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New Media and Socio-Cultural Formations

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New technologies of communication affect the social and cultural constellations in society. This essay adopts a perspective linking the three key concepts of networks, culture, and communication to examine these constellations and the effects of new media on them. Culture and networks are seen as interwoven, with cultural forms disseminating in networks, but also shaping them. New media alter the conditions of communication taking place in networks—with communication taking place across space and time, dyadically, within groups, or one-to-many, depending on the media at hand. The mass media of printed materials, radio, television, and the Internet, then, disseminate cultural forms in addition to the direct communication in interpersonal networks. Due to their social and economic conditions of production, writing and print media foster the development of first elite cultures, then high languages and national cultures, and finally life-style subcultures. The broadcast media of radio and television make for a blurring of social boundaries and for the homogenization of knowledge in complex modern societies, at least before their increasing specialization in the late 20th century. The Internet, in contrast, caters international subcultures and fosters cultural fragmentation.
Keywords: communication, culture, media effects, media technologies, social networks

1. Introduction

Communication technologies change social life: We maintain social relationships across long distances via telephone, letters, and e-mails. Radio, television, and the World Wide Web offer a common stock of information to draw on in everyday communication. The printing press made newspapers, journals, and books widely available. In particular, it created and catered specialized audiences from traders, scientists, and lawyers to youth cultures and subcultures with images and information. Today, the Internet hosts a bewildering variety of partnership websites, web forums, mailing lists, and social networking sites (Facebook, Twitter, Weibo, vk.com, LinkedIn, etc.). One wonders: how could observers speak and write about postmodernity and cultural complexity before the Web 2.0?

This essay lays out a systematic perspective on these phenomena, building on the idea that cultural formations are based on networks of communication underlying them (Pachucki & Breiger, 2010; Crossley, 2015; McLean, 2017; Fuhse, 2018). The following section (2) sketches this basic idea: Cultural forms have to be communicated for their emergence, diffusion, and reproduction. Accordingly, social networks as the circuits of communication heavily impact the development of cultural units and differences. In this sense, we can characterize social milieus or subcultures as cohesive network clusters with specific cultural forms.

What kinds of socio-cultural formations emerge if face-to-face communication is complemented by mass-mediated communication? I discuss this question in the two

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following sections. First, networks of personal relationships change through the introduction of communication technology (3). But different media of dissemination (print, radio and television, the Internet) foster specific socio-cultural formations (4). In particular, the Internet promotes international political or life-style oriented subcultures, contributing to the cultural trends of trans-nationalization and fragmentation.

My arguments resemble those of medium theory (Meyrowitz, 1994) and, in certain respects, the recent works on *mediatization* (Lundby, 2009; Couldry & Hepp, 2017). However, the focus here lies on the interplay of network patterns with forms of meaning in the process of communication. Given the confines of this paper, I chiefly develop my own arguments, rather than discussing or drawing parallels to other approaches at length.

2. Conceptual Background

This section lays out the theoretical foundations for this argument by relating the three central concepts—culture, network, and communication—to each other. In general, culture develops and reproduces within the context of the communication in networks of social relationships. I also briefly introduce the notion of media technologies as used in this paper. The adoption of new media leads to a shifting social constellations and cultural forms.

2a. Culture and Networks

According to relational sociology of Harrison White and others, culture and networks are closely interwoven (Pachucki & Breiger, 2010; Crossley, 2015; Fuhse, 2015a; McLean, 2017). *Culture* here refers to the repertoire of symbolic forms available, and in use, in a given social context (Fuhse, 2017). Countries, friendship groups, companies, and web forums all feature distinct forms of meaning. The introduction of new media of communication, like the printing press or the Internet, changes the conditions of dissemination and negotiation of cultural forms.

The second key concept is the social network. First, the concept assumes that we can think of social structures as networks of social relationships (of acquaintanceship and friendship, but also of influence or conflict). Secondly, the network concept connects to particular methods for analyzing relationship patterns (Carrington, Scott, & Wasserman, 2005). Traditionally, these methods are formal and examine the structure of relationships with regard to centrality, clique structures, or role patterns. But increasingly, qualitative methods are also used to study networks (Fuhse & Mützel, 2011; Domínguez & Hollstein, 2014).

Culture and social network are first of all analytical concepts for social phenomena to study the level of meaning (culture) and the pattern of relationships (network). Following relational sociology around Harrison White, culture and networks should be examined in conjunction. Social networks are interwoven with forms of meaning like symbols, narratives, categories, and identities (White, 2008;

Tilly, 2005; Fuhse, 2009; Pachucki & Breiger, 2010). Not only do cultural forms emerge and diffuse in networks. But social networks are themselves patterns of expectations, identities, and narratives.[2] We can distinguish relationship patterns and networks only analytically, but not as separate phenomena. For example, the meaning of relationship frames like love or friendship can differ by network context—leading to very particular network structures that cannot really be compared across contexts (Yeung, 2005).

Of course, symbolic interactionism postulates a systematic connection between culture and communication channels much earlier. In this vein, Tamotsu Shibutani wrote in 1955:

> common perspectives—common cultures—emerge through participation in common communication channels. … Variations in outlook arise through differential contact and association; the maintenance of social distance—through segregation, conflict or simply reading different literature—leads to the formation of distinct cultures. (Shibutani, 1955, p. 565)

Culture is based on communication channels—and a separation of communication channels (between tribes, social strata, milieus, or ethnic groups) fosters distinct cultural repertoires. Shibutani (1955, see p. 567) lists norms and values, group symbols, and prestige hierarchies as features of such distinct discourse universes. Symbolic interactionism focuses on primary groups of family, friends, neighbors, and colleagues (Cooley, 1909/1963, see pp. 23ff; Mead, 1934/1967). These provide individuals with symbolic patterns for interaction to make sense of their experiences. But groups also pressurize their members to adopt the cultural forms and practices of the group, making for a relative homogeneity of group cultures.

These symbolic interactionist formulations lead to a basic understanding of culture in social structures. However, they fall short of the complexity of contemporary socio-cultural formations in two ways:

(1) We can no longer map networks of personal relationships as groups. The group concept suggests relative homogeneity and boundedness—both rarely found anymore. In late modernity, most individuals are embedded in a variety of social contexts, with disconnected friends, family, and acquaintances. Social environments therefore represent networks (with more or less heterogeneity and with different structures) rather than groups (Fuhse, 2018, see chapter 3). In this vein, Gary Alan Fine and Sherryl Kleinman proposed in 1983 to substitute the symbolic interactionist concept of groups with that of networks. Culture is better conceptualized as based on networks rather than groups, traveling through weak ties as well as in the dense networks of cliques.

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2. To clarify the terminology used: Following Weber, Schütz, and Luhmann, *meaning* refers to the level of symbolic forms that becomes visible once we adopt an interpretive stance, asking for the meaning of something (a symbol, a relationship, a rule, etc.). *Culture* more narrowly captures the forms of meaning (or: symbolic forms) shared in a social context. In contrast, a lot of forms of meaning do not unite, are not shared, in a network—in particular the identities, roles, narratives, and relationships that relate the actors involved to each other.

(2) Networks of personal relationships are no longer the only, or even the primary, means for cultural transmission and reproduction. Most importantly, cultural forms diffuse through mass media and through systems of education and state institutions, thus disembedding from networks of personal ties. This essay focuses on mass media, leaving the cultural impact of schools, laws, political institutions, and markets aside. George Herbert Mead writes of groups unified by the reception of the same books (1934/1967, see pp. 200f). Similarly, Shibutani's quote cited above refers to "reading different literature" as the foundation of separate cultures. We have to add the mass media of books, newspapers, journals, radio, television, and the various channels of the Internet to networks of personal communication as an infrastructure for the development, dissemination, and reproduction of culture. But we should expect different mechanisms at work—face-to-face interaction entails aspects and processes very different from mass mediated communication (Turner, 2002).

Mass media and networks of personal relationships together make for the development and diffusion of cultural patterns. Their interplay—along with education systems, legal institutions, markets and so forth—results in a complex social topology of cultural production and reproduction (Hannerz, 1992). The subcultures examined by Fine and Kleinman (1979) are a case in point. On the one hand, they feature densely connected groups embodying the life-style and identity of the subculture. On the other hand, these local group cultures have to connect through weak ties and through media of dissemination—otherwise they would not form part of a larger subculture.

For example, many newsstands sell specialized journals for tattoos. Presumably, these do not only reinforce their readers' love for tattoos; they also offer blueprints for motives that allow the members of the subculture to mark themselves as outside of majority culture (seemingly as individuals). Fine's (1983) own doctoral research studies the emerging subculture of role-playing in the late 1970s. Again, this subculture was held together through weak ties between local groups, and through books and journals. In the meantime, many of these subcultural dissemination media have moved to the Internet (with websites, forums, and mailing lists). Online platforms for role-playing have also widened the appeal of the activity towards a medium of playful self-expression in addition to the former hardcore gaming community (Ikegami, 2011).

2b. ... and Communication

The last section discussed networks and culture as more or less static. They were sketched as stable structures, interwoven with each other and leaving little wiggle room for deviation and development. Also, I have not yet offered a conceptual apparatus for the impact of media technological on network constellations and cultural formations. What difference does it make if communication in a network takes place face-to-face, via telephone, or in the Web 2.0? We can deal with both the dynamics of socio-cultural formations and the role of technological media by connecting culture and networks with a theory of communication (Fuhse, 2015b).

In this perspective, culture and networks form relatively stable patterns of expectations. They emerge, reproduce, and change over the course of communication. At the same time, they structure the process of communication by marking the opportunities for future communicative events. Of course, social and cultural expectations do not completely determine events. All communication, however, has to deal with the definitions of the situation, with cultural meanings, and with social relationships established in the past; these structures will affect possible reactions to communicative events. This conditioning of the chain of communicative events through expectations is captured by the two concepts: culture and social network. The network pertains to the social dimension of meaning in the sense of Niklas Luhmann, relating the identities of the actors participating in communication. Culture, in contrast, covers regularities in the factual dimension of meaning, in abstraction from concrete participants. These general patterns of meaning, however, differ from one network context to the next, since they depend on the diffusion and reproduction in communication.

These steps make for a dual concept of networks: on the one hand, social networks consist of circuits of frequent communication—as we can observe from the outside, for example in e-mail exchanges or in commercial trade. On the other hand, social networks feature relatively durable patterns of expectations in the social dimension of meaning, making for a memory of communication (Schmitt, 2009). The first side covers the operating of communication, whereas the second side consists of relatively durable structures of meaning deriving from the observation of communication. While we have to separate these two sides conceptually, they are closely coupled empirically. Sequences of communicative events by and large follow expectations (in the form of culture and of social networks), just as they make for the emergence, reproduction, and change of these expectations (Fuhse, 2009, see pp. 52f).

Following Talcott Parsons (1968/1977, see pp. 167ff) and Niklas Luhmann (1984/1995, see pp. 103ff), expectations arise to alleviate the general uncertainty (double contingency) of communication. Knowing that the consequences of their actions depend on the reactions of others, alter and ego carefully observe each other for signs of what to expect. This mutual orientation of alter and ego is frequently broken up in technologically mediated communication. For example, a TV presenter talks to her audience, but receives less feedback here than she does from producers and editors. The audience's attention and reactions, and the expectations underlying them, remain invisible for her. Only the next day, she learns about audience ratings and about angry calls from viewers—rudimentary feedback of the complex processing of the communication within the audience. The viewers, in contrast, may talk to each other about the presenter. But they cannot react directly to her, for example, frowning about inappropriate remarks. Media technologies change the negotiation of expectations to the extent that they modify the mode of communication. How they modify it depends on the media technologies at hand. Television blocks the backchannels from the audience to the TV presenter. An online chat, in contrast, allows for immediate reactions, but it blocks out the sounds and visual cues transmitted via television.

Luhmann conceptualizes communication as the unity of three selections (1984/1995, see pp. 141ff): (1) *information* pertains to the content of communication, for example, the news read by the TV presenter. (2) The second selection, termed *Mitteilung* in German and translated as utterance by Luhmann, consists of the communicative event being attributed to an actor speaking, writing, or otherwise sending signals. I find it more appropriate to call this second selection *message* in English because it includes the message from the speaker to the addressees of communication. (3) *Understanding*, finally, fixates the meaning of a communicative event (in particular: its information and message) in subsequent communication (Schneider, 2000, see pp. 129ff). This is not subjective understanding of the people involved—we will never know for sure what they think. Instead, it consists of the follow-up communication making sense of what just happened, and giving an event a particular meaning (in ignorance of what the speaker or writer actually meant). This includes misunderstandings as well as the questioning of previous utterances.

If understanding primarily picks up on the information side of communication (e.g., the news presented), we are dealing with the construction of knowledge and culture. The message or utterance, in contrast, makes for expectations in the social dimension, about the actor from whom the communication emanates, and about the relationship between speaker and addressee(s) (Fuhse, 2015b, see pp. 47ff). In this interpretation, information roughly equals the *content aspect* of communication according to Paul Watzlawick, whereas the message refers to the *relationship aspect* (Watzlawick, Beavin, & Jackson, 1967, see pp. 51f). As I argue in the next section, media technologies render this relationship aspect of communication problematic and often relegate it to a secondary role relative to the content aspect.

2c. Media Technologies

Before discussing the impact of media communication on socio-cultural constellations, I first have to line out the point of reference: What are media technologies? Starting with a wide notion, I use the term here to include all kinds of material means through which communication gets disseminated beyond the immediate context of face-to-face encounters. In Luhmann's systems theory, the concept of medium covers a wide range of phenomena. Here I focus on *dissemination media* for the transmission of communication, rather than *success media* like money or power that propel people to accept otherwise improbable communicative processes (like giving away goods; Luhmann, 2012, see pp. 120ff). In a sense, spoken language itself is a dissemination medium. But here I focus on materially based communication technologies, from writing and printing through the telegraph, telephone, radio and television to the new media of mobile phones and the Internet. Unable to cover all of them, I focus on some prominent examples.

I argue from the phenomena of mass mediated communication upwards towards socio-cultural constellations, rather than situating such constellations or the mass media in a systems theoretical architecture of society. This strategy remains agnostic with regard to otherwise important questions like: Do the mass media constitute a

meaningfully separated sphere of society, and what would be the basis of this meaningful separation (Luhmann, 1996/2000; Görke & Scholl, 2006)? This allows dealing with effects of diverse media from e-mail to television without the communication necessarily forming part of an integrated mass-mediated public sphere.

3. Media in Personal Communication

The effects of media technologies on socio-cultural constellations depend on the social phenomena at hand. This section examines the conditions and the consequences of dissemination media on constellations between senders and receivers. The next section considers changes in socio-cultural constellations within the audience of dissemination media. I have to add a disclaimer for both sections: of course, media technologies do not determine the development of social structures and cultural forms. But in combination with the economic and political conditions and the material infrastructures of production and of dissemination, and with dominant usage patterns, media technologies render the development of particular socio-cultural constellations more likely than others.

As a first step, we have to distinguish between (I) mass media proper, realizing one-to-many communication in one direction, and (II) personal media like letters, telephone, and e-mails that support interpersonal communication. This distinction is only a rough one, with many media technologies (such as e-mail) used in both ways (in newsletters and in personal e-mails; Lüders 2008). Both of these feature different mechanisms:

(I) Television, movies, print media (books, journals, newspapers), and the world wide web make for one-to-many communication. They are archetypical mass media, transmitting information from one sender to wide audiences. It does not make much sense here to ask for the implications, say, of some remarks of the TV presenter for the relationship between her and particular viewers (as would follow from the message side of communication, see section 2b). She might get to be seen as competent and charming on the basis of her presentation. But this does not lead to expectations about how she will behave towards others. Such expectations would have to be negotiated in follow-up communication—and this will predictably run in only one direction (Esposito, 1995, see pp. 226f). Of course, there are exceptions. An author may dedicate her book to a close friend or relative, or a football player may send greetings to his grandmother in a TV interview. But overall, mass-mediated communication destroys the close intertwining of the three selections of information, message, and understanding. As Luhmann notes (with regard to written communication):

> The reader confronts the utterance process in reduced form: as text. The composition of a text often takes place at a remote place and time. Concrete motives for communicating therefore become less interesting (who wants to know why Thomas Aquinas wrote his *Summas*, and what use would it be if we knew?). … In using writing, society thus *waives* the *temporal and interactional guarantee of the unity of the communicative operation*. (Luhmann, 1997/2012, p. 155; italics in original)

Technologically mediated one-to-many communication loses the importance of the message in favor of the information side. Accordingly, expectations form mainly as culture in the factual dimension of meaning, rather than as network in the social dimension. Just this "removal from the exigencies of social interaction" (Sutter, 2010, p. 47) allows for the wide diffusion of information and of cultural patterns, independently of the participation of particular people.

(II) Letters, telephone, e-mails, or chats, in contrast, can be used as personal media (Lüders, 2008). Often they feature in personal relationships, flanking face-to-face communication. We can communicate through them even without co-presence. Internet communication, even more than letters and phones, allows for maintaining personal ties across considerable physical distance (Rainie & Wellman, 2012). But these media come with considerable limitations compared to face-to-face communication:

(A) Media technologies always decrease the channels of perception in communication. For example, we cannot include non-verbal forms of expression like intonation or an ironic smirk in an e-mail (Menchik & Tian, 2008). We sometimes resort to emoticons to convey moods or intended meanings. But these remain limited and somewhat clumsy in comparison to the richness of possible non-verbal communication. Following Gregory Bateson, gestures or other non-verbal signs make for the *framing* of communication, for meta-communication that assigns a particular *frame* (joke, irony, etc.) to the simultaneous verbal communication (Bateson, 1972/2000, see p. 178, pp. 186ff, pp. 215f). Such non-verbal communication frequently concerns the relationship aspect of communication—what kind of communication takes place between alter and ego affects how they stand towards each other. In their analysis of a speed-dating experiment, Daniel McFarland, Dan Jurafsky, and Craig Rawlings (2013) find that men and women send and interpret a number of (different) linguistic and prosodic signals in the development of social relationships, including interruptions, the mimicry of laughter, and the variation of pitch and loudness. Much of this rich information is lost in mediated communication.

Obviously, media technologies differ with regard to what kinds of signals they transmit. The prosodic features highlighted by McFarland, Jurafsky, & Rawlings (2013) can be conveyed via telephone or videos, but not in letters, e-mails, or messaging services. Chats and calls with video include visual signals, like smiling, frowning, or nodding. However, mediated communication sometimes allows for including things that may not work in face-to-face communication. Sentences in letters can be crafted a lot more carefully and artfully than in direct speech. E-mails and messaging services can link to online content, and they can send pictures, videos, or audio recordings. All of this may be used in the formation and maintenance of personal ties. However, we are culturally trained to send and decipher the rich audio-visual information of face-to-face communication, missing from much technologically mediated communication. In

particular older generations often see the step from face-to-face to messaging services as deteriorating personal relationships, unable to appreciate the complex construction and negotiation of identities and ties involved (Turkle, 2011; boyd, 2014).

(B) In addition to the channels of communication, the possibility of *feedback* between different participants in communication is of crucial importance. Letters, e-mails, and messaging services do make for a targeted communication from sender to receiver (unlike printing, radio, television, websites, and blogs). But they do not allow for the intense back-and-forth of face-to-face communication. Informal conversation is organized around the taking of turns, requiring their careful management (Sacks, Schegloff, & Jefferson, 1974; Schegloff, 2007).

Interruptions, for example, can violate the speaker's right of floor, but they can also mark engagement and make for collaborative story-telling (Tannen, 1989; Lerner, 1992). In the speed-dating study, women claimed a sense of *clicking* with males that interrupted them more often, mostly in supportive and engaged ways (McFarland et al., 2013, see pp. 1636f). McFarland and his co-authors interpret this as shared production of meaning between the female speaker and the male interrupter. The same holds for gestures like nodding or frowning. These give the current speaker immediate feedback, leading her or him to minute adjustments like dimmed assessments or further explanation.

Face-to-face communication facilitates the collaborative production of meaning through turn-taking and through short-cut feedback in gestures, mimicry, and minimal overlaps. But it also entails considerable pressure on the participants, to react immediately and to display interest and engagement. Media technologies differ with regard to the feedback channels involved. The turn-taking in letters, e-mails, online chats, Internet forums, and messaging services is spread temporally and omits non-linguistic features. The one-to-many media of newspapers, books, radio, television, websites, and blogs are located on the far pole on this dimension: feedback is minimal here, as in discussion posts or audience ratings (see above). Social networking sites like Facebook often combine various kinds of communication: from public posts to a lot of friends or followers to direct one-on-one communication in messages or in semi-public (on people's walls). This hybrid nature of communication on social networking sites makes it hard to categorize as mass media or personal media, but also tricky to navigate for users.

(C) The participation of only two or more actors in media communication affects the network structure of personal relationships. Letters, text messages, and phone calls typically run between two people. E-Mails or conference calls admit larger groups of people. Alter and ego are no longer the only two perspectives involved, but flanked by third, fourth, and more actors. Face-to-face communication frequently involves multiple actors in discussion rounds, at the family table, or in public space, with important consequences for the relationships at play. The telephone and letters support communication in singular dyadic relationships that can remain totally separate. Structurally, these can be strong ties

(between lovers or friends) as well as weak ties across social and physical distances, bridging structural holes in the network (Granovetter, 1973; Burt, 1992).

Face-to-face communication often takes place in larger groups, be it on the playground, at the workplace, or in the family. E-mails allow adding more recipients (in Cc. and Bcc.), leading to densely connected network clusters. Social networking sites like Facebook host groups with their own announcements and discussions. Like Internet forums or online games, these act as foci of online activity where people meet around common interests and form relationships (Feld, 1981). But networking sites also foster clustering in personal network ties by suggesting the friends of friends as new contacts, and by connecting us to them through discussions on our friends' profile pages. Both of these mechanisms make for a tendency towards transitivity—we tend to form relationships with people we indirectly connect to through direct contacts (Cartwright & Harary, 1956). Some media technologies (phones, letters) nurture weak ties, whereas others (networking sites) promote transitivity, as is also typical for face-to-face communication.

We therefore carefully have to distinguish between different technologies of communication. These lend themselves varyingly to the formation of personal relationships, social networks, and socio-cultural formations. I illustrate this point with two empirical examples: transnational migrant subcultures and social networking practices.

Migrants can stay in contact to friends, parents, and siblings in their old home region through communication technologies. William Thomas and Florian Znaniecki (1920/1996) showed Polish migrants in the US already around 1900 to maintain family ties in letters. But writing letters is tedious and time-consuming, in particular for migrants with low levels of education. They were unable to convey the manifold migration experience and the personal messages as in face-to-face communication. Most postal contacts of the Polish migrants soon withered. In the early 21st century, migrants use the telephone, satellite TV, the Internet, but also newspapers and magazines to connect to their old home countries—personally, politically, economically, and culturally. The telephone and Internet-based phone services (often with video) allow for less laborious and more multi-faceted long-distance communication than the postal correspondence available 100 years ago. The recent trend towards transmigration is therefore supported by advances in communication technologies (and in their availability), as well as by the leap in the number of fast trains, motorways, and cheap flights (Hepp, 2015).

We can similarly trace the impact of media technologies on *social networking* practices. I take social networking to cover the strategic formation and usage of social relationships, for example for business advantages of individuals and of companies. We also find networking techniques in the political realm, in academia, and at the intersections of different social spheres (Tacke, 2000). However, social networking is

not exclusively modern. In a sense, the alliances through marriages among the European nobility in the middle ages already constitute social networking.

Paul McLean's (2007) study on patronage-seeking letters in Florentine Renaissance shows a marked culture of social networking. The letters feature elaborate rhetorics, with the sender portraying himself through forms of address and through banter as equal to the addressee, or as his loyal servant. Fine-grained vocabulary refers to third parties (as guarantors), to long-standing alliance and loyalty, or to the advantages of granting a particular favor. For the purposes of this paper, three points are of particular interest:

- In Renaissance Florence, a distinct culture of specific symbols, frames, and scripts developed for these patronage-seeking letters.
- These symbols and frames are first of all deployed in the dyadic social context between the supplicant and his potential patron. But further actors are often involved, for example, in references to guarantors, or if help for a third party is requested (McLean, 2007, see pp. 150ff).
- The social environment of these networking practices is confined to the Florentine patrician families, and it is structured by status differences, factions, and existing patronage relations. The writers deploy the vocabulary appropriate to their status, factional affiliation, and previous relationship history relative to the potential patrons (McLean, 1998).

This last point contrasts with current Internet platforms for social networking like LinkedIn. Here, communication primarily aims at identifying contacts in similar branches and similar areas of expertise in a complex business universe and labor market. McLean's study focuses on the building of trust through the relative positioning of supplicants and patrons (e.g., by proclaiming loyalty). LinkedIn and other networking platforms, in contrast, allow for making personal contact in a social universe populated by impersonal employers. Again, dyadic interaction is frequently embedded in larger network structures: we arrive at new contacts through referrals; or we identify people we already know in the list of a friend's contacts. Both instances result in triadic network patterns with positive transitivity.

The introduction of media technologies infringes on meta-communication with its relational implications, but with important variation by dissemination medium. As in one-to-many communication, this makes for the relative muting of the message in favor of the information. Depending on the medium at hand, the development of social relationship is more or less limited. Technological media instead facilitate the dissemination of information and cultural forms. Culture increasingly disembeds from networks of personal relationships, and it allows for the communication and for the formation of social relationships across widely differing network contexts. This does not lead to homogeneous national cultures independently of social strata and networks. Rather, we have to identify a multitude of communication structures that carry cultural forms across shorter or larger (social and geographic) distances in world

society. They enable the formation of a pluriverse of national and regional cultures, of social milieus, transnational life-style groups, and diaspora cultures (Hannerz, 1992).

4. Socio-Cultural Formations in Media Audiences

Communication science and media sociology pay much attention to the reception of mass media by the wider population. Some commentators argue for a "mass deception" and for the limitation of critical capacities by radio, movies, and television (Adorno & Horkheimer 1944/1997, see pp. 120ff; Postman, 1985). This pessimist view has by now made way for more nuanced studies, but with similar questions: how do recipients process information and ideas from the mass media? And how does this affect social relationships and cultural patterns? The focus lies on the imprint of mass media on their audience (McQuail, 1997). In the following, I compare the effects of different dissemination media on audience patterns. Writing and printing, the broadcast media (radio and television), and the Internet all nurture distinct socio-cultural formations. These should not be read as superseding each other, but as broad tendencies that cross-cut in social structure.

4a. Writing

The introduction of writing changes social contexts fundamentally (Ong, 1986; Luhmann 1997/2012, see pp. 150ff). Proposed meanings can now be fixated, even if not agreed upon in face-to-face interaction. This greatly increases the possibilities of disagreements, of conflicting opinions. These can now be placed next to each other as *texts* without the need to dissolve discrepant arguments or ideas. At the same time, oral communication is freed from the exigency to reproduce meanings. Patterns of meaning—like Plato's writings—are now available for discussion and reflection without constant oral retelling and dissemination.

Writing thus facilitates an autonomous social memory without incessant repetition in face-to-face interaction. Margaret Archer (1988/1996, see p. xvii) conceptualizes culture as the content of libraries, emphasizing the storage of symbolic patterns in written documents (and their availability in libraries). Conversely, we would have to argue that social contexts without writing (like tribal societies or kindergarten playgroups) do not have culture. Of course, cultural patterns can be disseminated and made available in oral communication, too. But with the introduction of written documents and their wide accessibility, the conditions and character of cultural reproduction change. Cultural patterns dissociate from face-to-face interaction, and they become much more differentiated, multi-faceted, and heterogeneous.

If written communication allows for more complex symbolic universes, networks of face-to-face interaction can draw on this cultural heterogeneity and reproduce it. For example, Michael Mann (1986, see pp. 312ff) observes how early Christianity was able to disseminate and stabilize in the interstitial networks of trade communication, quite apart from the official state-regulated communication. Military and bureaucratic networks of the established upper strata existed side by side with the

networks of artisans and traders with their high degree of literacy. Christianity with its emphasis on individual salvation was more attractive to this commercial bourgeoisie than the traditional pantheon of multiple gods. The separation of these communication networks was facilitated by the written communication between the traders and the early communities of Christians (see the letters of the Apostle Paul). The networks of Brahmins in India around the same time are another example. These, too, were in frequent contact through letters and writings, accomplishing cultural unity across a number of early states and local networks of face-to-face interaction (Mann, 1986, see pp. 351ff).

Both examples feature particular trans-local cultures emerging through written communication. But overall, written communication in early states made for a relative homogeneity of the cultural repertoires of elites (Mann, 1986, see p. 125, pp. 159ff, p. 206, p. 236). Only commercial, bureaucratic, and military elites had any incentive to learn reading, and only they had access to the very few written manuscripts at the time. Consequently, early proto-national cultures developed in the networks of trade and of the political administration, but confined to elites. Some networks—of the Brahmins and of the Catholic church—made not only for dissemination across locales, but also across states—again confined to elites.

4b. Printing

The two tendencies of diffusion almost exclusively among elites and the emergence and stabilization of cultural heterogeneity on different levels continue into modern times. The introduction of paper mills on the Mediterranean from the 12th century onwards and of the printing press in Europe in the 15th century made written documents much easier to disseminate and to access (Eisenstein, 1983). Media communication now reaches more social groups and strata. The cultural differences they harbor become more wide-spread and more consequential for social life.

Religion dominates the early modern production of books and pamphlets in Europe. The bible was by far the most printed book, and further theological considerations made up almost half of all printed material before 1500 (Hirsch, 1967, p. 129). There seemed to be a widespread need for dealing with religious questions. After Martin Luther's split with the Roman Catholic church, the dispute between Catholicism and Protestantism took place mainly in printed books and pamphlets. The printing press thus contributed heavily to the success of the reformation (Gilmont, 1990). Christendom had been riven by Millenarian movements like the Waldensians and the Hussites, and by the disputes between Dominican and Franciscan Scholasticism (Collins, 1998, see pp. 472ff) from the 12th century onwards. But religious dissent was only able to disseminate widely, and to become politically successful, with the printing press.

To be sure, written documents did not have a mass audience before the 19th century. Literacy was still confined to bureaucratic, commercial, and ecclesiastical elites. It was their discourse in economic and political journals that Jürgen Habermas (1963/1989) stylized as the golden era of the public sphere. Political organization

became a central issue of deliberation in printed materials (newspapers, journals, books). But this deliberation only involved the most affluent and the most educated strata of European polities.

The printing press also allowed for *high languages* to develop and to get established. As Benedict Anderson (1991, see pp. 33ff, pp. 37ff) argues, these responded to the necessity of producing printed books and journals for a wide enough population of consumers. Local dialects blended into high languages that formed on the bases of modern nationalisms. Italy and Germany were symbolically united as cultural nations[3] ong before their unification as nation states. And the Netherlands developed its distinct high language—in spite of relatively small size and of the similarities with the adjacent Low-German dialects—on the basis of the high levels of literacy among its commercial bourgeoisie with its hunger for print media. Predictably, high languages first conquered the networks of elites, while the networks of peasants and laborers kept their local idioms. This confinement to elites lessened with the extension of education around 1800. The respective polities witnessed further homogenization of national languages and cultural repertoires.

The diverse trends of linguistic and cultural homogenization, of the widespread diffusion of information, but also of urbanization, of increases in state capacity, and of the spread of education for the first time made for large-scale social integration beyond the local level in the 19th century (Calhoun, 1988, 1991). A national audience and public sphere of print media emerged. The widespread consumption of newspapers, magazines, and books now disseminated standardized stocks of knowledge—across cultural spaces confined by high languages, by way of print media and of systems of education. The fragmented networks of direct social relationships became societies with distinct cultural patterns. These "communities" were imagined (Anderson, 1991, see p. 6, pp. 204ff) because they did not integrate networks of personal interaction. Social relationships remained mostly local and confined to social strata. National communities were united in their access to stocks of knowledge and to cultural repertoires, and in the imagined identity of the nation, as proclaimed in political, literary, and philosophical publications.

The spread of literacy to mass publics came with a certain degree of homogeneity of nations within political communities and linguistically integrated markets for print media. On this basis, however, the subcultural tendencies that we already encountered with the advents of Christianity and of Protestantism flourished. Books and magazines became cheaper and reached a wider potential audience. Apart from public announcements and advertising brochures, the production of print media was and is financed through sales. Publications have to target the interests of potential buyers (or of sponsors). Books and magazines correspond to the cultural orientations of readers. They are produced for subgroups with special interests within the national community, be they political, religious, ideological, or in terms of life-style. Within nationalized cultural spaces, symbolic universes and differences unfold.

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3. The idea of a nation of culture was developed by the German philosopher Johann Gottfried Herder.

The first newspapers and magazines spoke to the interests of the commercial bourgeoisie, informing them about political and economic conditions of markets (Habermas, 1963/1989, see pp. 16ff). The early novels and the philosophical writings of the Enlightenment, Idealism, and Romanticism were produced for an emerging educated bourgeoisie. Later, specialized publications for the working class arose (Thompson, 1966). Migrants started producing their own print media, reproducing their culture in the host society (Park, 1922). Crucially, print media not only represent existing cultural pluriverses, they also foster subcultures and heterogeneity. For example, the race consciousness of Afro-Americans only developed in specialized literature (Park, 1950, see pp. 284ff). Similarly, the differentiation of scientific discourse into various disciplines not only rests on distinct professorships, departments, and study programs, but also on specialized journals.

Generally, we can model subcultures to consist of small-scale, locally or institutionally anchored networks of interaction, on the one hand. These local groups are then linked through the weak ties of their members, and through specialized media communication (Fine & Kleinman 1979, see pp. 10ff). The media offer the cultural forms that are picked up on, negotiated in their meaning, and frequently modified, in the networks of face-to-face interaction. Media companies have a special interest in such subcultures as markets for their products. Here they are likely to find active consumers of media, looking for their own cultural supply, and willing to pay for it. The print media foster subcultural differences, being produced for sales to customers, unlike television and radio. Newspaper stands offer specialized publications for information on stock markets, for women and men, for wedding fashion and tattoos, for archeology, astrology, hard-rock, gardening, meat-lovers, and many more.

4c. The Broadcast Media

Radio and television do not offer the same plurality of subcultural material. Radio stations variously offer classical music, country, pop, rock, hip-hop, and news. But for a long time, they were limited to a small number of regional providers that had to target large segments of their potential audiences. With advances in technology, including the recent switch to Internet radio, radio stations are no longer confined to regions or nations. This made for a steep increase in the number of providers available to any individual listener, propelling them to cultural specialization. As with print media, the conditions of production and transmission and the market of potential consumers influence the content of media communication. Where larger financial and technical efforts are necessary, and where a smaller population can be reached, we expect lower cultural specialization.

Consequently, the programs of TV stations are most geared at large general audiences. They require extensive and expensive production. In comparison to magazines (and websites), we have access to a relatively small number of TV stations. They compete for much larger market shares, unable to cater to specialized subcultural audiences. This orientation is subject to historical change, with equipment and broadcasting options becoming cheaper, moving from antennas to cable to the

Internet. Nowadays, we do not only have TV stations for audiences with specific political leanings (Fox, MSNBC), but also targeting children, people with interests in history, the military, political news, sports, fashion and so forth. These developments depend not only on technology and on economic opportunities, but also on political regulation. For example, many European states maintained large public broadcasting stations, infringing on the market opportunities for commercial television. Also, they allowed for commercial radio and television only after a certain time and sometimes with severe restrictions. All of this has an impact on the cultural fragmentation of the broadcasting media.

Another mechanism against cultural heterogeneity lies in the typical way in which viewers choose programs. Most print media are actively selected by buying them. Radio stations are usually switched on for a long time. TV broadcasts are often not chosen in advance, but "zapped" into. According to Joshua Meyrowitz, "People tend to choose a *block of time* to watch television rather than choose specific programs" (Meyrowitz, 1985, p. 82; italics in original). TV productions have to appeal to largest possible share of channel surfers to arrive at high viewer ratings and advertising revenues. Of course, some broadcasts are actively chosen. These again tend to be productions targeting a wide audience, like TV series or sports events. Overall, television is much less specialized than the print media.

Meyrowitz argues that this broad orientation makes for more cultural homogeneity and for a better knowledge about cultural forms from different social groups:

> In general, print media tend segregate what people of different ages, sexes, and statuses know relative to each other and about each other, while electronic media, particularly television, tend to integrate the experience and knowledge of different people. (Meyrowitz, 1994, p. 62; see also, Meyerowitz, 1985, pp. 127ff)

First, television achieves a degree of synchronization of information and entertainment. We can talk with our friends about the Super Bowl (including the commercials!) or about the latest *Saturday Night Live* sketches. Novels or newspaper articles are usually not read by potential conversation partners, making for an asymmetry of information. Secondly, TV programs tell us something about different social milieus and life-worlds. We learn about black gang subculture, the police, and inner-city schools from *The Wire*, about US politics from *The West Wing* and *House of Cards*, and about the struggles of well-educated and disoriented young people in New York City from *Girls*. Migrant subcultures and local milieus are sketched (sometimes caricatured) for outsiders. Older people know about the social life of youth, and children get to see adult life-worlds on TV. Women and men watch many of the same programs together (in spite of frequent struggles over the remote control). Print media, in contrast, frequently target gendered audiences and disseminate gender-specific knowledge and orientations (Meyrowitz, 1985, pp. 187ff).

However, the broadcast media do not enforce cultural conformity, as Adorno and Horkheimer diagnosed (1944/1997, see pp. 120ff). Print media continue to exist and

thrive alongside radio and TV, catering special interests even more than before. Also, audience analysis shows that the content of mass media are not accepted and adopted uncritically. Rather, the mass media offer information, and their discussion and evaluation takes place in the networks of everyday face-to-face interaction (Lazarsfeld, Berelson, & Gaudet, 1944/1968; Schenk, 1995). Television allows for social groups to learn about each other without losing their specific cultural orientations. One of the tasks of television seems to be the representation of this diversity in a complex social world.

4d. Internet and Web 2.0

The socio-cultural formations supported by the Internet, in particular by the Web 2.0, differ substantially from those related to radio and television. Browsing as the dominant selection of media on the Internet seems to resemble the zapping (i.e, channel surfing) of television, jumping from website to website. But the Internet offers much more variety. Jumps to the next website do not proceed from one channel to the next, with them located on the same level and unrelated to each other. Instead, browsing relies on the reference structures encoded in websites (and sometimes in underlying data-bases built on past user behavior), tracing the pattern of interrelations between them, even if following one's own interests. Users usually stay within the same symbolic sub-universe on the Internet, instead of jumping to a completely different channel. Consequently, content is selected much more actively and in a more targeted way than on television, similar to the purchasing of print media. To be sure, most Internet content is available for free. This makes it easier to probe into new areas anonymously and without financial costs. These playful explorations sometimes uncover or generate new interests. Browsing the Internet, people do not only learn what is out there. They also find out what is of interest to them.

The Internet thus contributes to the pre-existing trend towards cultural fragmentation of mass media audiences (McQuail, 1997, see pp. 132f, pp. 143ff). The relatively low effort and technological knowledge necessary for the production of websites further add to this. Often, members of life-style subcultures fill Internet presences, web forums, and wikis themselves. In contrast, television, radio, and print media are mostly produced by professionally trained full-time personnel. Internet content more often springs from subcultures and life-style groups, in a self-organization of audience segments.

Web forums, wikis, and social networking sites—the Web 2.0—allow for their users to create content interactively. The boundary between producers and users blurs. These Web 2.0 platforms not only offer symbolic material for subcultures, as in print media and conventional websites. They also offer space for the negotiation of the meanings involved. The dissemination, reception, negotiation, and feedback of mass mediated communication can all take place in the Internet. We witness the construction of a parallel social space, characterized by the participation of users and by cultural specialization.

The Internet thus stabilizes subcultures that pre-exist in networks of face-to-face interaction (often fed by print media). But it also allows for the formation of new subcultures or virtual communities (Williams & Copes, 2005; Chiu, Hsu, & Wang, 2006). A football club's fans can share their enthusiasm and their anger in web forums across the globe. The disembedding of web-based interaction from local space facilitate the communication of migrants with their old home context, or about political issues. Web-based subcultures can form transnationally or even globally (Wellman, 2001). In contrast to Anderson's imagined communities, fueled by the print media, subcultures on the Internet are not only virtual or imagined. They have their basis in the online-interaction about cultural forms. These have to survive and proliferate both in face-to-face interaction and in the Web 2.0.

Unlike conventional websites, print and broadcast media, the Web 2.0 features direct interaction between the senders and receivers of media communication. Communication does not run in one direction only. The selections of information and message are not separated (see section 3). Users become visible as participants in communication. Hence, communicative events are examined with regard to their implications for the relation between alter and ego. The discussions in an online forum, the contributions to a mailing list, the comments to a blog (or blog entries referring to each other), and the entries on social networking sites make for the construction of identities, as negotiated in relation to each other (White, 2008, see pp. 2f). These identities do not necessarily mirror the full offline person. Rather, they feature as *users* with nicknames, with profile pictures or avatars, and with the observable participation at the online platform. I venture that two types of online identities can be distinguished, each corresponding to a particular constellation of online and offline world:

1. Some *online worlds*—web forums, online gaming—are largely dissociated from offline interaction. Identities here interact anonymously and in disconnection from offline persons and accountability. The identities result purely from the online interaction, making for creative and adventurous opportunities of self-invention (Ikegami, 2011). People can create multiple avatars, with different genders; they can swear at others or go behind their backs; or they can reinvent themselves as mysterious, flirtatious, sex-maniacs, devious, and so forth. without having to bother with offline consequences. These online worlds feature their distinct social structures, with relationships constructed and status assigned online.
2. Social networking sites, with Facebook as their current prime example, feature online identities with direct connections to offline persons. Here, people maintain ties they mostly form offline, fusing Internet communication and face-to-face interaction (Baym, Zhang, & Lin, 2004; Ellison, Steinfeld, & Lampe, 2007; Lewis, Kaufman, Gonzalez, Wimmer, & Christakis, 2008). They become one of the chief locales for self-expression and the negotiation of identities and relationships, especially among the younger generation

(Livingstone, 2008; Papacharissi, 2011; Davis, 2011; boyd, 2014). While the purely online identity construction of type (1) is dissociated from offline worlds, social networking sites render full persons with their multiple entanglements visible. My work colleagues get to see my party pictures, and my sports friends have to deal with my political views, as expressed in posts, *shares*, *likes* and online discussions. In a way, social networking sites make for a fusion of our multiple social identities into a multi-faceted representation, in contrast to the dissociation in online gaming and web forums.

However, this fusion or representation of multiple identities and social worlds in networking sites does not make for cultural defragmentation. Rather, it contributes to the perception of an all-encompassing representation of the social world through the feed of posts and shares of friends and liked outlets, be they news sites, fan groups, organizations, or Internet start-ups geared at generating clicks and likes (and advertising revenues). Traditional news organizations like *CNN* or *The Guardian* have to deal with this new media environment and find their places in it. Consequently, every user is confronted with her own personalized newsfeed, often with considerable homogeneity of information and opinion. Research disagrees over whether this reflects more of a filter bubble through the algorithms of online platforms, or an echo chamber where users only hear their own voices echoed from their friends' walls (Pariser, 2011; Bakshy, Messing, & Adamic, 2015).

In principle, social networking sites could make for a greater visibility of different viewpoints and for scrutinizing them from different sides. The actual user patterns, however, display too large an ideological homogeneity of social networks and subcultural orientations. This makes for ignorance and conflict between them, rather than for critical and constructive discussion. Further cultural fragmentation, rather than reintegration, ensues to the extent that quality journalism from the print media and the access to information from different social worlds on television is replaced by segregated online communication. However, because of the firm embedding of people with their multiple identities into one media environment (the social networking site), we do not have a cultural disintegration into a multitude of social worlds around interests and activities, as in the print media. Rather, social networking sites solidify the conflict between encompassing ideological universes (Bakshy et al., 2015). People are either liberal or conservative, and this structures their embeddedness into communication networks and their exposure to information.

5. Conclusion

Overall, then, the various media of dissemination come with quite different socio-cultural constellations and support them (see section 4):

- Writing and print media make for the emergence of elite cultures, and for the

standardization of linguistic forms within polities and markets for printed material. High languages develop, and mass mediated public spheres now discuss ideas and political developments. Both of them are borne primarily by the commercial and the educated bourgeoisie. But the examples of early Christianity and of the Reformation show: not always are dominant cultural forms disseminated and reproduced. Rather, writing and printing allow for cultural differences to develop and stabilize. The vast expansion of education around 1800 leads to a great variety of cultural material in print, serving different interests and fostering subcultures with distinct life-styles.

- The broadcast media of radio and television, in contrast, achieve a certain standardization of cultural forms. They also synchronize social events and experience. And they provide knowledge about different social groups to the wider public. As in print markets, the audiences of broadcast media remain by and large confined to the national level. Only very select movies, TV series, and sports events are produced for transnational consumption.
- Much of this changes with the advent of the Internet. On the one hand, the World Wide Web, mailing lists, web forums and wikis serve subcultural audiences, as the print media do. But these are now often transnational or even global. On the other hand, the Web 2.0 blurs the boundary between production and consumption, between senders and receivers of mediated communication. In web forums and in online gaming, entirely new social worlds emerge with their own construction of identities and relationships, dissociated from the offline world. Social networking sites, in contrast, represent people with their multiple entanglements in social contexts. Online and offline are strongly related here, making Facebook and other platforms prime sites for self-expression and for the negotiation of social relationships. However, usage patterns and algorithms together foster the separation of ideologically delineated symbolic universes. Our feeds of posts, shares, likes, and discussions tend to be filled with highly selective information and like-minded comments.

The impact of different media technologies on personal communication depends on a number of questions: What signals of communication do the technologies transport? Do they allow for an interactive turn-taking? And how is the mediated communication embedded into network structures? Telephone, letters, and e-mail process mostly in dyads. They allow for the maintenance of weak ties, often across large geographic distances and between different socio-cultural groups. Other media (including social networking sites) promote transitivity and the embeddedness of ties into larger clique structures. They promote the formation of subcultures with high internal connectivity and homogeneity in symbols and ideas.

All of this builds on a theoretical perspective that connects Luhmann's concept of communication with culture and networks (see section 2). Culture and networks here act as "memories" of communication, with the former pertaining to patterns of

meaning in the factual dimension, and the latter in the social dimension. Both consist of expectations that fixate opportunities for follow-up communication. Expectations in the social dimension—social relationships and networks—form as communication is attributed to actors (as its message). Much media communication in newspapers, books, radio, television, and in the World Wide Web puts the prime emphasis on information, with the social side relatively unimportant. This facilitates the dissemination of cultural forms, but hinders the concurrent formation of social relationships. The personal media of letters, telephone, e-mails, and the Web 2.0, in contrast, directly affect social relationships and network constellations.

Overall, this paper was only able to sketch the overall perspective. I have nonetheless tried to steer clear of both vague formulations and broad sweeping statements. For example, I trace various mechanisms at play in Internet communication: (1) the tendency to nurture transnational subcultures of life-styles and activities; (2) the dissociation of online identities and ties from the offline world in web forums and online gaming; and (3) the representation of a multitude of social entanglements (on- and offline) in social networking sites. All of this needs to be spelled out in detail. But it requires a perspective that is both sufficiently general and interested in empirical findings. The perspective offered here focuses on network constellations that can be studied with formal-quantitative methods and with qualitative interpretation.

Through its combination with Luhmann's theory of communication and with a concern for meaning, this network concept avoids the pitfalls of purely structural or metaphorical network approaches identified by Nick Couldry and Andreas Hepp (2017, see pp. 60f). Social networks are themselves meaningful constructs that develop and get negotiated over the course of communication. If communication runs through diverse media technologies, this has important consequences for social constellations and cultural formations. Sometimes these consequences come directly from qualities of the media at hand. More often, they result from dominant usage patterns, from economic constraints and opportunities, and from political regimes that monopolize or promote certain media technologies while hindering others. Media technologies foster distinct socio-cultural constellations not by themselves, but in the context of historically changing and context-dependent conditions of their production and usage.

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