

Blueprints physical to digital: curation of media to support ongoingness

WALLACE, Jayne, KOULIDOU, Nantia, DUNCAN, T, LAWSON, S, TRUEMAN, Julie, CRAIG, Claire <<http://orcid.org/0000-0002-3475-3292>>, FISHER, Helen, MORRISSEY, K, MONTAGUE, K and WELSH, D

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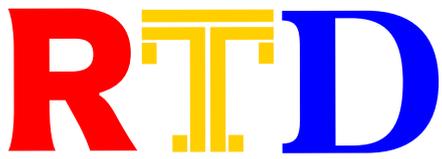
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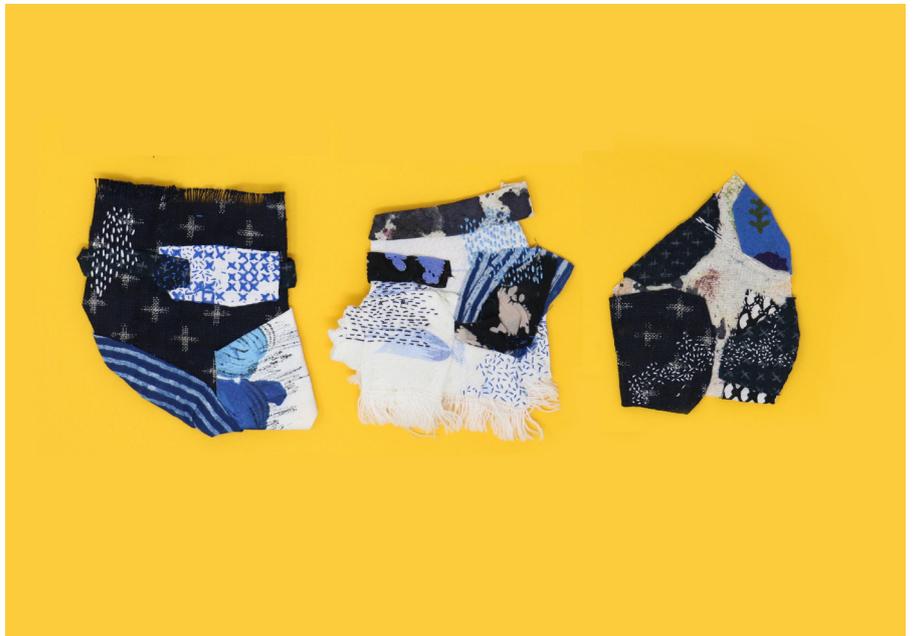
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**Proceedings of the 4th
Biennial Research Through
Design Conference
19–22/03/2019**



Wallace, J., Koulidou, N., Duncan, T., Lawson, S., Trueman, J., Craig, C., Fisher, H., Morrissey, K., Montague K., Welsh, D. 2019. "Blueprints' physical to digital: Curation of media to support ongoingness'. In: Proceedings of the 4th Biennial Research Through Design Conference, 19-22 March 2019, Delft and Rotterdam, The Netherlands, Article 31, 1-16. DOI: <https://doi.org/10.6084/m9.figshare.7855814.v1>.

**Method&
Critique** *Frictions and Shifts in RTD*



‘Blueprints’ Physical to Digital: Curation of Media to Support Ongoingness

Jayne Wallace¹, Nantia Koulidou¹, Trevor Duncan¹, Shaun Lawson¹, Julie Trueman¹, Claire Craig², Helen Fisher², Kellie Morrissey³, Kyle Montague³, Daniel Welsh³

¹ Northumbria University, Newcastle Upon Tyne, UK
jayne.wallace@northumbria.ac.uk

² Sheffield Hallam University, Sheffield, UK

³ Newcastle University, Newcastle Upon Tyne, UK

Abstract: Through describing ‘Blueprints’, a series of fabric collages, we detail a method for translating physical properties of objects into digital materialities of media compilations. This method has emerged within a piece of design research seeking to develop new ways to curate digital media to support ongoingness. The project context centres on working firstly with people who have a life limiting illness, secondly people living with an early stage of dementia and thirdly people who are bereaved. Ongoingness is a theoretical construct denoting an active dialogical component of ‘continued bonds’, which is an approach within bereavement care championing practices that enable a continued sense of connection between someone bereaved and a person who has died.

‘Blueprints’ are fabric collages made from scraps of fabric symbolising digital media (in this case photographs) from 2 people – one bereaved and one now deceased. The physical qualities that result from making the fabric collages (variation in layerings, thicknesses, stitching, fraying) each map onto directions for how the corresponding digital media will be composed in a compilation, and serves as a collaborative method of curating media in new ways. The ‘Blueprints’ method enables us to research if and how physical making of things can serve as a gentle way to engage with the complexities of media curation. It considers the potential value of indirect ways of curating digital media to enable ongoing connections between people through the unexpected compilations that the method creates.

Keywords: Ongoingness; Design Method; Curation of Digital Media; End of Life, Dementia & Bereavement; Craft.



Contextualisation

To frame the Blueprints artefacts, method and media outcomes let us start by describing what we mean by the term ‘ongoingness’ and the premise of the research project that this work sits within. The wider project (anonymous for submission) seeks to understand if and how new forms of media content curation, creation and consumption can support people’s sense of self and relationships with one another in relation to firstly anticipating death, secondly significant shifts in ability to represent self in dementia and thirdly living with bereavement.

To enable us to investigate these aims we are leveraging the concept of ‘ongoingness’ both as a theoretical construct and also as a pragmatic resource for design practice. The term comes from the body of work in bereavement and grieving therapy focused on ‘continued bonds’ (championed by, amongst others, Howarth 2007 and also Klass, Silverman and Nickman 2014). Continued bonds is an alternative to the dominant grieving practices of Western modernity following both World War 1 and 2 when a phased disengagement from the dead was adopted as a model of grief and bereavement. This perspective of disengagement encouraged the living to work through stages of detaching themselves from the dead so that they might continue to live fulfilling lives and find new attachments (Bowlby 1969, Lindemann 1944, Raphael 1984, Worden 2008). Although valuable and healthy as a strategy for many people it is not the only approach open to us in bereavement. An alternative approach is one that acknowledges that it may be healthy, for some people, to find ways to have a continued, dynamic relationship with those who were close to them but who have died. This sense of an ongoing relationship has long been active within many non-western cultures - Maori practices being one example (Babacan & Obst 1998) and as Howarth asserts is nothing new, but is something that in the West we lost. She suggests that in Western societies, “life and death have been perceived as being in opposition, and the dead viewed as having little impact on the world of the living” (Howarth 2007 P. 25.). Further, Klass et al remind us that people are not bounded selves, but instead connect with the selves of others, which is a positioning that correlates strongly with the notion of personhood in the philosophy of dementia care (Kitwood 1992). And just as personhood does, so continued bonds create a very particular design space and way of thinking about design to supporting our non-bounded, relational selves.

We have asserted elsewhere (Wallace et al 2018) that ongoingness is an element of continued bonds; a subset of the range of actions through which existing bonds are able to be continued. Continued bonds can be enacted through a wide range of means and conceptual positionings - they could, for instance, be experienced through things such as memorialisation, seeking in part to recapture a relationship as it was in a former state. The conceptual framing here is one of looking back and of maintaining something precious as it was. Ongoingness, alternatively, is a subset of continued bonds that is about the active and dynamic continuation of a relationship - meaning that it is open to that relationship changing over time. The emphasis is on an evolving, future-focused dialogue as time passes. Ongoingness is therefore separate and different from living in the past.

Ongoingness as a future facing concept is therefore potentially a very useful notion for design research to use in order to think through new dynamic ways to support sense of self within contexts such as end of life, bereavement or dementia. Using the framing of ongoingness to think about bonds between people that endure (even after death or in profound dementia) we can place an emphasis on dynamics that are forward looking, where there remains a continuing process of negotiation and meaning making and the potential for fluidity and change to occur.

Related Work

Although an extensive review of related work is beyond the scope of this paper we highlight the following research as being of particular significance.

Artist and photographer Moira Ricci (2011) created the piece 20.12.53 – 10.08.04 which is a series of photographs placing herself, always at her current age at the time, in photographs of her deceased mother from across her life as a way to create a particular personal dialogue and evoke ongoingness for herself. Ricci’s work has been a significant influence on our thinking across the wider project.

Schorr (2014) explored time and loss through photographs in relation to new media and Graham (2015) discussed how photographs of the dead act in part to enable people to live on, whilst rendering them somewhat paradoxically as being both alive and dead.

Rosner and Ryokai (2010) developed ways to associate digital records of the creative process of making something with physical locations on handmade fabric and Golsteijn

et al (2014) developed ways to explore novel craft processes, which include digital media in integrations with physical construction.

Research on design and mortality in human-computer interaction (HCI), includes literature on design for the act of looking back and on physical/digital memorials (Banks 2011, Uriu & Okude 2010, Moncur et al 2010); on design for forgetting after a relationship breakup (Sas & Whittaker 2013); on online practices of memorialisation and mourning (Walter 2015); on design perspectives on phases of letting go (Odom et al 2010); and on design to explore curated media portraits in new parenthood (Trujillo-Pisanty et al 2014).

Each of these pieces of work have been useful to our thinking when considering the Blueprints method and we now detail the idea development, refinement and initial use.

Blueprints

Blueprints are a series of fabric collages and also a method for translating physical properties of objects into digital materialities of media compilations. It is a way of thinking about how the physical and digital materialities of the things around us could inform each other or aid in curation of them respectively.

The idea has developed at a point in the broader project when we wanted to create some exemplar pieces of how media could support ongoingness pre-recruitment of participants to the project. In other words we made a series of pieces drawing from our own lives and relationships that we could use when meeting people who may want to take part in the research so that they could see some concrete examples of the kinds of things that we could make with and for them. The premise of the research and the notion of ongoingness are abstract and we wanted to create some tangible designs that we could talk through and give potential participants things to think around and with. We offer Blueprints up as an account of firstly an idea that seeks to find gentle ‘ways in’ to working with sensitive media, secondly a method for curating media through physical, craft based means, thirdly a method of reappropriating existing media in order to create something new from a finite archive and fourthly a series of personal reflections on the outcomes and potential implications of these in relation to ongoingness.

Idea Development - A dialogue of materials

The idea stemmed from some small textile objects that the first author made (Figure group 1) from scraps of fabric cut from old objects of her mum’s (clothing, tablecloths, napkins) that she owned since her mum’s death several years ago and new fabrics that she had brought back from travelling, or that she was making clothes from. Initially the objects were made as an attempt to bring things belonging to both people together in new ways to achieve something new, something current - a dialogue rather than a reminiscence object.

The old fabrics were things that were not sentimental, many were used, stained tablecloths that held little emotional meaning, but that nonetheless were definitely from one person. These were objects that weren’t the first author’s taste, weren’t particularly useful for other people as they were perhaps too old and worn to give away, but which she didn’t want to simply throw away either. So another strategy developed which was to use these objects as raw materials for the making of new things and this was the starting point for making the Blueprints pieces.

Boro (meaning ragged or tattered) - an old Japanese method of repairing clothes influenced the making of the initial collages. Typically this technique was used to patch farm labourers’ or fishermens’ clothes - out of necessity rather than for aesthetic reasons. The technique is to take scraps of fabric and place them behind a hole in the garment and then use tiny stitches to darn the two fabrics together as if making them into one fabric. Relating this to the wider project aims of creating new forms of media curation and consumption led us to think about the materialities of data through the different modes by which we encounter it.

As a team of researchers, that includes designers and craft practitioners, on talking through the objects and method of making them there felt to be a link to how the physical and the digital worlds around us could intersect in forms of curation.

The aim was not to emulate Boro but this method influenced the collages in the use of small stitches to connect scraps of fabric and the layerings. In making them we considered the scraps as data and how the process could be seen as mixing data from one person with that from another. The idea of leaving some of the edges raw and even frayed as opposed to folding edges under and stitching these down could have implications for how we design with data in terms of it staying robust or unravelling and wearing out (for example). We imagined that we could think of an object like this as a blueprint for digital curation - taking the physical qualities of such an object and using them as a directive for the form and behaviour of the digital curation and interaction.

Refinement of Idea and Method

In order to develop the idea and see how the method could play out we decided to use a small number of eight photographs from the first author's personal archive featuring images of her and her mum over their lives (Figure group 2). Firstly we developed a clear set of rules that we could establish as the key for how the materiality of the fabric collages would direct the manipulation and curation of the media images. Secondly we made a series of 4 new fabric collages that purposefully responded to this set of rules. And thirdly we developed a process by which areas of a collage would relate to certain images from the archive and how these would be curated sequentially. We now detail each of these three aspects to the method.



Figure group 1 above. Initial collages. Photo: Jayne Wallace, Nantia Koulidou.



Figure group 2. Personal archive media of 8 images. Photo: Jayne Wallace, Nantia Koulidou.

Grid and Key

We established a grid of 2 x 4 cells (Figure 3) to use as a way to visually divide up a collage into sections that could be assessed in terms of material qualities – each section of the grid relates to a digital image from the media archive (in the example of the method that we share here the grid is composed of 8 boxes, which correspond to 8 images, but this could be altered depending on scale of collage, preferred fidelity of assessment or size of corresponding media archive). By placing the grid over the top of a collage each portion of the object can be assessed and coded up in relation to the key. In this approach the object is visually assessed from one particular angle (i.e. from the perceived front face of the collage, rather than also from the reverse), but the collage is additionally physically assessed by hand to determine thickness in each grid cell. We now list the rules that make up the key for this first exploration of the method. We devised a series of rules governing composition (i.e. qualities of the collage that would determine how the corresponding photographs were altered/merged/composed) and a series of rules governing sequence of images.

COMPOSITION RULE 01: If, in a grid cell, the collage is made of many layers of the same fabric and feels thick to the touch then make no change to the digital image corresponding to that grid cell.

COMPOSITION RULE 02: If a grid cell has one different fabric to the base layer and it bridges two or more sections of the grid then blend the corresponding images utilising transparencies.

COMPOSITION RULE 03: If the collage in a grid cell has one different fabric to the base layer, but this remains only in that single grid cell then change the corresponding image to greyscale and highlight a detail of the image using a transparent circle in the dominant colour of the uppermost fabric.

COMPOSITION RULE 04: If a grid cell has two layers of fabric on top of the base layer, and these span two or more grid cells then create a visual collage using components from each of the corresponding images.

COMPOSITION RULE 05: If the fabric in a cell has frayed edges then make the corresponding image black and white and increase contrast.

SEQUENTIAL RULE 01: If there is no visible stitching in grid cells then run the sequence of images numerically from 1 (1, 2, 3, 4 etc).

SEQUENTIAL RULE 02: If two or more cells are connected using tight stitches in clear lines then connect up in sequence images corresponding to each of the cells that the stitching passes through (See description of Blueprint 02 for exposition).

SEQUENTIAL RULE 03: If sections of the grid are connected with loose stitching, then only the images at the ends of the run of stitching are connected in a sequence (See Blueprint 01 for exposition).

1	2
3	4
5	6
7	8

Figure 3. Illustration of 2 x 4 grid. Photo: Jayne Wallace, Nantia Koulidou.

Method in Practice

By using these limited rules we made three new collages (see main paper image). We wanted to explore how this enabled us to alter the archive of 8 photographs in order to create new visual images and possibly new visual and semantic links for an owner of these images. Thinking forward to using this method with participants at a later date, a wide range of rules could be established co-creatively as a playful palette and space for exploration and media curation. We have offered up only a small number here. We now describe each of the 3 collages and reveal how their materiality directed changes to the photographs and determined how they were sequenced to create a final set that could be played like a short film.

Figure group 4 below. Blueprint Collage 01 and detail of the image adjustment outcomes. Photo: Jayne Wallace, Nantia Koulidou.

Blueprint Collage 01

Below is the first resulting collage made in relationship to the rules and Figure group 4 steps through how the materiality of this collage directed composition of the resulting images. The sequential ordering of the resulting images was dictated by the stitching as denoted by Figure 5.



Figure group 5 above. Sequence of resulting images. Photo: Jayne Wallace, Nantia Koulidou.

Grid cell 1 has one different fabric to the base layer, which continues into grid cell 2. This has directed the corresponding images 1 & 2 to be blended using a transparency (composition rule 02).

Grid cell 3 has one different fabric to the base, but remains only in this cell. This has directed image 3 to be made greyscale and a highlight to be placed somewhere in the image using a circle in a colour taken from the top fabric (composition rule 03).

Grid cell 5 is comprised of many layers of the base fabric and feels very thick to the touch. As such the corresponding image 5 was left unaltered (composition rule 01).

Grid cell 7 is made only from the base fabric, but is not thick. It has a frayed edge which directed the corresponding image to be changed to black and white with increased contrast.

Grid cell 4 contains 2 different fabrics in addition to the base layer and these continue down into cell 6. This directed images 4 & 6 to be combined as a collage using details from each image (composition rule 04).

Grid cell 8 is made only from the base fabric, but is not thick. It has a frayed edge which directed the corresponding image to be changed to black and white with increased contrast.



Figure group 6 above. Blueprint Collage 02.
Resulting images and sequence dictated by the collage.
Photo: Jayne Wallace, Nantia Koulidou.

Making the Collages and Altering the Images

The collages (Figures 4, 7 & 9) were made by the first author with a clear eye on the rules. We purposefully chose to make new collages that would speak to the rules as we wanted to explore if and how they worked in practice and the results that they yielded.

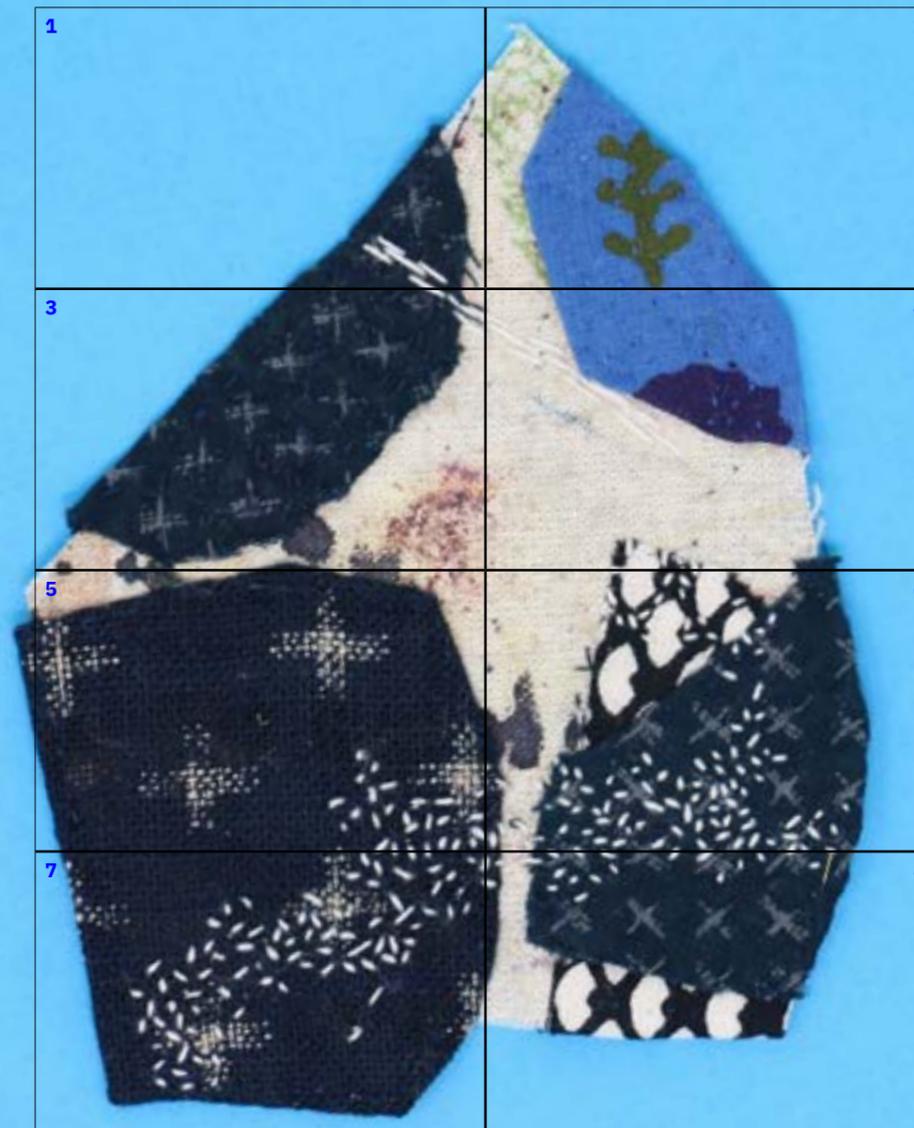
The creative adaptations of the images in relation to the collages/rules (Figures 5, 6 & 8) were made by the second author.

By dividing up the activities in this way we were able to create a situation where the first author, who owned the photographs, could experience the resulting adaptation and creation/curation of something new out of them almost as a participant - i.e. by seeing the completed image compilations after having made a collage. We hoped that this would enable a particular space for reflection from the first author on what the new images meant to her (if anything) and how they made her think about her relationship.

It is also key to point out that there is a creative flexibility within the rules and that the second author had space to play around with the resulting images, whilst still doing what the rule asked for. We return to this point in the reflections section.

Figure 7 right. Blueprint Collage 02. Photo: Jayne Wallace, Nantia Koulidou.

Blueprint Collage 02





Blueprint Collage 03



Figure group 8 left. Resulting images and sequence dictated by Blueprint Collage 03. Photo: Jayne Wallace, Nantia Koulidou.

Figure 9 r Jayne Wallace, Nantia Koulidou. ight. Blueprint Collage 03. Photo: Jayne Wallace, Nantia Koulidou.

Discussion

We now discuss three aspects of this work: firstly reflections on the resulting clips of images by the owner of the photographs (first author); secondly limitations of what we have presented in this paper, and thirdly potential of the method in the context of the wider research.

Personal Reflections

I (first author) am going to talk in the first person for this section as I'm reflecting on how the final images and watching them play as short film clips made me feel.

Without hesitation I can say that the merging of images - following both composition rule 02 and 04 had the strongest effect on me. As I hadn't made the changes to the images I wasn't sure what creative decisions would be made in merging them and on seeing the results it felt almost as if I was seeing these photos as something new, which was a very strange feeling as I know them so well. Being confronted with a newness from what felt to be a finite archive is an exciting prospect. The compositions in Figures 10 & 11 in particular present not only new narratives (that I can read into them), but also impossible scenarios where my mum and I are with each other at different stages of our lives and even together with our younger selves.



Figures 10 and 11 above. Photo: Jayne Wallace, Nantia Koulidou.

Similarly the particular placement of images in Figure 12 struck a chord with me as it shows a physical connection (the hand resting on the shoulder) that means something to me. And the highlighted area (composition rule 03) seems very intriguing (Figure 13). It caused me to think of reasons why that area would be highlighted, what this suggested and in turn I found myself creating new narratives or meanings around this.



Figure 12 and 13 left. Photo: Jayne Wallace, Nantia Koulidou.

Beyond the context of the images themselves it made me see the particular creative decisions behind the compositions as very caring and considerate. I had an appreciation of this and felt like the images had been worked with/played with/alterd in a way that did not diminish their value or trivialise their content. This in turn emphasised that these photographs - this digitised media - is far more than data. It is personal and precious - and fragile because of that. Using my own archive made tangible and acute what we already knew, that if and when we use this method with participants a gentle approach is needed - whether we are creating the images for them

to see (as was the case here), or working closely with them in the actual adaptation of the images (more co-creative practice).

In terms of considering how the outcomes speak to a practice of ongoingness in my life I can see how meaningful it could be to see new images of yourself with someone you love, but who is now deceased. It suggests that the archive of images that you have is not finite in the way that it feels when you know that no new photographs can be taken of that person. Beyond this new capacity for 'more' there is a capacity for new meanings and interpretations to be read - particularly into the collage images and there is something very exciting about that - and significant that this was possible from a small number of photographs. Seeing each of us 'out of time' i.e. together at ages that weren't possible emphasised the feeling that I already have that we are just part of each other's lives in a deep way regardless of time frames. If we had used images of me now, doing things that were current in my life and these had been merged with photos of my mum there is the potential for these to extend this feeling, but I'm aware that this might also feel disturbing and uncanny for some people. For me personally it feels as though positive emotions would be evoked if we both feature in photographs of each other from the past, but there is something different at play with photographs of me taken after Mum's death. I suspect that this would feel uncomfortable and not necessarily positive. When working with participants this would be something to approach very sensitively and gently to see if and how this would be appropriate and useful/positive for someone or not.

Limitations

As this paper describes both the conceiving of this method and also an initial development and use of it there are a number of limitations.

We established a small number of rules and there are clearly a whole range of decisions that could be made here. The purpose of the paper is not to create an extensive lexicon for potential rules that could be established, but to explore how things played out using a series of rules and to argue for the potential of the method in the curation and adaptation of digital media through tangible, physical means of making an object.

We report on the work at a stage pre external participant involvement, and chose to use ourselves and our own experiences as the basis for this study. As such there are limitations in regard to feedback from participants. We hope that there are contributions in the framing of the work (concept of ongoingness), the articulation of the development of the method and in the personal reflections that stem from the outcomes however. Moreover we see a value in the way that we articulate the potential for this method for the wider contexts of the project.

A quality of the method is the creative input and activity needed to adapt and curate the images once a fabric collage has been made. This method does not automatically lead to digital outputs - there is human effort in play to make creative decisions about how images are merged and altered. This therefore requires time and considerable emotional commitment. This could be a timely process depending on size of image archive selected.

We also acknowledge that we are only reporting in this paper on the demonstration of this method in the context of bereavement and not the full scope of contexts of the ongoingness project which also include dementia and end of life. This is a limitation of the paper, but not the method itself. The method has value across and also beyond these three contexts and has implications more widely to RTD, which we now discuss further.

Potentials and Conclusion

Thinking of how a physical 'thing' could inform how we curate/map/alter digital data could give us novel ways to think about how physical 'stuff' informs digital content regardless of research context. One reason why this could be particularly significant in the wider ongoingness research project is that when we work with people (who are: at an early point of dementia, living with a terminal illness or bereaved) it could potentially be very liberating to have methods of curating data without the arduousness of directly selecting clips of music, photographs, pieces of film footage from a large personal archive and then deciding how they will be merged or play as a montage (for instance). Particularly in contexts where participants may get tired very quickly, are dealing with the stresses of an illness or bereavement or where the emotional meanings of the media are too much to engage with on occasion. A method such as Blueprints that can be done iteratively and where the fabrics act as a proxy to the media/data could potentially be very useful. Dealing with fabrics (whether from personally significant garments/objects or just a selection of fabrics that have different patterns and materialities) could potentially be far less emotionally stressful than working directly with personally meaningful media - of course for some people the act of cutting materials up that do have emotional symbolism could be too stressful. At the very least, however, having methods such as this to counterpose times when participants do engage directly with personal media could be a way to vary activity and potentially mitigate stress, whilst still moving creatively forward and achieving something with the media.

Another potential value in this method is that there are no judgements being made about right or wrong - instead it is an experimental process that can yield surprising results. It generates (albeit through the efforts of someone adjusting media in line with the rules) new amalgams of media that could enable a viewer to see new nuanced connections between themselves and the deceased person. This was our experience in using the method, although only to a limited degree due to number of both images used and collages made. Even if this did not occur however the new series of media outcomes could serve as propositional curations for a viewer to critique and use as a catalyst to create something different that is meaningful to them. Similarly fabric collages could be further worked into by participants (i.e. stitching more tightly, cutting cloth or making it fray) in order to develop new media outcomes. Perhaps also using proxy materials which represent data could potentially act as an accessible 'way in' for people who feel unknowledgeable or nervous in terms of digital technology. In terms of the method and implications for RTD more broadly we make some final comments.

Here we have made collages from fabrics, but any materials and forms of making could be substituted as appropriate for particular participants. Further, arguably any existing object could also be assessed using a grid and interpreted in line with a set of self determined 'rules'. However, we argue that craft engagement facilitating considerations of how digital data is manipulated is highly significant for RtD more broadly. Beyond the autobiographical specificity of our project the method draws us closer to considering digital data as a material and gives us the tangible means to iteratively adjust how digital media is configured through changing physical things (i.e. adding more stitching or cuts to a collage). It is a way of getting 'hands on' with digital materiality through craft-process-as-interface and this, perhaps especially for people who are not used to manipulating digital media, has much potential. By describing in detail how the method developed, current limitations and how we used it by drawing on our own personal experiences we hope that this paper serves as an example of RtD deriving from lived experience that speaks to a far wider context.

References

- Babacan H. & Obst P. (1998) *Death, Dying and Religion: Practices and Beliefs, A Guide for Healthcare professionals working with HIV/AIDS*, Old Department of Health, Brisbane.
- Banks, R. (2011). *The future of looking back* (Microsoft Research). Microsoft Press.
- Bowlby, J. (1969). *Attachment*, Vol. 1 of *Attachment and loss*.
- Golsteijn, C., Hoven, E., Frohlich, D., & Sellen, A. (2014). Hybrid crafting: towards an integrated practice of crafting with physical and digital components. *Personal and ubiquitous computing*, 18(3), 593-611.
- Graham, C. (2015). The photograph reaches out: uses of photographs of the dead in China. *Mortality*, 20(4), 351-374.
- Howarth, G. (2011). *The rebirth of death: continuing relationships with the dead*. In *Remember me* (pp. 29-44). Routledge.
- Kitwood, T., & Bredin, K. (1992). Towards a theory of dementia care: personhood and well-being. *Ageing & Society*, 12(3), 269-287.
- Klass, D., Silverman, P. R., & Nickman, S. (2014). *Continuing bonds: New understandings of grief*. Taylor & Francis.
- Lindemann, E. (1944) *Symptomatology and Management of Acute Grief*. *American Journal of Psychiatry* 101, no. 2 :141–48.
- Moncur, W., Julius, M., Van Den Hoven, E., & Kirk, D. (2015). *Story Shell: the participatory design of a bespoke digital memorial*. In *Proceedings of 4th Participatory Innovation Conference* (pp. 470-477).
- Odom, W., Banks, R., & Kirk, D. (2010). Reciprocity, deep storage, and letting go: opportunities for designing interactions with inherited digital materials. *interactions*, 17(5), 31-34.
- Raphael, B. (1984) *The Anatomy of Bereavement: A Handbook for the Caring Professionals* (Lanham: Rowman and Littlefield).
- Ricci, M. (2011) *interview with Teresa Meucci, May 26, 2011, Artifacts—Dealing with the Past*, www.artifacts.net/index.php/pageType/newsInfo/newsID/6193/lang/1 (accessed Oct 16.2018).
- Rosner, D. K., & Ryokai, K. (2010, April). Spyn: augmenting the creative and communicative potential of craft. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 2407-2416). ACM.
- Sas, C., & Whittaker, S. (2013, April). Design for forgetting: disposing of digital possessions after a breakup. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 1823-1832). ACM.
- Schorr, S. (2014). *The Bereavement Project: Picturing Time and Loss Through Photographs in the Landscape of New Media*. In *Mediating and Remediating Death* (pp. 75-91). Ashgate.
- Trujillo-Pisanty, D., Durrant, A., Martindale, S., James, S., & Collomosse, J. (2014, June). *Admixed portrait: reflections on being online as a new parent*. In *Proceedings of the 2014 conference on Designing interactive systems* (pp. 503-512). ACM.
- Uriu, D., & Okude, N. (2010, August). *ThanatoFenestra: photographic family altar supporting a ritual to pray for the deceased*. In *Proceedings of the 8th ACM Conference on Designing Interactive Systems* (pp. 422-425). ACM.
- Wallace, J., Thomas, J., Anderson, D., & Olivier, P. (2018). *Mortality as Framed by Ongoingness in Digital Design*. *Design Issues*, 34(1), 95-107.
- Walter, T. (2015). *New mourners, old mourners: Online memorial culture as a chapter in the history of mourning*. *New Review of Hypermedia and Multimedia*, 21(1-2), 10-24.
- Worden, J. W. (2008) *Grief Counseling and Grief Therapy: A Handbook for the Mental Health Practitioner* (New York: Springer)