

Expanding Temporal and Participative Digital Horizons Through Web Documentaries for Social Change

Carles Sora

Pompeu Fabra University, Department of Communication

DigiDoc Group, Barcelona.

Abstract

Recent forays into online and participatory social documentaries like *QuestionBridge* or *Immigrant Nation* are offering alternative temporal conceptions and participative processes compared to what other media activism does using social networks. These projects propose reiterative dialogues, where media time consumptions expand and differ from Internet standards, fostering long-term temporal horizons. Starting with the timescapes conceptual framework as a theoretical background, we will analyse two interactive documentaries as key examples of the new possibilities these platforms or storyspaces (places for sharing stories) bring about, where participants can share, exchange and contribute to the dialogue of relevant issues through a more multi-layered personal experience.

Keywords: Time, Social Networks, Webdoc, Participation, Timescapes

Introduction

In recent years, the technological role and impact of social media and online media platforms on social movements has been reviewed and studied extensively (Howard & Hussain, 2011; Shirky, 2011; Howard & Parks, 2012; Tufekci, 2013; Poell & Dijck, 2015). From the Arab Spring movements and the #Indignados movement in Spain, to the more recent #Occupy in the United States and the Umbrella Movement in Hong-Kong, relevant use of digital social platforms in their daily communication activities proliferates.

In general, these movements have used two strategies to spread their messages and voices over the net: via private social networks and services like Facebook or Twitter, and through independent networks like Indymedia, Global Voices and others (Atton & Hamilton, 2008). Even though the dynamics, methodologies and outcomes of both strategies are noticeably different, using these platforms allows activists to have greater control over the way their messages are disseminated through the public domain. They provide journalists and audiences with instant access to content uncensored by third parties. This way, activists are not forced to make concessions regarding how they present themselves or the subjects and topics they are dealing with, or as Poell & Dijck (2015:527) suggested, they avoid “catering to mass media’s need for spectacle, conflict, and flamboyant newsworthy individuals.”

Scholars agree that these tools counteract the power of mass media broadcasters and the way they construct social discourse. As Tufekci (2013) suggests, the use of these platforms has

altered the power dependency between mass media and social movement actors, allowing activists to gain visibility via mainstream media.

Even though the mass media still have a huge social impact, increasingly more audiences are making everyday use of digital networks. Furthermore, these platforms have become a huge media content archive for social movements, with a significant number of testimonies regarding different historical events. Public online archives (depending on their Internet neutrality policies) are usually well organised and include search content tools. In this regard, then, it seems feasible to say that we are facing a major revolution in social change communication today, as anyone can potentially access an incredible amount of raw footage of actions, content and testimonies.

Temporal criticism of social media networks

There is no doubt that social networks are a tool that can radically affect the actions of social movements. We think, however, that it is worth applying a more critical analysis to this idea, especially in terms of social networks' temporal dynamics and specific technological configurations. As mentioned before, social networks have their particular rules, dynamics and uses and do not always correspond to users' needs or interests. It is important to bear in mind that these networks have become major business corporations, which means user experiences are affected and mediated by a particular interface design driven by specific business models, most of which depend on advertising.

Networks not only promote the dissemination of the message, but also mediate it depending on the available features. Retweeting, liking and unliking or following are just some the metaphors circulating in the digital communication world, but they are, nevertheless, the most relevant. On-trend networks are imposing a model focusing mainly on immediacy, in which these options provide a rapid model of communication, thus leading to the viral spread of content. These networks are designed with data streams that quickly and constantly push information to our feeds without giving users time to absorb it, connecting them only momentarily. The interface is designed to steer this type of connections between users, with little capacity for discourse, very similar to the old real-time broadcast coverage model. Furthermore, algorithmic selection rules drive the user's experiences and limit the amount of content and stories that anyone can reach, to people with whom they already share interests.

In some cases, even activists have based their own actions based on the system's particular configurations, generating new time-dependent relationships. This was observed by García and al. (2012) in their study on the emergence of a relationship between Twitter's trending topics and the events that were simultaneously taking place in streets and squares. At some point, activists started using Twitter as a tool to moderate physical actions, making the information public at the same time. Thus, they stood up to the time when mainstream media set the news agenda by using the new capabilities of digital media, which interrupt and intercept media attention with unexpected actions.

Social networks are turning the information retrieval paradox into a more consumer-oriented approach that constantly feeds a user's wall, which means there is not enough time for more

in-depth analysis and debate, because there is always a new topic coming up to replace the previous ones. As some scholars have suggested, the web is transforming from a relatively static environment primarily focused on information retrieval into a highly dynamic ecology of data streams, which constantly feed users with new information (Hermida, 2010; Poell & Dijck, 2015).

However, there have still only been a few attempts within the academic world to understand the temporal dynamics underlying the practices of social movements on social networks (Postill, 2013). It is therefore worth zooming in on one of these particular scenarios and trying to draw out what these temporal configurations imply.

On Facebook's feed interface, for instance, the lifetime of a story lasts just a few hours, with 75% of the audience interacting with one of the stories during the two or three hours following publication (Boland, 2014; Rey, 2013). After that time period, users will probably not see one particular post because they are published continuously and in a constant rush.

Due to the need to reduce the number of stories, social networks such as Facebook or Twitter push up some content based on algorithms, depending on different variables and our interactions with other users. The average amount of stories and posts available each time users access their Facebook feed is about 1,500 (Boland, 2014). The platform's algorithms give us a more manageable number, shrinking the amount of visible posts to approximately 300 stories. Thus, we only see a tiny portion of the content available to us. And these figures have grown significantly in recent years, meaning that in the next few years, as suggested by

Manson (2014), we will probably catch only 1% or 2% of all stories published online. In this regard, it is worth noting that Facebook is adding a time-spend variable to its algorithms, so it is the time spent looking at a particular text or photo that counts, no matter how many interactions you have with it.

By analysing all these figures, one can see how the always-on dynamics of social platforms focus on breaking news. This impedes more in-depth debate, which means the connections and ties between people that emerge at a particular moment in time (especially within social debates) tend to quickly disappear. Although they are highly effective at helping cover particular actions, then, they may not be the best tools for complex discourses. “In social media-dominated online environments, processes of togetherness are always ephemeral, always already on the point of giving way to the next set of trending topics and related sentiments.” (Powell & Dijck, 2015:534).

If we agree that social media are focused on connecting users momentarily by pushing a model of perpetual now communication, we can assert that this model does not fit coherently with global protest objectives and strategies as they normally work, as goals based on long-term change. As Postill (2013) identifies in his discussion of the *Indignados* movement in Spain, there are at least four temporal horizons that co-exist in the protests: the present moment, well covered by social networks; the short-term, for preparing and organizing actions days in advance; the mid-term, for preparing large scale mobilization in advance, as observed in recent years with the *Indignados* movement (García and al., 2012); and finally,

the long-term horizons for good, like changing people's values, improving the country's policies and wealth, etc.

As Adam noted (2004), these multilayered temporal horizons exposed by Postill, have been identified before as a necessity for every aspect of social life and society, where the many faces and shapes of time are expressed and modulated by technology and social configurations. This means the aforementioned tech-driven perpetual now temporalities of the networks are only one of the possible configurations, representing only one of the four temporal horizons that Postill cited, the one that is close to real-time actions. Consequently, does this mean that mid- and long-term horizons cannot be reflected and represented on the Internet based on social networks analysis? No, it just means social debates fostering long discussions collapse due to the micro-dynamics of social networks, claiming for the promotion of other tools, uses and practices, as we will now analyse.

Timescapes for online community platforms

We aim to identify the temporal processes in which participants are connected and communicate with each other on an online platform, trying to highlight what kind of temporal implications these networks employ in creating their narratives and stories. In this regard, the concept of timescapes (Adam, 1998) is particularly useful in making sense of the historical and social time and space in which participants are placed and through which they build their relationships and dialogues.

In order to theorise about the different temporalities of each society, Barbara Adam developed the concept of timescapes, in which she defined the world as an experience of a sum of multiple temporalities, both micro and macro, present in nature and in our bodies. A timescape is a landscape of historical and social times, which includes visible patterns and the aspects and traces we cannot see as part of our individual selves. This multifaceted, complex and multi-dimensional time present in the historical record of nature can also be extended into the understanding of social life temporalities, connecting space and time with the context of each individual, “acknowledging the links between time, space and matter and the need for attention to context and to the role of the researcher. Indeed, time and space are neither neutral nor static facts.” (Raddon, 2007:63).

On a structural level it implies a number of irreducible elements that make up our daily experiences, scientific and everyday knowledge of time. Adam offered an introductory list of elements for the understanding of time, such as the Timeframe (cycle), Temporality (process), Timing (synchronisation and coordination), Tempo (speed), Duration (extend), Sequence (order) and Temporal modalities (past, present, future), which help conceptualise a framework for bringing together these interlinked and multi-layered elements of space and time.

Although all these temporal and contextual elements of time and space are part of our experience of online communication, the predominant linear metaphor present in social networks covers only a tiny part of them. As discussed in previous research on digital temporalities by the author (Sora, 2015, 2016), only a few Internet artistic practices offered a wider number of temporal concerns that were not present within mainstream digital platforms.

Therefore, the above reflection on mid- and long-term digital experience for social change could be addressed through other digital media projects, rather than on social networks, in order to facilitate and represent a participant's timescapes. A wider temporal perspective of digital media is needed, moving from the linear metaphor to other representations of temporal experience, such as the cyclical, which entails a review of content and narratives with the passing of time, incorporating contextual, historical and space-time perspectives into digital media dialogues.

It is worth noting that a cyclical framework fosters long-term dialogues, promoting digital actions where users can undertake more in-depth interaction and where empathy on social networks around specific social issues can last for more than three hours. As Powell & Dijck (2015:532) said, "a crucial question is whether such instances of solidarity or togetherness can eventually translate into more durable networks and communities that provide the basis for political contestation in the long run." This sense of togetherness is only a starting point and other stages of involvement are needed in order to create ties between users. The concept of community, namely, a place to share and talk, should be the real goal of interaction.

Being part of a group, a community, would help create more in-depth dialogue, awareness and, hopefully, change. But what is a digital community? In social terms, it is a place where content matters and where users can interact with each other without time constraints. For that purpose, the concept of participation is key. In one particular shared place, if interaction is well driven and users participate with other users, a sense of community may arise. On this issue, Henry Jenkins said, "I object to calling it participation if the people involved have no

sense of themselves as belonging to something bigger than the individual. For me, participation starts at that moment when we see ourselves as part of a group that is seeking to achieve some shared goals through collective effort.” (Couldry & Jenkins, 2014: part 3).

More in-depth participation could not be addressed in platforms where, as in social networks, the interface metaphors foster quick content update based on old linear top-to-bottom content interface metaphors. As Schulz (2012) said, linear is the preeminent metaphor because the social and industrial dominant management model imposes it, not because it is the only available way of representing time. “Other representations of time (as cyclical, for instance) are not made invalid by linear time; they coexist with it, but only the latter is dominant, which is evident in the fact that it is proclaimed to be objectively real.” (Schulz, 2012:443-444).

What other online platforms reveal to us is that it is also possible to offer alternative temporal configurations of the interface, ordering content not in a linear way but according to other shapes and forms. As such, these non-mainstream forms may offer a deeper temporal experience of exploration and agency because users are compelled to explore and understand content that is not meant to be consumed rapidly.

With these considerations in mind, we will now look at two new online projects that represent our idea of a digital community, where participants interact and participate in a particular social issue. These projects are interactive web documentaries (webdocs), which foster interaction and dialogue between users, creating relevant long-term participative dynamics

and dialogues, making them an interesting and strategic tool in communication for social change.

Participation in webdocs for social change

A webdoc is a web documentary that is narrated through a digital interface in which the viewer is required to interact through the interface in order to move the story forward. The term “webdoc” refers to the creation of interactive documentaries specifically designed for the web.

The past few years have seen the emergence of interactive documentaries, a sub-genre that straddles documentary practice and interactive design (Nash, 2012). These webdocs are now attracting the interest of European authors, festivals, producers and television networks. Webdocs are a hot topic because the number of online productions is growing all the time and a few high quality projects have started to win awards at major international film and documentary festivals. Webdocs are not a new concept or format (there are excellent earlier projects in web or CD-ROM formats), but they are part of a new context that is generating considerable interest. Webdocs can be understood as an evolution of the first hypertext fiction narratives explored in the nineties as genuine digital non-linear narratives (Landow, 1992). Today, these new online narrative forms take advantage of browsers’ new capabilities, using high quality video and interactive features.

These new interactive documentary narratives can encourage public collaboration and participation, leading to new strategies for social empowerment. In fact, some of these

documentaries are becoming spaces of interaction where users can discuss one particular topic. Their participation varies according the project but it usually requires a personal contribution, which we consider to be a key factor in engaging audiences. These projects offer new temporal frames of action and reception close to Castells' timeless idea for networks (1996), helping to build a place with a non-specific temporal duration. For case-study purposes, we will now analyse two interactive documentary projects that foster participation within long-term temporal horizons.

Question Bridge: Black Males is a transmedia artistic project that aims to facilitate dialogue between black men from diverse backgrounds, representing and redefining black male identity. Conceived by Chris Johnson in 1996 as an audiovisual art installation, subsequently followed by Hank Willis Thomas, Bayete Ross Smith and Kamal Sinclair, it has expanded to other formats as a website, a mobile app, a long video version for community screenings and a curriculum for schools. The project opens a window onto the complex and often invisible dialogue between African American men, or as the authors' statement say: «used by those who want to create honest expression and healing dialogue among members of a particular group.»¹ With the aim of reaching over 1% of African Americans, which remains a distant goal, over 3,000 people have taken part in the roundtables and 1,000 educators have downloaded its curriculum.

In this project, users can post a question looking into a camera as if they were talking to another person. Later on, another person can answer this question or post another, thus

¹ The website is available at <http://questionbridge.com/>

creating several threads on different topics. The distance between the participants that is created through the digital window allows people to express themselves more deeply. “[It] reduces the stress of normal face-to-face conversations and makes people feel more comfortable with expressing their deeply held feelings on topics that divide, unite and puzzle.” (QuestionBridge web statement). Within the main configuration of the site there is also a living archive of all the posts from the beginning, with location and timeframe information, and one can see how topics and interests evolve depending on the year.

Thanks to this interactive proposal, users interact with each other in different times, expanding the timeframe of participation with several visits and giving continuity to the content, well above the figures discussed previously for social network feeds. In fact, the average time spent in webdocs is approximately few minutes but few particular cases reach bigger time consumption figures. Participation in these projects is not intimately tied to social or professional calendars, so dialogue can continue at any time. As such, it is not hijacked by the perpetual now dynamics of social networks or the acceleration of social life (Rosa, 2013; Hassan, 2007). The temporal use of this kind of project is closer to a non-linear or contingent time. In fact, they can be understood as a formal expression of counterculture, in the context of the temporal consumption of current digital culture.

Question Bridge project has different ways to build and offer content. It uses spatial and temporal metaphors that are far away from the dominant linear interfaces of the Western culture that rules the Internet, where the last post or content is the prevailing one. Instead, this

project builds a nodal and distributed spider's web of content, linking the interface with the issues, with time, content and interface tied into the experience, making it more genuine.

Another relevant project is *Immigrant Nation (IN)*. As with *Question Bridge*, this webdoc emerged through a Kickstarter campaign and was launched in 2014. *IN* is a platform aiming at creating and sharing immigration stories from US citizens, based on the official recording of waves of immigration into the United States since 1820. The goal is to share the range of immigrant stories that have shaped the country from past to present within a unique space. This transmedia project has three components: the website, a series of short documentary films and live events for schools and other educational institutions. There are more than one thousand stories shared online.

The aim of the project is simple: as most of the US population have an immigrant background, they would probably want to share their stories with others in order to discuss their present and shared past. "The topic of immigration often divides communities across the country, but bringing these stories to the surface has the potential to create commonality between new arrivals and those whose families have lived in the U.S. for generations."²

Participants are invited to become co-creators in the website by creating and sharing their own stories with their own photo archives and voices. Anyone can get involved by creating a profile, searching others' stories and comparing those stories with the official immigration waves data sets. A small amount of text and images is required in order to facilitate

² The website is available at <https://www.immigrant-nation.com/>

participation. Anyone can post comments in other people's stories and it is also possible to add tags in the stories, allowing users to search according to topics and countries. Tags organise queries, helping to find stories within different waves of immigration and countries.

This project can also be understood as a huge online mural of testimonies, with the shared experience of immigration shaping participants' lives. The mural represents memories of their countries, the difficulties and struggles they have faced as undocumented citizens, but also, a positive diversity and mixture of cultures, languages and traditions.

Temporal experiences presented in these two projects are close to the timescape concept, where the different contexts, spaces and historical temporalities of the participants are mediated and incorporated. They are a place where individuals share their stories in a timeless space neither defined nor mediated by the perpetual now that engages cyclical participation. A place where their past and actual locations and time of contributions is relevant. A kind of timeless participatory dialogue that evolves over time, where crowdsourced content shapes discourse. And this occurs precisely when the artefact -the interface- is designed with this goal in mind.

Conclusion

After analysing these two case studies, we would like to highlight a few considerations through which these relevant projects contribute to our debate, with different layers of understanding.

Through the proliferation of digital networks in our globalised environment in recent years, activists have focused on developing their own tools and platforms, so that protest mobilisation becomes less dependent on mainstream media channels. Alternative media has become a counterweight for mass media news reporting and a tool of disruption for people who need a free and accessible networked tool that lets them surpass censorship, as occurred during the protests in Iran and Egypt. After having spread all over the world images and news that were banned by government-controlled mass media broadcasters, these tools are now part of an organised and structured strategy of communication.

In spite of the thousands of likes or comments given to stories published on Facebook or Twitter, it has been shown that the design and dynamics of these platforms do not foster long-term dialogue. On the contrary, as we have discussed, they are designed for consumer-oriented purposes, so time is not valued in the creation of discourse. While these social media tools are good for creating viral content handled superficially, they are not very relevant for deeper reflections. As software studies research into political context have demonstrated (Fuchs, 2015), these tools steer and shape the way we use, discover and find content, especially in terms of temporal dynamics.

With the passing of time, humans have changed the pace of our channels and communication technologies accelerate the duration of our interactions, making them shorter. Mediated digital technologies of communication have led to an unprecedented change in our time-consuming paradoxes, (now) fostering quick and superficial communication exchanges. By approaching things differently, participative webdocs propose new temporal ecologies where different cultural and personal temporal logics can be gathered in one shared space. These projects bring us to the idea of timescapes of change that highlight current visible contexts, along with historical and invisible temporal contexts. So by offering them a long-term and temporal disruptive platform to discuss a particular issue, participants' hidden, immanent contexts appear and enrich their discourses.

Participation in this kind of crowdsourced stories emphasises individual contributions while providing agency through the designer's creation. In this process, the author acts as a curator rather than a filmmaker, and the participant has a relevant role as a contributor, because the obstacle to be overcome is specifically focused on the artistic and content-related quality of contributions. This idea involves an important shift from the figure of the author as designer and creator of the audiovisual product to that of the designer of a narrative storyspace platform, through which audience participation is moderated. In these cases, participants believe their contributions matter and that the quality and relevance of their content have an impact on the product. This particular implication allows some degree of social connection with each other, fostering social ties between participants and perceiving others' content as a part of their own personal experience. We would argue that the success of this kind of interactive project happens when the platform is not a service or a product but a cultural

interface designed with particular content in mind, trying to create a precise dialogue through content. It is a creative process between the author and the audience.

Finally, we have identified an ontological shift from the pre-digital archive—spatially discrete, rigorously ordered and regulated by a professional team of archivists—towards the temporal dynamism and distributed logic of a digital archive, which encourages experiments with databases. These living archives represent a vast corpus of elements that evolve over time and the amount of narratives created through users' visits to the database are infinite. As such, transitions from one point to another within these archives can be understood as a narrative, with the author predefining paths instead of using a classical narrative storytelling plot.

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References

- ADAM, Barbara, *Timescapes of modernity : the environment and invisible hazards*, New York, : Routledge, 1998.
- ADAM, Barbara, *Time*, Malden, MA, Polity Press, 2004.
- ATTON, Chris, and HAMILTON, James F., *Alternative journalism*, London, Sage, 2008.
- BOLAND, Brian, Organic Reach on Facebook: Your Questions Answered, 2014. Retrieved from <https://www.facebook.com/business/news/Organic-Reach-on-Facebook>
- CASTELLS, Manuel, *The rise of the network society: The information age: Economy, society, and culture (Vol. 1)*, Oxford, Blackwell Publishers, 1996.
- COULDRY, Nick and JENKINS, Henry, “Participations: Dialogues on the Participatory Promise of Contemporary Culture and Politics”, *International Journal of Communication*, 2014, 8, part 3.
- FUCHS, Christian, *Foundations of critical media and information studies*, New York, Routledge, 2015.
- GARCÍA, Néstor, CRUCES, Francisco, & URTEAGA, Maritza, *Jóvenes, culturas urbanas y redes digitales*, Madrid, Ariel, 2012.
- HASSAN, Robert and PURSER, Ronald E., *24/7: Time and temporality in the network society*, Stanford, Stanford University Press, 2007.

Preprint version chapter of the forthcoming book: Temps et temporalités du Web (2017). Valérie Schafer (Ed.). Collection Intelligences Numériques. Presses universitaires Paris Nanterre.

HERMIDA, Alfred, “Twittering the News - The Emergence of Ambient Journalism”,

Journalism Practice, 2010, 4(3), p. 297–308. doi:10.1080/17512781003640703

HOWARD, Philip N., and HUSSAIN, Muzammil M, “The Role of Digital Media” (Special

Issue: The Upheavals in Egypt and Tunisia), *Journal of Democracy*, 2011, 22(3), p. 35–

48. doi.org/10.1353/jod.2011.0041

HOWARD, Philip N., and PARKS, Malcolm R., “Social Media and Political Change:

Capacity, Constraint, and Consequence”, *Journal of Communication*, 2012, 62(2), p.

359–362. doi.org/10.1111/j.1460-2466.2012.01626.x

JIMÉNEZ, A. C., and ESTALELLA, A, “#spanishrevolution”, *Anthropology Today*, 2011,

27(4), p. 19–23. doi:10.1111/j.1467-8

LANDOW, George P., *Hypertext : the convergence of contemporary critical theory and*

technology, London, Johns Hopkins University Press, 1992.

MANSON, Marshall, “Facebook Zero: Considering Life After the Demise of Organic

Reach”, 2014. Retrieved from [https://social.ogilvy.com/facebook-zero-considering-life-](https://social.ogilvy.com/facebook-zero-considering-life-after-the-demise-of-organic-reach/)

[after-the-demise-of-organic-reach/](https://social.ogilvy.com/facebook-zero-considering-life-after-the-demise-of-organic-reach/)

NASH, Kate,, “Modes of interactivity: analysing the webdoc”, *Media, Culture & Society*,

2012, 34(2), p. 195–210. doi:10.1177/0163443711430758

POELL, Thomas, and DIJCK, José van, “Social Media and Activist Communication”, in *The*

Routledge Companion to Alternative and Community Media, 2015 (Vol. The Route, p.

527–537).

Preprint version chapter of the forthcoming book: Temps et temporalités du Web (2017). Valérie Schafer (Ed.). Collection Intelligences Numériques. Presses universitaires Paris Nanterre.

POSTILL, John, “The multilinearity of protest: understanding new social movements through their events, trends and routines”, 2013. Retrieved from <http://johnpostill.com/2013/10/19/the-multilinearity-of-protest>

RADDON, Arwen, “Timescapes of Flexibility and Insecurity”, *Time & Society Sage*, 2007, 16(1), p. 61–82. doi:10.1177/0961463X07074102

REY, Benjamin, “Facebook posts’ lifetime.. even shorter than you thought!”, 2013. Retrieved from <http://www.wiselytics.com/blog/facebook-posts-lifetime-even-shorter-than-you-thought/>

ROSA, Hartmut, “Social Acceleration: Ethical and Political Consequences of a Desynchronized High-Speed Society”, *Constellations*, 2003, 10(1), p. 3–33. doi:10.1111/1467-8675.00309

SCHULZ, Y, “Time representations in social science”, *Dialogues in Clinical Neuroscience*, 2012,14(4), p. 441–447.

SORA, Carles, *Temporalidades digitales. Análisis del tiempo en los new media y las narrativas interactivas*, Barcelona, UOC Press Comunicació, 2016.

SORA, Carles, *Temporalitats digitals. Aproximació a una teoria del temps cinemàtic en les obres audiovisuals interactives.*, Tesi doctoral, Departament de Comunicació, Universitat Pompeu Fabra, 2015. <http://www.tdx.cat/handle/10803/323896>

Preprint version chapter of the forthcoming book: Temps et temporalités du Web (2017). Valérie Schafer (Ed.). Collection Intelligences Numériques. Presses universitaires Paris Nanterre.

SHIRKY, Clay, “The Political Power of Social Media: Technology, the Public Sphere, and Political Change”, *Foreign Affairs*, 2011, 90(1), p. 28–41. Retrieved from <http://www.jstor.org/stable/25800379>

TUFEKCI, Zeynep, “ ‘Not this one’: Social movements, the attention economy, and microcelebrity networked activism”, *American Behavioral Scientist*, 2013, 57(7), p. 848–870. doi:10.1177/0002764213479369