
Journalism and the Circulation of Communicative Objects

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Abstract Digital infrastructures are increasingly altering the ways in which journalistic content acquires social value. Our key argument here is that processes of digital circulation are merging with the construction of social meaning in new kinds of news flows. Based on recent work in journalism studies, this paper outlines a theoretical perspective on circulation through the concept of “communicative object”. Through this concept we account for the dual technological and cultural constitution of circulation and the processes of meaning-making that it sustains. We argue that the duality of the communicative object as both a digital and an epistemic object allows for a productive conceptualization of journalistic communication as well as for a methodological innovation in journalism studies.

Keywords: circulation; journalism; digital objects; communicative objects; digital methods.

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I. Introduction

Circulation is emerging as a critical concept for analysing online communication. This is prompted by an increasing awareness among scholars from various disciplinary backgrounds of the growing embeddedness of digital content in forms of online interaction, especially through social networking sites. Circulation seems to be hard-wired into the digital systems that structure, aggregate and prioritise communications at the individual level – for millions of users at the same time. Web search and social networking sites in particular enhance the circulation of *more* information in *less* time among *larger* networks of users across *different* (geographical and cultural) spaces, which, however, does not nec-

essarily result in more heterogeneous networks. In light of the emergence of such sites, increasing circulation could count as a plausible but simplified rationale of media development in general. It would be fairly easy to establish a genealogical connection between the now dominant social networking sites and early efforts of Dutch publishers to enhance the distribution of stock and goods prices across Europe in what was called *co-rantos* in the 16th century – the ancestors of modern day newspapers (Hart 1970; Steinberg 1959).

Methodologically, it is easier to retrace circulation to a source of origin than to understand in what ways and dynamics circulation contributes to the constitution of social and individual practices of meaning-making. With digital and networked media gaining central importance in the maintenance of social relations, we are, however, urged to acknowledge the need for a methodological reversal, asked to “explore the intersections of content and materiality in the use of media technologies” (Siles and Boczkowski 2012, 242). In this article, we bring together previous arguments on the practice of journalism and its connection to cultures of circulation (Raetzsch 2015; Bødker 2015) in order to develop the notion of the circulation of communicative objects as a theoretical and methodological innovation for the study of journalism.

Taking circulation seriously as a critical concept in journalism studies means to shift our attention away from traditional actors (e.g. institutions) to acknowledge the co-constitution of materiality, users and meaning. Just as journalists developed specific cultural forms and practices which, over time, gave shape to the institution of journalism, so have users engaged in practices of *commonplacing* in their function as readers and audiences. Already in the 16th century, users were copying and curating information to “construct a trail of references, often shared with other people, as a way of showing off their taste and their circle of friends” (Hoem and Schwebs 2015). This sharing of information, commentary and content with others has enhanced under conditions of digital and networked technologies, becoming a new form of “self-communication” (to borrow half a phrase from Castells 2007, 248). By circulating references, symbolic content and relations in social networks, users are “equipping copied information fragments with tags and with links to the online sources” (Hoem and Schwebs 2015). The practice of circulating information is not and has not been exclusive to the domain of journalism.

The potential of circulation as an analytical concept lies in the possibility to overcome dichotomies of creators and consumers, of producers and users, to focus on the social processes that emerge from the enhanced referentiality of very different types of content in digital media. As audiences come to be regarded as actors in these processes, the domain of journalism studies needs to critically interrogate its key analytic categories and models of public communication. In this article, we want to propose that circulation is akin to processes of “co-creation” (Banks and Deuze 2009), not simply in the sense that audiences and journalists together cre-

ate new forms of journalism, but that circulation can help to understand the negotiation over boundaries, cultural meanings and heterogeneous group affiliations in digital media. Invoking circulation in relation to journalism and networked media means foregrounding processes of interaction in which cultural forms develop, are contested and appropriated – among journalists and their audiences, between users and observers, between actors and their networks. Circulation implies more than “[bridging] a source and a destination” but foregrounds a constant “realignment of forms in relationship to each other” (Straw 2010, 26).

In this article, we delineate in what ways our understanding of journalism can be reconfigured through the concept of the circulation of communicative objects. In the first part, we will retrace the prevalent concept of circulation in relation to journalism to show how the strong association with distribution has side-lined processes of meaning-making that arise from the negotiation over journalistic content and that now become all the more relevant (and apparent) in regard to social media. We will especially focus on how news in its varied forms contributes to the creation of social value through circulation. In the second part, we will develop the concept of the communicative object based on two core arguments. First, we posit that digital circulation is distinguished by a uniform layer of referencing (i.e. digital encoding and metadata description), which creates the condition for the transmutation and remediation of any kind of content. Second, we argue that this referential layer is not adjacent or secondary to content but is now integral to the constitution of processes of communication. By defining the communicative object in relation to its digital materiality and its epistemic function in social interaction, we propose that the study of journalism needs to methodologically and theoretically focus on how circulation sustains and creates techno-social structures rather than just focusing on specific types of content.

2. Journalism and Circulation: from Newspapers to News Flows

The concept of circulation has often been associated with objects moving – either in circles or through networks of different kinds. Jörg Heiser has retraced the etymology of the term to the “metabolic distribution and redistribution of fluids and matter, implying qualitative and quantitative transformation via movement.” From this original meaning, the term circulation in the 19th century became “linked to urbanization, the flow of populace and traffic in the city” before being applied to the circuits of money, labour and news (Heiser 2005, n.p.). Circulation thus stood for basically two forms of circular movement. In the original sense, an object or substance was seen to repetitively move through a point of origin or was propelled by a centrifugal force around a centre. During the

passage, the circulated object or substance changed, acquired new properties or transformed into something else. In the latter sense, circulation came to describe an endless and cyclical transmutation of forms (symbolic, artistic, commodities, labour) while the notion of an actual or assumed centre of force driving circulation receded gradually to the background.

In journalism, circulation traditionally refers to the physical distribution of newspapers, i.e. how many copies are printed and disseminated. The history of modern journalism is often associated with the gradual increase in the circulation of particular cultural artefacts, especially newspapers, across geographical space. But most newspapers were at the same time intimately linked to a specific urban setting and market. Through their close associations with urban communities, most journalists and editors were keenly aware that the distribution of newspapers had a social significance for the exchange and constitution of public opinions. The movements of the artefact were thus intimately tied to the circulation and the construction of meaning within the community of which journalists and editors were both members and outside observers. In many locations, the newspaper became the main object through which communities and publics were formed. Traditionally, this “text-based” community of readers and contributors to a newspaper (Warner 2002, 51) was a “kind of public that comes into being only in relation to texts and their circulation” (Warner 2002, 50). In the early twentieth century, the sociologist Robert E. Park made the obvious but important point that “[a] newspaper is not merely printed. It is circulated and read. Otherwise it is not a newspaper” (Park 1923, 274-275). Forming reading publics through the regular provision of printed news calls attention to the material object of the newspaper that is flexible and mobile enough to be inserted into an unlimited number of social contexts. Through the institutionalisation of the urban newspaper, Straw points out, the circulation of news gradually moves away from the “chance encounters” in “the chaotic unpredictability of urban life” to take the form of structured deliveries to households in “repetitive, bureaucratized routines” (Straw forthcoming; see also Boutros and Straw 2010). In light of more recent technological developments, the newspaper then appears as a “mobile-interface” for printed information (Sheller 2015, 13) that establishes certain conventions and cultural forms to distinguish itself from more quotidian practices of disseminating information and forms of knowledge. Publics begin to form in relation to the modern newspaper that now serves as a document of important knowledge and official information. As the profession of journalism begins to establish rules and guidelines to turn “less authentic types of knowledge” into news, information on the printed page becomes “more or less authenticated by the fact that it has been [published and] exposed to the critical examination of the public to which it is addressed and with whose interests it is concerned” (Park 1940, 679). News as a journalistic and narrative genre codifies both a ‘politics’ on the relevance of certain pieces of information (Schudson 1995) as much as it creates the

reading public in perpetual response to the cyclical provision of identical copies of printed documents. The circulation of news as a cultural form and the creation of publics as a social structure thus are written into and derived from the specific materialities of news journalism itself (de Maeyer and Le Cam 2015).

These established modes of circulation in journalism, and their underlying routines of news production continue to exist today. They correspond loosely to what Nerone respectively calls the “commercial public sphere” and the “expert public sphere” that came with the institutionalisation and professionalisation of journalism in the late 19th and early twentieth century (Nerone 2015, 191). With the emergence of a “networked public” (boyd 2011) or “networked public sphere” (Benkler et al. 2013), we arguably seem to witness a return to more chaotic modes of circulation, in which ‘chance encounters’ often structure interaction in diverse social settings. The “new forms of the public sphere” that are emerging at the intersections of various networks of actors, institutions and media outlets in many ways “straddle the modern divide between active and passive publics” (Nerone 2015, 191), a divide which was constitutive of the professionalisation of journalism in the early 20th century. Apart from the widely distributed forms of news that journalists continue to produce, news now also structures interpersonal information, e.g. through emails, blog posts, feeds, or tweets. News in this wider sense emerges out of processes that “blur the production, consumption, and distribution of news into a single [multi-directional] flow of ambient live updates of an on-going situation” (Sheller 2015, 20). At the intersections of different technological systems and networks of digital communication, users are embedding the creation, distribution and curating of news from a wide range of online sources in quotidian practices of communication. This shapes what Sheller calls “ambient news flows”, the constant circulations of news that “re-situate how we understand where we are, who we are connected with, what our ‘present’ moment actually is. The now-ness of news, in other words, offers a new sense of the present” (Sheller 2015, 24).

Understandably, journalists are keen to tap into this constant news flow, using social media as an “awareness system” for upcoming stories (Hermida 2010) or as a means to access prominent (and less prominent) sources (Broersma and Graham 2013). Journalists, as a specific professional ‘culture of circulation’, now need to assume new roles in relation to their content and the audiences that connect to it (Bødker 2015, 112). But by integrally embedding content from non-journalistic media (e.g. social networking sites, syndication services) journalism is also coming to depend on resources that are beyond its own control. As Ananny argues in relation to networked news “those with power are increasingly technologists and advertisers—not journalists—whose platforms and commodifications control how and when news circulates” (2016, 12). The temporal and spatial circulation of journalistic news comes to be co-determined by processes outside the institutional settings of journalism itself, e.g.

through the availability of network bandwidth, the importance of search algorithms to find content and the pluralisation of outlets for advertising, which often enough infringes on the exclusivity of certain occupational roles and their respective fields of expertise (Rodgers 2015). Despite such developments in digital media and journalism, the “concepts of sender, channel, message and receiver are still the most common starting points for much journalism research” argue Sjøvaag and Karlsson (2016, 1) in the introduction to a recent special issue of *Digital Journalism* on research methods. To bypass this established set of analytic categories, we argue that the circulation of news should not only be restricted to occupational roles, institutional settings or professional values but also include a focus on the creation of social value across different networks of actors. Limiting journalism to its products, e.g. news, overlooks that journalists interact on a regular basis with a wide range of actors, many of whom are nowadays also communicating independently within their own ‘personal publics’ (Schmidt 2014). Seeking the social value of news only in the products of journalism (e.g. in the content of an article, in information about an event) misses out on the opportunity to regard journalism and its wider spheres of circulation as equal parts of a social structure that is newly realised in each new interaction (Raetzsch 2015).

2.1. The Circulation of News as Social Value

The new prominence of ‘less authentic types of knowledge’ now circulating online has created an urge to defend professional ethics and roles among journalists and journalism scholars alike (McNair 2013; Pavlik 2013; Meyer 2004). Quality and trust in journalism are regarded as important values both commercially and socially to sustain journalism in a dispersed environment of communication online. One key issue in this negotiation over value is the “professional-participatory tension” (Lewis cited in Carlson 2015, 11) that arises from the growing possibility of non-journalists to engage with journalism in equally public fashion. Comment sections of online news sites, now already in decline (Ellis 2015), were an early setting in which a “constant contestation [over authority]” between journalists and their audiences took place (Robinson 2015, 161). Following Papacharissi these comment sections can be regarded as “[l]iminal spaces ... where journalists and citizens meet, to collectively shape a story” (2015, 37). Negotiations over authority and identity may indicate a “de-differentiation” of occupational and professional roles in journalism (Loosen 2015). Whether this is the case, is still subject to debate. Nonetheless, these negotiations between audiences and journalists signal that we need to shift away from seeing journalism mainly as an institution to seeing it as a “performative discourse” that is able to “simultaneously describe and produce social phenomena” (Broersma 2013, 33). Through this performativity of journalistic practice, we can highlight that journalism sustained in its varied historical forms and media of communication a

social structure between different types of actors – the public in the wider sense (Jones and Salter 2012).

The business of news has for a long time been about turning the immaterial or social value of news into monetary value. This model for news has become a lot harder to sustain with declining numbers of people regarding newspapers (even when they are digital) as necessary constituents of their own conversations. The percentage of people who discover news through social media first has risen from 2013-15 in all the countries measured in the *Reuters Institute Digital News Report* although there are still significant differences between countries (e.g. 20% in Germany and 48% in Brazil). The proportion of under-35s that discover news through social media is, in all countries, higher than for the over-35s, and the proportion of women is, again in all countries, higher than the proportion of men, who use social media to discover news (Newman et al. 2015, 76). Exposure to news is more and more tied to an immediate social environment, as a sign of embedding attention to public affairs with interpersonal communication on a regular basis.

Elisabeth Bird points out that “news is received and circulated almost constantly – even more so today with the rise of social media” (2011, 490). User practices of engaging with journalistic and other types of content become a lot more apparent and transparent, as they are objectified as comments, links or likes. A lot of meaning-making that had been taking place outside the media is nowadays increasingly mediated as well: “Previously most people’s commentary on the media was lost in the ether – a shout at the television, a scrawl in a book, a remark to a friend. Now our commentary is automatically archived and made visible online” (Couldry 2012, 54-55). Digital traces of online interactions feed data-banks with detailed records of user behaviour, preferences and social connections. Traces of ‘chance encounters’ are becoming “extractable as data” (Beer 2013, 17) as more and more “objects ... capture data about their use” (Beer 2013, 18). Interactions between users become structured by a “variety of practices that blend news co-creation with social practices of sharing” where journalistic stories are embedded within other modes of storytelling in “affective news streams” (Papacharissi 2015, 28). Whereas the newspaper (print or online) was and is a fairly fixed container of circulation, personalised news streams fuse the circulation of content with the creation of social meaning. The combination of “news reports with emotionally filled and opinionated reactions to the news [...] makes it difficult to discern news from conversation about news” (Papacharissi 2015, 32). This new hybridity of information, circulation and commentary makes news streams on social media “affective” in the sense that they “emerge out of collaboratively generated flows of information” (35). Social media are used as a “commentary filter”, as a “hybrid between earlier informal retellings and repetitions [...] and published commentary within journalism” Bødker (2013, 213). The distinction between circulation as the movement of artefacts and circulation as a process of

constructing meaning is further blurring in such media environments in that the artefact (e.g. the article) now often circulates with comments attached to it (as meta-text), which is somewhat different from newspapers circulating and being talked about.

The new quotidian practices of circulation attract the attention from media institutions and academics alike. Jenkins, Ford and Green have introduced the term “spreadable media” to develop a “hybrid model of circulation, where a mix of top-down and bottom-up forces determine how material is shared across and among cultures in far more participatory (and messier) ways” (2013, 2) than was possible in the era of broadcasting. Circulation in the context of digital and networked media means to understand how meaning is created through the interaction of social networks, artefacts and media texts (Jenkins et al. 2013, 35). Sharing and commenting become intricately linked to a “culture of connectivity” (van Dijck 2013) and sociability itself (cf. Hermida 2014).

On the level of digital code, a circulated artefact can be detached from its original location or context, “converting information that has distinct spheres of circulation into a homogeneous, commutable format” (Rae-tzsch 2015, 69). An article or just parts thereof can be remediated and re-combined endlessly, just as images, database entries, tweets and posts can be copied and republished instantaneously in various platforms with an ever growing reference scheme of links keeping tabs on the changes occurring every second on a global scale. The link-based economies of digital circulation trigger new assemblages of objects, meanings and social actors. What emerges out of these economies, then, are new “cultural forms”, to use a term employed by Gaonkar and Povinelli (2003). On the basis of digital encoding, symbolic content, which previously existed only in a limited, material form and sphere of circulation, can now acquire new “edges” through metadata, syndication and linking. Following Straw, we can perceive of these edges as “constitut[ing] the interfaces of cultural artefacts with human beings and other forms” (Straw 2010, 23). Such edges are now an integral part of the practice of journalism itself, as likes, tweets, RSS feeds and news alerts become embedded in the production and circulation of journalistic content. But through these same technologies and protocols of digital circulation the previously ancillary practices of audiences in debating, referencing and circulating content – whether journalistic or not – sustain a now quotidian “communicative performance of endless distribution and flow of media texts and images” (Sumiala and Tikka 2011, 147; see Aronczyk and Craig 2012). This communicative performance of individual actors can include original creations or the remediation of texts (blogs, photo collage, mash-up, remix, wiki), where the “distributed texts, images and symbols are a material site of the exercise of circulation” (Valaskivi and Sumiala 2014, 232-233). Circulation here designates a process of creating social value that is intimately linked to its modalities of communication, i.e. the digital encoding of content coupled with the ability to trace, store and reconnect content,

actors and resources across different platforms. In the following section, we want to address these modalities of digital circulation through the concept of the communicative object in order to foster methodological innovation for the study of journalism and its publics. We here agree with Kitchin et al. who argue that “much more research needs to be undertaken with regards [sic] the social and spatial processes by which knowledge circulates and mutates through social media, *its intersections with other fora such as broadcast media*, meetings, classrooms, pub talk, and so on, and how tokens of credibility, authority and reputation are recast and negotiated” (Kitchin et al. 2013, 100, emphasis added).

3. Communicative Objects as Cultural Forms

On January 7, 2015, the French graphic designer Joachim Roncin (@joachimroncin) created an iconic image and posted it to his Twitter profile. Only an hour after terrorists had attacked the satirical weekly *Charlie Hebdo*, Roncin’s image captured the feeling of speechlessness and solidarity with the victims. Using the typeface of *Charlie Hebdo*’s cover page, Roncin put just three words on a black background: Je Suis Charlie. Seven minutes after Roncin’s image had appeared on his profile, Thierry Puget (@titi1960) used the image and added the hashtag #JESUISCHARLIE (Beech 2015). In the two weeks after the tag had occurred, it was used roughly 5 million times on Twitter.¹ In the hours after his image had gone viral Roncin was busy replying to other users and journalists, asking whether they could re-use his image. He replied “yes and we have to” (tweet by @joachimroncin, January 7, 2015; 20:54:58). Roncin’s image appeared first online but in its most notable manifestations, the image was taken to the streets by people all over the world. The image was printed and adapted, appearing in different forms in shop windows and on social media profiles, on cars, as projection on walls and even in the source code of software.²

The example of *jesuischarlie* shows very clearly the dynamics of circulation that we address in this paper. Parallel to the reporting of the events of January 7 in journalistic media around the world, the image and hashtag from single users of Twitter created “ad hoc issue publics” (Bruns and Burgess 2011, 7) for the event. Through their digital circulation, the tag and the image became manifest objects through which an evolving public discourse and response to the events took shape. Our aim in this section is to use the example of #jesuischarlie for a theoretical elaboration of our concept of the communicative object. By using the term object, we do not mean to “objectify” or simplify the social process-

¹ Estimate created by the app Sifter on Texifter.com for the hashtag #jesuischarlie occurring between Jan 7 and Jan 21, 2015.

² See https://en.wikipedia.org/wiki/Je_suis_Charlie for examples.

es in which meaning is created. In contrast, we regard communicative objects in their duality as both *digital objects* (e.g. Roncin's image file, Puget's tweet, the hashtag #jesuischarlie) and as *epistemic objects*, as a stage in the process of circulation, where both form and meaning become temporarily fixed by certain actors to sustain particular aims. We adopt this dual viewpoint to understand how the materialities of digital communication are tied up with and are now often constitutive for social processes of interpretation and meaning making. The concept of communicative objects emphasises that digital circulation relies on the meta-textual description of digital data (metadata), which creates the edges for particular objects to be copied, linked or remediated. In turn, circulation creates on the cultural level a form of epistemic object, an object of knowledge that emerges from the temporal layering of references and links between actors, content and platforms.

3.1. Communicative Objects as Digital Objects

At first sight, digital circulation seems to warrant a distinction from analogue circulation. In journalism, the number of copies of a newspaper or the number of viewers of a television program was and is often used as a key figure to determine circulation. And this remains the case in many branches of the media industries, which rely on advertisers for a large share of their profits – whether they are traditional journalistic ventures or social media platforms. With digital circulation this production of identical copies of a single artefact has even become much easier, which makes it difficult to posit a difference between digital and analogue on the basis of the materialities of media production or distribution. But what we believe distinguishes digital from analogue circulation is the prominence of links and metadata – descriptive data about data – which create a referential layer of information *in addition to* what is manifest as content. As Rogers and others argue, links are “natively digital objects” (Rogers 2013, 19) and were a central innovation in the development of the first HTML standards for websites (Berners-Lee and Fischetti 2000). When we encounter ‘text’, ‘image’ or ‘video’ in digital media, these media forms are universally encoded digitally, but in addition, are endowed with meta-textual elements such as tags, links and other descriptors.

Hui argues that digital objects are experienced on the user side in similar ways as “natural objects” e.g. objects perceived in space. Despite the sensory deprivation and privileging of the visual sense in computer-mediated communication, the construction of digital objects through code is effectively obliterated by means of graphic and interaction design: “Digital objects appear to human users as colourful and visible beings. At the level of programming they are text files; further down the operating system they are binary codes; finally, at the level of circuit boards they are nothing but signals generated by the values of voltage and the operation of logic gates” (Hui 2012, 387). The complexity of the technological lay-

ers involved in digital circulation has, however, little importance for assessing how users experience digital objects, because their experience is structured around a flexible and continuous responsiveness of digital systems to input: buttons are 'clicked', a line is 'drawn' and appears on the screen, a tweet is 'sent' and appears in another user's feed only milliseconds later. Hui points out that "one fails to see the whole landscape if one simply understands the digital as only a 0 and 1 binary code; rather, one should grasp the digital as a new technique to *manage data in comparison with the analogue.*" (ibid. 387, emphasis added). Instead of insisting on a rupture of the digital with the analogue, Hui regards the digital as an additional descriptive layer of our quotidian world, in which new social practices in conjunction with technological systems become possible. In comparison to natural objects, digital objects can become more "concrete" as more and more descriptive attributes are added through metadata, creating new possibilities of connecting, circulating and transmuting such objects: "When there are more digital objects, there are more relations, hence the networks either become larger or new networks are actualized" (390). Endowing objects with enough description to make them mobile and readable to machines is what Hui calls the "datafication of objects" (389). What seems trivial from the perspective of user experience (seeing and finding an image online, reading a tweet) is based on standardised descriptions of data across different platforms, groups of users and computer systems. A hashtag found on Twitter like #jesuischarlie is significant insofar as it functions as a descriptive metatext, which allows for different tweets to be aggregated from various users, while it is at the same time also a form of content, which is embedded into the grammar of the message.

In journalism, the *rNews* metadata framework was developed to describe in a structured fashion types of information and relations between them that were logically unreadable for machines when presented in the narrative formats of journalism (Raetzsch, forthcoming). Although a human user may know that "Omaha" is a CITY and that Barack Obama is a PRESIDENT of a COUNTRY called "United States of America", such categories and relations need to be defined by metadata to enable subsequent digital operations. A search query like "PRESIDENT in CITY on DATE" requires a prior definition of what type of information in a narrative journalistic text will qualify as data for each of the three categories. A sentence like "The president visited Omaha yesterday" is replete with contextual information that is not usable for calculation when it is presented in narrative form. A tweet containing only the hashtag #jesuischarlie is not meaningful in itself, unless a lot of contextual information is available. The same definition of information through metadata – what is commonly called *semantic web technologies* – applies to new forms of communication like tweets, wikis, or blog posts. Researchers in the social sciences and those employing "digital methods" typically take advantage of the high level of structuration in web and social media data for auto-

mated data retrieval and scraping of online sources. While it is easier to scrape all posts from Twitter containing a particular term or tag, the challenge for researchers is to understand in what functions and social relations a retweet, for example, is used as an endorsement, as a criticism or in an effort to build social networks.

To summarise, communicative objects as digital objects are distinguished not primarily by their different form of encoding but by the possibility of assigning metadata, which creates new edges. These structured ontologies of describing properties of data allow for the calculation, storage, and circulation of content across platforms, types of software and hardware, and open up new possibilities for social science to use automatically retrieved data as sources for investigations of digital circulation.

3.2. Communicative Objects as Epistemic Objects

The digital side of communicative objects becomes apparent when we consider single objects, e.g. a post on a website, a tweet or simply an entry in a database. Links to this object can proliferate around the web and social media. Because the description of the object remains stable, e.g. through a link, we can retrace circulation as the proliferation of links in a variety of contexts. The link thus functions as an indicator to wider cultures of circulation, to social networks in which a given object is endowed with particular meanings and can fulfil very different functions. In digital circulation, however, the objects themselves are also changing and proliferating, being remediated, adapted, and connected by social actors. Objects appear much more prominently as instances of on-going and constantly evolving processes of communication and negotiation. When an image like Roncin's appears in journalistic reports, it simultaneously exists in other users' profiles and feeds, is printed and handed out at demonstrations, thus assuming a variety of material forms that are often remediated to the digital, e.g. through photographs uploaded to individual profiles on social media. We thus begin to see that communicative objects do not have fixed identities, but are part of a continuum of on-going cultural interpretation and production that functions as a permanent contestation of what it means to live in the present. Not least because of the enhanced possibilities to track and trace journalistic reporting over time, we are beginning to realise that each journalistic object in circulation (an article, an image, a video clip) is merely an instantiation of meaning-making processes that take place across a wide domain of actors – in journalism and society as a whole. The novelty here is not, that these processes are taking place, but that our awareness of them is now considerably more pronounced as links and references are made explicit in digital circulation and subsequent aggregation. We propose to regard communicative objects not only as digital objects but also in their function as “epistemic objects”, a term that was originally coined by Karin Knorr-Cetina to describe practices of knowledge creation among scientists.

In her article *Objectual Practice*, Knorr-Cetina argued that knowledge production in science needed a relational approach to practice, in which the connections of subjects and objects could be captured reflexively. She underlined that objects of knowledge were always rather markers in a continuous process of research than fixed entities. Epistemic objects were defined by a “lack in completeness of being”, functioning more “like open drawers filled with folders extending indefinitely into the depth of a dark closet” (2001, 190). In contrast to seeing such objects as internally defined and externally limited, Knorr-Cetina argued that epistemic objects are “always in the process of being materially defined [and] continually acquire new properties and change the ones they have” (ibid.). Epistemic objects are stages in a sequence of communicative acts that involve the transformation of stocks of knowledge, references and shared meanings. Epistemic objects thus have an “unfolding ontology” (ibid. 196) in time and are “meaning-producing and practice-generating” (ibid. 192). Knowledge production constantly reintegrates and questions what is already known, formulating concepts and theories that are instrumental for a given question but that more importantly serve to generate new questions. In science, Knorr-Cetina argues, the designation of an epistemic object like a theorem or a neuron “is not an expression and indicator of stable thinghood” but rather an attempt “to punctuate the flux” of constantly shifting stocks of knowledge and “to declare them as pointing to an identity-for-a-particular-purpose” (ibid. 193).

From this conceptualisation of the communicative object as an epistemic object, we can draw important parallels to journalism. Similar to the creation of knowledge in science, journalists provide to a certain degree – and with less theoretical and methodological rigour – preliminary interpretations of present events and developments as they unfold. The objects that journalists circulate have the character of an unfolding ontology meaning that journalists struggle to establish meaning about events as they unfold, while reacting to what is already known and what others are saying at the same time. In this sense, news as a narrative form “conventionalizes” events and “rewrites history for immediate popular consumption” (Langer 1998, 20-21). One of the core tasks of a journalist is to determine in what ways events or developments are significant for his or her readers, why they matter and what the consequences may be: “To ask ‘Is this news’ is ... to ask ‘Does this mean anything?’” (Schudson 1986, 84). Designating particular events or issues by names and keywords is a central journalistic practice to ensure that a ‘story’ is continued and can be followed by audiences. In digital circulation, the designation by name or special terms is now a widespread, quotidian practice, which in turn exemplifies how the exclusivity of journalism in determining public relevance is under siege. The hashtag and image of #jesuischarlie became synonymous with the public response to the terrorist attacks in Paris but they were not the creations of journalists. With communicative objects as epistemic objects, we see processes of meaning creation unfold, under-

stand how a given meaning emerges in response to particular events by following the adoption and recirculation of given objects by different actors.

3.3. Communicative Objects in Digital Circulation

To theorise digital circulation in relation to journalism, we have proposed the concept of communicative objects. Our main aim was to understand in what ways the materiality of digital communication can be related to a reconsideration of the social processes of negotiations over meaning that occur publicly in web and social media. The particularity of the communicative object as a digital object consists in its capacity to accumulate rich descriptions, either through metadata or links from different sources. This descriptive layer allows for the emergence of new social relations, which are often only momentarily stabilised, and which expand well beyond those established categories of journalists and their audiences. By focusing on objects, rather than discourses or networks, we maintain the central theoretical premise of Lee and LiPuma (2002, 192) that cultures of circulation are “created and animated by the cultural forms that circulate through them, including – critically – the abstract nature of the forms that underwrite and propel the process of circulation itself”. In digital circulation, communicative objects appear as temporarily and materially defined cultural forms, which sustain the continuous (re-)production of social relations on the basis of content shared by actors across platforms and networks, both inside and outside journalism. Communicative objects as digital objects can be connected, transmuted and reactivated, creating sequences of communication between different actors over time. As layer upon layer of objects and references accumulates, a technologically simple object like #jesuischarlie can assume a history of meanings across very different sets of actors.

Far from objectifying social processes, the communicative object in digital circulation should be seen as a manifestation of the dual technical and cultural constitution of meaning where primary agency is ascribed neither to technology nor to users alone. The challenge for researchers in this environment is to develop methodologies that can capture the unfolding and potential unpredictability of the emergence of communicative objects. Not surprisingly, the development of digital methods has proven that on the basis of user data we can research social processes rather than treating data as stand-in for such processes (Rogers 2013). But an overt focus on data itself risks to exaggerate the statistically significant (top ten users, most active sites, most tweeted messages) in comparison to the less significant but equally important cohorts in a dataset. Taking circulation seriously as a critical theoretical and methodological concept will require an integration of statistical and qualitative methods in order to grasp how objects emerge constantly at the intersections of social networks and computational routines (Gillespie 2014). Modelling such temporalities of

circulation between different actors, platforms and data formats will be a central challenge for innovating methods in journalism studies.

4. Conclusions

This paper has pursued two interrelated goals: I) a description and discussion of how digital circulation can be understood in relation to journalism apart from its established association with distribution, and II) a theorising of digital circulation through the notion of communicative objects. In the conclusion, we want to outline a few suggestions as to what these considerations imply for journalism studies.

A first consideration addresses the increasing complexity of the processes through which the publics of journalism are formed. While journalism never had just one public the various possibilities and practices of digital circulation create an intricate, fluid and ‘messy’ image of how publics are formed, interact and confront each other over the definition of ‘now-ness’ (Sheller 2015). The exclusivity of journalism to speak with authority on behalf of a wider public is in many areas of social life waning, as users prefer to connect directly to sources they deem relevant. A related issue here is whether and how journalists connect to their own publics. Frequent interactions on many levels of intensity mean that journalistic texts and meta-texts are accumulating as communicative objects in their own right, texts which can be re-activated and re-contextualised later on. Such processes of (re-)circulation mean that journalists and their institutions are becoming increasingly aware of the life of their work, as well as their own role in its creation. Neither the “continuous present” of news journalism (Schudson 1986, 86) nor the “permanent amnesia” of journalists (Bourdieu 1998, 72) are certain any more, as algorithms define what is new and relevant and databases store any snippet of exchange for later retrieval.

For journalism studies circulation poses some of the same challenges as it does for journalism. Scholars and practitioners alike are increasingly focused on mapping the trajectories of communicative objects and understanding the public spheres that they create and sustain. Integrating an understanding of the processes of digital circulation with the social and cultural processes of meaning-making urges us to come to terms with the duality of communicative objects, as both technological and cultural forms. But developing methods for the study of communicative objects requires the acquisition of knowledge and skills that neither journalism scholars nor journalists have traditionally mastered. While the meaning of news has always been linked to their specific mediation there has been a tendency in journalism studies to push aside the meaning of form. Given the increasingly varied mediated forms of digital circulation such a neglect is increasingly difficult to defend.

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References

- Allan, S. (ed.) (2009) *Citizen Journalism. Global Perspectives*, Abingdon, Routledge.
- Ananny, M. (2016) *Networked News Time: How Slow—or Fast—do Publics Need News to be?*, in “Digital Journalism”, Published online: February 6, 2016: <http://dx.doi.org/10.1080/21670811.2015.1124728>.
- Anderson, C.W. (2011) *Deliberative, Agonistic, and Algorithmic Audiences: Journalism's Vision of its Public in an Age of Audience Transparency*, in “International Journal of Communication”, 5, pp. 529-547.
- Appadurai, A. (1986) *Introduction: Commodities and the Politics of Value*, in A. Appadurai (ed.), *The Social Life of Things: Commodities in Cultural Perspective*, Cambridge, Cambridge University Press, pp. 3-63.
- Aronczyk, M. and Craig, A. (2012) *Introduction: Cultures of Circulation*, in “Poetics”, 40 (2), pp. 93-100.
- Banks, J. and Deuze, M. (2009) *Co-Creative Labour*, in “International Journal of Cultural Studies”, 12 (5), pp. 419-431.
- Beech, R. (2015) *The first person to tweet #JeSuisCharlie - how it became a symbol of defiance and solidarity*, in “Daily Mirror”, January 8, 2015. Available in: <http://www.mirror.co.uk/news/world-news/first-person-tweet-jesuscharlie---4941329> (retrieved March 13, 2016).
- Benkler, Y. (2011) *The Penguin and the Leviathan: How Cooperation Triumphs Over Self-Interest*, New York, Crown Business.
- Benkler, Y., Roberts, H., Faris, R., Solow-Niederman, A. and Etling, B. (2013) *Social Mobilization and the Networked Public Sphere: Mapping the SOPA-PIPA Debate*, The Berkman Center for Internet and Society Research Publication Series. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2295953 (retrieved June 8, 2015).
- Berners-Lee, T. and Fischetti, M. (2000) *Weaving the Web. The Original Design and Ultimate Destiny of the World Wide Web by its Inventor*, San Francisco, HarperBusiness.
- Bird, E. (2011) *Seeking the Audience for News. Response, News Talk, and Everyday Practices*, in V. Nightingale (ed.), *The Handbook of Media Audiences*, Oxford, Blackwell, pp. 489-508.
- Boczkowski, P.J. and Mitchelstein, E. (2011) *How Users Take Advantage of Dif-*

- ferent Forms of Interactivity on Online News Sites: Clicking, E-Mailing, and Commenting*, in "Human Communication Research", 38 (1), pp. 1-22.
- Bourdieu, P. (1998) *On Television*, Emg. Trans. by Priscilla Parkhurst Ferguson, New York, New Press.
- Boutros, A. and Straw, W. (eds.) (2010) *Circulation and the City. Essays on Urban Culture*, Montreal, McGill-Queen's University Press.
- Boyd, d. (2011) *Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications*, in Z. Papacharissi (ed.), *A Networked self: Identity, Community and Culture on Social Network Sites*, New York, Routledge, pp. 39-58.
- Broersma, M. (2013) *A refracted paradigm: journalism, hoaxes and the challenge of trust*, in M. Broersma and C. Peters (eds.), *Rethinking Journalism. Trust and Participation in a transformed news landscape*, London, Routledge, pp. 28-44.
- Broersma, M. and Graham, T. (2013) *Twitter as a News Source*, in "Journalism Practice", 7 (4), pp. 446-464.
- Bruns, A. and Moe, H. (2014) *Structural Layers of Communication on Twitter*, in K. Weller, A. Bruns, J. Burgess, M. Mahrt and C. Puschmann (eds.), *Twitter and Society*, New York, Peter Lang, pp. 15-28.
- Bruns, A. and Burgess, J. (2011) *The Use of Twitter Hashtags in the Formation of Ad Hoc Publics*. Available in: <http://ecpr.eu/filestore/paperproposal/90279-979-25e8-4090-bd32-2e3cf8ee0c10.pdf> (retrieved March 13, 2016).
- Bødker, H. (2013) *Sociale medier som journalistisk kommentarfilter [Social Media as a Journalistic Commentary Filter]*, in J.L. Jensen and J. Tække (eds.), *Faceboøk i den danske hverdag: fra socialt netværk til metamedie*, Copenhagen, Samfundslitteratur, pp. 211-226.
- Bødker, H. (2015) *Journalism as Cultures of Circulation*, in "Digital Journalism", 3 (1), pp. 101-115.
- Carlson, M. and Lewis, S.C. (eds.) (2015) *Boundaries of Journalism: Professionalism, Practices and Participation*, Abingdon, Routledge.
- Castells, M. (2007) *Communication, Power and Counter-Power in the Network Society*, in "International Journal of Communication", 1 (1), pp. 238-266.
- Couldry, N. (2012) *Media, Society, World: Social Theory and Digital Media Practice*, Cambridge, Polity.
- de Maeyer, J. and Le Cam, F. (2015) *The Material Traces of Journalism: A Socio-Historical Approach to Online Journalism*, in "Digital Journalism", 3 (1), pp. 85-100.
- Dijck, J. van (2013) *The Culture of Connectivity. A Critical History of Social Media*, Oxford, Oxford University Press.
- Ellis, J. (2015) *What happened after 7 news sites got rid of reader comments*, NiemanLab.org, 16 September 2015. Available in: <http://www.niemanlab.org/2015/09/what-happened-after-7-news-sites-got-rid-of-reader-comments/> (retrieved October 12, 2015).

- Gaonkar, D.P. and Povinelli, E.A. (2003) *Technologies of Public Forms: Circulation, Transfiguration, Recognition*, in "Public Culture", 15 (3), pp. 385-397.
- Gillespie, T. (2014) *The Relevance of Algorithms*, in T. Gillespie, P. Boczkowski and K. Foot (eds.), *Media Technologies. Essays on Communication, Materiality and Society*, Cambridge, Mit Press, pp. 167-194.
- Hart, J.A. (1970) *Views on the News. The Developing Editorial Syndrome 1500-1800*, Carbondale, Southern Illinois University Press.
- Heiser, J. (2005) *Good Circulation*, in "Frieze", 90. Available in: http://www.frieze.com/issue/article/good_circulation/ (retrieved October 9, 2015).
- Hermida, A. (2010) *Twittering the News: The Emergence of Ambient Journalism*, in "Journalism Practice", 4 (3), pp. 297-308.
- Hermida, A. (2014) *Tell Everyone: Why We Share And Why It Matters*, Toronto, Double Day.
- Hoem, J. and Schwebs, T. (2015) *Digital Commonplacing*, in "First Monday", 20 (7). Available in: <http://firstmonday.org/ojs/index.php/fm/article/view/545-1/4647> (retrieved March 10, 2016).
- Hui, Y. (2012) *What is a Digital Object?*, in "Metaphilosophy", 43 (4), pp. 380-395.
- Jones, J. and Salter, L. (2012) *Digital Journalism*, Los Angeles, Sage.
- Karlsson, M. and Sjøvaag, H. (2016) *Introduction*, in "Digital Journalism", 4 (1), pp. 1-7.
- Kitchin, R., Linehan, D., O'Callaghan, C. and Lawton, P. (2013) *The Creation and Circulation of Public Geographies*, in "Dialogues in Human Geography", 3 (1), pp. 96-102.
- Knorr-Cetina, K. (2001) *Objectual Practice*, in T.R. Schatzki, K. Knorr-Cetina and E. von Savigny (eds.), *The Practice Turn in Contemporary Theory*, pp. 175-188. London, Routledge.
- Langer, J. (1998) *Tabloid Television. Popular Journalism and the 'Other News'*, London, Routledge.
- Lee, B. and LiPuma, E. (2002) *Cultures of Circulation: The Imaginations of Modernity*, in "Public Culture", 14 (1), pp. 191-213.
- Loosen, W. (2015) *The Notion of the "Blurring Boundaries": Journalism as a (De-)differentiated Phenomenon*, in "Digital Journalism", 3 (1), pp. 68-84.
- Meyer, P. (2004) *The Vanishing Newspaper. Saving Journalism in the Information Age*, Columbia, University of Missouri Press.
- Moore, S. (2005) *Media/theory. Thinking About Media and Communications*, London, Routledge.
- Nerone, J. (2015) *The Media and Public Life: A History*, Cambridge, Polity.
- Newman, N.; Levy, D. A. L. and Nielsen, R.K. (2015) *Reuters Institute Digital News Report 2015*, Oxford, Reuters Institute for the Study of Journalism.

- Papacharissi, Z. (2009) *Preface*, in Z. Papacharissi (ed.), *Journalism and Citizenship — New Agendas in Communication*, New York, Routledge, pp. vii-xiii.
- Papacharissi, Z. (2015) *Toward New Journalism(s) – Affective news, hybridity, and liminal spaces*, in “Journalism Studies”, 16 (1), pp. 27-40.
- Parasie, S. and Dagiral, E. (2013) *Data-Driven Journalism and the Public Good: “Computer-Assisted-reporters” and “Programmer-Journalists” in Chicago*, in “New Media and Society”, 15 (6), pp. 853-871.
- Park, R.E. (1923) *The Natural History of the Newspaper*, in “The American Journal of Sociology”, 29 (3), pp. 273-289.
- Park, R.E. (1940) *News as a Form of Knowledge: A Chapter in the Sociology of Knowledge*, in “The American Journal of Sociology”, 45 (5), pp. 669-686.
- Pavlik, J.V. (2013) *Innovation and the Future of Journalism*, in “Digital Journalism”, 1 (2), pp. 181-193.
- Raetzsch, C. (2015) *Innovation Through Practice. Journalism as a Structure of Public Communication*, in “Journalism Practice”, 9 (1), pp. 65-77.
- Raetzsch, C. (forthcoming) *Structured Journalism*, in Deutscher Fachjournalisten-Verband (ed.), *Journalistische Genres*, Berlin/Konstanz, UVK.
- Robinson, S. (2015) *Redrawing the borders from within: Commenting on news stories as boundary work*, in Carlson, M. and Lewis, S. (eds.), *Boundaries of Journalism: Professionalism, Practices and Participation*, London, Routledge, pp. 152-168.
- Rodgers, S. (2015) *Foreign Objects? Web Content Management Systems, Journalistic Cultures and the Ontology of Software*, in “Journalism”, 16 (1), pp. 10-26.
- Rogers, R. (2013) *Digital Methods*, Cambridge, MIT Press.
- Schmidt, J.-H. (2014) *Twitter and the Rise of Personal Publics Twitter and Society*, in K. Weller, A. Bruns, J. Burgess, M. Mahrt and C. Puschmann (eds.), *Twitter and Society*, New York, Peter Lang, pp. 3-14.
- Schudson, M. (1986) *Deadlines, Datelines, and History*, in R.K. Manoff and M. Schudson (eds.) *Reading the News*, New York, Pantheon, pp. 79-108.
- Schudson, M. (1995) *The Politics of Narrative Form*, in M. Schudson, *The Power of News*, Cambridge, Harvard University Press, pp. 53-71.
- Sheller, M. (2015) *News Now: Interface, Ambience, Flow, and the Disruptive Spatio-Temporalities of Mobile News Media*, in “Journalism Studies”, 16 (1), pp. 12-26.
- Siles, I. and Boczkowski, P. (2012) *At the Intersection of Content and Materiality: A Texto-Material Perspective on the Use of Media Technologies*, in “Communication Theory”, 22 (3), pp. 227-249.
- Steinberg, S. H. (1959) *Five Hundred Years of Printing*, (New edition), London, Faber and Faber.
- Straw, W. (2007) *Embedded Memories*, in C. Acland (ed.), *Residual Media*, Min-

-
- neapolis, University of Minnesota Press, pp. 3-15.
- Straw, W. (2010) *The Circulatory Turn*, in B. Crow, M. Longford and K. Sawchuk (eds.), *The Wireless Spectrum: The Politics, Practices and Poetics of Mobile Media*, Toronto, University of Toronto Press, pp.17-28.
- Straw, W. (forthcoming) *Circulation*, in I. Szeman, S. Blacker and J.A. Sully (eds.), *Companion to Critical and Cultural Theory*, Hoboken, Wiley-Blackwell.
- Sumiala, J. and Tikka, M. (2011) *Imagining Globalised Fears: School Shooting Videos and Circulation of Violence on YouTube*, in "Social Anthropology/Anthropologie Sociale", 19 (3), pp. 254-267.
- Valaskivi, K. and Sumiala, J. (2014) *Circulating Social Imaginaries: Theoretical and Methodological Reflections*, in "European Journal of Cultural Studies", 17 (3), pp. 229-243.
- Warner, M. (2002) *Publics and Counterpublics*, in "Public Culture", 14 (1), pp. 49-90.