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Durkheim and Weber on the social implications of new information and communication technologies

Ralph Schroeder
Oxford Internet Institute, University of Oxford, UK

Rich Ling
IT University of Copenhagen, Denmark

Abstract
Max Weber and Emile Durkheim made an important contribution to our understanding of new information and communication technologies (ICTs). While they did not discuss ICTs in their work, they provided conceptual tools at the macro-, meso- and micro-social levels that help us understand the use of ICTs. We examine how Weber's iron cage and Durkheim's mechanical solidarity and ritual present a coherent account of how ICTs sustain cohesion and also enmesh us in mediated interactions in complex societies. Thus, they directly address the question of the implications of increasingly mediated relationships, which is overlooked by theories that focus only on the relation between individuals and technology. Unlike other theorists who *do* focus on the societal level, Weber and Durkheim are more concerned with their routine workings, providing a more grounded, everyday, and in this sense realistic understanding of ICTs and social change.

Keywords
Communication technology, Durkheim, information technology, social theory, Weber

Introduction

The sociology of science and technology has often drawn on Marx (Bimber, 1994), but more recently has entirely ignored him insofar as he no longer fits the social

Corresponding author:
Ralph Schroeder, Oxford Internet Institute, 1 St. Giles, Oxford OX1 3JS, UK.
Email: ralph.schroeder@oii.ox.ac.uk

constructivism that is currently in vogue. Durkheim and Weber, in contrast, have been relatively neglected. Here we do not want to "resurrect" these two classics for their own sake, but rather make the argument that these two thinkers, with modification and updating, provide powerful insights into the role of technology in society, and in particular the often overlooked routine and everyday workings of information and communication technologies (ICTs). The same point applies to media or communication studies: although Marx was for some time a key reference for those who study media and communications – we can think here of topics like the news as ideology or of capitalist cultural imperialism (see for example Tomlinson, 1999) – nowadays Marx's idea are on the wane.

Weber and Durkheim, in contrast, have not figured in the study of the social implications of new media or ICTs. For example, in the study of communication within American sociology, these two thinkers have been entirely overlooked (Katz, 2009). As a result, apart from the main exceptions that will be discussed (Habermas, Luhmann, Castells), the field of media and communication studies has been lacking in theories at the macro-level. Or, where there *are* theories, such as that provided by Giddens, the role of ICTs often revolves around the state and "surveillance" (Giddens, 1990) rather than focusing on everyday life and communication, as we will develop here.

A key shortcoming of theories of ICTs is that within media and communication studies, ICTs are treated in isolation rather than in terms of their role in society as a whole. Among sociological theorists, on the other hand, the main focus in understanding the role of ICTs is on their emancipatory potentials (Castells), or the barriers thereto (Habermas). This focus overlooks their most common role, which is routine and ritualized. Apart from this, ICTs are often seen by popular writers as having the effect of isolating the individual and surrounding them by a cocoon of gadgets. Thus, they suggest that the increasing use of technologies separates us from each other, via communication devices or experiences of mediated entertainment, and that this constitutes a loss of the kind of ritual solidarity that was experienced in the immediacy of face-to-face encounters. Here we can think of writers such as Turkle (2011) and Lanier (2011), who discuss the alienating and isolating effects of new ICTs. Yet these writings evince a non-sociological understanding of ICTs that often only sees the relation between individuals and technology, rather than the broader context of how new technologies create dense webs of relationships between individuals and solidaristic or even constraining social relations.

Weber and Durkheim allow us think sociologically about ICTs rather than in terms of individuals and technology. With Durkheim, we would argue against these alienating effects: quite the reverse; these are technologies for enhancing cohesion through mediation – perhaps within pockets, but pockets that add up to an organic whole. Similarly it might be thought that ever denser networks of ICTs constrain us in the manner of a consumer culture dominated by appliances or machines. Yet for Weberian thinkers like Gellner (1987), Weber's "cage" of consumer culture also re-enchants, and can thus be said to structure our everyday lives in the manner of pervasive and yet diverse routines. While "cages" of political or economic apparatuses can be coercive forces in social life, these mediated cultural routines, shared throughout a common but diversified culture – an organic one – also contribute to cohesion in a manner that complements Durkheim's ideas. Thus, the combined ideas of these two thinkers help

us to understand how more mediated but denser (to each other, and to mediated content) social lives make, paradoxically, for a more cohesive and routinized type of society; tying macro to micro.

In a short paper, we can only sketch this argument and give examples. However, we have given fully-fledged separate accounts of the two thinkers elsewhere (Ling, 2008, 2012; Schroeder, 2007), and here summarize and compare their positions. The main point of this essay is to develop a conceptual framework based on their work. This can be done by counterpoising their analyses, highlighting where they differ, and the respective strengths and shortcomings of the framework derived from synthesizing their ideas. In the conclusion, we shall argue that although the two thinkers differ, they nevertheless also complement each other and, together, provide a theoretically powerful analysis of the social implications of science and technology, and ICTs in particular. We also argue that they fill an important gap in theories of the social implications of new ICTs because other theories fail to connect with the question of the routine role of ICTs in social change.

To make this argument, we shall need to extend Durkheim and Weber's ideas, in some cases extrapolating from their thought in order to apply them to ICTs. This is because the ICTs we are concerned with were still mainly on the distant horizon at the time they were writing. Both thinkers were commenting on a dramatically changing landscape occasioned by industrialization and the transitions from traditional to modern capitalist society. Although Weber focused on macro-questions, his account of the rationalization of modern societies has implications for understanding the pervasiveness of instrumental rationality in everyday life on the micro-level. And although, as we shall see, he was unduly pessimistic about rationalization, the strength of the concept of rationalization is that it recognizes the positive and negative implications of this process. Where Weber is weak is in spelling out concrete ways in which this concept applies to everyday life, but we will see that ideas about rationalization can be extrapolated and extended to understand the role of ICTs in everyday settings.

Durkheimian ideas, often filtered through the work of Goffman, can be focused precisely on the meso- and especially the micro-levels of everyday life where interaction rituals take place, and how these rituals reshape and reinforce our everyday routines (Ling, 2012). The implications of these rituals fit well with Durkheim's macro-picture of an organic society strengthened by denser and more complex ties that yield a more cohesive society. This picture, in turn, both complements and extends Weber's conception of routinely mediated relations.

The strength of both Durkheim and Weber is that they tackled the social implications of science and technologies at all levels – macro to micro – and at least tacitly and conjointly connected them. Very few theorists since have followed them in this endeavor – one that might be thought supremely important for sociology. The few that have addressed this bigger picture have done so in a speculative way and often without bringing evidence to bear, which also makes them difficult to operationalize in sociological analysis. One exception is Luhmann, whose ideas about science can be seen as Durkheimian in their functionalism. Luhmann, however, never addressed technology – with the exception of mass media (2000) – so that he is a partial exception to what has been said so far about the lack of a big picture in relation to ICTs. Again, we shall come back to him.

This leads to a second strength, which is that Durkheim and Weber present a more general and generalizable view. This is in contrast with the current social constructivist theory of science and technology, which argues that science and technology are inescapably socially (or culturally) shaped, and hence that every different social context entails different implications of science and technology. Put differently, Durkheim's and Weber's ideas provide a structural account of ICTs and social change. Constructivist theory, although it provides case studies and analyses of various individual aspects of ICTs and social change, is limited by the fact that these are invariably bound to particular contexts or issues, which makes them difficult to evaluate across different cases or at a more general level.

Weber

Rationalization and a rubber cage

Weber's ideas about science and technology center on the notion of rationalization. He argued that science "disenchants" the world, replacing value-oriented action with instrumental rationality (Brubaker, 1984); indeed, the spread of instrumental rationality can be seen as the essence of rationalization. The advance of instrumental rationality also applies to technology, which creates impersonal structures, foremost among them bureaucracies, but also including large technological infrastructures or systems (Hughes, 1987). Thus, he talks of machines as "frozen spirit" (Weber, 1948: 320). For Weber, machines, whether bureaucratic or technological, constituted an "iron cage" ("stahlhartes Gehäuse" in German) since he thought that increasing rationalization was inescapable. As we shall see, these ideas can be used to describe how ICTs have become rationalized into systems, not just for industrial production or in infrastructural support for ICTs, but also in the structural embedding of these systems into everyday routines that rely on these systems for maintaining our relationships and access to information. Routinization can thus be defined as the increasing taken-for-grantedness of this systematic management of our relationship maintenance and information needs. We see this, for example, in the way that the mobile phone has become structurally embedded in the way that we arrange our daily lives. Hence, Weber provides a way for understanding how, for example, technologies like the internet and mobile communication have become widespread and indeed embedded in everyday life in a very short period of time.

Before describing these processes in more detail, it is necessary to amend Weber's ideas briefly. There is much to be said for the notion that technologies translate into social "caging," with two caveats: one is that, in addition to a "cage," new technologies also constitute an "exoskeleton" (Schroeder, 2007) which provides us with greater mastery over the environment (as Weber also argued). The second caveat concerns Weber's rather gloomy prognosis about the effects of technology, since the "iron cage" leads to ever-greater "meaninglessness" and impersonal structures of domination. He says that scientific progress means that "culture's every step forward seems condemned to lead to an ever more devastating senselessness" (1948: 357). Yet technology, as an exoskeleton, can also be used to provide richer and more variegated experiences, for example in relation to consumption and leisure. Gellner (1987: 152–165) therefore talks of a "rubber

cage" rather than an "iron cage" because, apart from its role in instrumentally-rational production, technology also provides, on the consumption side, an environment of user-friendly devices which make our life-world more comfortable and allow plenty of scope for individuality and expressiveness in our everyday lives as well as our interpersonal relations. Put into standard sociological language, technologies constrain but they also enable. In the case of ICTs, the constraint is the extent to which they pervade our everyday lives and come to be a routine part of it.

Before we turn to everyday life, however, how do these "cages" arise in the first place? Weber associates the origins of science with the Protestant ethic: he says the "specific contribution [of ascetic Protestantism was] to have placed science in the service of technology and economics" (1923: 368). Weber saw bureaucratization in organizational terms, but on the side of technology, the expansion of the scale and scope of bureaucracies can also be interpreted as relying on large technological systems. Yates (1989), for example, provides an account of the spread of office machinery for communicating and organizing information in the American corporation, which she labels "systematic management." The infrastructures created by these technological systems are means of enhancing organizational capacity, but once they have grown to encompass the environment they are aimed at, they congeal and become ossified. In other words, while they may still be further refined in line with the fluidity of technology that is put forward by social constructivists, nevertheless, to a large extent, these "cages" become increasingly unchangeable: "The revolutionary force of 'reason' works from *without*, by altering the situations of life and hence its problems, finally in this way changing men's attitudes towards them" (Weber, 1968: 975). These ideas can readily be applied to the technological implications of ICTs and how they mediate modern culture. Indeed, the systematic – instrumental rational – management of our everyday relationships and information needs is central to how rationalization at the macro-level translates into everyday life.

The main reason for Weber's pessimism is that, instead of focusing on consumer culture, Weber's main concern was with impersonal political and economic domination. Thus, he sees bureaucratization, including by means of ICTs, as leading to rule by specialists and experts. Weber's ideas in this respect have been extended by Dandeker (1990), who argues that bureaucratization and its increasing scale and scope, as well as the central role played by knowledge in institutions, enables institutions to exercise more surveillance over populations. ICTs are essential in this development, and although it may be possible to separate these (mainly economic and political) uses of ICTs from their uses in consumption, the line is somewhat blurred if we consider the enhanced capacity of ICTs to target and operate to expand the needs for consumption. In any event, Weber says the increasing rule of experts contributes to a more disenchanted world, calling these experts "specialists without spirit" (1930: 182).

It may, however, be misleading to see these large technological systems only as infrastructures: they are systems which support the bureaucracies of political "machines" (as Weber referred to parties) and of production, but also – going beyond Weber – machines (or systems) underpinning consumer economies with their logistical and advertising needs. Thus, the consumer economy has a supporting system that has been interpreted along functionalist lines (Beniger, 1986) as being a precondition for the logistics,

marketing and advertising that are required for scaling up consumption to encompass whole societies. Apart from these infrastructures, there is also another (more familiar) part of Weber's thought that explains this expansion of a consumer economy, which is the dynamism that he saw as underlying capitalist economies. What he described as the rational restlessness of capitalism, arising from market competition and open-ended profit-seeking in the first instance, finds its echo in the restless seeking of novel consumption experiences, as Campbell has argued (Campbell, 1987). To Weber's ideas, it can be added then that innovation and economic growth has led in the 20th century to a mass consumer culture.

Indeed, much of this consumer culture is driven by the proliferation of new technologies for leisure, including ICTs that increasingly facilitate consumption (recently extended with Amazon, Craig's List, eBay, and the like), transport technologies for travel, and technologies for enhancing the comfort of the home. Hence, it is possible to speak of a "culture–technology" spiral (Braun, 1994), whereby novel artifacts enable more experiences of cultural consumption, which in turn generate more needs for novel artifacts, and so on in a never-ending spiral. Clearly, consumer culture has become a central part of contemporary culture generally, with ICTs, in turn, playing a major part in enabling this part of culture – and perhaps constraining it in the sense of dominating it (Schroeder, 2007).

These ideas are in keeping with Weber's notion of rationalization, even if they also extend them: with the proliferation of devices and forms of mediated cultural consumption, there is an increasingly uniform (rationalized) proliferation and diversification of experiences with new technologies. Weber is thus firmly on the side of those who argue that globalization leads to greater homogeneity or convergence, yet this convergence need not rule out that this homogeneity consists of a consumer culture and of more heterogeneity in the devices that people use or in the manner in which they use them – for example – to gain access to knowledge or information or to maintain their interpersonal ties. In this respect, we can already see echoes of Durkheim's organic solidarity and the idea of havens of neo-mechanical solidarity within organic society.

ICTs and the spirit of consumerism

Weber did not write about information and communication technologies. Nevertheless, applying or extending his ideas to ICTs is relatively straightforward: if we focus on personal and leisure uses of ICTs, as opposed to uses of media for political communication, Weber's notion of increasing rationalization can be applied to mediated interpersonal communication. The growth of the impersonal side of these technological cages can be said to lead the rise of large infrastructures, which support various tools for communication. These in turn lead, on the consumer side, to the proliferation of devices and systems including mobile phones, internet, and social networking sites. As their uses expand, these tools have the effect of a simultaneous tethering – to devices, to others, and to the amount of time spent in their uses – and un-tethering – from face-to-face interaction and from places (Schroeder, 2007).

Weber's cage/exoskeleton nature of technology is thus illustrated by the proliferation of devices for interpersonal communication and information access: they at once

provide a means of more dense, more extensive (in time and space), and more multiple channels or means for interacting with others. At the same time, they inexorably lead to more technologically mediated experiences of sociability and accessing entertainment and information. This is a theme that will also be seen in Durkheim and our use of his work in the idea of mediated ritual interaction. Whether this is perceived as more "iron" than "rubber" depends on the extent to which we focus on how technology shapes culture, or if the cultural habits are regarded as ways of life in affluent societies increasingly dominated by leisurely mediated sociability and information access. Or again, the difference between these perceptions could depend on whether the focus is on structure (the systematic management of relationships and information) or on content (the expressiveness of interpersonal messages or the meanings of one's information diet). In either case, however, this proliferation of ICTs becomes routine: our everyday lives are shaped by this environment of ICTs in a pervasive way, even if this pervasiveness also moves into the background such that it is hardly noticed (foreshadowing the Durkheimian social facts that we shall come to shortly).

Convergence

One debate on which Weber's concept of rationalization sheds light – at least by implication, Weber himself does not spell this out concretely – is in relation to the homogeneity or heterogeneity of the effects of technology. This debate closely relates to a number of others, including the convergence of technologies and to what extent social forces shape the uses of technologies. Reframing this as a question at the most macro-level, we can ask whether ICTs have effects that are similar across the globe, or alternatively quite different effects? In relation to this congerie of questions, Weber's ideas point to homogeneity and globalizing effects. This is because rationalization is the master narrative in Weber's sociology, and the inexorable advance of this process is in the direction of greater instrumental rationality or means–ends efficiency: "Precisely the ultimate and most sublime values have retreated from public life either into the transcendental realm of mystic life or into the brotherliness of direct" – should we add: unmediated or face-to-face? – "and personal human relations" (Weber, 1948: 155). And while this effect may have been initially limited to western capitalist societies, the "cage" of consumerism has, since Weber's time and in ways that he could not have foreseen, spread across the globe (Stearns, 2006).

Although Weber did not directly discuss ICTs, it can be seen that the continuing way in which consumption experiences and access to information are mediated, via new technologies and devices, shapes culture along Weberian lines even if, again, this cage of mediation is more "rubber" than "iron." The restless seeking of new experiences and proliferation of information and mediations of relationships, however, while it is dynamic, could equally be regarded as becoming an ever more routine part of everyday life, and this again points to how homogeneity and diversification are not necessarily mutually exclusive. This follows from what was said earlier: while the structure is homogeneous (more systematic management), the content can be more diverse – even while, again, what is more homogeneous is that there is more of it.

Durkheim

Neo-mechanical solidarity and ICTs

In many ways, Weber's ideas help us understand the increasing adoption and use of ICTs and how they have become embedded in our daily routines. The work of Durkheim helps us to see their efficacy in these embedded contexts. This is because Durkheim focused on cohesion, a key feature of his analyses both of mass-society as well as of the smaller "clumps" of groups who maintain tighter and more traditional bonds within it. In a society that is moving in the direction of ever-greater rationalization, it is necessary to ask how a local sense of uniqueness and local identity can be maintained. But where Weber spoke of increasing rationality, Durkheim examined what he called – somewhat counter-intuitively – the transition from mechanical to organic solidarity. While generations of students studying the introduction to sociology think he got the names backwards, Durkheim was clear in his thinking on this point in describing industrialization.

Mechanical solidarity is that form of social cohesion that arises due to similarity of perspective and situation. It is based on the homogeneity of people who feel connected by a similar social situation. According to Durkheim, it represents a situation where "Everyone knows that there is a social cohesion whose cause lies in a certain conformity of all particular consciences to a common type which is none other than the psychic type of society" (1997: 105). The solidarity in this society is "born of resemblances" and it is in this way that the individual is linked to society (Durkheim, 1997: 368). Cohesion within a group comes from a shared sense of similarity. Individuals gain cohesion through similar status, training, religious perspective, and the like. In many ways, each individual is similar in orientation to all others. There is little specialization and a certain amount of interchangeability. In the case of mechanical solidarity, there is a broadly felt common notion of similar beliefs and sentiments by all members in a group. To be sure, this is an oversimplification; there is a complexity to traditional societies that is not reflected in this understanding. However, the sense of association based on similarity of thought is the central point that we will pursue vis-à-vis ICTs.

By contrast to mechanical solidarity in traditional society, in industrial society we experience organic solidarity where individuals fulfill different functions in the complex interactions of the larger society. With organic solidarity, there is another principle operating. Rather than being based on similarity, the principle is that different actors have different positions in society and thus different perspectives. There is a need to "mark cleanly the barriers which separate them" (Durkheim, 1997: 119). In the case of organic solidarity, society is characterized by the notion of interdependence of the component parts.

The difference between the two can also be seen in the type of legal system that the two systems spawned. In mechanical solidarity, the legal system is based on the indignation of people who feel that they have been wronged. Durkheim writes regarding crime in mechanical solidarity that "crime shocks sentiments which, for a given social system, are found in all healthy consciences (1997: 73). In this system, punishment "is an act of vengeance" (1997: 89). It is easy to see from today's perspective that, for example, the notion of "healthy" is a difficult concept to determine and that this notion jars. The monitoring and disciplining of individuals in mechanical solidarity is based

on a web of interlocking observations and the development of a kind of social narrative about the individual. There is the sense of not being able to hide from the all-observing eyes of fellow members of the village or the tribe. There is also a high sense of collective consciousness in mechanical solidarity. An organic system, in contrast, is characterized by contractual interactions, and with them, a dissipated sense of collective consciousness. This local monitoring and communal awareness, as opposed to a more diffuse and indirect web of relations, is obviously relevant to technology and social solidarity.

This brings us to the notion of ICTs being used in the project of maintaining social cohesion; and it is here that we can recalibrate Durkheim's notion of mechanical solidarity. In general, Durkheim was interested in the transition from mechanical to organic solidarity, that is, the transition from less to more industrialized society. In characterizing modern industrial society as "organic," he argued that people took on more complex and differentiated roles and were becoming more interdependent on one another. This replaced the mechanical solidarity of traditional societies in which people's homogeneity and ties in small-scale groups provided them with cohesion.

Our suggestion is that it is equally possible to consider the potentials of ICTs as a means of bridging the divide between the two, allowing mechanically solid experiences even in societies with complex organic organization. What we are suggesting is that ICTs allow us to cultivate a type of neo-mechanical solidarity: namely, while there is a general drift in the direction of organic society, we have the potential with ICTs to cultivate sociation of the intimate sphere and to provide a space for this neo-mechanical solidarity, which could be characterized as co-presence fostered by mediated interaction and shared digital objects. While there is often a discussion of ICTs as an agent of separation, there are also many examples of how we can use them to cultivate intimacy and social cohesion. This can be done when we simply send a partner a phatic "tap on the shoulder" (Ito, 2004). ICTs can also be used to reach out to loved ones in the midst of dramatic catastrophes such as floods, shootings and the like (Bruns et al., 2012). ICTs provide a reach and an immediacy that is not possible when only face-to-face interaction is possible. Thus, regardless of physical copresence, we are able to nurture our relationships and we are able to provide succor when it is needed. We use ICTs to reach out to others who we trust and upon whom we rely.

In our suggestion of neo-mechanical solidarity we are contradicting Durkheim's notion of directionality. He described a world that was becoming increasingly industrialized and where specialization flourished. Yet, it is possible to think of overcoming this mechanical/organic drift by suggesting the rise of neo-mechanical solidarity. While there is undeniably a movement in the direction of an increased division of labor (or as Weber would have it, more instrumental rationality and specialization), there are also islands or clumps of mechanical solidarity. Indeed, we claim that the phone and its privileging of person-to-person interaction support neo-mechanical solidarity. Thus we are able to share interactions and views with our closest friends and family and in this way maintain our sense of common identity in the face of an ever more differentiated society. We use point-to-point mediated interaction to keep in touch with one another even as we are sitting in meetings or participating in the highly specialized routines of everyday life. The mobile phone (largely in its role as a point to point communication channel) and other

ICTs become ways that enable us to develop a neo-mechanical refuge in the increasingly rationalized world.

Overcoming the dichotomy between mechanical and organic via the notion of neo-mechanical does not cover all aspects of mediated encounters. For example, a part of the control in Durkheim's mechanical solidarity comes via being constantly exposed to local approbation. We fear the harsh words or judgmental comments of others in the group. By contrast, mobile telephony and net-based interaction provides us with a space free from the eyes of local onlookers and wagging tongues. Thus, the cohesion is based on our wish to be together with our closest sphere, not on the fear of shrill sanctions when we stray from the approved path of the group. It can be added that the neo-mechanical groups of the mobile phone in particular, but also of many web based groups, are smaller in scale than Durkheim's society-wide version. It is in this context that Goffman's work offers an insightful extension of Durkheim's theories.

There are also differences in the way that neo-mechanical solidarity is worked out – given the form of mediation. Social networking sites, for example, cast a broader net for including people when compared to the typical core group of contacts using the mobile phone (Steinfield et al., 2008). Where the mobile phone is largely the instrument of the closest sphere, internet interaction and social networking sites also encompass this sphere, but also go up to the meso-level of social interaction among larger groups.

Social cohesion via ritual interaction

A second issue where Durkheim makes a contribution is in helping us to understand how social cohesion actually develops within small groups. Durkheim developed the notion that ritual interaction is a key element in the development of social cohesion (Lasén, 2011). In this respect his ideas were expanded upon by Goffman (1967) and also Collins (2004), and the combination of these three thinkers allows us to see how we build social cohesion through the use of ritual.

To appreciate the links between these thinkers, it is important to understand the social nature of ritual interaction. According to Durkheim, a ritual is a mutually focused activity that engenders a common mood in a bounded group. There is a mutual reflexivity associated with the collective action: We see others engaging in the action and we also know that they see us. The mutual focused activity may be cheering for the team, telling jokes over beers, participating in a religious ceremony, or any other social situation where the individuals maintain a common focus and work to maintain a common mood. Durkheim writes: "It is by shouting the same cry, saying the same words, and performing the same action in regard to the same object that they arrive at and experience agreement" (1995: 231–232).

The reason that this leads to social cohesion is that it engenders a common feeling or experience that we are all in this together. In other words, Durkheim focuses on shared practices. Rawls succinctly summarizes his position on this point: "Durkheim argues that the basic concepts required for shared intelligibility are created by producing visibly and hearably recognizable practices that produce identical feelings in all participants simultaneously" (2001: 36).

When we engage in these situations and when we use the correct manners, assert the correct mood and engage in the correct focus, we help to cement the cohesion of the group. This is in turn carried with us as a type of reservoir of social cohesion that will be replenished the next time we meet up. This is not to say that there cannot be failed rituals (Collins, 2004). The poorly executed church service, the tasteless joke or the gossip that becomes too salacious can destroy the mood and thus reduce the cohesion.

While Durkheim saw rituals as meso-level interactions of groups recurring and sustained over time in the rituals of Aboriginal tribes in Australia, Goffman viewed the micro-level in the individual encounters experienced in everyday life. Every time we greet one another, eat a meal, tell a joke, gossip or for that matter enter into an elevator with others, we are using the elements of ritual interaction. It is possible to suggest that Durkheim was attentive to the generation of social cohesion while Goffman was concerned with its maintenance. Rather than only looking at large-scale situations, Goffman refocused our attention on the ongoing events in everyday life, the routines that Weber also saw as constitutive of our social cages. It can be mentioned in passing that Goffman mentions the telephone at several points in his work: among other places he discusses it as an element in his signature "back stage" activity (1959: 112), and he also discusses the "unboothed" telephone in *Forms of Talk* (1981: 86; see also 1983: 6). Meyrowitz (1985) is the main thinker who has taken Goffman's ideas further to extend them to media (though we omit a discussion of this extension for reasons of space).

Durkheim, Goffman and Collins all conceive of ritual as face-to-face interaction. Indeed, in some respects they pointedly exclude mediated interaction because the common focus and mood are most clearly recognized in the immediacy of face-to-face situations. Yet, the rise of a variety of instruments for mediated social interaction and their increasing pervasiveness brings into question the idea that co-presence is a prerequisite for engaging ritual. This, in turn, leads to the possibility that mediated interaction can also be a space – however virtual – where socially cohesive ritual can take place (Carey, 1988).

We argue that technologies of mediation allow us to maintain and indeed elaborate social cohesion within the group. Teenagers cultivate their circle of friends through the use of texting and increasingly through the use of mobile- and PC-based social networking. Our gossiping, flirting and joking with our closest friends via Facebook, email or the mobile phone allow us a focused situation where there is a common sense of effervescence, to use Durkheim's terminology.

In many ways, we always have our closest social contacts available, albeit in a mediated form. Indeed, we would argue that nowadays, there is an ever-increasing connectedness via multiple modalities (Schroeder, 2007); or what Baron (2008) calls "always on." They are always just a text message, a Facebook entry, an IM chat, Second Life login or tweet away. Once in a particular sphere of mediation, we can go about the work of developing a common focus and engendering a common mood.

Taken to a perhaps not so distant conclusion, it is possible to see mediated interaction and the devices that we use in this context as taken for granted. This statement is not simply meant to suggest that this form of interaction is something the individual would expect of him/herself. Rather, it is something that we routinely expect of one another. The ownership, mastery and use of mediated forms of interaction has until now been

seen as a convenience for the individual. However, there is the increasing sense that we owe it to one another to, for example, have a mobile phone. To the degree that this attitude obtains in a group, we are seeing the emergent establishment of what Durkheim called "a social fact." With time, there will be the expectation that we are available to one another via mediated forms of communication. To shirk this would result in pressure from others to amend our ways.

> [Social facts] come to each one of us from outside and can sweep us along in spite of ourselves. If perhaps I abandon myself to them I may not be conscious of the pressure that they are exerting upon me, but that pressure makes its presence felt immediately (when) I attempt to struggle against them (Durkheim, 1938: 53).

While Durkheim might see the collective urge to be available as a type of social fact, this idea fits well with Weber's notion of the iron cage noted above: certain routines of systematically managing our interpersonal communication and information needs have become inescapable, even if they constitute not a private cage, but rather a cage of solidaristic relationships to mediated people and shared content. Indeed, we may be living in the period when the bars of this particular cage are in the process of becoming less flexible, even if they only consist of the web of mediated interpersonal relationships and expectations of using devices routinely – with all that this implies for the hardness or otherwise of these bars.

Contrasts and complementarities

We are left with several points of convergence and divergence with Weber and Durkheim that need to be resolved. The individualizing effect of rationalization versus neomechanical solidarity within an organic society is one contrast that needs to be reconciled. Another is that unlike Durkheim, who emphasizes cohesion, Weber is often regarded as a conflict theorist, but his ideas about conflict apply mainly to political struggle and competition for market chances. In the realm of culture – as in how the realm of politics and economics are affected by rationalization – the process of rationalization leads to greater organizational capacity. Yet in the realm of culture, it is difficult to translate this ongoing development into either conflict or cohesion: the main effect is to displace the role of religion and enhance the role of expertise and of those with powerful knowledge. Yet this expertise, in our everyday lives, has turned into the routine uses of ICTs that pervade a consumer culture. Among consumers, we have all become experts at managing mediated relationships and organizing information. Whereas Durkheim, on the macro-level, suggests that organic solidarity requires denser ties that he sees in positive terms, Weber sees the growth of impersonal structures in negative terms. It can be added, however, that it is not necessary to follow Weber in this: impersonal structures that were in the first instance developed in the name of rationalization can provide a variety of routines which, as we grow into these, "re-enchant" culture and everyday life. In short, the two thinkers could agree (in our extension of their thinking to new technologies) on the thrust of modern social processes: ever greater management of relationships via ICTs. But while Durkheim's focus is on the commonalities of mediated content that

give routine relationships their cohesion, Weber saw this process in terms of the larger impersonal structures which make for greater homogeneity. These are two different lenses on the same phenomenon whereby the individual is embedded in a web of mediated relationships with others and with the content of ICTs.

This provides us with our first attempt to reconcile contrasts with complementarities: if, as we have argued in a Durkheimian vein, ICTs give us back a simpler and more direct, albeit mediated relationship to our closest social sphere in providing a neo-mechanical world, then these relationships can be seen as cohesive havens in an increasingly routinized world. One way to harmonize the two thinkers in this respect is to notice that while ritual provides much needed solidarity in everyday life, this ritual as practiced in its mediated form is hardly noticed by participants as it has become part of a taken-for-granted routine. The feared impersonality of how these systems operate does indeed support the organic complexity of the rationalized technical system (the communications infrastructure, though this has moved into a taken-for-granted background), but on an everyday level it facilitates sociation at an immediate intimate level. This can be seen, for example, in relation to Facebook, which is in many ways a large rationalized organization focused on providing a service for profit. Yet this service also provides a venue where we interact with our "friends" of various calibers. In this way Durkheim's necessary ritual solidarity on the micro- or everyday life level and Weber's ideas about the growing dominance of a consumer culture on the macro-level are reconciled insofar as the two sit at different levels that nevertheless complement one another. Here we can add, again, that this is partly a matter of perspective: Weber's ideas are about the growing dominance of routines, but the content of these routines are various "genres" (Yates and Orlikowski, 1992) that continue to be added to an ever growing repertoire of communication and information routines; from individuals communicating with others and consuming mass media, to "phatic" short messages of "connected presence" (Licoppe, 2004), status updates, active searches for and sharing of information (as opposed to broadcast), and many more.

Weber and Durkheim thus focus our attention on common everyday practices in terms of how ICTs are pervasive routines which have become part of the management of mediated content and relationships. They therefore – jointly – lead us to thinking about the increased power of ICTs, but without the normative implications of Habermas (1989) and Castells (2009). Habermas' public sphere has offered one framework, but this is premised on the idea that communication freed from the constraints of capitalist economies will lead to a more "rational" society. This approach concentrates on communication as a means of political debate and deliberation, which for most people is a matter of episodic engagement and routine mainly as a matter of monitoring the news media. Similarly, their ideas are different from Castells, who builds the idea of resistance and its potential for progressive social change into the very fabric of his analysis of communication networks. While he sees that there is a centralization of network power, he also outlines the potential for what he calls mass self-communication (2009). Castells' notion of mediated interaction thus takes into account the reach of broadcast mediation, be it the programs of the BBC or the more limited pronouncements of a blogger or Facebook user, and in this way he takes the analysis into the realm of everyday life even if he does not directly address person-to-person interaction (Castells et al., 2007). Castells, again, even

if he recognizes a shift away from mass-communication, limits his analysis to political conflicts and solidarities, rather than on information as a part of the experience of shared consumption or on interpersonal relationships. In this way, both Castells and Habermas seek to identify the role of ICTs in everyday life, but mainly to link this to larger emancipatory social changes in the face of increasingly constraining systems.

Durkheim and Weber offer an interesting alternative here insofar as everyday solidarity and routines are reproduced at the macro-level (and vice versa) in the rituals and routine systems operating throughout society, foremost in its consumer culture. They therefore go beyond other thinkers in providing greater anthropological distance: If we see a more mediated culture not in terms of domination and emancipation, but rather as simply the requirements of a mass society and a more complex one, then the thrust of their ideas points us to an impasse, or a link, which had not hitherto been resolved between interpersonal relations and everyday life. This link has mainly been discussed in the literature on ICTs only as they affect different contexts, as in social constructivist accounts, but not on an aggregate level. The macro-level of access to information and knowledge, on the other hand, tends to be treated at the aggregated level in misleading terms such as "information," "knowledge" or "surveillance society." Alternatively, at this level, the analysis is restricted to political communication and focuses exclusively on the democratizing effect of ICTs or the opposite.

Weber and Durkheim address this intersection (the micro–macro link). For example, the ritual dimension of broadcasting or other large-scale media and ICTs is quite different from what Weber would have seen as their disenchanting effects, but come close to an enchanted consumer culture and to what Durkheim would have regarded as an emerging national (perhaps today, again, transnational) common culture – a "collective conscience."

One thing is missing, however, from the analysis of ICTs in terms of ritual, and that is that ritual theory and self-awareness only provide accounts of singular events and understandings which focus the attention of the populace on a sacred center. Yet these events and these shared foci are not just single events, and this more everyday routine functioning of the media is also addressed by Luhmann (2000). What a Weberian account could thus add here in a Durkheimian and Luhmannian vein is that the sacred has become a *system*. With the proliferation of devices and content, there is a vast panoply of cults of personality (including politicians) and sacred beliefs (again, including political ones). In developed societies, this is a pluralized and at the same time coherent mediated sphere – coherent in the sense that it is part of everyday routine and pulls together interpersonal ties and societal beliefs supported by a large technological system of mediation. Yet, apart from its role in maintaining the web of interpersonal (micro-) relations, this system consists of an ongoing, everyday and pervasive systematic sense of social cohesion and a constant or routine and expanding demand for mediated consumption.

Durkheim and Weber thus provide a more "distanced" view insofar as they point to the ritual and more mediated nature of ICTs in society, though with different valences. The two can be combined, however, via Luhmann (2000), who argued that the role of ICTs was mainly to provide legitimizing inputs into politics – and by extension into a consumer culture and economy. Put differently: Habermas and Castells make the main thrust of their analysis the emancipatory or potentially emancipatory aspects of ICTs.

Weber and Durkheim, in contrast, are more concerned with their routine workings. This brings them closer to Luhmann, who also considered the input of media into the political process an "irritation": that is, part of an ongoing conversation that society has with itself that is also simply entailed by its increasing complexification. Here we have emphasized the role of ICTs in everyday life apart from this political role. Although the two are related, clearly any conception of the role of technology in politics – and in other parts of social change – would need to be grounded in the interpersonal communication aspect and the aspect of personal information, though these issues take us beyond the scope of this essay which has focused on the role of ICTs in culture rather than politics.

What Durkheim and Weber therefore point to (at least in our elaborated version of their ideas) is how ICTs seemingly play such an extraordinarily powerful role in society, not only in mediating our interpersonal lives but also providing the media rituals required by mass entertainment and politics. At the same time, this effect is weak inasmuch as it is merely a routine one. Thinkers like Castells and Habermas argue – or hope – that the role of ICTs is to transform society. Durkheim and Weber, in contrast, show how a personal sphere, enveloped by access to information and by multiple mediated relations, sits comfortably within a larger sphere saturated by ICTs and complex and dense networks of relationships. If the role of ICTs is less emancipatory or critical to emancipatory social change than Habermas and Castells hope, then this is because Durkheim and Weber (and indeed Luhmann) would agree that ICTs can adapt within a complex and homogenous system to being ritualized and routinized, a cocoon and a cage, at one and the same time.

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Author biographies

Ralph Schroeder is Professor and director of the Master's degree in Social Science of the Internet at the Oxford Internet Institute at the University of Oxford. His recent books are *Rethinking Science, Technology and Social Change* (Stanford University Press, 2007), *Being There Together: Social Interaction in Virtual Environments* (Oxford University Press, 2010), and *An Age of Limits: Social Theory for the 21st Century* (Palgrave Macmillan, 2013).

Rich Ling is a professor at the IT University of Copenhagen. He is a founding co-editor of the Sage journal *Mobile Media and Communication*. In addition, he is the author of *The Mobile Connection* (Morgan Kaufmann, 2004), *New Tech New Ties* (MIT, 2008) and *Taken for Grantedness* (MIT, 2012).