media, Culture & Society*: Deacon & Stanyer (2014), Hepp et al. (2015), Lunt & Livingstone (2016) and Ekström et al. (2016).
11 This is discussed by Karin Knorr-Cetina, using the concept of 'scopic media' to emphasize the 'flowing representation' of corresponding information; see, Knorr Cetina (2014).
12 For the distinction between 'individual actors' and 'supra-individual actors', see, Schimank (2010: 327–341).
13 For a general approach to media as practice, see, Couldry (2004) and Couldry (2012). For a discussion on the relationship between communicative action and other forms of human action, see, Reichertz (2008) and Reichertz (2011).
14 This has been shown in the field of ethnomethodology (Garfinkel 1967), to which Anthony (Giddens 1984) also refers in his theory of structuration.
15 For an overview, see, for example, Beer (2017), Gillespie (2014), Manovich (2013) and Striphas (2015).