

# TRANSNATIONAL RADIO RESEARCH AND THE DIGITAL ARCHIVE: PROMISES AND PITFALLS

---

*Sonja de Leeuw*

The beginning of the present century among many things marked the European Commission's recognition of the critical role of digitization in stimulating access to European cultural content. (cf European Commission 2001) Consequently the Commission launched several initiatives to help create the necessary conditions for a so-called *European continuum of digital heritage*.<sup>1</sup> Expectations ran high in terms of access across borders, transnational cultural cooperation and raising awareness of the diversity and richness of European culture. (cf European Commission 2004) Over the years that followed, several European programs provided the financial and cultural frameworks needed to meet these expectations. These programs, to mention just MEDIAPlus, eContentPlus and the ICT Policy Support Program, set prerequisites for transnational collaboration between European nations so as to support common data models and services to which national initiatives could conform. They resulted in digital heritage platforms such as the European Film Gateway, Europeana Sounds, TEL (The European Library) and EUscreen.

The notion of the transnational indeed appears often in the reports and speeches delivered by the European Commission. It reflects a true belief in the role of cultural (digital) content in shaping a common Europe. According to Information Society and Media Commissioner at the time, Viviane Reding, "Information technologies can enable you to tap into Europe's collective memory with a click of your mouse." (European Commission 2006) Later on, the European Commission's communication on the progress of digitization, accessibility and digital preservation of cultural heritage in Europe changed the metaphor of "collective memory with a click of your mouse" into "Europe's cultural heritage at the click of a mouse." (European Commission 2008) This is not to say that the notion of memory has become less important; on the contrary. The wording rather emphasizes how much digitization and preservation

---

**1** | According to the proceedings of the conference *Strategies for a European Area of Digital Cultural Resources: towards a continuum of digital heritage*, held September 15-16, 2004, The Hague.

of Europe's cultural heritage precede the construction of a collective European memory.

As Europe's cultural heritage is stored in archives, the European Commission's efforts in the last decade focused increasingly on establishing a European digital library, combining multicultural and multilingual environments with technological advances. Europeana, the access portal to Europe's cultural heritage, is the most prominent result of these efforts. It was launched in 2008 and has since then developed into a professional network and multi-sided access platform for use and re-use of digital heritage content from across Europe. Europe's present policy reflects a belief in Europeana's potential to strengthen its cultural and digital innovation value for the European community at large through user oriented projects and technological advancement. (Council of the European Union 2016) In this chapter, I will discuss some of the promises and pitfalls faced when doing transnational media research with digital archives. The main focus will be on the implications of the transition of the archive from a storage place of objects and documents to an interface generating digital data.

## ACCESS TO RADIO ARCHIVES

Where is radio in this context? When initiating research from a transnational perspective, Europeana Sounds may well be the first place to look. This project selected and aggregated radio programs from a number of European stakeholders ranging from national libraries such as the Statsbiblioteket Denmark and the British Library in the UK to archives (Netherlands Institute of Sound and Vision) and public bodies, such as Rundfunk Berlin-Brandenburg. The Europeana Sounds collection is publicly accessible through the Europeana website and enables cross collection linking as a result of the technical infrastructure and enriched descriptions of the material, developed within the project. The project's foremost objective is to unlock sound collections from across Europe for a broad audience. As the very title of the project suggests, it mainly is about sound, and not radio per se as a communication medium, which includes production and distribution practices, aesthetics and listener engagement strategies. The radio programs collection on Europeana Sounds is limited indeed.

Why is access to radio archives and radio programs mostly limited and fractured? Constraints follow mainly from national policies in the first place, yet many nations seem to have them in common; as a consequence, there's even less in the way of transnational access. The core issues here are copyright, metadata descriptions and technology. No matter the different legislation rules that nations follow, and the different stages of digitization they are in, there are common issues indeed. Being mostly public bodies, funded with public money, the question becomes pressing how stakeholders are able to address

their public mission to reach out to the public and to transfer knowledge about their holdings, whilst copyright legislation limits access to in-house consultation only. Therefore, stakeholders often struggle with the balance between preservation and dissemination, with a focus on preservation rather than on usability.<sup>2</sup> As Knapskog (2010: 23) argues, this is very much an area of policy in the making indeed on issues of access (to whom), commercialization (in relation to public service ideals), and the public interest (how best to be served?). As a consequence, we need to be aware how much the availability of digital sources may act as the shaper of the research design, whilst the availability in turn is the result of pre-selection by archivists (Corner 2003: 277).

In this context it is important to acknowledge the need for close cooperation between archives, libraries, broadcasters and researchers for several reasons. Researchers can help prioritize digitization and online access and even help to describe the content of specific programs, especially with radio, where lots of information is simply unknown. Moreover, digitization allows for a deeper engagement by users with the digitized content and thus for increasing usability. In order to support stronger engagement with digital heritage, contextualization is key (De Leeuw 2012: 7; Snickars 2012: 36); here researchers come in again providing signifying practices around digitized content. Finally, such collaboration is essential to carry out transnational research. Digital access across borders would facilitate such transitional research, and at the same time serve the policy of the European commission to open up European cultural heritage for all European citizens. Ironically, European money seems to be needed to construct such transnational radio research networks and projects (such as with the TRE project) and support standardization and harmonization of existing data models and technical services into interoperability. In the meantime, a probably more realistic option would be for stakeholders to confine to the Europeana data model that would allow for a much easier exchange of content. As national rights legislation remains restrictive, this would call for a harmonized intellectual property rights (IPR) model, under the current EU copyright framework for instance, which was already described in great detail in the 2001 Infococ Directive on Copyright in the Information Society.<sup>3</sup> The EU intends to use this existing framework to grant access for educational, scientific and research purposes on a large scale; it is possible, yet according to the current legal framework, not mandatory. Another approach would be to strive for a “digital

---

**2** | Constraints have been discussed in a panel *National archives' transnational archive agendas*, Copenhagen May 28, 2015. Panellists were Bas Agterberg (Netherlands Institute of Sound and Vision), Carl Davies (BBC), Jeroen Depraetere (EBU), Ditte Laursen (State Media Archive Denmark), and Paul Wilson (British Library).

**3** | See [http://ec.europa.eu/internal\\_market/copyright/copyright-infso/index\\_en.htm](http://ec.europa.eu/internal_market/copyright/copyright-infso/index_en.htm) (accessed January 11, 2017).

commons” on the Internet, a non-commercial virtual arena for information, education, and entertainment (the commonly agreed on core tasks of public service), which was followed in the BBC’s Creative Archive Project (Knapskog 2010: 24).

## THE ARCHIVE IN TRANSITION

So far we have discussed the European policy context of digital curation as well as the core constraints of accessing digital heritage collections, while pointing to the notion of the digital library as a key place for content storage. The digital library basically is a digital archive, consisting of digital artefacts that in one or another way represent the (construction of the) past. From a theoretical point of view digital heritage mediates between past and present, between history and memory in the making, as Nanna Bonde-Thylstrup will further elaborate in her contribution in this volume. It has the potential to bridge existing academic history, constructed with the help of traditional sources, with popular memory, based upon stories about the past that are available in the public domain, as communication studies scholar Craig Robertson suggests (2011: 5). Digital libraries thus combine history and memory and in doing so they create a culture of memorizing that supports the continuous production of memory.<sup>4</sup> However, we need to acknowledge that digital heritage is not the equivalent of memory. The act of memorizing takes place whenever heritage is being transformed “into the cultural intermediary of memory” as Zinaida Manzuch, a library and communication studies scholar (2009: 6) puts it. In other words, it needs to be made meaningful to its users to become a part of memory.

Digitization per se seems to have further supported the production of memory, making more room for the so-called “archival turn” (Robertson 2011: 1). With the archival turn, the archive entered a stage of transition from storage to curation, emphasizing the role of the archivist in the formation of the archive. This shift has implications for the research practice, the production of knowledge and on how to account of the historical sources as records that contain data. This holds even more for the digital archive. In the words of museum researchers Fiona Cameron and Sarah Kenderdine, the digital archive involves “taking up the challenge to address the shifting paradigms of knowledge and power.” (2007:3) The archive in transition then refers to the dynamic character of digital heritage as it is being continuously redefined in relation to its archivists and users, who both share acts of agency.

---

4 | Hoskins in his keynote address, ‘Media, memory and the connective turn’, *EUScreen International conference*, Rome, October 7, 2010. (cf. Hoskins 2004)

Let's take a closer look at the role and function of the archivist. Archivists make decisions every day as to what to keep and catalogue, and what not, how to order and classify. No matter how much budget limits, staff resources and storage space influence these decisions, they are not just technical, rather political as sociologist Richard Harvey Brown and information specialist Beth Davis-Brown describe (1998:18). Their argument centers on the role of the archive in preserving a shared past, "the received truths of tradition", that build national memory and identity (Brown/Davis-Brown 1998: 19). Professor of Archive Science Eric Ketelaar (2001: 131) convincingly argues how the meaning of archives could only be understood by deconstructing their "tacit narratives." The situatedness of archival work within historical and cultural contexts not only assigns the archivist agency, also it points to informed processes of preserving and archiving. That is why Ketelaar (2001: 133) coined the term "archivalization", meaning "the conscious or unconscious choice [...] to consider something worth archiving." Archivalization thus precedes archiving; the procedures involved in archiving impact on the hidden narratives that the records contain. Accordingly archiving is not just preservation; rather it is an act of cultural and historical knowledge construction. The tacit narratives are therefore informed by the power of those in charge and constitute the archivalization and formation of the archive (examples are discussed in this volume by Carolyn Birdsall in discussing the history of radio archives and Alexander Badenoch when he addresses the preservation of a transnational radio archive).

Building on Derrida, Verne Harris (2007) discusses the archive and archiving not only as culturally and historically bound, but also as fundamentally political; the result of power relations. As the chief archivist at the Nelson Mandela Foundation he discovered not all voices are being archived. In this context the issue of community archives as addressed by archivist Terry Cook (2011) is relevant. He advocates the role of community archives that initiate the inclusion of unheard community voices and hidden community records in the broader (digital) archive (2011: 183). This way, these community records become part of the archive at large and eventually of historical investigation and popular memory (cf. Bastian /Alexander 2009; Joost van Beek's contribution in this section zooms in on one such initiative).

When doing national or transnational research with digital radio archives, it becomes imperative to be able to deconstruct the discursiveness of records and archives. This would call for transparency at many levels, something that is hard to find in existing archival and curatorial practices. What stands out from this discussion though is the apparent need for contextual information, so as to be able to value the historical source in the social-cultural context of its time. This too remains a dynamic practice for researchers, as valuing depends on the historical issues at stake and the lens through which these are addressed. Programs at the time of production do not think of themselves as historical

valuable and some media production even is pre-historic as with radio in the 1920s and television in the 1950s when recording technologies did not yet exist. (Scannell 2011: 44)

## CONTEXTUALIZATION

Ketelaar's conceptualization of the archive as a site that contains multiple meanings waiting to be (de)constructed, by definition involves contextualization of the archive and the archival record alike. To some extent, context comes with the record, mainly in the form of metadata, thesaurus terms and tags, all added by the archivist. Yet for researchers answers to the who, what, where, when, and why of source criticism remain a preliminary condition for contextualization and historical interpretation of the records (Fickers 2012: 25).

Contextualization in the digital age allows for shared agency among archivists, researchers and general users, acknowledging the dynamic nature of digital archives that is self-evident and speaks to a continuous revisiting of archival data. (cf. Noordegraaf 2011) Computer scientist Isto Huvila (2008: 34) refers in this context to the participatory archive involving the notion of decentralized curation, radical user orientation and a both broader and deeper contextualization of records and the entire archival process. Still, this is not common practice; instead, curatorial authority remains assigned to archivists and in some instances to researchers alike, for example in collaborative work on virtual exhibitions and portals. Examples are the virtual exhibitions on the EUScreen portal, or Europeana Remix World War One.<sup>5</sup>

The mutual relationship between curatorial and humanities research work is the focus of the work of archive scholar Arjun Sabharwal, more specifically of his analysis of curatorial and research practices: "Without a robust and trustworthy repository, there is no reliable scholarship in the digital humanities, and without a well-supported digital humanities community, there is little context for digital curation." (2015: 25) Again, metadata (data about data) are key here and usually archives conform to the generally accepted Dublin Core metadata schema and/or the Linked Open Data model of Europeana. Such common metadata schemas and models are a necessary condition for digital humanities researchers to search across different digital collections and find relations between collections or records, not known as such before. Europeana Sounds again is an example where this works. Consequently, it allows us to pose new research questions and explore new historical pathways whilst using digital

---

**5** | For Euscreen VE's, cf. <http://oldportal.euscreen.eu/exhibitions.html>. Voor Europeana Remix cf. <http://remix.europeana.eu>.

technologies and methods. These will be briefly discussed as Digital Humanities below.

Media scholar Wolfgang Ernst (2004: 46) goes so far as to claim that without context the archive is just a storage space and has no memory at all, as each narrative (we could read this in the sense of context or added information, SdL) comes from outside, as we also discussed with the help of Ketelaar above. For Ketelaar (2001), there are hidden stories in the archive and in deconstructing these stories, the role of the archivist as an agent of knowledge production is crucial. Ernst is less focused on curatorial practices than on the spatial and temporal relations of the archive in transition. He believes archival objects (he refers to the objects per se, without metadata, thesaurus terms and tags) do not tell stories: “only secondary narratives give meaningful coherence to its discontinuous elements” (2004: 48). The archive is a space or place, dealing with storage. Memory only comes into being by adding context and in dealing with digital collections this would involve computerized data mapping and data processing so as to create interoperability between collections. Hence data become temporally rather than spatially locatable and are subjected to pattern recognition algorithms. (Ernst 2004: 51-52) There is a challenge here ahead of us to deconstruct these algorithms, but practically this will turn out to be a mission impossible for humanities researchers and curators alike, as we will further discuss by the end of this chapter.

Digital contextualization already faces immense challenges according to media scholar Pelle Snickars (2012: 36). He points to the proper question of how to deal with the wealth of available digital data, as these could no longer be analyzed and searched in traditional ways. Snickars anticipates a more dynamic understanding of digitized heritage, taking advantage of the opportunities of analyzing data with digital media (2012: 39). This takes us to the discipline, if that is what it is, of Digital Humanities.

## DOING DIGITAL HUMANITIES

Historian Joshua Sternfeld (2011: 64) compares various search systems using formal lists (for guided searches), tag clouds (indicating the frequency of cited terms), and user tags in order to demonstrate how search interfaces assist in the contextualization of retrieved information. The importance of the role of information architecture in archival public services, outreach, and digital curation is widely acknowledged (Sabharwal 2015: 93). After all, the technology of the interface allows for a diverse, though limited, number of navigation paths, finding hypertextual relationships and therefore ways of producing knowledge. In order to search across collections, and even more so across collections transnationally, meaningful links need to be created. Elsewhere, I have suggested

the notion of connectivity as a way of looking at the interface as an intersection of digital nodes in the archive that appear once we start searching (De Leeuw: 2011). Within the Digital Humanities, these nodes themselves are the primary objects of reconstruction and interpretation. “Here it is no longer a question of reactivating objects, but of relations.” (Ernst 2013: 83)

Digital Humanities indeed is about researching these relations, about building and analyzing tools and platforms for humanities research, about curating online collections and mining large cultural datasets. It involves both qualitative and quantitative methods and cuts across a diversity of disciplines. In presenting research results, it is also about digital storytelling and visualizations (Burdick et al. 2012: 123). An example is Radio Garden, the online exhibition that allows users to explore an interactive globe filled with radio’s past and present (<http://radio.garden>). Another one is a Virtual Exhibition on the history of Radio Luxembourg/RTL.<sup>6</sup>

Digital Humanities is thus concerned with the intersection of computing and the discipline of the humanities and preferably is self-reflexive. As Bakhshi et al. emphasize, humanities researchers have to offer a “fundamental understanding of how technologies transform and re-order knowledge by exploring how information is collected, stored and retrieved.” (Bakhshi et al. 2009: 6) How would this work when doing transnational radio research with digital archival material? Elsewhere we argued for media archaeology as an approach to think about digital historical media research. (Van Gorp/De Leeuw/Van Wees/Huurnink 2015)

Media archaeology by definition is self-reflexive; a method of intellectual inquiry that stresses non-human agency, that is to say it focuses on the deep material structure of media technology. (Parikka 2012: 12) Media scholars Erkki Huhtamo and Jussi Parikka (2011) have put media archaeology firmly on the research agenda, leading the way of historiography in the digital age. They claim that media archaeology is not only a historiography of technologies from past to present, rather it comprises an inquiry into the discursive and the material manifestations of culture. The archive is a key site where media archaeology takes place as nowadays it is also a key site of digital software culture and, as a result, media archaeology relates to Digital Humanities. (Parikka 2012: 15) Wolfgang Ernst (2011: 239) explicitly understands media-archaeology as an alternative method to media historical narratives and stresses that media themselves “become active ‘archaeologists’ of knowledge.” Or, to put it differently, digital software produces cultural articulations.

Following Huhtamo and Parikka (2011), radio research with digital archives would involve an investigation of the material structures of technologies used to produce digital historical radio data as well as an investigation into the cura-

---

6 | The VE is developed by the University of Luxembourg: [http://h-europe.uni.lu/?page\\_id=4767](http://h-europe.uni.lu/?page_id=4767)

torial practices of the radio archive. As we argued above, this is to be considered another type of contextual information, necessary to value the provenance of research data at the main levels of their production. Ernst (2011: 249) already points to the competence in informatics researchers would need in the digital age to reach the sub-semantic strata of media culture as well as the non-cultural dimensions of the technological regime making cultural analysis calculable. This is but one of the big challenges we now face.

## THE TRANSNATIONAL AND THE DIGITAL: CHALLENGES

I started by referring to the EU policies on digital heritage, acknowledging the importance of access to Europe's cultural heritage at large. Creating access is vital so as to acknowledge that remembering as a continuous process takes place in a dynamic interaction between present and past, allowing for a diversity of memory narratives. Creating access across borders is a preliminary condition for searching and researching the commonalities and differences among European radio and to understand how we remember radio and why we remember it the way we do. Apart from access, we also need much more *contextualisation*, which by definition involves collaborative work between archivists and researchers. Conditions for collaborative projects need to be created from both ends. Once working together in such projects, *participatory indexing* (tagging) by researchers would additionally enrich existing metadata and thus allow for further research. On top of that, I advocate the approach of *media archaeology* outlined above to investigate the provenance of the digital data in the first place, yet definitively also of the technology used to generate these digital data. This speaks to collaborative work between archivists, media researchers and computer scientists. Only then we will be able to offer new perspectives of the study of radio transnationally.

## REFERENCES

- Bakhshi Hasan/Schneider, Philippe/ Walker, Christopher (2009): "Arts and Humanities Research in the Innovation System: The UK Example," *Journal of Cultural Science*, 2/1, pp. 1-23: <http://www.cultural-science.org/journal/index.php/culturalscience/article/view/27/54>.
- Bastian, Jeannette A./Alexander, Ben (eds.) (2009): *Community Archives: The Shaping of Memory*. London: Facet.
- Brown, Richard Harvey/Davis-Brown, Beth (1998): "The making of memory: the politics of archives, libraries and museums in the construction of national consciousness," In: *History of the Human Sciences*, 11:4, pp. 17-32.

- Burdick, Anne/ Drucker, Johanna/Lunenfeld, Peter/ Presner, Todd/ Schnapp, Jeffrey (2012): *Digital\_Humanities*. Cambridge (MA): The MIT Press.
- Cameron, Fiona/Kenderdine, Sarah (2007), "Introduction." In: Fiona Cameron/Sarah Kenderdine (eds), *Theorizing Digital Cultural Heritage. A Critical Discourse*. Cambridge (MA): The MIT Press, pp. 1-15.
- Cook, Terry (2011): "'We Are What We Keep; We Keep What We Are': Archival Appraisal Past, Present and Future." In: *Journal of the Society of Archivists*, 32/2, pp. 173-189.
- Corner, John (2003): "Finding data, reading patterns, telling stories: issues in the historiography of television." In: *Media, Culture & Society*, 25, pp. 273-280.
- Council of the European Union (2016): Council conclusions on the role of Europeana for the digital access, visibility and use of European cultural heritage, adopted by the Council at its 3471st meeting held on May 30-31, 2016.
- De Leeuw, Sonja (2012): "European Television History Online: History and Challenges." In: *VIEW. Journal of European Television History and Culture* 1/1, pp. 3-11.
- Ernst, Wolfgang (2004): "The Archive as Metaphor. From Archival Space to Archival Time." In: *Open*, 7, pp. 46-53.
- Ernst, Wolfgang (2011): "Media Archaeography: Method and Machine versus History and Narrative of Media." In: Erkki Huhtamo and Jussi Parikka (eds) (2011): *Media Archaeology: Approaches, Applications, and Implications*, Berkeley-Los Angeles-London: University of California Press, pp. 239-255.
- Ernst, Wolfgang (2013): *Digital Memory and the Archive*. *Electronic Mediations*, vol. 39. Minneapolis: University of Minnesota Press.
- European Commission (2001): *Lund Action Plan* (<http://www.cordis.lu/ist/digicult/lund-principles.htm>).
- European Commission (2004): *Making Citizenship Work: Fostering European Culture and Diversity through Programs for Youth, Culture, Audiovisual and Civic Participation*, (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52004DC0154>)
- European Commission (2006): *European Commission steps up efforts to put Europe's memory on the web via a European Digital Library* (<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/06/253>)
- European Commission (2008): *Europe's cultural heritage at the click of a mouse: progress on the digitisation and online accessibility of cultural material and digital preservation across the EU*, ([http://ec.europa.eu/information\\_society/activities/digital\\_libraries/doc/communications/progr\\_ess/communication\\_en.pdf](http://ec.europa.eu/information_society/activities/digital_libraries/doc/communications/progr_ess/communication_en.pdf)).
- Fickers, Andreas (2012): "Towards a new digital historicism? Doing history in the age of abundance," In: *VIEW. Journal of European Television History and Culture* 1:1, pp. 19-26.
- Harris, Verne (2007): *Archives and Justice. A South African Perspective*. Chicago: Society of American Archivists.
- Hoskins, Andrew (2004): "Television and the collapse of memory." In: *Time Society*, 13, pp. 109-127.

- Huhtamo, Erkki /Parikka, Jussi (eds) (2011): *Media Archaeology: Approaches, Applications, and Implications*, Berkeley-Los Angeles-London: University of California Press.
- Huvila, Isto (2008): "Participatory Archive: Towards Decentralized Curation, Radical User Orientation and Broader Contextualization of Records Management." In: *Archival Science* 8/1, pp. 15-36.
- Ketelaar, Eric (2001): "Tacit Narratives: The Meaning of Archives." In: *Archival Science* 1/2, pp. 131-141.
- Knapkog, Karl (2010): "Archives in Public Service." In: *Critical Studies in Television*, 5/2, pp. 20-33.
- Manzuch, Zinaida (2009): *Proceedings: Cultural Heritage on line. Empowering users: an active role for user communities*, Fondazione Rinascimento Digitale, ([https://www.researchgate.net/profile/Zinaida\\_Manuch/publication/268056977-Digitisation\\_and\\_communication\\_of\\_memory\\_from\\_theory\\_to\\_practice/links/547e00980cf241bf4b5b9e01.pdf](https://www.researchgate.net/profile/Zinaida_Manuch/publication/268056977-Digitisation_and_communication_of_memory_from_theory_to_practice/links/547e00980cf241bf4b5b9e01.pdf)).
- Noordegraaf, Julia (2011): "Who knows television? Online access and the gatekeepers of knowledge." In: *Critical Studies in Television* 5/2 , pp. 1-19.
- Parikka, Jussi (2012): *What is Media Archaeology?* Cambridge: Polity.
- Robertson, Craig (2011): "Introduction: Thinking about Archives, Writing about History." In: Craig Robertson (ed.), *Media History and the Archive*, London: Routledge, pp. 1-7.
- Sabharwal, Arjun (2015): *Digital Curation in the Digital Humanities. Preserving and Promoting Archival and Special Collections*. Oxford: Elsevier Science & Technology-Chandos Publishing.
- Scannell, Paddy (2011): "Television and History: Questioning the Archive." In: Craig Robertson (ed.), *Media History and the Archive*, London: Routledge, pp. 40-54.
- Snickars, Pelle (2012): "If Content is King, Context Is Its Crown." In: *VIEW. Journal of European Television History and Culture* 1/1, pp. 34-39.
- Sternfeld, Joshua (2011): "Archival Theory and Digital Historiography: Selection, Search, and Metadata as Archival Processes for Assessing Historical Contextualization." In: *The American Archivist: Fall/Winter*, 74/2, pp. 544-575.
- Van Gorp, Jasmijn/de Leeuw, Sonja/Van Wees, Justin/Huurnink, Bouke (2015): "Digital media archaeology: uncovering the digital tool *AVResearcherXL*." In: *VIEW. Journal of European Television History and Culture* 4/7, pp. 38-53.
- Williams, Andy (2016): *Hyperlocal News in the UK: Its Current State and Future Prospects* (<http://impress.press/news/hyperlocal-news-in-the-uk.html>).

