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### The ENCODE Imputation Challenge: a critical assessment of methods for cross-cell type imputation of epigenomic profiles

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## Cultural resilience: The production of rural community heritage, digital archives and the role of volunteers



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#### ABSTRACT

The following paper addresses a lacuna in the literature relating to the concept of resilience. To date, cultural activity in relation to resilient communities has been given little attention and this paper will highlight how the lens of community heritage activities and the 'bottom-up' role of volunteer labour can act as a catalyst for building more resilient communities in rural areas. This develops from rural areas that have strong place identities, formed through the reproduction of traditional cultural practices alongside contemporary influences. These identities are performed and constructed through a varied repertoire of knowledges, histories, and customs. Their on-going production can be central to community identity as they attempt to make visible their own accounts of history and place. Beyond this, community heritage organisations have also begun to have grounded 'impacts' that move away from heritage interests alone, often revitalising buildings and providing community services. This will be used to highlight how such cultural heritage activity builds collective resilience. A further trend (in the UK) has been for community heritage groups to digitise collections, due to the perceived transformational effect for community regeneration, the strengthening of community cohesion and the potential socio-economic benefits. In partnership with community heritage groups, the CURIOS (Cultural Repositories and Information Systems) project explores two case studies in rural Scotland asking how community activity, connectivity and digital archives can support interest in local heritage as well as help develop more resilient communities.

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#### 1. Introduction

This paper comprehends the concept of resilience through the lens of cultural heritage, as a means for building more resilient communities. This approach is something that the literature pertaining to resilience has largely failed to contemplate but needs to address in order to consider more thoroughly the processes through which communities build resilience in rural, remote and

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peripheral locations (see Callaghan and Colton, 2007; Roberts and Townsend, 2015). By researching community led activity in rural locations, a different set of geographies, politics, micro-politics and representations of place and space come into being, especially by not following the urban (often seen as the main foci for cultural activity) bias in most research (see Kneafsey, 2001 or Markusen, 2007 for rural examples).

Cultural heritage in many rural locations operates on a number of levels, from professional museums and council run services through to voluntary groups such as historical societies. It is the work of the latter that this paper unpacks in three ways: firstly, what is meant by the concept of resilience in this context, and why, although problematic, it is still a useful term to think with; secondly, how voluntary community cultural/heritage work builds

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resilient communities that move beyond purely cultural functions; and thirdly, how in the contemporary setting their on-going resilience has led to a shift towards digital mediums for heritage collection and dissemination through projects such as CURIOS, as well as other digital mediums such as websites, blogs and social media. The viewpoint that is given by following place-based rural community cultural heritage production offers a different perspective within the resilience literature that attempts to leave ecological definitions of the term behind by placing it firmly within the context of human agency and social systems.

The paper will begin by introducing (briefly) the CURIOS project. The project has involved innovative interdisciplinary research. The computer science element of the project has included novel development of semantic web/linked data technologies, which will be discussed briefly in Section 2. However it is the novel social science aspect that will be the focus of this paper. The paper will then unpack the concept of resilience in relation to the activities of community heritage societies in rural locations before moving on to open up the placing of community heritage and its cultural remit in relation to the researched historical societies. The emphasis will then shift to cover how resilient community heritage groups are turning to a digital praxis in the preservation of their historical and cultural heritage. Finally, the paper will conclude with its main findings.

#### 2. CURIOS

CURIOS is an interdisciplinary project based upon both social science and computer science research, which has been developed in conjunction with community heritage groups to create a system that makes use of semantic web/linked data technology (see Mäkelä et al., 2012, for previous use with cultural heritage). This is in order to build a general, flexible and "future proof" software platform that can help community heritage volunteers maintain a digital presence that is sustainable over time. Key to this project's development has been conducting empirical research into the ways in which community heritage groups' function, in order to comprehend the socialised process of memory work (Nora, 1989) that is taking place. This has been invaluable in terms of how we moved to develop CURIOS but it has also generated innovative social science research in itself.

We have been working with two case study examples in rural Scotland, one with *Comainn Eachdraidh* (Gaelic for Historical Societies) groups based on the Isle of Lewis called Hebridean Connections and the other with historical societies based in the town of Portsoy on the Moray Coast. Both case studies give highly relevant perspectives in terms of how resilient behaviour is enacted through cultural activity, which has in turn led towards a desire to develop digital collections. Added to this, each case study area is based in a rural location (in Scotland) that are in some way peripheral and distant from more established and resourced urban centres. They each encounter issues relating to depopulation and ageing populations common to rural areas, as well as being faced with lower broadband connectivity in comparison to urban areas.

It is within these case study examples that the following empirical work will be based. In both cases the historical societies represent groups of volunteers attempting to articulate their own narrative of history that is largely driven by their collective sense of place, and in the process of doing so they have become further-reaching in terms of their remit to build resilience, enact change and, at times, bind communities together through their historical production. It is important to note that the groups in Lewis and Portsoy have very different histories and reasons for coming into existence, however they both embody aspects of cultural resilience in the way they work and what they have done and are doing, and it

is this that the following paper will divulge. These two case studies offer fascinating insights into the role of community heritage for building resilient communities, as well as to why both desire to hold their collections in digital forms alongside their analogue collections.

CURIOS as an application represents a form of action research (see Reason and Bradbury, 2006) which through its development uses digital technologies as a mechanism that can enable rural communities to be more resilient through enhancing existing practices. The need for using digital technology is one in which the communities themselves have identified as the next step in their on-going practices and represents a way in which to push their collections beyond their locality. Castell's (2001:155) notes that communication technologies represent a 'space of flows' that to a certain extent has the ability to compact issues created by geographic distance. This allows for distant locations and people to be connected through technology as well as allowing for local communities to find new ways of working together and collaborating. This is especially important for rural areas as Galloway et al. (2011) have noted that digital technologies have become more and more relied upon as a means of survival. It is hence the unfolding of these processes that is paper wishes to consider in relation to resilience whereby digital technology builds on and enhances the resilience of rural communities as they move existing 'analogue' structures or cultural production into 'digital' forms. Digital technology is therefore seen as a contributing factor to the ways in which community resilience can be built in new and novel ways.

#### 3. Resilience

Within the social sciences the concept of resilience has not engaged with thinking through the ways culture and cultural activity produce resilient behaviour through practice (within psychology there has been some discussion to this, see Theron et al., 2015 for example). This paper will therefore develop the concept to think through and empirically evidence the ways in which cultural practices develop resilient behaviours for rural communities.

The concept of resilience has developed at an exceedingly fast pace within recent social science literature, and although the concept has a much longer history (see Skerratt, 2013), its more recent rise to prominence has been in the wake of the current economic downturn. Here it is often described in terms of how communities react to external shocks (e.g. Pike et al., 2010; Wilson, 2010), but following Skerratt's (2013:36) lead to move away from this, this paper wishes to consider how 'human agency is central to resilience' in relation to the continued production of community heritage resources. This will be done by suggesting that, in the context of community heritage, the notion of resilience as human agency is useful in two ways. One, it gives an appropriate understanding as to how different cultural repertoires have been maintained and passed through subsequent generations. Two, it neatly describes a set of relationships and connections that continue to maintain those cultural repertoires in the present day, especially as practices move towards digital forms. In doing this, the aim is to extend the concept of resilience to consider how, by understanding the 'topologies of relationships between people' (Adams and Ghose, 2003:419), this constructs place in both physical and virtual forms. Essential to understanding this form of resilience is considering the importance of cultural activity as a key driver to these actions. This is something that, to date, has not been addressed by the academic work on resilience (Callaghan and Colton (2007)).

Within the resilience literature, due to its founding within ecological studies and hence a social Darwinist outset (see Holling, 1973, 1986 and Holling et al., 1995), resilience is often framed

around the context of how well communities respond to external shocks. Here, resilient communities are considered to be those that bounce back to a pre-disturbance state dealing with external shocks as they happen. Looking at this though the lens of culture, however, raises a series of difficult questions for that interpretation as to what resilience is and suggests an exceedingly misleading approach as to how rural communities develop and continually change — whether due to external impacts or internal influences. Adger (2000), Davidson (2010), and Skerratt (2013) all discuss how the idea of shocks to communities is somewhat flawed, especially when bringing in human agency to the concepts of resilience. This is because for the most part, communities are continuing entities within a locality who have their own agency to develop which is not necessary stimulated by shocks. In attempting to move away from the ecological frameworks that have developed the term, they question the application of a physical systems framework in the research of social systems. Adger (2000) and Davidson (2010), although still working in an ecological framework, raise these issues well and Skerratt (2013) expands upon this while moving directly away from the ecological framework to consider questions around community land ownership. Further to this, Magis (2010) gives a compelling argument with regard to how communities are constantly changing and dynamic (like is often argued in urban literature, see Hall, 1998). Here, rural areas are constantly shifting with regards to changes that are created both externally and locally and this constant change is reflected both planning and agency that is taking place (Magis, 2010). To highlight one event, or shock, set against a background of constant disturbance, means it is often difficult to pick out a specifically resilient reaction. Further, at times resilience may not recover to a previously undisturbed state but to something that is entirely new. Magis (2010:402) neatly defines this as:

... the existence, development and engagement of community resources by community members to thrive in an environment characterised by change, uncertainty, unpredictability, and surprise. Members of resilient communities intentionally develop personal and collective capacity that they engage to respond to and influence change, to sustain and renew the community, and to develop new trajectories for the communities' future.

This definition is useful as it begins to unpack the complexity of comprehending what resilience is and how it is deployed, or not, within complex social systems. Key to this is, again, the context of 'human agency' and how individuals based in communities adjust to or attempt to rework or resist (Katz, 2004) a whole variety of changes that are taking place all the time.

The work of Magis and Skerratt is therefore central to the way in which a cultural understanding to resilience can be comprehended. As such, this paper will move to tease out the ways in which community heritage within rural areas represents resilient activity. As Franklin et al. (2011:771) suggest, it is important to examine the 'social geographies of resilience' and this paper will do this but importantly, it will extend this further to also consider the cultural aspects and dynamics. At the same time, it will also represent the ways in which such resilience develops, and will move to give an insightful example into how culture can act as a catalyst within small rural communities. It also acts as a medium to providing an engagement point for the community, by building dialogue as well as moving into the provision of other services which have been lost in these peripheral yet lively locations.

In developing the discussion in relation to cultural activity and resilience, there needs to be some caveats built into this argument before it can begin. To build an important caution to this, what resilience does not do, as Mackinnon and Derickson (2013) neatly

point out, is overturn the existing power relationships. It is very much contained within the micro-politics of place and the macro influences of current political economy. This is something that Skerratt, who engages with the work of MacKinnon and Derickson, fails to deal with, somewhat sidestepping this critique to the concept. Hence as Adams and Ghose (2003) suggests, it is the bounding and shaping of topologies that both limit and allow community heritage groups to produce their narratives of people and place through different mediums.

Central to the production of community heritage archives is the volunteer labour that maintains and produces the archives. It is this social and cultural activity that represents human agency and is shaping the resilience to preserve the collective memories and histories of a particular place. Within its production these activities build further cases of micro-politics at the community level and they can have both positive and negative connotations attached to them. For example, they can at times reinforce existing class distinctions within communities, rather than break them down — culture and its preservation has always been a context within which who remembers and what is remembered represents a broader power relationship (see Bourdieu, 1984).

To engage the concept of resilience to the cultural work of community heritage, the following sections will move to consider how the day-to-day activities inherent in community heritage produce greater resilience and how the human agency that is created by these actions is now moving to integrate digital methodologies to better preserve cultural assets. Digitisation is therefore comprehended as both a resilient step forward and a process that aims to make such collections and histories more resilient in the future. As Stevenson et al. (2010:60) suggest, it is not the physical location itself 'but rather the active and on-going involvement in the source community in documenting and making accessible their history on their own terms'. Hence, it is the encompassing processes of archive production in its totality, not just the archive alone, which represents the human agency and the building of resilience. The case studies researched for the CURIOS project will therefore highlight how cultural activity, through the production of community heritage, illuminates the importance of culture in helping resilient communities develop.

#### 4. Methodology

The empirical data was collected via semi-structured qualitative interviews with members of each of the community heritage groups. Interviews listed 1–14 are data from Comainn Eachdraidh members whereas interviews 15–23 are data from groups based in Portsoy. The interviews were conducted from 2012 to 2013. Participants were selected to give a range of views from each research area, from those with positions of responsibility to those who were participants in a range of activities. The aim was to gather a variety of perspectives from those that participated in community heritage, in order to comprehend how discourses around the production of community heritage are constructed.

The interviews were openly coded (Strauss, 1987) following the conceptual issues raised by the CURIOS project and the work of community heritage organisations. The open coding was intuitively developed from a grounded approach allowing for a flexible and thematic analysis to be developed (Braun and Clark, 2006). This developed into a series of more descriptive codes (Welsh, 2002) in order to reflect how participants described their thoughts, feelings and emotions towards the questions being asked.

#### 5. Community heritage

The relevance of community heritage archives to resilience is

due to the way in which volunteers in historical societies mobilise and build connections through historical narratives. For Flinn (2007:153) the real, important focus is upon the nature of how these types of activities are driven by the communities themselves, as he states:

Community histories or community archives are the grassroots activities of documenting, recording and exploring community heritage in which community participation, control and ownership of the project is essential. This activity might or might not happen in association with formal heritage organisations but the impetus and direction should come from within the community itself.

Here, agency lies with the community to present and articulate their historical sense of place for their own purposes, only engaging with institutions and the (local) state as necessary. This chimes with the previously mentioned work by Stevens et al. (2010) who argue that archival work moves well beyond the archive, which is revealed in the ways in which members of different historical societies reflect upon their desire to represent their histories and to tell the everyday stories about their communities:

It's about preserving the community's history and culture and Gaelic and pictures and all that, for the community itself (9).

Yes, I think a lot has changed in the study of history since we were in school in that there is a lot more emphasis on everyday lives and ordinary people (20).

Hence, it is the political motivation to express an historical narrative collectively that reflects the interests of a particular place. This often sits against the more sweeping local state or nationalistic heritage claims that miss out the finer-grained and every-day social histories of place (Mason and Baveystock, 2008). For Creswell (2012:165), such community archives represent spaces of 'marginalised memory' that draw 'attention to the things people push to one side and ignore, the things that do not make it into official places of memory'. Furthering this point, MacKenzie (2010:163–164) argues that cultural heritage projects (in North West Sutherland that have strong resonances with the CURIOS case studies) are a method of rehabilitation in collective psyches for dealing with past grievances:

Part of that bold, collective, effort to turn around centuries of dispossessions, defined not just through the Clearances, but also through more contemporary loss — of people, of jobs, for example, in the fishing and forestry sectors and of the houses which have been turned into holiday homes. These collective projects are about re-mapping the land in ways that suggest an alternative imaginary to that aligned with processes of dispossession and the practices of privatisation and enclosure that have underpinned them.

This chimes with Said (1994: 210, 226, 209), who has stated that cultural initiatives are part and parcel of 'a culture of resistance', in that they chart cultural territory — the 'reclaim[ing], renam[ing], and reinhabit[ing] [of] land' that precedes 'the recovery of geographical territory'. The process of collecting these marginalised memories is one that seeks to disrupt conventional knowledge-power asymmetries, especially those associated with professional endeavours, by creating their own places of memories, i.e. archives required to hold their collections. In this instance, for each of the groups there is a micro-politics that 'can affect [shared] heritages and through which attempts can be made to reorganise time and space as memory is mined, refigured and re-presented' (Crouch and Parker, 2003:396). Articulations of (historical) place, space and hierarchy are in play,

which drives their activity to collect, research, preserve and present own place histories and heritages:

Not people looking in and telling you what you should be doing or exploring your differences and making out that you are freaks because of what you believe in, what you do, way of life and so on. So I think that's the strength of a Comann Eachdraidh — showcasing ourselves (1).

Being part of history, being part of the museum and promoting local history. A lot of them watched the whole development of the restoration and everything and just kind of have committed since then because they just think it's a good thing (15).

Robertson (2012:7) discusses this in the context of a 'heritage from below' whereby it 'is both a means to and manifestation of counter hegemonic practises' where the very purpose is to articulate a position that does not conform to a top down narrative, but aims to represent those more 'ordinary' lives and incumbent practices that go along with their history. Central to these arguments is place, identity and a notion of dwelling (Ingold, 2000) that builds over time and reinforces each in relation to the heritage the communities wish to create. This reflects on the types of materials that are collected in these communities (see Box 1), as both forms of tangible and intangible heritage are gathered for their archives.

Collectively, Box 1 represents a large proportion of the 'objects' community heritage groups choose to collect and it is from this amassing of cultural artefacts that their historical place identity is formed:

Our artefacts are not artefacts per se. They are things that certain people had, they illustrate the way of life of the people. What we see is that the information about the people is the important thing. It's not the artefacts (1).

As Creswell (2012:2) argues, 'Things are at the heart of the process of constructing an archive of a place' and for him, the study of the process of archiving is 'informed by those who urge us to give due care and attention to the things people push to one side and ignore, the things that do not make it into official places of memory'. Cresswell draws on Pearson and Shanks' notion of 'rescue archaeology' (also see Lorimer and MacDonald (2002) for an example of this) to focus on the high cultural stakes at play in 'linking seemingly worthless things to the endless narratives, the political aspirations and disappointments, which have accumulated around them' (Cresswell, 2012:2 citing Pearson and Shanks, 2001: 156).

**Box 1**The different types of heritage materials collected.

Tangible heritage	Intangible heritage
School log-books	Oral history, stories
Individual collections	Genealogical knowledge
Photographs	Sheilings
Personal objects	Local place names
Industrial objects	Patronymics
Archaeological artefacts	Bárdachd (poetry)
Newspaper cuttings	Local dialects
Paintings	Gaelic dialects
Crofts	Gaelic terms
Buildings	Recipes
Boats	
Gravestones	

Therefore as Robertson (2012) hints with his construction of heritage from below and as Ingold directly suggests, it is the strong relationship between place and dwelling that 'a 'dwelling perspective', according to which the landscape is constituted as an enduring record of - and testimony to - the lives and works of past generations who have dwelt within it, and in so doing, have left there something of themselves '(Ingold, 2000:189), The CE and Portsov groups have become so focused on trying to represent themselves, in both physical and virtual forms, that they have created a community heritage taskscape upon which all activities are folded within. Central to this process has been a comprehension that a form of historical 'truth' can be represented. From the perspectives of the historical societies, 'truth' (a slippery term) represents an account of history that is delivered by the communities themselves, is constructed from their perspective, and reflects their socialised processes of remembering:

For the last couple of hundred years we try and make it historically accurate but any stories before that you can't really vouch for it as being historically accurate unless you get a document that shows that a person was there (10).

Community heritage therefore represents a series of placebased connections between individuals who come together to collect and share their historical narratives. They become entwined within a *taskscape* of activity, that as Flinn (2007) and Stevens et al. (2010) suggest, creates a set of processes that are community driven but also move well beyond the specific heritage work itself.

It is the social formation of groups and societies, their organisation and their on-going desire to present heritage that pushes community heritage beyond its production of archives and narratives into other areas of the community. It is at this point that the paper will shift to consider how this 'pushing off' point for community heritage represents how culture can be significant in the development of resilient communities. Within both communities, similar patterns can be seen in terms of how each organisation has grown to reach beyond its initial starting point. The taskscape of activity that heritage and culture present expands through developing human agency and thus, so does the scope of what such groups consider to be appropriate activities for volunteer heritage groups. Portsoy (Section 5.2) and Lewis (Section 5.1) show the successful ways in which community heritage activities have led to a variety of different outcomes and benefits for the local communities, acting as catalysts for human agency and resilient activity. These activities have grounded impact upon their communities, as they begin to use formally unused buildings for community needs. The following sections will give some brief context to the two community heritage organisations and the ways in which they have developed, showing how they have purposefully adopted a series of identifiable actions and pathways as they have sought to develop their community heritage resources.

#### 5.1. The Comainn Eachdraidh and Hebridean Connections

In the past 40 years around 22 'Comainn Eachdraidh' (CE) have been established in the Outer Hebrides CE are community run groups that began in the 1970s with a very specific political and cultural purpose — to preserve the culture, history and language of primarily Gaelic regions of Scotland. Each is autonomous and has set about preserving its own cultural traditions related to its own specific locality. In each locality there is a separate group of volunteers who run and administer the collection and preservation

Something about the community, in the community, and created by the community itself (1).

Great emphasis is thus placed upon provision for the local community in order to capture the history and heritage of that area. Memory work (Nora, 1989) is central to this approach as the communities feel that if these histories of people and place are not collected, they will be lost. Figs. 1 and 2 show two of their centres, one in Ness and one at Ravenspoint. Both are buildings that were previously schools but have now been developed by their respective CE's as community history spaces. They contain the archives themselves, community museums, community spaces, cafes and at Ravenspoint they run Gaelic language courses, a publishing company (The Island Book Trust), a hostel and a community shop.

Developing out of the CE movement in the early 2000s a collection of societies on the Island of Lewis (Uig, Bernera, Kinloch and Pairc) decided to pool their resources into a digital archive by applying for, and gaining, Heritage Lottery Funding (HLF). This created Hebridean Connections (HC), an organising group that would develop the digital collection. The digital archive was, for a period, in abeyance, as it was tied into working with a proprietary software provider. They have, however, now gained further funding through the Scottish Government to continue their digital archive and secure the employment of two members of staff, which has allowed HC to expand from the original four CE to ten.

#### 5.2. Portsoy Salmon Bothy and Portsoy Past and Present

Portsoy is a small fishing town that has a harbour that dates to the late seventeenth century. The Portsoy Salmon Bothy developed from the success of the community organised Scottish Traditional Boat Festival (see Fig. 3), which began in 1993 to celebrate the harbour's tercentenary. The hosting of the festival, which originally had its focus upon small Scottish traditional sailing boats, was initially highly successful, and so became a yearly event that grew in popularity due to community and volunteer efforts. The festival developed to integrate other cultural aspects into its remit as it grew, including music, food and craft. This success led to the development of the Salmon Bothy. Once an ice house (Fig. 4) for the Salmon fishing industry (that ended in 1993), it was refurbished and re-opened in 2011 due to volunteers securing funding for its restoration. The Bothy is a museum, community space and office for



Fig. 1. CE Nis (Ness), Lewis.

processes.

<sup>&</sup>lt;sup>1</sup> This is the Gaelic term for Historical Societies.



Fig. 2. Ravenspoint, Lewis.



Fig. 3. Traditional Boat Festival, Portsoy.



Fig. 4. Portsoy Salmon Bothy.

the Traditional Boat Festival and continues to thrive due to the role volunteers' play in sustaining it as a community enterprise:

What's happened wouldn't have happened if there hadn't been the community spirit and I think that's quite important to recognise. It is interesting because I talked to other communities and people say — communities quite close to us and further afield say, 'How do you do it?' ... I don't know, if Portsoy hasn't had the very strong community spirit it had, it wouldn't have happened. Now, interestingly I think what has happened, it has now moved into almost probably you might term it a second or third stage; where it's actually starting to probably accelerate the community spirit and involvement (20).

As a community space, it has fostered a hive of other related activities such as traditional boat building, genealogical research, folk music, knitting and art classes. The group has also sought to develop learning opportunities for local children surrounding boat building and traditional music by taking their activities into schools and funding tuition for pupils.

They have also acquired other sites in the town (this is an ongoing process at the moment), which includes the former boatsheds (to potentially be used as a learning space for traditional boat building) as well as what was previously the municipally run caravan site. The latter site presents an income for the group as they run it at a profit. Their collective efforts, as the quote above suggests, does seem to be accelerating as their success as a community enterprise continues.

Developing at a much later stage (2013) is Portsoy Past and Present (PPP), which is a separate heritage group that has developed in Portsoy. This group interestingly began on Facebook as a virtual space for people to post pictures and stories about the area, and gathered around two thousand followers:

I don't think there was a motivation but it was caused by a few folk — one guy in particular kept on badgering me about a Facebook page, I think it was just because he knew that I was local and I knew a lot of people and a lot of people knew me, it wasn't because I had any great talent or any super gift. And that was it (23).

This, however, quickly moved beyond Facebook, as a group of committed volunteers saw an opportunity to use the internet interest to bring benefits to the broader community. This led to the formation of a committee and the start of a variety of fundraising activities around cultural, heritage and social events in order to raise funds that could then be given back to the community. They were able to open a small museum space within the former bakery and currently, one of there main projects is the development of a small community garden on a previously unused plot of land.

The narrative in each of the group vignettes (both in Portsoy and Lewis) highlights a number of interesting relationships that have developed through volunteer activity. They represent the resilient activities of such community groups as they make deliberate and purposeful attempts to not only preserve and maintain a historical sense of place but to also impact upon the present. The acquiring of buildings, the development of amenities, the employment of staff, and the on-going search for further funding and opportunities, represents how cultural activity is a catalyst to community resilience and development in rural locations. The following section will move to consider how this has also moved into virtual spaces and why the development of digital archives further reinforces a resilient attempt to preserve cultural heritage.

#### 6. Going digital

Digital archives for community heritage groups need to be seen as an extension to their on-going work. In wishing to develop them, there is a strong resilient rationale to their production, due to an ontological angst with regards to existing methods of collection and dissemination. The two different groups of historical societies within rural Scotland both have an on-going resilience to maintain their strong local cultural identity and sense of place. Digital methodologies are seen as a potential way to extend this process and to find new ways to preserve and pass on these collections to future generations. The decision to develop digital solutions comes from two strong discourses that talk directly to the resilience literature in terms of how human agency can pre-empt problems as well see future possible opportunities. The first considers the discourse by which the groups are driven to produce digital archives, as a reaction to a variety of perceived 'threats' to their ongoing process of memory work. The second is in relation to the opportunities that re-connecting with diasporas offers rural communities alongside the better dialogues that can also be built with more local population. The following sections will now discuss why 'going digital' addresses these two discourses.

#### 6.1. Culture as fragile

In Lewis and Portsoy there has been a strong awareness with regards to what digital technologies, the internet and Web 2.0 technologies can potentially deliver. This has especially been in the context of trying to connect younger members and incomers into the community:

As more people come in from the outside with no connections with the original communities, so the information gets more and more fragmented. In a way Hebridean Connections is a good way of getting the minutia captured (1).

The ability to self-publish materials and present them as they wish in websites on there own terms is highly important, however, there is a further discourse that points to an ontological angst with regards to the preservation of these cultural repertoires. A variety of volunteers expressed a view that in some ways traditional methods of collection had broken due to the fast pace of contemporary society and the increased encroachment of influences from outside their locale. In both communities, volunteers express how they comprehend their sense of culture, heritage and current practices of collection as threatened:

[Local history] was all passed down orally by the older generation to us and that was to pass time in those days, the Taigh Cèilidhs (...). The oral tradition is going or has gone and what we are doing is trying to record as much of it as we can. Either in writing or by taking recordings of it (10).

This is due to a variety of influences, such as changing population; changing language; volunteer burnout; volunteer death; which all contribute to the failure of traditional methods of cultural transference to continue to pass on this knowledge from generation to generation. Digital archives are therefore viewed as one solution:

The population is changing, the people who really knew the people here and the language and everything else - they are dying, basically (5).

[T]his place is changing so quickly now. A lot of the people who have moved into the area don't really have history here (...) [The

croft] was always in the family, it just passed from one family member to another but now people come and go (2).

'Change' and its perceived pace represents a number of fractures in the potential for passing on community cultural knowledge. Nora (1989) represents this process in his work Les Lieu de Mémoire (1989:7) arguing that the 'acceleration of history' has changed the ways in which society remembers; institutions no longer function as once done, so that 'spontaneous memory' is replaced by 'lieux de memoire'. Thus there becomes a need for 'remembering' that is embodied within archives, museums and historical societies, which are 'the ultimate embodiments of a commemorative consciousness that survives in a history which, having renounced memory, cries out for it' (Nora, 1989: 6):

I'm fearful that some of this information is going to be lost again because everything at the moment is being done by volunteers. I think we have published quite a bit, little bits and pieces but there is a vast amount of data there that all Comann Eachdraidh must have that could be lost again. And it would be lost this time because you can't go back and get the information again (5).

Fear of losing this cultural material and the perception of a future where such material is available drives the digital collection of heritage materials for future generations:

Trying to get things, especially — things recorded in Gaelic, in the natural language of the people that were telling the stories so those have been digitally preserved. But again, unfortunately, a lot of these people are now no longer with us. So as time goes on the source of that information is becoming less and less (4).

The digital archive is therefore rationalised as the technological fix that may in some respects help 'remedy' this problem. The perceiving of an ontological angst with regards to lost social memory, represents a sense of human agency that is purposefully attempting to address the threat that 'not remembering' proposes. The digital archive is therefore viewed as a better way for maintaining a historic sense of place into the future and the mobilisation of the CE, HC and Portsoy groups towards this end is a purposeful attempt to pre-empt the losing of cultural and historical identity.

#### 6.2. (Re-)connecting with diaspora and local communities

The Internet has the ability to disseminate information around the world and this is seen as a potential opportunity for accessing and building dialogue with diaspora, as well as with many within the existing local community. The process of building linkages, and social and human capital (Putnam, 2000) represents one way in which such cultural activity builds greater resilience within a community. The digital archive thus becomes a mechanism for connecting with diaspora and community. For HC this is seen as a key motivation with regards to the opportunities a digital archive could bring to the islands and, initially, the islanders:

The local audience was the important audience, in the early days anyway. There wasn't really a conscious effort to make this knowledge accessible to an outsider (9).

Yet, there has been a shift more recently towards the 'outsider',

<sup>&</sup>lt;sup>2</sup> Add to this cemeteries, collections, festivals, monuments, associations, and anniversaries.

with the motivation being to attract ancestral tourists to the islands. This notion of the 'outsider' is interesting because it also represents members of the local community who may not be involved in such activities:

I think it was a change agent. So basically it's the process of change that we're interested in and the outreach that you get through the internet and social networks is just amazing. It makes me personally interested in, well, social development (16).

Web based technologies and particularly those related to Web 2.0 (Tsekeris and Katerelos, 2012) then become key conduits through which relationships between local and global communities can be simultaneously built. In following PPP's Facebook page, for example, it becomes apparent that users are both near and far, with both playing a role in the co-production (in digital form at least) of the ways in which the community heritage of place is produced. This is interesting because in such forums a more pluralistic sense of history and heritage can be represented whereby multiple voices are heard and stronger ties can be built. With regards to PPP, it has built stronger connections between community members, resulting in grounded changes in the community taking place:

That was something that we hadn't thought about before, to get a community group out of it but it seemed to naturally follow, and quite quickly actually (17).

Such technologies, both archival and through social media, are therefore key in this process of developing new ways through which cultural expression can take place and can be harnessed in order to develop more resilience locally.

This is not to say that it does not create some tensions for the communities too, especially in relation to a sense of potentially losing control of something that is seen to be so locally driven. In HC only CE members can edit records (non-member can comment though) and, similarly, members have always moderated the PPP Facebook page:

I think there is, basically, we have guidelines, like swearing and bad language so we had to set the ground rules early to — ok, in the first few weeks it was a free for all and folk were just putting on what they wanted, but we stood firm and some folk took the hint. But I think we had to put down the ground rules and what happens is a small close-knit community like this does — everybody knows everybody in the community (23).

Despite this on-going need to not fully relinquish control of discourse and to keep such activities controlled from, and embedded in, their locales, the need to build relationships with external communities has been a key driver for such dissemination. This is especially seen in the growth and interest in genealogy that has expanded greatly within recent years. A key process in tracking ancestors back through time requires locally run, place-based archives, such as those held by the CE or in Portsoy. Their desire to collect more everyday accounts of place and history often picks up on things that more institutional archives have ignored or disposed. This mean for the keen genealogist doing their own 'rescue (family) archaeology', such resources could be key to tracing their lineage.

I think the Hebridean Connections community is very much going to be the international genealogically based community plus anyone else who is interested. But that is the core community ... So it's us the home community – the whole of the Hebrides – speaking to the Diaspora (9).

Ancestral tourism has developed from this process. The locating of a document about a past relative is not necessarily enough, the experience of then going to the archive and viewing the place in which they lived then becomes an essential part of the process for tracing back your family tree:

... more importantly, to open it up to the world wide diaspora who would have an interest in that, in the finding of records to do with themselves or their family links. And to look at how we might develop the products and services eventually round that relationship, recognising that some people would want to come and see where their family roots are from, the majority would not (8).

The digital archive (and Web 2.0) is therefore seen as the appropriate medium for disseminating this information to a broader audience. The need to develop suitable web based archives is key in this process and represents a new *taskscape* (see Ingold, 2000) in the production of digital space in order to preserve and reproduce a historic sense of place but to also develop relationships beyond the (localised) community itself (to diaspora or for more commercial interests such as tourism). The virtual representation of place through archives and social media therefore becomes an example as to how community heritage and culture can be used to aid the building of more resilient communities.

#### 7. Towards resilient digital archives?

Through following the existing processes and the development of CURIOS, with both groups, the software proposes a potential solution to co-produce a more sustainable and useable way of creating web based digital archives. This in itself, however, raises a series of critical questions that the project itself needs to address along with the communities involved. The following sections will now touch upon these caveats that will form future research questions for the CURIOS project.

Digital archives and the CURIOS software do not represent a simple technological fix that can solve the problems HC and the Portsoy groups have. As digital archives, they translate the materials into a new and accessible medium, but this still requires work both in terms of digitising materials and in terms of the long-term maintenance of the systems and servers that make it run. This potentially requires further funding to maintain their digital archives and to have the technical expertise in place to keep them running. Will the resilience already shown in such communities be able to maintain this over time?

The technology used by CURIOS (linked data/semantic web) to make the production of websites from archives much more do-able, also makes that data much more accessible to other interested groups. Such data could, therefore, be harvested by another collection and presented in a very different way. This potentially means losing some control of their own materials through publishing it as open-linked data. This raises real questions about the control of such data and the narratives that people choose to present from it. The reserve to this is that linked data archives can also make use of other linked data provided by external digital archives. A group may wish to harvest other groups or institutions collections in order to expand and improve their own. To date, historical societies in Lewis and Portsoy have been very keen to research and collect history from their locality and present that back to the community – what happens when pertinent collections in other locations can be 'pulled' into their own collections, potentially enriching them? Furthermore, what then happens to the local sense of place and history that is being produced? This, therefore, raises a series of further fascinating questions about the relationship between place, history and identity that will be researched as the CURIOS project develops.

#### 8. Conclusions

This paper has outlined the key arguments that we wish to express in relationship to the production of community digital heritage. This has been done by extending the concept of resilience to consider the production of community heritage and culture from a rural, grassroots, non-institutional perspective. The paper has shown that unpicking human agency is essential in order to comprehend the ways in which these multi-faceted communities have chosen to present themselves and build resilience through cultural production. This is highlighted by resilient desire to maintain a specific body of cultural knowledge, which is translated as wanting to hold onto something that would otherwise have been lost. This, as was previously stated, comes from a political motivation to not be consumed in the broader cultural currents of nationalism and globalisation.

Secondly, in both case studies there have been small scale, socially entrepreneurial 'heritage industries' that have developed out of the historical societies themselves. Examples range from smallscale museums and the restoration of buildings for use as hireable community spaces to book-publishing, community amenities and digital archives. They represent both physical and virtual attempts to shape and construct place. The final example, connecting with diasporic communities for genealogical research, has also been a central motivation in producing digital representations of heritage. This has been due to the growing potential of genealogical tourism. The archive as a locus of knowledge then becomes central to virtual, to the construction of historic place in a form that can be transmitted beyond the rural.

The concept of cultural resilience is therefore an attempt firstly to move determinately away from social-Darwinist tendencies that have stalked the concept and to embrace the role of human agency that needs to be integrated into the concept when looking at societal relations and development. In doing this, 'the cultural' needs to be fully recognised in its importance to this, especially in terms of the cultural value (Crossick and Kasynska, 2014) that it brings to communities. Cultural activity and the construction of distinct localised cultural identities plays an essential role in the building of resilience in such rural locations whereby it acts as an enabler for wider community development. In following the work conducted by community heritage groups in Lewis and in Portsoy, in relation to digital archives, it has become clear that the production of historical narrative is as much about developing the present and envisioning the future as it is about mining the past. The concept of resilience and our understanding of how such a framework is deployed within communities is therefore so much more enriched by understanding the import role such activities have in the process of rural development. This means in constructing future frameworks of resilience, it is not enough to only consider the 'social geographies of resilience' (Franklin et al., 2011) but such approaches have to integrate the cultural geographies of resilience too.

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