University of Groningen

Unlocking multiple histories of amateur media

Aasman, Susan

Published in:
Screen

DOI:
[10.1093/screen/hjaa011](https://doi.org/10.1093/screen/hjaa011)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2020

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Aasman, S. (2020). Unlocking multiple histories of amateur media: from micro- to macro-histories. *Screen*, 61(1), 157-166. <https://doi.org/10.1093/screen/hjaa011>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Unlocking multiple histories of amateur media: from micro- to macro-histories

SUSAN AASMAN

Over the last century, amateur media has evolved from representing somewhat marginal practices into becoming a pervasive force in today's mainstream media culture. Without doubt it has become a crucial and defining feature of our everyday lives, with producing and sharing personal, informal audiovisual content now routine. Video cameras – whether standalone or embedded in communication devices like smartphones – have become instrumental in building rich visual family archives. These born-digital sources add to the already plentiful home-movie archives built on a century of film and video productions, which are now gradually being digitized. Ideally a history of home movies should be able to chart how people presented their lives in certain ways at particular moments in time, and how technological, economic, social and cultural factors influenced these choices. As such, amateur media has moved from the periphery of theoretical approaches and gained a far more visible role in media studies, including media history.

Back in 1986 Fred Camper pleaded for a history of home movies that acknowledged it as a phenomenon with important and distinct characteristics: 'its own varied set of stylistic motifs, even its own aesthetic, moral and cultural implications'.¹ His plea still resonates today, although I would counter the implicit suggestion that there is only one history to tell. On the contrary, amateur media is a complex phenomenon and has always represented a very diverse field of practices, from cine club members developing their skills, to parents recording future

¹ Fred Camper, 'Some notes on the home movie', *Journal of Film and Video*, vol. 38, no. 3/4 (1986), pp. 9–14.

memories or artists experimenting with consumer media technologies, but also including YouTubers sharing their uploads. Indeed, multiple histories have still to be written.

Although historical research on amateur media has become by now a rich and established scholarship, the research on twenty-first century amateur media makers has only just started. It would be interesting to see if and how recent developments inspire new research questions and alternative research methods. How, for instance, do different sets of consumer media technologies and changing cultural and social conventions shape the different amateur media cultures, from hobbyists active at the cine club to content creators active on YouTube? Indeed, is today's ubiquitous mode of audiovisual communication on social media platforms comparable to early twentieth-century home movies? Thus far, long-term diachronic perspectives or synchronic transnational approaches have been embedded in case studies enabling detailed micro-histories of small datasets or individual home movies, while extensive analysis of large datasets of digitized home movies, home videos and born-digital, user-generated content has been hardly possible. As Annamaria Motrescu-Mayes and I argue in our book, *Amateur Media*:

There is an urgency to circumscribe, re-define and develop a critical language able to cope with the rapid shift between what was conventionally categorized as private and personal – i.e. home movies watched and distributed as 'home entertainment' – and what has become in the digital space a public, global privacy where the image-maker adopts the amateur's creatively liberating status.²

Yet it is not just developing a critical language but also exploring critical methodologies that enable researchers to deal with challenges that are related to changes in scale and scope. Historian Ian Milligan connects this challenge of scale to the sheer amount of available data that are 'readable' only with digital tools.³ This challenge of scope he relates to the difficulties of dealing with archived, born-digital data, such as user-generated content on social media platforms like YouTube. It seems to be the right moment to develop new interdisciplinary scholarship that builds on the availability of a multitude of digital data repositories and on the emergence of a wide variety of digital tools.

In this essay my focus will be on the opportunities provided by digital humanities for understanding transformative changes in the ways in which personal visual narratives or domestic images have been produced and shared in different contexts. Digital humanities has turned into a broad field that develops computational tools, methods and approaches within humanities research that can be employed across a range of research questions and disciplines. One of its strengths is the acknowledgement that there is a need for close collaboration between media scholars and computer scientists, even though there is a certain tension in this development. According to digital humanities scholar Stephen Ramsay, there are two 'conversations' going on: one is about

2 Annamaria Motrescu-Mayes and Susan Aasman, *Amateur Media: From Home Movies to Participatory Media* (London: Routledge, 2019).

3 Ian Milligan, 'Historiography and the web', in Niels Brügger and Ian Milligan (eds), *The Sage Handbook of Web History* (London: Sage, 2018), pp. 3–13.

- 4 Stephen Ramsay, 'Humane computation', in Matthew K. Gold and Lauren F. Klein (eds), *Debates in the Digital Humanities* (Minneapolis, MN: University of Minnesota Press, 2016), p. 527.
- 5 Huub Wijffjes, 'Digital humanities and digital media: a challenge for historical newspaper research', *Tijdschrift Voor Mediageschiedenis/Journal for Media History*, vol. 20, no. 1 (2017), p. 6.
- 6 Lev Manovich, 'Cultural analytics, social computing and digital humanities', in Mirok Tobias Schäfer and Karin van Es (eds), *The Datafied Society: Studying Culture through Data* (Amsterdam: Amsterdam University Press, 2017), pp. 55–69.
- 7 Lev Manovich, 'Can we think without categories', *Digital Culture and Society*, vol. 4, no. 3 (2018), pp. 17–29.
- 8 See for instance, Editorial Special Issue Audiovisual Data in Digital Humanities, *VIEW: Journal of European Television History and Culture*, vol. 7, no. 14 (2018), <<https://www.viewjournal.eu/articles/abstract/204/>> accessed 29 November 2019.
- 9 Taylor Arnold and Lauren Tilton, 'Distant viewing: analysing large visual corpora', *Digital Scholarship in the Humanities*, vol. 0, no. 0 (2019), <<https://www.distantviewing.org/pdf/distant-viewing.pdf>> accessed 29 November 2019.

computer science's belief in 'best practices, design patterns, measures of statistical significance, and concerns about extensibility, reproducibility, fault-tolerance, and design that anyone working with digital materials needs to know and heed'; the other is informed by the humanities' drive to understand 'the nature of the human condition and its artistic and historical and historical artifacts'.⁴ However, as media historian Huub Wijffjes reminds us, there is an opposition between those who believe that 'history should hermeneutically focus on understanding and contextualizing unique events versus those who aim to analyze structure and patterns based on quantifiable units and data'.⁵

Thus far, much of this debate has focused on written text or on language, while the number of studies that attempt to deal with audiovisual material at scale is still limited. There are important studies such as the projects initiated by Lev Manovich, who developed 'cultural analytics', a method of using computational tools in the analysis of large visual cultural datasets.⁶ His work shows new pathways to applying quantitative methods while simultaneously maintaining the strength of the humanities in doing justice to the variability and diversity of cultural artefacts. More recently he reinforced his plea for cultural analytics by suggesting that today's digital culture, in which everyday media production and distribution is driven by algorithms, should also be analysed by similar methods. Such 'media analytics' should be able to deal with the diversity, structures and dynamics of our culture.⁷

What I appreciate about this cultural or media analytics approach is that it evidences a great interest in both professional and vernacular media expression, in historical and contemporary cultural artefacts and in quantitative and qualitative approaches. In addition, it stimulates media scholars to deal with the emergence of a growing number of digital media archives, and to seriously explore the possibilities and constraints inherent in applying computational methods. Indeed, recent research shows that the field of media and film studies is becoming far more aware of not just the challenges involved but also the possibilities.⁸ There is a growing confidence that experimenting with new tools and large-scale datasets, acquiring experience in both close and distant digital reading techniques, combined with a critical and reflective awareness of what such tools can and cannot do, will be beneficial for the field. Lauren Tilton and Taylor Arnold, for instance, recently argued that 'distant viewing' – analysing large collections of visual materials applying computational methods – should be perceived not only as automatic processing through an algorithm but rather as an 'active process', always culturally and socially constructed.⁹ In other words, *viewing* visual materials, done either by a person or a computer, is always an active process of interpretation, but one that should be based on an explicit framework that enables meaningful collaboration with media scholars and computer scientists.

As a media historian interested in historical and contemporary amateur media practices, I will discuss two digital humanities projects I am

10 The CLARIAH project, now CLARIAH Plus, contains not only the domain of audiovisual media but also includes structured data and textual data.

11 For an evaluation of this project, see Susan Aasman, Liliana Melgar Estrada, Tom Slootweg and Rob Wegter, 'Tales of a tool encounter: exploring video annotation for doing media history', *VIEW: Journal for European Television History and Culture*, vol. 7, no. 14 (2018), pp. 73–87.

working on, and situate my experiences within this debate about the new methodologies. Although the two projects discussed here have different research goals, they both raise questions related to institutional and non-institutional infrastructures harbouring cultural heritage, and the application of digital tools and methods required to analyse large sets of digitized and born-digital audiovisual data.

How might we reconstruct the emergence of a genre in a large dataset of audiovisual material? This was the main goal of the exploratory research project 'Me and Myself: tracing first person in documentary history in AV-collections', funded by and embedded in an ambitious ongoing national project in the Netherlands called the Common Lab Research Infrastructure for the Arts and Humanities (CLARIAH).¹⁰ The aim of this collaborative initiative of archives and universities is to design, construct and exploit a sustainable research environment in which (media) researchers can access different (types of) collections, integrating digital research resources with innovative tools to process them in virtual workspace called the 'MediaSuite'. The idea is that with an integrated MediaSuite, the annoying experience of having no access to source material, because it is copyrighted or scattered across different repositories, can be avoided. Entering this integrated research environment means that media historians are able to search, annotate, analyse and enrich large digitized audiovisual and contextual collections from archives and other cultural heritage institutions across the Netherlands. The main suppliers for audiovisual material – which includes amateur film and video – are the Netherland Institute for Sound and Vision and the Eye Filmmuseum Amsterdam.

The 'Me and Myself' project was designed to test the suitability of a web-based video annotation tool for media historical research.¹¹ The goal was to trace a transformation from the traditional objective documentary as a fair and fact-based genre towards one with an appreciation for a more personal and subjective style. The practice of documentary filmmakers turning the camera – sometimes even literally 180 degrees – on their own lives came rather late in documentary history compared to other art forms. Since the nineteenth century, the idea of self-portraiture and autobiography in literature but also in photography has been quite common as a means of self-identification, introspection and reflection. It is only at the end of the 1950s and the start of the 1960s that we can see a change in perspective within documentary filmmaking, albeit in small circles of self-proclaimed amateurs and/or avant-garde artists. Some three decades later, in the early 1990s, first-person documentaries had become a dominant subgenre within documentary filmmaking. Around that time it became a 'requirement' to produce subjective, intimate and exposing forms of self-expression.

Different media scholars have attempted to locate and explain this profound transformation from the traditional objective documentary as

12 Susan Aasman, 'Broadcast yourself: new media technology and the democratisation of truth and trust', in Marcel Broersma and Chris Peters (eds), *Retelling Journalism: Conveying Stories in a Digital Age* (Leuven/Paris/Walpole, MA: Peeters, 2014), pp. 47–64.

13 For an overview, see Liliana Melgar Estrada, Eva Hielscher, Marijn Koolen, Christian Olesen, Julia Noordegraaf and Jaap Blom, 'Film analysis as annotation: exploring current tools and their affordances', *Moving Image Journal*, vol. 17, no. 2 (2017), pp. 40–70.

14 See, for instance, the inventory of tools for audiovisual annotation included in *ibid.*

15 Barry Salt, *Film Style and Technology: History and Analysis* (London: Starword, 1992). His datasets are downloadable from <www.starword.com> accessed 29 November 2019.

16 See *Cinemetrics*, <www.cinemetrics.lv> accessed 29 November 2019.

17 See *Filmcolors: an Interdisciplinary Approach*, <<https://filmcolors.org/2018/03/08/vian/>> accessed 29 November 2019.

18 See *Media Ecology Project*, <<http://mediaecology.dartmouth.edu/wp/>> accessed 29 November 2019.

fair and factual towards an appreciation of a more personal, confessional or autobiographical style. Elsewhere I have argued that these developments were part of a rather slow change that emerged in the 1960s, grew stronger in the 1970s, before becoming mainstream in the 1990s.¹² The empirical basis for this research was a restricted set of well-known documentaries. With the help of a digital humanities approach, I wanted to test this thesis on a large corpus of Dutch documentaries that were produced for Dutch public broadcast between 1960 and 1990. The second goal was to gain a better insight into the use of video annotation as a research tool for analysing new and related developments, like the relation between this emergence of a confessional TV culture and the early history of DIY confessional culture on platforms such as YouTube.

As mentioned, the main tool was video annotation, which has been around for a while. In essence it is a method that enables a user to segment a digital moving-image file and add annotations (metadata) to these time-coded segments.¹³ This technology has been applied in several fields, including communication studies, oral history, video ethnography and conversational analysis.¹⁴ Since the 2000s video annotation tools have had a growing influence on the field of film and media studies. Of course scholarly annotations, done manually, had been important in analysing audiovisual material; but with the arrival of a wide variety of digital video annotation tools, different opportunities for analysing time-based media opened up. Initially video annotation built on earlier work, such as that of film scholar Barry Salt, who in the early 1970s had pleaded for a statistical method of analysing style in film. In his work he emphasized the importance of counting and labeling shots.¹⁵ This tradition was continued by later film historians such as Yuri Tsvian, who developed Cinemetrics, a computational tool that could segment and label films and store the results in a web-based database.¹⁶ More recently, the Austrian Adelheid Heftberger introduced the Digital Formalism project (2007–10), applying video annotation as a tool for a formal study of the films of Dziga Vertov. Currently there are multiple projects in progress: in Switzerland Barbara Flückiger is leading a large-scale, computer-assisted qualitative analysis of film colours of approximately 400 films, including the use of a video annotation tool;¹⁷ in the USA the Media Ecology Project, directed by Mark Williams, aims to be a digital resource that gives researchers access to digitized archival moving-image collections, with the expectation that a 'fluid contribution of metadata and other knowledge' will flow back to the archival and research communities. The system employs a Semantic Annotation Tool (SAT), a standards-based, drop-in annotation tool for web-native video.¹⁸

All the projects mentioned here require a certain level of reductionism in order to be able to compare or count in an automated fashion. In the 'Me and Myself' project we struggled with this formalist approach. Our type of material turned out to be a challenging genre for an approach that favours strict shots as 'units of analysis', since in (autobiographical) documentaries the shot is not always the main unit. On the contrary,

- 19 Bill Nichols, *Introduction to Documentary*, 2nd edn (Bloomington, IN: Indiana University Press, 2010), p. 143.

- 20 Aasman et al., 'Tales of a tool encounter'.

- 21 This project is funded by the CIT/RIS, and the Centre of Digital Humanities, University of Groningen. Collaborators on the project are junior researcher Rob Wegter, and data scientists Dimitrios Soudis and Nicoletta Giudice.

many of the first-person narratives we selected for manual annotation 'evolve, change, consolidate, and scatter in unpredictable ways', as Bill Nichols would describe it.¹⁹ As Nichols furthermore states, documentaries are often a combination of different media formats: fictional, non-fictional, cinematic and non-cinematic. This means that while one documentary may use the diary form or the amateur home mode to convey a story or point of view, another may draw from journalistic strategies. Eventually we had to acknowledge that many autobiographical documentaries are not obvious candidates for a Cinematic-like (or formalist) analysis, but instead need an approach that accommodates their complex textual features. As a consequence, a more hermeneutical approach was tried, by applying the concept of *unit of interest* in the video annotation.²⁰ A *unit of interest* indicates a portion/unit of a documentary where the aspects under research are manifested through (a combination of) images, sound or spoken commentary, which can be recognized as 'traits' of an autobiographical and confessional approach. This approach gave us more room to deal with the complexities of material that refuses to adapt to restrictive forms and formats.

The downside of the chosen approach was that it became much harder to scale up annotations, even raising the question of whether it would ever be possible to agree on guidelines for which categories might be used to tag and segment this type of documentary. It also made us aware of a certain hesitance we felt towards reductionism inherent in distant readings.

The awareness that applying a certain level of formalist mapping to contemporary amateur media can be a challenge was instrumental in designing the methodology for another project aimed at reconstructing the role of amateur media makers in the early years of YouTube. The goal of 'Intimate histories: a web-archaeological analysis of YouTube's early history (2005–2007)' is to revisit the advent of YouTube, when it was the hotspot for people who wanted to experiment with new media technologies to make and share audiovisual content.²¹ At the platform new genres emerged, including remixes, pranks, tutorials and intimate personal vlogs. A new generation of users entered this platform, embracing the potential to gain a worldwide audience. But how did early amateur users on YouTube appropriate the affordances of the computer-embedded media technologies such as the webcam? How did it change the tradition of the amateur home mode? The hypothesis is that many early YouTube videos indicate a new type of media use that disrupted and ultimately transformed earlier social, aesthetic and cultural conventions on how, what and when to use the camera in domestic areas or in private moments.

One of the issues in researching the early years of YouTube is the question of how to build a solid historical corpus; more important is the

22 Roy Rosenzweig, 'Wizards, bureaucrats, warriors and hackers: writing the history of the internet', in *American Historical Review*, vol. 103, no. 5 (1998), pp. 1530–52.

23 Robert Gehl, 'YouTube as archive. Who will curate this Digital Wunderkammer?', *International Journal of Cultural Studies*, vol. 12, no. 1 (2009), pp. 43–60.

24 Bernhard Rieder, 'Introducing the YouTube data tools', *The Politics of Systems Thoughts on Software, Power and Digital Method*, 4 May 2015, <<http://thepoliticsofsystems.net/2015/05/exploring-youtube/>> accessed 29 November 2019.

25 See 'YouTube data tools', *Digital Methods Initiative*, <<https://tools.digitalmethods.net/netvizz/youtube/>> accessed 29 November 2019.

question of whether this type of early YouTube material is still accessible. Despite the huge volume of videos, the long-term sustainability of YouTube is open to doubt, as is the case for most websites. Back in 1998, when the web was still in its early phase, digital historian Roy Rosenzweig already recognized both the impact and the challenges it posed for future historians when he wrote that, 'Historians will feel compelled to reckon with the emergence of the Internet as a standard feature of everyday life'.²² Over the following twenty years the web has become integral to our culture and society, and (media) historians have gradually acknowledged that the internet does indeed need serious historical research, especially YouTube. In just a decade this platform transformed from a modest video repository to a popular global archive. As a huge database of countless millions of mediated human traces, of happy and unhappy moments, YouTube is a 'digital Wunderkammer'.²³ The combination of audiovisual content and the responses by viewers, including video responses, commenting, liking, hating, suggesting, supporting, and so on, makes YouTube a valuable site for future historical research, as it brings together the whole chain of production, distribution and reception.

YouTube is not, however, an archive, and thus poses several challenges as a locus for historical research. YouTube's growth is beyond control, with 500 hours of content uploaded every minute; it also undergoes a continuous process of deletion, although it is unclear how much is deleted and by whom. This unceasing process of growth and of deletion means that it is impossible to have precise knowledge about the exact parameters of this collection, and it is impossible to consider it as a stable archive. Furthermore, YouTube does not like its own history. The search algorithms favour recent and popular uploads rather than assisting users to find historical or unique material that has rarely been viewed. In addition, YouTube search filters only allow the user to go back one year; if a user abandons a channel, the footage might become 'orphaned' and eventually untraceable.

In order to create a historical corpus, a first step is to apply innovative methods that are able to employ historical filtering in huge datasets. There are, however, no institutionalized cultural heritage institutions – such as regular film archives or digital infrastructures like CLARIAH – that provide metadata, and there are thus far only a few computational methods and tools available to assist this type of research. According to new media scholar Bernhard Rieder, YouTube is still, when compared to Facebook and Twitter, 'the most understudied platform considering its enormous popularity in the context of popular culture, politics, and commerce'.²⁴ To stimulate scholarly research, Rieder developed a set of digital methods research tools to help data extraction, such as his 'Video list tool', which enables historical filtering.²⁵ Our first attempts with this tool used specific keywords, such as bathroom, kitchen or bedroom, to link the people in front of the camera with a specific location. These locations offered the context/background for confidential talk to the

Fig. 1. Recognizing the face as object in a YouTube video.

camera, for dialogues between family members, for pranks, for sex and for fun. Using this approach we traced a total of 16,790 videos in the first year, an unsurprising number given the huge volume of videos uploaded on the YouTube platform. Of course among the videos there were some false positives – that is, videos that represent the search term but are given false content with respect to the researched concept. Frequently these videos belonged to the genre of the music video and therefore were not relevant to the analysis.

An alternative to this method of using tags or keywords is to analyse directly the moving images themselves. One particular system that we experimented with was to apply automated visual analysis, ‘reading’ the repository of selected vlogs and clips. This approach is based on automated image recognition, which should be able to identify those moments where the practice of recording and sharing personal lives takes place within the domestic sphere. For this we defined domestic as indoor intimate environments, such as the living room, the kitchen, the bedroom, the bathroom or the toilet. The assumption is that these places can be identified by specific objects (like a kettle), space area or settings. In the first stage of this research we used the very popular YOLO algorithm (You Only Look Once) as a real-time object detection system.²⁶ For scene classification, we use the algorithm VGG16 that was trained on the Places365 dataset.²⁷

The results are still a work in progress, but some interesting methodological issues have already come up. The algorithm analysing videos that show users experimenting with webcams, for instance, correctly recognized the object in the clip as a person. Reading the context, however, was much more difficult. The location in [figure 1](#), for example, was classified as possibly a beauty salon, a television studio, a

²⁶ YOLO: Real-Time Object Detection, <<https://pjreddie.com/darknet/yolo/>>. For an explanation by the developers, see Joseph Redmon, Santosh Divvala, Ross Girshick and Ali Farha, ‘You Only Look Once: Unified, Real-Time Object Detection’, <<https://arxiv.org/pdf/1506.02640v5.pdf>> both accessed 4 December 2019.

²⁷ For more on VGG16-places365, see <<https://github.com/GKalliatakis/Keras-VGG16-places365>> accessed 4 December 2019.

discotheque or a dressing room – the intimate interaction of a person staring into the webcam presumably comes close to a person looking in the mirror. This shows the strengths and weaknesses of the state-of-the-art of computer vision: algorithm image detection is built upon training sets with predefined classes. These codes are built on annotations that have been made for other purposes than this particular research project and its interest in particular amateur material. Ongoing training of large datasets of user-generated content is needed to make some more progress.

The second part of the research is related to analysing the dataset, taking the ‘cultural analytics’ approach of new media scholar Lev Manovich as its main source of inspiration. Central to this multi-disciplinary approach are research questions about ‘observing’ giant cultural universes of both user-generated and professional media content created now.²⁸ By looking at individual artefacts, but also medium-scale and large-scale datasets, it will be possible to see patterns and measure temporal changes in cultural datasets like the YouTube corpus. A proven concept within this approach has been the application of a visualization tool that produces image grids. ImageJ software, an open-source tool that facilitates an algorithm such as ImagePlot, enables you to transform a sequence of images (from one video) into one frame (see figure 2). With this method it becomes possible not just to chart the plots and lines, but also to integrate actual visual analysis; ImagePlot also helps to produce a scatterplot for measuring the distribution of similarities within the files. Overall, then, the aim of these projects has been to test multi-disciplinary and visual analytical approaches to media histories, whether they use digitized or born-digital audiovisual materials. They have revealed the need for combining the strength of computer science with cultural analytics, media history and media studies. The key technological challenges exist in annotating and classifying large sets of videos through computer vision. Computational methods aid the building of a historical corpus of videos when there is no institutionalized cultural heritage institution that already holds classified material. For research fields like

28 Lev Manovich, *Cultural Analytics Lab*, <<http://lab.culturalanalytics.info/p/about.html>> accessed 29 November 2019.

Fig. 2. Image grid produced by ImageJ software: bedroom.

29 For Software/Seebibyte project, see University of Oxford, *Information Engineering*, <www.robots.ox.ac.uk> accessed 29 November 2019.

30 *Distant Viewing Lab*, <<https://www.distantviewing.org>> accessed 29 November 2019.

film history or media studies, it has become crucial to find the right tools for developing databases in order to analyse massive cultural datasets; thus a machine-learning approach to analysing large bodies of moving images will give valuable information for further development. Although many of the computer vision projects are still experimental, and require the collaboration of specialized data scientists, more user-friendly tools have also become available: the British Seebibyte project offers open-source software to search for faces (VGG face finder), to track movable objects (Seebibyte visual tracker), and an image classification engine.²⁹ Another project is the Distant Viewing Lab, developed by computer scientist Taylor Arnold and media scholar Lauren Tilton, who offer ready-to-use tools, methods and datasets that can be utilized by other researchers. As they emphasize in their mission: 'The lab engages closely with critical cultural and data studies, aiming to make explicit the interpretive act of algorithmic logic'.³⁰

At a time when both archival and non-archival digital sources are gaining volume, research on amateur media and other types of user-generated-content can be a major challenge. Experiences with small-scale projects can be important steps towards achieving more multi-layered visual analytical approaches developed with large digitized corpora or large-scale unmanaged collections on the web. Many more case studies are needed to solve the challenge of exploring content of videos at scale. Through the use of innovative digital tools that help visualize and analyse, it will be interesting to see the historical research of amateur media develop further, and to unlock multiple histories.