Testing the continuum: user-generated cultural heritage on YouTube

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Leisa Gibbons completed a Masters in Information Management and Systems at Monash University in 2007. With a background in visual media, Leisa's archival theory specialisation travelled towards moving-image and digital technologies and led to starting a PhD at Monash in 2008. Her thesis investigates the complexity of digital cultural records, particularly those found online and in complex forms such as social media. While studying, Leisa has worked as an archivist at BHP Billiton Archives and is now the records manager at the Brotherhood of St Laurence (BSL) in Melbourne. As the first BSL records manager, Leisa is looking forward to building a records program and organisational archive based on Continuum thinking and utilising Web 2.0 tools and practices.

The Web 2.0 phenomenon has created an online culture that is social, interactive and portable. Cultural production online using social media undergoes constant and rapid change and is connected to personal identity and memory-making. Cultural heritage institutions have begun to capture records of online social culture as cultural heritage, adding them to fast-growing and often massive collections of born-digital culture. However, the nature of the technology and the complexity of production challenges traditional archival concepts, and archival practices which have a long history of collection of artefacts.

In this paper I flesh out the complexity of online social media production as cultural heritage and introduce my PhD research concerning online moving-image video created in social media website YouTube. Drawing from media and cultural theory, I apply archival Continuum theory to cultural heritage formation through an investigation of the capture and organisation of YouTube

videos by three Australian cultural heritage institutions. The results illustrate that online cultural content is manifestly more complex than current archival practices allow and requires a conceptual shift in the approach to collection and re-presentation of recorded digital culture.

Introduction

The Web 2.0 phenomenon has introduced new ways for Internet users to interact with online spaces and content. The online culture that Web 2.0 has spawned is inherently social, interactive and portable, where users create and share their own and other people's creations across online spaces. Cultural heritage institutions have begun to collect the outputs of these social media interactions, adding them to fast-growing and often massive collections of born-digital culture. However, the capture and organisation of Web 2.0 cultural production by institutions is actioned with website archiving models of practice. These practices do not take into account the complexity inherent in social media as continuously re-created cultural production.

Additionally, the familiarity and portability of Web 2.0 forms, such as photographs and moving-image video, has meant that online culture has been collected as objects, with value ascribed in subject and content. However, online cultural content is manifestly more complex than current archival practices allow and requires a conceptual shift in the approach to collection and re-presentation of recorded digital culture.

This paper presents work from my PhD research into social media website YouTube, and the preliminary investigations undertaken to discover and understand the complexities of online digital content. I have used a model of complexity, the Cultural Heritage Continuum model (CHCm), which is one of the array of continuum models developed by Frank Upward, as a tool to explore the role of YouTube in culture formation. In this paper I also introduce the use of the CHCm as a model to conceptually explore and highlight assumptions and limitations of Australian collecting institutions that have begun to collect content from YouTube as cultural heritage.

This paper is divided into four sections. In the first I will introduce and present the CHCm as a tool for understanding culture formation.[1] In the second the phenomenon of YouTube is discussed, referencing media and cultural theory literature. The third section contains an investigation of how YouTube, and YouTube videos, are conceptualised as evidence of culture. Finally, I introduce the larger context of my PhD research concerned with personal recordkeeping and memory-making, ending with a vision of how complexity of online digital cultural heritage can be realised in personal cultural memories.

The Cultural Heritage Continuum model

For those acquainted with the Records Continuum model,[2] the model presented below (figure 1) will be somewhat familiar. The four rings represent the four dimensions of action: create, capture, organise and pluralise. These actions mark the places of transformation over time: from an initial idea created, to dissemination and pluralisation to multiple communities.

The Cultural Heritage Continuum

c.Frank Upward, 2005

Spacetime distancing

Dimension 1
CREATE

Dimension 2
CAPTURE

Societal totalities

Spacetime distancing

Routinization

Interaction

Story-telling

Legitimation

Domination

Signification

Tale

Small story

Exhibit Item

Group acceptance

Organisational and community warrant

Metanarrative

Narrative scale

Exhibition

Museum

Museums

Dimension 4
PLURALISE

Dimension 3
ORGANISE
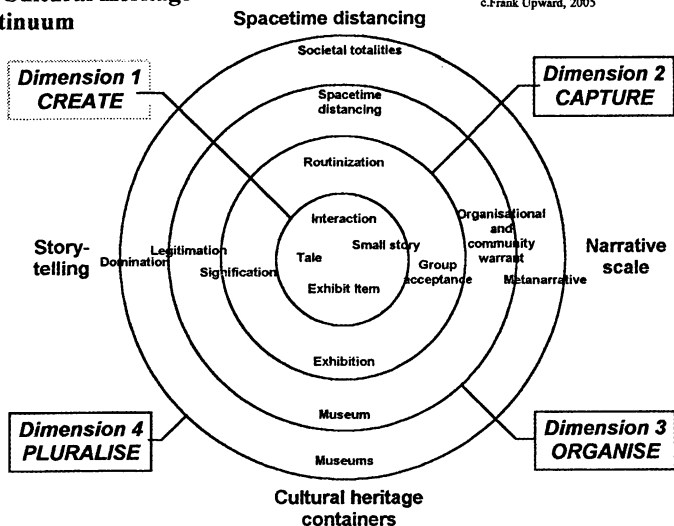
Cultural heritage containers

Figure 1. The Cultural Heritage Continuum model, created by Frank Upward, provides a framework for the actions and structures involved in culture formation over time

Transformation takes place across the dimensions and within the structures of time–space distanciation, narrative scale, cultural heritage containers and story-telling. Each dimensional 'layer' of the continuum reveals how the structures impact on the formation of that which is considered 'heritage'.[3]

Heritage is defined as having value to a group (or groups) and is generally something that is preserved for successive generations, whether it is a story, artefact or site.[4] The United Nations Educational, Scientific and Cultural Organization (UNESCO) defines cultural heritage, in general, as something which holds universal value from the point of view of history, art, science, aesthetics, and from ethnological or anthropological points of view.[5] Concepts of value are reflected in the titles of the structures of the CHCm, with each dimensional layer revealing how time and interactions with groups of people contribute to how culture can be valued as heritage.

Of interest to archivists will be the museum terminology used for containers of the cultural heritage axis. However, as Frank Upward explains, the term museum(s) refers simply to a container, in a generic sense: a topological term for use, not for literal use.[6] The container is the cultural content, as well as that which contains it. For example, an 'old' style film reel is both a container of cultural content (the story being told by the moving images), as well as the container that holds it (physical film and reel). The implications (and complications) of the terminology in the CHCm highlight issues on how to understand what a container of digital cultural heritage might actually be, especially when digital cultural production is merely structured data.

As my research progresses, I estimate that the practical and conceptual application of what is understood as cultural heritage containers will reveal more challenges for capture and organisation of online digital cultural content. I have called these challenges, 'eddies in the space–time continuum', a concept borrowed from Douglas Adams's *Hitchhikers Guide to the Galaxy*.[7] 'Eddies' are a variance in the continuum, a space of unclear understandings which appear to work at odds with the current, but also exist within it. It is entirely feasible to say that the impact of digital technologies has been producing eddies on archival principles throughout the last few decades.

In this paper, the focus of the CHCm has been narrowed to the axes of story-telling and narrative. What stories are being told in the way that digital media from YouTube is captured and organised (second and third dimensions) by cultural heritage institutions and how do these practices re-create cultural heritage (first and fourth dimensions)? What conceptual narratives are constructed in relation to online digital culture? What underlying principles and models of practice does the model reveal?

What is YouTube?

YouTube is a website that entertains people with videos uploaded by users. Anyone with access to the Internet can watch YouTube videos. YouTube, the corporate entity, promotes the website as a space for broadcasting, focussing on the ability to share video across the Internet on other websites, mobile devices, blogs and email.[8] Regardless of personal opinion about the value of YouTube content and the quality or legality of its videos, it is undeniable that YouTube has been absorbed into the vernacular and is a part of contemporary culture.

What makes YouTube part of the Web 2.0 phenomenon is that YouTube does not create the video, the users do. The video clips on YouTube are created by users and shared throughout online spaces by users, and on the YouTube website itself, other users can comment on video, mark it as a favourite, put it in a playlist or produce a video in response. These activities are called 'user-generated content' or UGC, as well as participatory culture or consumer co-creation.[9] The carrier of participatory culture online is also often referred to as 'social media'.[10]

The principles of participatory culture refer to ideas about the everyday person being able to access media industry modes of communication. However, participatory culture is not specific to YouTube, or even social media, but has its roots in the subcultures and grassroots cultures that have been emerging into mainstream consciousness in the last few decades: activities such as underground or guerrilla film production, zines, folk opera, and graffiti art.[11] This is 'do-it-yourself' and 'do-it-with-others' culture, allowing small stories, from individuals and groups, to be part of a larger and pluralist world of communication.[12]

YouTube is a space for the amateur[13] plus the high-end commercial company, as well as any non-profit, governmental or educational organisation.[14] In this sense YouTube is a facilitating tool for individuals and communities to participate in the production of culture where the content is published in the same space as that of any other participant.[15] With this kind of accessibility, and tools provided in the website for user participation, YouTube could be considered a 'continuum machine'.

YouTube as continuum machine

YouTube is a space for videos which contribute to the small stories and tales of the everyday which are found at the centre of the CHCm; the create dimension. Research has shown that the content of the videos influence social interaction between people and the establishment of greater social networks on YouTube.[16] The story is in the content of the moving images, as well as within the interactions in the social media.

The website provides tools to capture videos so that they may be exhibited either in a creator's collection, or in other user's playlists (second dimension). This interaction tells a story of significance of both the communications technologies and the video content itself. User stories and styles, such as video blogging (vlogging) or amateur style, become accepted within the YouTube community, as well as within wider communities of culture. These types of videos and interactions become part of a new way of sharing meaning.

Additionally, social interactions on the website are performed by users through the addition of video descriptions, tags, video annotation of videos and comments left by viewers. YouTube adds value to the video webpage by posting links to more videos by the user, as well as related videos created by other users. Social interaction is supported by tools to create and manage a profile, generate playlists and establish networks of supporters, either as friends or channel subscribers. YouTube users can use these facilitating tools to create and organise their work and that of others to construct an identity and establish themselves in a community (third dimension).

These YouTube interactions legitimise the story-telling media across wider groups online. The tools and social interactions also allow any

registered user the ability to be a curator and assess the value of content, regardless of whether its origin is commercial or amateur, and re-present it for other consumers. The traces of other people's creations, whether video, text or playlists, feed back into the ongoing generation of videos in response to other videos, different collections of video and mash-ups of videos, establishing a continuous vernacular participation in culture formation.[17] New stories and new spaces of meaning are created within the YouTube website, as well as across the Internet wherever YouTube videos are found.

This situates the YouTube website within the realm of the fourth dimension where mediated communications and connections tell a tale of YouTube as social agent: the driver of social interaction and cultural production. YouTube dominates the world of online video, as well as having established itself in the vernacular: YouTube and YouTube videos are not just a website, but a phenomenon. The meta-narrative is that of online social communities and how mediated communications can create both offline and online friendships and social networks with varying degrees of intimacy.[18] The small stories inherent in these interactions contribute to the creation of individual, community and social narratives within YouTube.

The interactions that occur using social media are referred to by media and cultural researchers as 'mediated memories'. This concept refers to the artefacts produced through the use of digital technologies, such as a video, or a YouTube channel page, which mediate relationships between individuals and groups of any kind, such as family, community or society.[19] Mediated memories have personal value, but collections of mediated memories can reflect a sense of personal identity within a particular space and time.[20] Mediated memory in YouTube refers to relationships with technology and groups of people, as well as the spaces of public and private the relationships occupy, raising questions about how personal and public culture might contribute to evidence of culture.[21]

I have used the concept of mediated memories to conceptualise YouTube as an information system that provides space for creation of memories through video, online identity and the other tools YouTube, and the Internet as a network, provides. Additionally, the interactions between a YouTube creator, the one who uploads video, and the audience that

watches it, plays a role in mediating memories: between self and groups, and between private and public.

This concept is played out in the analysis of YouTube as continuum machine. In this concept YouTube is a system of production, where production occurs in different spaces within the website, as well as across networks. The CHCm reveals the nature of the system and how it works by feeding into itself continuously. Additionally, this concept looks towards cultural formation as a process, not just as creations generated by individuals as private memory, but through interaction within groups and communities as shared memory, which then situates the community as producer of culture.

Cultural studies researchers Jean Burgess and Joshua Green have categorised YouTube into four roles: high-volume website; broadcast platform; media archive; and social network.[22] These four roles encompass concepts of YouTube as a social technology, as well as a service to disseminate content and provide distribution to audiences. Of interest to archivists is that Burgess and Green refer to YouTube as an archive, implying that Google, YouTube's owner, has developed it as such. However, Google, the corporate entity, is not active in preserving the videos or the website itself for purposes other than commercial accessibility.[23]

Burgess and Green actually use the more specific term 'public archive' for YouTube because its users digitise, upload, describe, arrange and assign metadata (tags) to videos and these activities are commonly associated with archival work.[24] This explanation points towards a more vernacular understanding of archival practice and may be one of the keys to a greater understanding of the 'eddies' in the CHCm.

The following analysis of the practice of collection and organisation of YouTube content by three Australian cultural heritage institutions reveals questions about the nature of individual and community cultural production, and how it is re-presented as evidence of culture. The analysis references the CHCm as a framework to investigate interactions along the story-telling and narrative axes. Burgess and Green's four descriptive roles of YouTube are also used in the analysis to provide a context for YouTube in a particular cultural time and space.

YouTube videos in cultural heritage collections

The three institutions chosen are:

- the National Library of Australia's (NLA) PANDORA archive, which collects and provides long-term access to selected online publications and websites which have significant associations with Australia.[25] The NLA captured and organised online videos and other Web 2.0 websites created as a result of the 2007 federal election into PANDORA as part of a larger website collection on Australian politics;

- the State Library of Tasmania's (SLT), *Our Digital Island* web archive, which selects and preserves online digital content that has been created and placed on the web in Tasmania.[26] Unlike the NLA, the SLT has legislation governing legal deposit of digital records which allows them more freedom to select and preserve digital material.[27] The SLT has captured and organised various digital material, including extensive video files from YouTube, to contribute to a collection about the burning of the Hobart Myer building, an event that occurred on 22 September 2007; and

- the National Film and Sound Archive (NFSA), which are partners in the PANDORA project, and select and capture examples of websites, netcasting in radio and television, audio files, video files, streaming audio and video, and other emergent media technologies from the Internet, as part of their New Media Project.[28] The NFSA does not have a legal deposit mandate and supports their own selection by engaging the public and cultural producers to contact them with ideas for submission. The NFSA selected, captured and organised a video created and uploaded to YouTube in 2007 about a group of dancers, called the Chooky Dancers, performing at a festival in the Northern Territory to a soundtrack of *Zorba the Greek.*

Figure 2 (page 99) is a screen shot of PANDORA's listings of online material collected under the heading 'election campaigns'. The organisation of the collection is based on subject within a hierarchical structure: Politics — Election Campaigns — Federal Election 2007. This organisational structure provides a model which can be used to compare similar collections over time – see the federal election 2004 subject groups at the top of figure 2.

The particular focus for this analysis is the 'media, comment and video websites' collection.

The NLA captured and organised online videos and other Web 2.0 websites of the 2007 federal election because it was understood that that election was the first political campaign in which the Internet played a significant role in communications between political entities and the public.[29] The NLA's acknowledgement and use of YouTube videos created as part of a political campaign establishes YouTube as a broadcast platform and legitimate story-telling device.[30]

Situating YouTube as a commentary and communications tool establishes social media as a broadcast platform which has group acceptance both within online communities as well as offline, and in what could be called 'traditional' communications – such as commercial TV – establishing the legitimate role of the media tool itself and the YouTube website as a place of activity.

The NLA's approach to archiving video was to download these and then re-position them into the captured websites in order to make it function as it would have been originally viewed.[31] Google Australia's YouTube channel was captured as part of this record, a website which contained over 700 videos which were found within the political party sites linked via the site.[32] However, this approach was not taken with all websites, as some did not have any video embedded, while others such as Red Symons's videos were captured as video only, to be accessed as MPEGs from the PANDORA archive record.[33]

The creation of websites as heritage container acknowledges the role of the YouTube website as place of activity. The NLA seeks to capture and organise the information the webpages contain, both visually and textually, as exhibit item. The practice of taking multiple snapshots of the website provides a story of its movement through time. Additionally, the practice of capturing videos as separate entities presumes the role of YouTube as media archive. The video and its content, along with the subject association (Red Symons in the above example), is captured and organised as exhibit item or object.

In performing these activities the NLA establishes YouTube and its videos as having a role to play in politics. The Internet as a media tool,
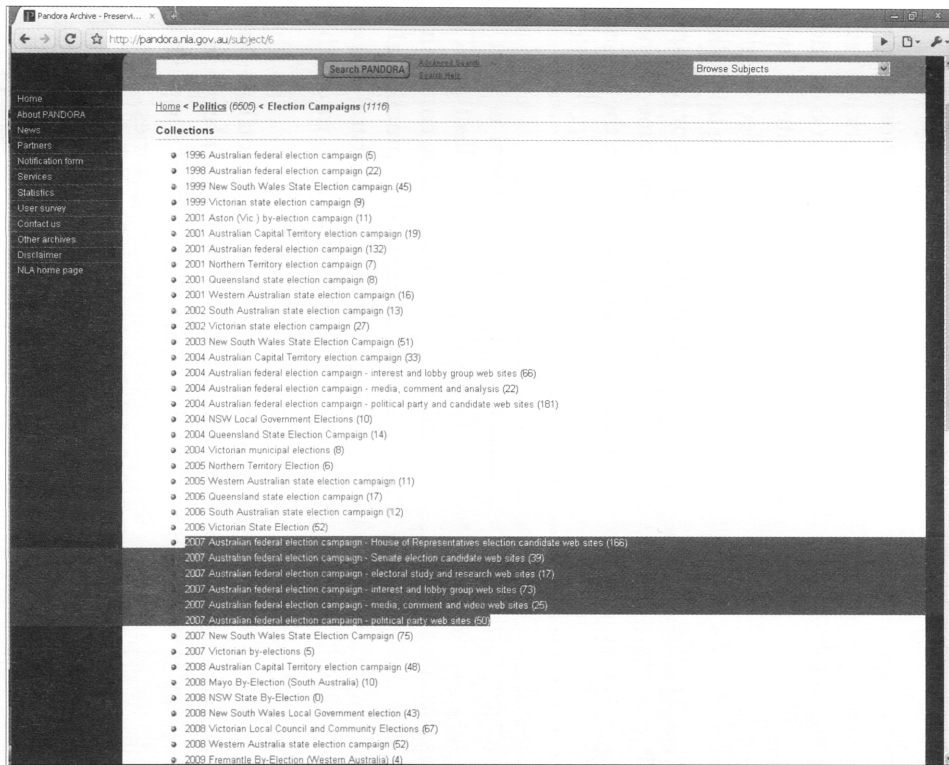
Figure 2. Screen capture from the PANDORA web archive showing arrangement of captured online content into collections based on subject

and activities that are performed online, are considered significant to cultural heritage. By capturing YouTube webpages with video, some of the elements that make YouTube a social media website, such as comments and links, are also collected. However, this practice provides little understanding and context about how social networks play a role in the creation of the webpage content.

Similar to the NLA, the SLT downloaded numerous videos from YouTube as part of a digital collection on a particular historical event. However, the SLT approach was to organise the video as a collection of single files that can be opened, viewed or saved in whatever local program is available.[34] The capture of multiples under a collection title (see figure 3) possibly implies that numerous stories are being told in the content of the videos. The stories may be of multiple voices, or multiple formats, or a number of different physical positions of the camera when taking the footage; however, the container of culture is in the telling. The action of capturing multiples positions YouTube in this collection as a broadcaster of stories told by many voices.

However, by capturing only the video, the video content is seen as containing the only information that is useful to this collection. The video is then understood as cultural object, or exhibit item, containing the most valuable and meaningful information. This practice also identifies YouTube as a media archive which contains cultural objects that can be selected, dis-embedded and re-embedded into other cultural 'archives'.

Additionally, by downloading numerous videos from YouTube and organising them under the collective title *Collection of YouTube videos ...*, the SLT, similar to the NLA, establishes the significance of the website itself and the legitimate role it plays in communicating stories.

In undertaking these practices the SLT establishes YouTube's role as a teller of multiple stories within the wider narrative of online story-tellers. The stories being told are personal histories wherein YouTube's users and their videos document community history. YouTube users come together to form a community of common voices.

The NFSA collects new media in various forms, which contributes to a rather different type of collection than that of the two library web
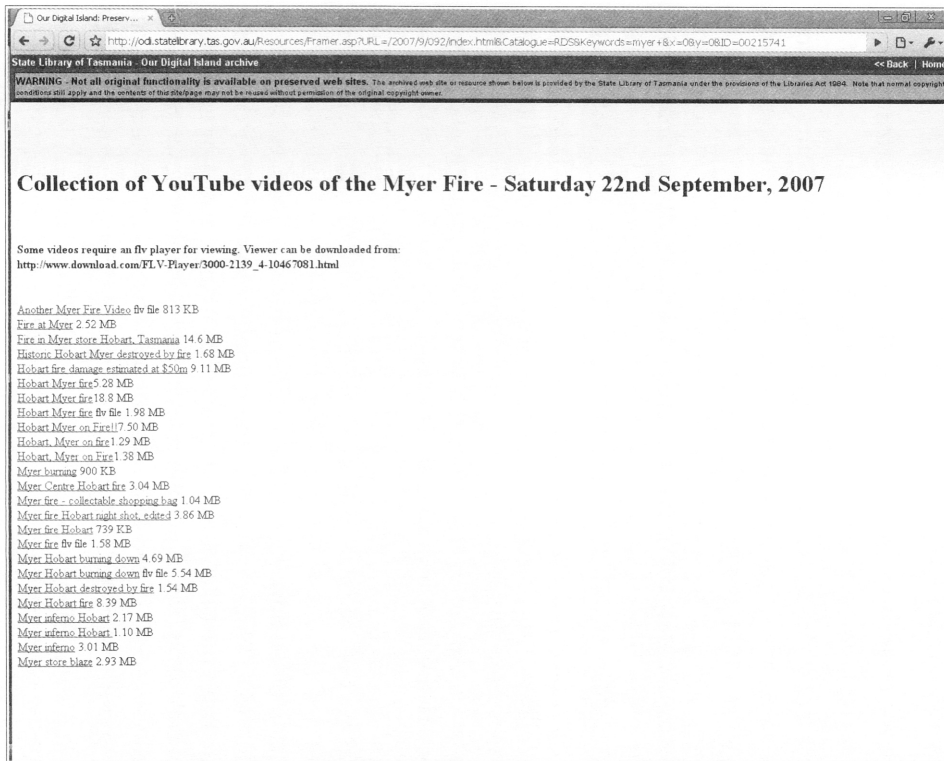
Our Digital Island: Preserv...

http://odi.statelibrary.tas.gov.au/Resources/Framer.asp?URL=/2007/9/092/index.html&Catalogue=RDS&Keywords=myer+&x=08y=08ID=00215741

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State Library of Tasmania - Our Digital Island archive

WARNING - Not all original functionality is available on preserved web sites. The archived web site or resource shown below is provided by the State Library of Tasmania under the provisions of the Libraries Act 1984. Note that normal copyright conditions still apply and the contents of this site/page may not be re-used without permission of the original copyright owner.

Collection of YouTube videos of the Myer Fire - Saturday 22nd September, 2007

Some videos require an flv player for viewing. Viewer can be downloaded from:
http://www.download.com/FLV-Player/3000-2139_4-10467081.html

Another Myer Fire Video flv file 813 KB
Fire at Myer 2.52 MB
Fire in Myer store Hobart, Tasmania 14.6 MB
Historic Hobart Myer destroyed by fire 1.68 MB
Hobart fire damage estimated at $50m 9.11 MB
Hobart Myer fire 5.28 MB
Hobart Myer fire 18.8 MB
Hobart Myer fire flv file 1.98 MB
Hobart Myer on Fire!!7.50 MB
Hobart, Myer on fire 1.29 MB
Hobart, Myer on Fire 1.38 MB
Myer burning 900 KB
Myer Centre Hobart fire 3.04 MB
Myer fire - collectable shopping bag 1.04 MB
Myer fire Hobart night shot, edited 3.86 MB
Myer fire Hobart 739 KB
Myer fire flv file 1.58 MB
Myer Hobart burning down 4.69 MB
Myer Hobart burning down flv file 5.54 MB
Myer Hobart destroyed by fire 1.54 MB
Myer Hobart fire 8.39 MB
Myer inferno Hobart 2.17 MB
Myer inferno Hobart 1.10 MB
Myer inferno 3.01 MB
Myer store blaze 2.93 MB

Figure 3. Screen capture from the *Our Digital Island* web archive showing the arrangement of captured online content into a collection based on subject and media used

archives discussed above. A search for YouTube in the NFSA catalogue resulted in a listing of clips from television news reports about YouTube, two videos which were uploaded to YouTube, as well as a documentary about one of those YouTube videos.

The catalogue entry I chose to investigate was a video created and uploaded to YouTube in 2007 about the Chooky dancers, a group of dancers performing at a festival in the Northern Territory to a soundtrack of *Zorba the Greek*.

The catalogue entry of the Chooky dancers video (figure 4) does not indicate where this video was captured from: whether it was downloaded from YouTube or a copy of the footage was donated by the video maker is unknown. The catalogue entry only indicates that that the holding is in Windows Media Video (.WMV) format, which is not the YouTube standard Flash video (.FLV) format. The summary entry however reveals that this video does have a relationship with YouTube, with the description notes taken from the YouTube website. This establishes the website as a broadcasting platform, although not necessarily a legitimate story-telling device, rather a space where stories of significance are told, and where popularity and group acceptance of the story-telling medium is established.

The media category of the video is described as 'film', establishing this video as part of the moving-image genre, and situating this video into a longer and legitimate story of audiovisual heritage, and the moving image as story-telling form. This categorisation as well as capture of a single video file, implies that the Chooky Dancer video can stand separate from the place in which it was originally created or exhibited. In this sense, YouTube plays the role of media archive; however, not in the same sense as in the library examples discussed earlier. Without knowing exactly where this video was captured from, the role YouTube plays as media archive is that of searchable content library index wherein the website is a database, rather than a content repository.

The documentary in the collection mentioned previously is about the Chooky Dancers, and this particular YouTube video; however, the NFSA catalogue entries for these two moving-image productions are not linked. The documentary is organised within a larger series of short films made by *Indigenous Western Australian Filmmakers*.

NFSA - Title Details

http://colsearch.nfsa.gov.au/nfsa/search/display/display.w3p;adv=;group=;groupequals=;holdingType=;page=1;parentid=;query=youtube;querytype=;rec=3;resCou

NATIONAL
FILM
&SOUND
ARCHIVE

About | Access Restrictions | Charges | Help

SEARCH THE COLLECTION

You have 0 items in your list. | Log On

Title Details

Easy Search | Advanced Search | Browse A-Z

☑ Send Email   ▲ Print Item.

ADD TO LIST   VIEW MY LIST   ACCESS REQUEST

prev next summary view

Title Details

Title No: 749948
Title: [ZORBA THE GREEK CHOOKY DANCERS RAMINGINING FESTIVAL 2007.09.30]
Media: Film
Summary: -- General notes taken from You Tube: Aboriginal interpretation of Zorba the Greek. Frank Djirrimbilpilwuy from Milingimbi has been in the Indigenous Media Industry for many years and has been a long-standing member and supporter of the Top End Aboriginal Bush Broadcasting Association, (TEABBA) Radio. He has worked Independently in Music and Film for many years also. As the man behind the camera and release of the video, Frank is also representing the dance group who call themselves "The Chooky Dancers". Frank has said that he filmed the footage at this year's Ramingining Festival on the 30th September 2007 and knew it would be "something special" as soon as he saw the boys rehearsing. "The crowd went wild as you can see in the video, and the classic song Zorba the Greek has now become a hit overnight in the communities and now it seems, everywhere else too" Frank said. In just one week of being released onto "YouTube" by the staff at TEABBA Media Services, the video has received rave reviews been given a 5 star rating and has now been viewed well over 15,000 times. "The phones have not stopped ringing at the TEABBA offices, all from people who want to know more about the footage," a TEABBA staff member has said "even the honorable Kon Vatskalis with the Territory Labour party has commented on the video and suggested that they perform at the Greek Glenti next year." The Chooky Dancers are a group of 10 energetic young men who had healthy living in mind when they choreographed the performance. Franks son Lionel is the lead dancer in the video footage at front and center. "They (the Chooky Dancers) begun working on this just after this years Garma Festival in Gukula and worked very hard on it, they also do a Bollywood style performance which is also fantastic" Frank said. It seems that talent runs in Frank's family, with Franks Daughter also in an all Indigenous Line Dance Group also who Frank actively plays a role in. The "Zorba" video, which has not yet been given an official title, is just a sample of Franks works "I edited that footage on "imovie" at the TEABBA Media Services video workshop and now have plans to make a documentary about my Yolngu families connections to the Greek culture". Franks feelings towards the Greek culture have been reinforced by his daughter Priscilla, who requires constant care and is currently being cared for by a woman of Greek heritage in Darwin. "Lillian is a selfless woman, who cares for my daughter" Frank said " she takes Priscilla to church, weddings and all kinds of functions within the Greek community and they are all lovely people with strong cultural identity also which Yolngu people can identify to. I want to show through this documentary how 2 cultures can mix and this dance video is a fabulous start", Frank said.
Country of Origin: Australia
Language: English

If you find an error please let us know at corrections@nfsa.gov.au

Title Relationships
Nil found.

Holdings
1 Access/Browsing copy Video/wmv

Figure 4. Screen capture from the NFSA collection database showing title details for the Chooky Dancers YouTube video

A possible reason why the YouTube video is separate is that there is no professional production company assigned to it, as can be seen in the catalogue entry (figure 4). However, the documentary catalogue entry (figure 5), does have a production credit.

This tells an interesting story of how this video, and possibly other online content, might be situated within traditional constructions of legitimate moving-image production, particularly in Australia. It may be the amateur nature of the YouTube video which sets it apart, or the lack of Government funding (although this is speculation), but the absence of a producer in the metadata implies that there is another, larger story being told about this type of moving-image production.

Finally, it is not entirely clear where the Chooky Dancers YouTube video sits within the NFSA narrative of 'new media', as it has been captured and organised as if it were any other 'film'. Additionally, the choice of a title and term such as New Media Collection by the National Film and Sound Archive implies that there is something that is conceptualised as 'old media'. The relationship between new and old media is not clear. However, the inclusion of 'new media' as part of the National Film and Sound Archive's collection cements the notion that a relationship must exist between these different types of media, and the moving-image and sound recordings the NFSA has traditionally collected.

Conclusions

Overall, the analysis revealed that current capture and organisation of YouTube videos in these three cultural heritage collecting programs re-create YouTube primarily as a website, broadcast platform and media archive. Representation of the social media space from which the YouTube video was captured was limited. Using the structures of the CHCm as an analytic tool, the predominant underlying principles were revealed to be based on the capture of content relevant to subject. This indicated that the premise of moving image found online is contained within the story of the moving images, rather than the media itself. However, the capture and organisation of online material into web archives, or new media content, indicated that the media plays a critical role in why the video was captured in the first place.

Figure 5. Screen capture from the NFSA collection database showing title details for the documentary produced about the Chooky Dancers YouTube video phenomenon

Ultimately, the analysis indicated that YouTube videos are being conceptualised as objects which can be removed from an online digital space and organised into a heritage collection. Reasons for the capture and organisation of digital content as objects are more than likely founded in the practices of collection, wherein cultural heritage institutions select and organise according to a specific purpose. However, other reasons may be more technical in nature; with ever-increasing complexity of online digital content the capture of website material is technically problematic.[35]

Within my wider PhD research project, little information was found in archival literature on moving-image archiving in relation to born-digital materials, let alone online digital content. Additionally, there were only a few significant voices in the moving-image archiving field who thought it pertinent to point out that digital technologies fundamentally change how the moving image is understood, particularly the born-digital moving image.[36]

The underlying principles in institutional practice do not take into account the complexity of YouTube as a system of production of multiple voices, as was seen in the continuum machine analysis. But do they have to? The questions that need to be asked of cultural heritage institutions are how YouTube, and other online social media, contribute to cultural heritage as a media?

Does the capture of a website with embedded video provide evidence of what the media does? What is the media when the video is shared in an email, or a blog page? Who would be interested in such a collection and what would it look like? Is the technology capable of creating such a collection and where would it be located?

In the last couple of years there have been efforts made to address the issues of the multiple voices and private/public spaces of cultural production in social websites. There are at least three models in the archival world which investigate, in some way, the relationship between personal recordkeeping and the relationship with the collective cultural memory of society. The first comes from two web archivists from the United States, Chirag Shah and Gary Marchionini, who have been researching YouTube and its videos for the purpose of creating digital archives which contain relevant contextual information.[37] Shah and

Marchionini have developed a model and a tool for capturing context in online video that will give meaning to the videos collected from within their own time and space.[38]

Shah and Marchionini's model relies on the dual premise that information in digital archives changes over time through use and interpretation, and that digital access provides tools for use, interaction, annotation and sharing of archival materials.[39] They call these 'temporal context' and 'social context' respectively, and are used to model an automated system for harvesting contextual information from the YouTube site provided by both video creator and YouTube itself.[40]

The second is a model by Peter van Garderen, developed as part of his work on access systems for archives using Web 2.0 tools.[41] This model incorporates personal archives and recordkeeping practice, and the integration between private and public collections in order to realise the potential of collective memory in digital archives.[42]

The third model is found in the conceptual writing of moving-image archivist Karen Gracy, who questions the 'social order that sustains cultural institutions in their role as the creators and sustainers of objectified cultural capital.'[43] This model acknowledges that archival and curatorial practices are being performed by web users and is driven on democratic principles.[44] Gracy refers to her model as, 'the democratic archive', which will document and facilitate social discourse, and communities of interested individuals and organisations.[45]

Gracy's overture, although not detailed, calls for linkages between curators, both professional and amateur, and the spaces where moving images reside in archives, museums and in user-generated spaces such as YouTube.[46] Gracy's model is a continuum machine and in it, social records will be documented, but also will be continuously created and re-created through social discourse and communities of interested individuals and organisations.[47]

Similar to these models, my PhD research looks to the first dimension of the CHCm for answers, addressing complexity by looking at the private and public spaces of Australian YouTube user–creators, and personal cultural memories.

Capturing the cultural record: YouTube in the continuum

My PhD research project looks at personal and social interactions in public and private mediated spaces to discover how social media production is captured by users and therefore, how it can potentially be retained as cultural heritage. The focus is on the relationship between the creation and sharing of YouTube videos with other social activities also taking place on YouTube: social media as personal mediated memory machine.

The research is from the perspective of the user–creator, that is, the contributor of original content to the website (which excludes TV clips). This type of content is that which is being captured and organised in collections such as PANDORA, *Our Digital Island* and the NFSA.

Personal cultural memory is a concept linked to mediated memories, referring to a sense of self as creator.[48] Together, personal cultural memory and mediated memories draw upon ideas that are found in the CHCm concerning how interactions build complexity in multiple times and spaces. Mediated memory is not only about products or 'objects' of technology, but is closely entwined in the structuring interactions with technology in relation to self and social groups over time.[49]

The applications for this research are in curatorial models of practice, whereby users may contribute to digital archives in online spaces using familiar and popular tools available in the Web 2.0 world. Through the use of these tools they are able to co-contribute, alongside archivists, to provision of context for a collection. Additionally, by looking at the roles of technology in cultural production, we will provide a greater understanding of how emerging models of shared ownership and authority of personal and community online digital culture will be tested.

However, more importantly, this research and use of the CHCm throw light on systems and structures of cultural production, both at the creator level and the community level, including institutions. The real potential is in the development of powerful and innovative media tools for self and community expression for personal and shared community memory-making. These tools will be for individuals, groups, cultural heritage institutions and future researchers to engage with technologies

as system of cultural production. The tools will provide new models of practice on how to conceptualise the nature of mediated memory-making as evidence of culture ... evidence of us.[50]

Endnotes

[1]   Frank Upward, 'Continuum Mechanics and Memory Banks: (2) The Making of Culture', *Archives and Manuscripts*, vol. 33, no. 2, 2005, p. 21.

[2]   Sue McKemmish et al (eds), *Archives: Recordkeeping in Society*, Charles Sturt University, Wagga Wagga, NSW, 2005.

[3]   For an explanation of the reasoning behind the choice of terminology and concepts of the CHCm see Upward, 'Continuum Mechanics and Memory Banks'.

[4]   See *Macquarie Dictionary Online*, Macquarie, 2009, available at <*http://mobile. macquariedictionary.com.au/*>, accessed 16 November 2009.

[5]   See 'Information Document Glossary of World Heritage Terms', June 1996, available at <*http://whc.unesco.org/archive/gloss96.htm*>, accessed 16 November 2009.

[6]   Frank Upward, 'Continuum Mechanics and Memory Banks', p. 21.

[7]   Douglas Adams, *Hitchikers Guide to the Galaxy: A trilogy in four parts*, Pan, London, 1992, p. 321.

[8]   YouTube website is available at <*http://www.youtube.com*>.

[9]   Henry Jenkins et al, 'Confronting the challenges of participatory culture: media education for the 21st century', white paper, MacArthur Foundation, Chicago, 2006, available at <*http://digitallearning.macfound.org/atf/cf/%7b7e45c7e0-a3e0-4b89-ac9c-e807e1b 0ae4e%7d/jenkins_white_paper.pdf*>, accessed 16 November 2009.

[10]   See the nexus of participatory culture for the vernacular (and working) definition of 'social media' on *Wikipedia*, available at <*http://en.wikipedia.org/wiki/Social_media#cite_ note-trends.google.com-0*>, accessed 16 November 2009.

[11]   Henry Jenkins, 'What happened before YouTube?', posted 25 June 2008, *Confessions of an Aca-Fan: the official weblog of Henry Jenkins*, available at <*http://henryjenkins.org/2008/06/ what_happened_before_youtube.html*>.

[12]   Jean Burgess and Joshua Green, *YouTube: online video and participatory culture*, Polity Press, Cambridge, 2009, p. 12.

[13]   The concept of 'amateur' is problematic, particularly as YouYube set up a system whereby popular channels could reap advertising revenue through what is called the 'partner program', details available at <*http://www.youtube.com/partners*>, accessed 16 November 2009. This program is aimed at content provided by users who were not originally commercial or that was uploaded by professional media companies. Some of the participants in the partner program are receiving more than a substantial income from this scheme, and therefore can be considered professional rather than amateur, regarding which see Brian Stelter, 'YouTube videos pull in real money', *New York Times*, 10 December 2008, available at <*http://www.nytimes.com/2008/12/11/business/media/11youtube. html?_r=1&em*>, accessed 16 November 2009. Even prior to this, amateur became a style of video, rather than merely designating that the producer was unpaid. Lonleygirl15, who appeared on YouTube as a regular, amateur-type vlogger in 2006, caused a controversy later the same year when it was discovered that her YouTube videos were written,

filmed and produced by three filmmakers using a professional actress. For further details on Lonleygirl15 see the *Wikipedia* entry available at *<http://en.wikipedia.org/wiki/ Lonelygirl15>*, accessed 16 November 2009. The new 'amateur style' video production is big business, with advertising companies using the viral nature of YouTube video (easy sharing across the Internet) to create marketing campaigns at the grass roots. In the CHCm, these phenomena correspond to legitimation of story, and organisational warrant in narrative, both of which occur in the third 'organise' dimension.

14 The BBC has a massive presence on YouTube, though with only highlights and clips for an international audience constituting a promotional presence, see for instance the BBC Comedy Greats Channel available at *<http://www.youtube.com/ user/BBCComedyGreats>*, accessed 16 November 2009. Other high-end commercial organisations with a YouTube presence at the time of writing include EMI America Records, CBS News, and Fox Searchlight.

15 Henry Jenkins, 'Nine propositions toward a cultural theory of YouTube', posted 28 May 2007, *Confessions of an Aca-Fan: the official weblog of Henry Jenkins,* availableat *<http://henryjenkins.org/2007/05/9_propositions_towards_a_cultu.html>*, accessed 16 November 2009.

16 Burgess and Green, *YouTube: online video and participatory culture*; Patricia Lange, 'Publically private and privately public: Social networking on YouTube', *Journal of Computer-Mediated Communication*, vol. 13, no. 1, 2007, pp. 361–80, available at *<http://jcmc.indiana.edu/vol13/issue1/lange.html>*, accessed 16 November 2009; John C Paolillo, 'Structure and network in the YouTube core', conference paper presented at 41st Hawaii International Conference on System Sciences, 2008, available at *<http://www.computer.org/ portal/web/csdl/doi/10.1109/hicss.2008.415>*, accessed 16 November 2009.

17 Jenkins, 'Nine propositions toward a cultural theory of YouTube'.

18 Lange, 'Publicly Private and Privately Public'.

19 Jose van Dijck, *Mediated memories in the digital age*, Stanford University Press, 2007, p. 1.

20 ibid.

21 ibid, p. 2.

22 Burgess and Green, *YouTube: online video and participatory culture,* p. 5.

23 Frank Kessler and Mirko Tobias Schäfer quoting Leo Enticknap, 'Navigating YouTube: Constituting a hybrid information management system', in Pelle Snickars and Patrick Vonderau (eds), *The YouTube Reader*, National Library of Sweden, Stockholm, 2009, p. 275.

24 Burgess and Green, *YouTube: online video and participatory culture,* p. 88.

25 See the overview of the National Library of Australia's PANDORA archive, available at *<http://pandora.nla.gov.au/overview.html>*, accessed 16 November 2009.

26 See *Our Digital Island* homepage, available at *<http://odi.statelibrary.tas.gov.au/>*, accessed 16 November 2009.

27 For details see the SLT's legal deposit webpage, available at *<http://www.statelibrary. tas.gov.au/collections/tasres/heritageservices/legaldeposit>*, accessed 16 November 2009.

28 For details see webpage on the NFSA's New Media Project, available at *<http://www. nfsa.gov.au/the_collection/categories/new_media.html>*, accessed 16 November 2009.

29   Edgar Crook, 'The 2007 Australian Federal Election on the Internet', staff paper, National Library of Australia, Canberra, 2007, p. 2, available at <*http://www.nla.gov.au/ nla/staffpaper/2007/documents/Election2007.pdf*>, accessed 16 November 2009.

30   ibid., p. 5.

31   ibid., p. 3.

32   ibid.

33   'Videos produced by Red Symons', available at <*http://nla.gov.au/nla.arc-79542*>, accessed 16 November 2009. Red Symons used YouTube as a platform for personal comment. The PANDORA archive contains captured video content in MPEG format, and also provides a link to the publisher's site (YouTube) for access to (potentially) more current information.

34   Some videos, however, required a Flash player to be installed.

35   The Internet Archive's *Wayback Machine* tells a great tale of how website capturing technology has changed in effectiveness since it was started in the 1990s. The PROV guideline on technical issues for capturing web-generated records provides a good overview of the issues involved in capture, available at <*http://www.prov.vic.gov.au/ records/web_advice/provrmadvice20b.pdf*>, accessed 16 November 2009.

36   Some issues emerging from a literature review are reflected in the analysis conducted in this paper. Who collects online video? Are they web archivists or moving-image archivists? Is online video the same as all other moving-image formats? What relationships do media have to online video? Is all online video the same? What is different about YouTube video and the YouTube website? For some of the significant voices in the literature and a selection of their work see: John F Barber, 'Digital archiving and "the new screen"', in *Transdisciplinary digital art: Sound, vision and the new screen*, Springer, Berlin, 2008, pp. 110–19; Howard Besser, 'Digital preservation of moving image material?', *The Moving Image*, vol. 1, no. 2, Fall 2001, copy available at <*http://www.gseis.ucla.edu/~howard/Papers/ amia-longevity.html*>, accessed 16 November 2009; Dylan Cave, '"Born Digital" – Raised an Orphan? Acquiring Digital Media through an Analog Paradigm', *The Moving Image*, vol. 8, no. 1, Spring 2008, pp. 1–13; Karen F Gracy, 'Moving Image Preservation and Cultural Capital', *Library Trends*, vol. 56, no. 1, 2007, pp. 183–97; and Rick Prelinger, 'Archives and Access in the 21st Century', *Cinema Journal*, vol. 46, no. 3, 2007, pp. 114–18.

37   Chirag Shah and Gary Marchionini, 'Preserving 2008 US Presidential Election Videos', paper delivered at the *7th International Workshop on Web Archiving and Digital Preservation*, Vancouver, 2007, available at <*http://www.ils.unc.edu/vidarch/Shah-IWAW2007.pdf*>, accessed 16 November 2009.

38   ibid.

39   ibid., p. 1.

40   ibid., pp. 3–4.

41   Peter van Garderen, 'Web 2.0 and Archives Access Systems', paper delivered at the Society of American Archivists 2009 Annual Conference, Washington, DC, audio available at <*http://archivemati.ca/wp-content/shockwave-flash/SAA2006.html*>, accessed 16 November 2009.

42   ibid.

43   Gracy, 'Moving Image Preservation and Cultural Capital', p. 183.

44   ibid.

45 ibid., p. 187.

46 ibid., p. 184.

47 ibid., p. 187.

48 van Dijck, *Mediated memories in the digital age*, p. 2.

49 idid., p. 21.

50 Sue McKemmish, 'Evidence of me ...', *Archives and Manuscripts*, vol. 24, no. 1, May 1996, pp. 28–45.