**ORIGINAL ARTICLE**

# The role of born digital data in confronting a difficult and contested past through digital storytelling: the Waterford Memories Project

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**Abstract**

Digital scholarship is ubiquitous, where even the most Luddite of scholars use some form of digital technology in their research. Differences in the level of technology use have become a question of degree not kind. Currently in the second wave of Digital Humanities, Presner (2010) argues that Digital Humanities 2.0 introduces entirely new-born digital paradigms, methodologies, and publication models not derived from print culture. This new wave is "deeply generative, creating the environments and tools for producing, curating, and interacting with knowledge that is 'born digital' and lives in various digital contexts" (Presner 2010, para. 13). Using the case study of a Digital Humanities project called "The Waterford Memories Project", this paper will consider both the role of born digital survivor testimony in confronting a difficult and disputed past in Ireland and, more broadly, how we create and access knowledge in this contested space. The Waterford Memories Project is an oral history driven study in digital humanities, publicly documenting survivor narratives of the Magdalene Laundries and Industrial Schools in the South-East of Ireland. The last Magdalene Laundry in Ireland closed in 1996. These institutions formed part of a system of coercive confinement, which incorporated a wide range of historical institutions used to confine both children and adults whose "crimes" were to act against the strict and punitive moral codes of the period, poverty, or mental illness. This paper will examine the role of born digital data in public humanities (in the form of the audio-recorded survivor oral histories), and frames the Waterford Memories digital humanities project in the technoculture and minimal computing literature, emphasising the overall need for a human-centred approach to technology at all stages of the research. Cultural stories can become fossilised and continue to perpetuate the silencing of survivors; it is therefore essential to consider how the openly available digital testimony contributes to the framing of cultural discourse around our history of coercive confinement in Ireland.

**Keywords** Magdalene laundries · Industrial schools · Testimony · Archives · Digital humanities

## 1 Introduction: Digital humanities and born digital data

"Use what you know to make the world a better place, to fight, to rebel against evil. We know so much in the humanities: we know history, how to read closely, how to teach, how to make arguments, how to tell stories, how to organize knowledge, how to do research, how to critique, to question what we're told, and yes, how to code, how to make interactive websites, documentary films, podcasts, books, and so much more. We should use all of that to go down fighting into that good night, to bear witness to evil, to show up, and even to save lives. If all we're doing is contributing to some encyclopaedic knowledge of the world, we've failed at the gift of life" (Gil et al. 2020, 32).

Digital scholarship is ubiquitous, where even the most Luddite of scholars use some form of digital technology in their research. Differences in the level of technology use have become a question of degree not kind. Currently in the second wave of Digital Humanities, Presner (2010) argues that Digital Humanities 2.0 introduces entirely new-born digital paradigms, methodologies, and publication models not derived from print culture. This new wave is "deeply generative, creating the environments and tools for producing, curating, and interacting with knowledge that is 'born

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digital' and lives in various digital contexts" (Presner 2010, para. 13). Using the case study of a Digital Humanities project called "The Waterford Memories Project", this paper will consider both the role of born digital survivor testimony in confronting a difficult and disputed past in Ireland and, more broadly, how we can create and access knowledge in this contested space.

The Waterford Memories Project is an oral history driven study in digital humanities, publicly documenting survivor narratives of the Magdalene Laundries and Industrial Schools in the Southeast of Ireland. These institutions formed part of a system of coercive confinement, which incorporated a wide range of institutions used to confine both children and adults whose "crimes" were to act against the strict and punitive moral codes of the period, poverty, or mental illness. The broader network of institutions involved in coercive confinement included county homes, industrial schools, Magdalene Laundries, Mother and Baby Homes, and psychiatric institutions (among others). Within this system of containment, the Magdalene Laundries were initially established in the mid-eighteenth century in Ireland (and across Europe, the US, Canada, and Australia) as asylums for poor and destitute women, primarily run by religious orders to provide opportunities and training to the women (Luddy 2007; Smith 2008). British rule formally ended in Ireland in 1922, after which the ten remaining Magdalene institutions in the new independent Ireland were subsequently run solely by Catholic Orders, with the final Laundry closing in 1996.

The running of the institutions became increasingly punitive after 1922, where strict regimes of silence, prayer, and physical labour (usually laundry work) were used to gain psychological and physical control of the "penitents". The symbolism of a repentant Mary Magdalene was adopted by the Magdalene Laundry, emphasising the role of work and penance in the forgiveness of sins. In Western Christian tradition Mary Magdalene's story of redemption is intimately linked with Jesus as she is described as a fallen prostitute who repents and is redeemed. The concept of penance is echoed strongly in Ireland's Magdalene Laundries where penance manifests in hard labour so that divine forgiveness might be granted for the penitents "sins". The Laundries were used by the Irish State and Religious Orders to incarcerate girls and women who were deemed to be immoral, including unmarried mothers, victims of sexual assault, and girls referred through the criminal justice system.

Access to official data sources pertaining to the Magdalene Laundries is prohibited. The State archives of the Commissions of Investigation into the Magdalene Laundries and Industrial Schools are inaccessible to researchers and members of the public; the Religious Orders which ran these institutions have also embargoed their archives. The State archives have been held by the Department of An Taoiseach[1] since 2015. The archive contains data from the religious congregations which ran the laundries, as well as official records from numerous Government departments, state agencies, and bodies. The Government has refused calls from academics, activists, and survivors to open the archive to the public. In 2016, the Justice for Magdalenes Research (JFMR) group requested access under Ireland's Freedom of Information Act; the Government response stated that the archive was being held for "safe keeping" and "not held within the control of the department for the purposes of the FOI Act" (Ó Fártha 2018, para. 1). The archival data were collated under the auspices of the Commission of Investigation on a statutory basis. Even though the Committee had powers to compel evidence the Religious Orders were permitted to submit their records voluntarily, the records were returned, and copies were then destroyed by the Committee. There was no facility for researchers or the public to access the information. In 2018, the then-Taoiseach Leo Varadker stated that the Government had no intention to open the archive to the public. Furthermore, the Government introduced a Retention of Records Bill in 2019, which seeks to seal the archival data and contents of a previous Commission of Investigation into Ireland's Industrial Schools for 75 years (Oireachtas 2019). The Bill is currently lapsed, but highlights the Irish State's continued unwillingness to provide open-access to its Commissions' archives.

As Gil et al. (2020, 32) advise in the opening quotation to this paper, "Use what you know to make the world a better place, to fight, to rebel against evil. We know so much in the humanities…We should use all of that to go down fighting into that good night, to bear witness to evil, to show up, and even to save lives." Gathering and analysing survivor narratives is essential to document Irish cultural heritage and to provide a voice to those held in these institutions. These restrictions to historical data ensure a fractured and incomplete narrative of the interconnected cultural, social, and economic trends, which allowed the Industrial Schools to exist until the mid-1970s and the Magdalene Laundries to exist until the mid-1990s. Furthermore, these archival embargoes have contributed to an ongoing silencing and marginalization of the women's experiences (Yeager and Culleton 2016; O'Rourke 2020). Digital Humanities offers a way to address these fractured and incomplete narratives through digital humanities projects like the Waterford Memories Project where technology is re-centred in the conversation of marginalisation, such as that experienced by the Magdalene survivors.

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[1] An Taoiseach is the Irish language term for head of the Government or Prime Minister.

## 1.1 The Waterford Memories Project (WMP)

The Waterford Memories Project was established in 2013, after the release of the "Report of the Inter-Departmental Committee to establish the facts of State involvement with the Magdalene Laundries" by the Department of Justice and Equality (the "McAleese Report") (Department of Justice 2013). The report has been heavily criticized by survivor groups for its limited focus on establishing the facts surrounding the extent of the State's involvement. While the report includes testimony from survivors (chapter 19), "the Committee did not make specific findings in relation to [the living and working conditions in the Magdalene Laundries], in light of the small sample of women available" (Department of Justice 2013, 50), despite the Department of Justice revealing that their report was based on a large sample of evidence from 118 women. However, it is worth noting that 58 of these women are still in the care of the religious orders, having spent the majority of their lives institutionalised in Ireland's system of coercive confinement (Ó Fártha 2013). Furthermore, the UN Human Rights Council (2014) noted that "118 women who had been in these institutions agreed to complete a questionnaire on conditions (food, punishment etc.) in these institutions and/or to meet with and discuss these issues with the independent Chair". It is therefore unclear how many women provided verbal testimony versus completing a questionnaire.

Little significance was placed on the survivors' testimony, and the former Magdalene Laundry in Waterford (in the south-east of Ireland) features minimally in the report. My initial interest in the history of the Waterford Laundry was three-fold; first, I had spoken to two survivors of the Laundry a number of years previously and heard their stories. Second, I was working in the building which formed part of the former Laundry complex, and, third, I have a strong professional interest in stories of social justice and social change. After the release of the report, I realised it was very difficult to hear the voice of the survivors in any existing documentation (including academic discourse). The Waterford Memories Project was started with the initial aim of creating a platform to disseminate the stories of people in the Southeast of Ireland who had been affected by the Laundry system and whose voices were continually being marginalised by official gatekeepers.

The Waterford Memories Project (WMP) is an oral history driven study in digital humanities, publicly documenting survivor narratives of the Magdalene Laundries in the Southeast of Ireland, bringing together both the digital and public humanities to understand the Magdalene Laundries and their relevance to Irish heritage. The digital lens of the WMP broadly considers how we might understand and document the human experience through, with, and mediated by technology. From within this context of Ireland's Magdalene Laundries, this paper considers the role of born digital survivor testimony (recorded by the WMP) in confronting a difficult and traumatic past.

## 2 The value of narrative and testimony

As humans, we constantly survey and analyse our worlds and search for meaning in life events. Trauma life events are much more difficult to understand and process than everyday activities. If we have been the victims of abuse, we try and understand why it happened and the consequences of the experience. This is further complicated when the abusive experiences consist of *many* events over time. And, further, if the trauma of these events is unresolved, "we will think, dream, obsess, and talk about it for days, weeks, or years" (Pennebaker 2000, 12). In the case of the Magdalene women, the option to talk about the abusive events was severely limited, if not entirely forbidden. As Pennebaker (2000, 14) explains:

> "If I can't tell you about some deeply disturbing events in my life, you will not be able to interpret many of my actions or emotions. By the same token, I will probably be too consumed with my own problems to be a good listener or friend during your times of need… What we are finding is that after writing about traumatic experiences…individuals begin talking more to their friends, laughing more, and using more positive emotions in their daily language."

Ideally, we would all exist in a world where we could immediately translate our traumas into stories, disclose them to others, and receive positive reactions from the listener. Telling stories helps us to process and frame events, while also conveying out emotional and psychological states to friends; this act of storytelling helps form and maintain our social and emotional lives (Pennebaker 2000). Even after leaving the Magdalene Laundries, many survivors did not disclose their past in these institutions, recalling the nuns' warnings to never disclose their history because everyone would know they were a "fallen" woman. The reality for the Magdalene women was to keep secrets; secrets which are physically, emotionally, and cognitively arduous, and which arrest the process of meaning-making and integration of these experiences and memories. These secrets further distance the women from the potential support of friends and family, while at the same impacting their sense of self, identity and worth.

Telling a story requires a listener; in this way, trauma stories are inherently social, requiring interaction and engagement (Pennebaker 2000; Herman 2015; O'Mahoney 2018). Once a complicated experience has been given narrative structure it becomes simplified, and the brain does not have

to engage as much cognitive effort to bring meaning and structure to the trauma event. This process both reduces the emotional toll of the event, and makes the story more understandable for the listener. Storytelling, then, is inextricably linked to testimony. While testimony has many different forms, for the purposes of the Waterford Memories Project, testimony refers to a *public recounting* of the tellers' personal lived experiences of the Magdalene Laundries. The stories were told with the purpose of creating a permanent and public record of the women's first-hand accounts, but have the potential less obvious role of providing a way for the women to understand the meaning of their experiences through the storytelling process. The narratives were digitally recorded with a mobile audio/video recorder to capture both the verbal and nonverbal information of participants.

Ethical considerations are paramount at all stages of the work with the Magdalene women. Ethical clearance was granted for the project and the interviews, including the project's extensive consent documentation (including an information and consent form and interview recording agreement). The project and its focus are explained both orally and via paper documentation with the interviewees. The information and consent form explain the rationale of the project, the interview process, etc.). The interview recording agreement explains that the copyright of the interview rests with the Waterford Memories Project and that the survivor understands that materials may be used in publications, lectures, etc. as well as being publicly available on the internet. These major ethical issues are discussed in detail with the survivors, including the potential use of the interviews by people who will download their likeness without permission, for instance. The survivors are given many options to consider regarding how their interview should be stored, managed, and disseminated. For instance, the interview agreement form asks the survivor if they would like to use a pseudonym or hold the interview for a specified time period before it is released. Other than removing all identifying data (including names and locations which from the interviews, they are not cropped or edited as these are the women's stories and words, told in their way. The videos are then shared to the project website via HEAnet (Ireland's National Education and Research Network); HEAnet provides e-infrastructure services to schools, colleges and universities within the Irish education system and allows for hosting of large video files, which can then be embedded into the WMP website.

The born digital survivor testimony bravely recorded and publicly disseminated by survivors is a direct action in challenging the silencing and inaccessibility of both the State and Religious Orders' archives. In the face of silenced archival data, survivor testimony is ever more important in confronting a difficult and contested past. We must understand the history of the Magdalene Laundries *as the survivors experienced it*, the resulting long-term sequelae of trauma, and our current political, economic, and social context of life in Ireland.

Extensive empirical work on the psychological impact of trauma highlights the benefits and power of testimony and storytelling across a wide variety of experiences and cultures (see, for example, Pennebaker 2000, 2018; László 2008). These benefits include enhanced immune system functioning; reduction in physician visits; lower levels of depression; and enhanced mood, demonstrating evidence of significant and consistent relationships between writing and speaking about difficult experiences and physical health (Pennebaker 2000). Interestingly, Pennebaker also reports that these health benefits only occur when participants respond to their inner thoughts and emotional states by translating their experiences into language. Pennebaker suggests these data (yielded from numerous empirical studies) demonstrate that the action of converting emotions into words reorganises the person's thinking of the trauma as the teller integrates their thoughts and feelings in constructing their narrative. The act of constructing a narrative helps to organize the emotional effects of an experience as well as the experience itself, resulting in measured physical and mental health improvements.

What is recurrent amongst these explanations speaking to the power of testimony and story-telling is that narrative processes are beneficial to people's coping both as a method for framing a story to tell, as well as a method for meaning-making and integration in coping. However, these same narrative processes have important potential for society more broadly, when these historical abuses constitute larger-scale human rights violations against large numbers of people. The Waterford Memories Project has situated itself within this knowledge base to respond to the hidden stories of the survivors of the Magdalene Laundries. Documenting the women's testimonies is one method of working with silenced histories where survivors tell us stories of their trauma and I, as the listener, co-construct the digital recording with the survivor. The born digital nature of the interview recording provides a method to bring that story to other listeners so they may also bear witness to these human rights violations.

The process of bearing witness is essential. Engaging with the history of coercive confinement in Ireland involves a national effort to remember and reconstruct historic trauma. This time of renegotiation with and recognition of? Our past is essential for the survivors and their families as they also renegotiate the silenced and shamed identities they were coerced to embody and internalise. The historical, social narrative of the women as "fallen" has been perpetuated for and by many generations, entering into a shared cultural narrative and social story-telling of and about the survivors, their lives, and identities. It is problematic because it provides a less than accurate collective memory of the

women and the institutions. It is the testimony of what the women experienced which aids in uncovering hidden lives and reintegrating this traumatic past into the present. As Wesley-Esquimaux and Smolewski (2004, 83) reflect:

> "Narrations of the tragic past, memories internalized to the point of silenced voices that still resonate in people's collective (non-) remembering of the tragic past and people's relationships to the past, become the groundwork for future discussions and negotiations."

The development of collective memory of the Magdalene Laundries as part of the Irish national identity is essential if we are to truly recognise the experiences of survivors and the impact of their trauma experiences on subsequent generations. In other words, how we remember and interpret past events (our own direct experiences, as well as historic events) strongly influences our present. The experiences of the Magdalene women are the same cultural cohort of people from the rest of the population; in this way, the Irish people are directly connected to the women through a shared legacy of a nation which must confront its history of human rights violations. This shared sense of mourning a traumatic past must also recognise that these past harms can continue to manifest inter-generationally into the present day lives of the survivors as well as the broader community (C. Wesley-Esquimaux 2008).

Of course, testimony can only accomplish its goal of publicly recounting if there are engaged listeners. If we do not listen we risk losing what Wesley-Esquimaux (2008, 9) terms a "cultural consensus", a shared cultural knowledge, which only services to further marginalise the women while encouraging our public forgetting of our history of coercive confinement. A trauma-informed response is needed for the survivors, but I would argue that such a response is also required for the Irish nation so that we may share in the collective grief and restitution which is needed to ensure we do not relive these abuses again.

One potential method of trauma transmission from one generation to the next is culturally based through storytelling. Testimony collected by The Magdalene Oral History project (O'Donnell 2012) and the Waterford Memories Project (O'Mahoney 2014) demonstrates that girls and women incarcerated in the Laundries were frequently victims of incest and sexual violence, and only a minority had given birth outside wedlock. This testimony is in stark contrast to the national narrative, which maintained that the Laundries existed to rehabilitate "fallen" women. Some had intellectual disabilities, while others had committed minor crimes or were destitute, sent to the Laundries via the criminal justice system, religious orders, and their own families (O'Donnell 2012; O'Mahoney 2014; O'Rourke et al. 2021). Cultural stories can become fossilised and continue to perpetuate the silencing of survivors; it is therefore essential to consider

how the openly available digital testimony contributes to the framing of cultural discourse around our history of coercive confinement in Ireland.

Weine (1999, 164) advocates for testimony projects in which many professionals and others are involved to develop a "civic dialogue on survivors' remembrances". When a sincere dialogue is being carried out, it might open a way for a traumatized society to reconcile. Digital Humanities and the digital and digitisation of cultural phenomenon has raised many complex questions about memory, knowledge production, and dissemination, but also presents both survivors and researchers a new method through which to ensure their advocacy work reaches a public audience. Digital culture and digitisation of the humanities have revolutionised how we produce, present, interpret and research (Tam 2019). Some cultural texts, forms, and practices are transformed through this process, while, in the case of born digital data, new cultural forms and interactions are created. We turn now to examine the role of this cultural storytelling and testimony work in the digital space.

## 3 Technocultures and the Magdalene laundries

If technology can be defined as "the set of tools or 'techniques' that serve the requirements of any given culture" (Shaw 2008, 1), technocultures are, by extension, "the various identities, practices, values, rituals, hierarchies, and other sources and structures of meanings that are influenced, created by, or expressed through technology consumption" (Kozinets 2019, 621). The study of technocultures, then, examines the nexus of technology and culture, and the expression of that nexus in the patterns of economic and social life. Recognising that tools have formed part of the definition of what it is to be human over millions of years, Shaw (2008) maintains that the late modern period can be comparatively defined by technological development advancing social change.

At its core, the Waterford Memories Project is about aiding the survivors to advance social change. Digital humanities projects like the WMP are contributing to a larger discussion about how technology alters our social and cultural existences. One way to understand and interrogate the interplay between technology and culture is in terms of evolution. Humans have developed along-side their use of tools (and vice versa) for millions of years, where toolmaking and technology development are so essential to being human that we should not consider human history as ever pre-technological. In fact, "technologies are not foreign to 'human nature' but inseparable from it" (Nye 2006, 2).

Nye (2006, 2) maintains that the central purpose of technology is for social evolution where invention is often the

mother of necessity, as opposed to the usual direction of this proverb; "the tool often exists before the problem to be solved. Latent in every tool are unforeseen transformations". Following from this premise, then, is the conclusion that technology is inseparable from human evolution, and technology is therefore part of a system of actions, ideas, and meanings. To imagine and conceptualise a tool involve remembering past behaviours, recalling them, and imagining change where "storytelling and toolmaking evolved symbiotically" (Nye 2006, 5). In other words, technology has provided us with the next evolutionary step through which to tell our stories. This is particularly important when technology allows access to a wider range of listeners and witnesses to survivor testimony.

## 3.1 Minimal computing and technoculture

So how can we understand the culture of the Magdalene Laundries through digital technology? To understand born digital data and born digital culture there is a need to understand the role of computer code and software in the process of producing, consuming, and critiquing culture (Berry 2011). Does this mean, then, that only those with expertise in programming and code can access these digital platforms in their research? That only a small number of qualified individuals control what stories get told; where, and to who? This would simply perpetuate the silencing of marginalised voices. Fuller (2009) argues that we should always be critically aware of the potential for new technologies to create inequality, not just as a result of a digital divide, but a deeper concern of how we merely classify those that are more 'human' than others. Fuller's (2009, 262) concern is that "unregulated innovation is likely to increase already existing inequalities in society" and that we should consider an "explicit policy of redistribution" when considering any new technology which is capable of redefining the human condition.

As Nye (2006) has argued, technologies are not just tangible tools, but also incorporate the skills needed to use them. And using technology results in a different type of knowledge than merely observing it. Additionally, the development of new technologies tends to surpass the ability of most people to understand its functioning and the underlying principles (Shaw 2008), ensuring only a small number of people can truly access, engage, and control these technologies. On a practical level, this means that a very small percentage of technology users understand both the technology conceptually as well as the relationship between the underlying parts and functionality of the machine.

I was not aware of minimal computing when I started the Waterford Memories Project in 2014. I discovered the concept relatively recently and was thrilled to discover a movement which focuses on making technology more accessible.

The movement is about "getting started with what you have, using what you know, and keeping it simple" while focusing on the user experience and the end result of "getting things done" (Chen 2019, para. 1). Chen (2019) suggests that when a novice user is confronted with wanting to use computing practices that they should do minimal design, limit to what they need to achieve, and use as little infrastructure as possible and focus on establishing the minimum viable product to facilitate moving forward with the product quickly. In other words, minimal computing strategies can make introducing the women's stories to the public simpler.

Minimal computing generally refers to computing performed under significant constraints of a range of factors and describes both the application of minimalist principles to computing and a reflection on what is practically needed to bring a project to fruition (Gil 2015). Minimal computing is premised on asking "what do we need", which should be closely linked to understanding "what is enough?" (ibid). Digital humanities projects (and digital humanists) are diverse, but share the common goal of renewing, disseminating, and preserving scholarly outputs.

In my case, this involved learning how to produce, disseminate, and preserve scholarship digitally by learning what I needed to know to accomplish the goals of the Waterford Memories Project. I needed to record and publicly disseminate the stories of survivors. If I were to rely on IT experts, the dissemination would not have happened. In the project's early stages there was no funding and no support, meaning I had to displace my reliance on expertise and, according to Gil's (2015, para. 11) formulation; learn to make my own, imperfect as it may be. Over time, this process afforded time and energy to leverage stronger institutional support for the project.

When the WMP started, it had no choice but to be minimal. There would be little fundable about the project until the website was publicly viewable and could be pointed to as a more traditional research output stream. However, none of the subsequent funding received from the WMP pays for the upkeep of the website platform or the editing and website management. In this way, the project is also considered minimal because there is no administrative infrastructure. In discussing a minimal computing project, Brillante Knight (2017) highlights further how reducing financial and administrative requirements provide enhanced control and flexibility of the project. Similarly, as Principal Investigator I complete the vast majority of the project work in terms of the infrastructure and administration. This work is not seen as "fundable" and creates its own problems in terms of invisible and hidden labour (and the irony of this hidden labour is not lost on me).

In this sense, I further echo Brillante Knight's (2017) statements that this type of project is not in reality minimal because it "requires a significant time investment" (para.

16) and "generates tremendous goodwill" (para. 18). The amount of hidden labour on the WMP is significant, ranging from the emotional labour of the women telling their stories to the volunteer labour of students who donate their time to facilitate the processing of the digitised and born digital data. While there is a wide range of resources which might potentially support a digital humanities project I have drawn primarily on volunteered time and collaboration, even when strands of the project are funded. In the project's early stages this involved learning how to produce, disseminate, and preserve scholarship digitally by learning what I needed to know to accomplish the goals of the Waterford Memories Project without the direct involvement of IT experts. I had to displace my reliance on expertise and, according to Gil's (2015, para. 11) formulation; learn to make my own, imperfect as it may be. However, this process afforded time and energy to leverage stronger institutional support for the project. The goodwill invested on the part of volunteers speaks to the volume of support for the survivors.

The development of the WMP has been organic, but shaped by practical relationships between needs, technology, and the broader social context and political climate. The survivors of the Magdalene Laundries are an aging population, leaving a relatively small window of opportunity for these women to tell their stories. Waiting years to design the "perfect" digital humanities project was (and is) simply not an option. Most importantly for the WMP, a minimal computing approach affords maximum justice, reducing technological and economic barriers to increase access and participation, while also building a project premised on social justice (Sayers 2016b). Hence, minimal computing is a critical movement, operating at the intersection of necessity and choice, achieving balance between gains and costs; "Minimal computing thus relates to issues of aesthetics, culture, environment, global relationships of power and knowledge production, and other economic, infrastructural and material conditions" (Minimal Computing 2021, para. 1).

In addition to what we *need* minimal computing is also about what we *want*. Sayers (2016a) describes the concept of minimal barriers, where minimal computing engages with social approaches through low-tech methods with materials that respond to user's specific needs. It is this redirect of physical computing research from "the treatment of environments and people as data toward *social and cultural praxis premised on negotiations with materials and structures*" (Sayers 2016a, para. 21), which is relevant to the Waterford Memories Project. If social progress can be enhanced through reducing barriers to data gathering, then the historical tension between progress and negotiation must be reframed for technology and action (ibid). Related is the concept of approaching digital work with minimal technical (and specialised) language, as technical terminology can discourage participation. Amidst a large amount of literature

calling for stronger action towards inclusivity and technology, minimal computing's emphasis on the significant distinction between choice and necessity may help minimise the participation barriers between those with high-level expertise and people who just need to "get things done" (Chen 2019, para. 1).

## 4 Technology, testimony, and cultural social change

While minimal computing can help increase the sustainability of digital projects (particularly when a paid technology expert is not possible), minimal computing will only progress the work of the WMP to a certain point. The focus of choice versus necessity brings important issues within the field of digital humanities (such as social justice concerns, e-waste, etc.) into the spotlight. As what I want changes (more powerful technology to process and store increasingly complex born digital data), what I need from technology will also change. But this is also where the inter-disciplinarity of digital humanities offers many potential solutions. Cooley (2018) argues that we must re-centre technology in the conversation of marginalisation, where technology should be used as a vehicle for valuing human dignity and challenging social exclusion. Inter-disciplinarity is mandatory if this goal is to be achieved.

The concept of the university and academic scholarship has been critiqued by many scholars and disciplines, stemming from a concern that universities hoard the production and dissemination of knowledge behind closed doors and in ivory towers (Berry 2011; Boyer 2016). As a result, the university itself becomes a source of scholarly investigation, re-evaluation, and remediation. Digital technologies are contributing further to this questioning, offering a potential transformation in how we can understand and use knowledge outside the "traditional knowledge structures" of the university (Berry 2011, 5). Berry (2011) proposes that in the current computational age, we are starting to recognise the *cultural* importance of the digital as a new unifying force within the academy through which it is possible to develop a shared digital culture and collective (digital) intellect for all. Cooley (2016) supports this emphasis on the role of culture in understanding technology, maintaining that all human production, takes place within social and cultural contexts, and not within the abstract constructs of science. And, after all, it is this human production we are attempting to store in archives and digital humanities projects.

There is a clear desire to create an environment where academic and civic culture are symbiotic and co-construct each other to encourage deeper dialogue and creativity, enriching the human experience. Weine (1999) maintains that digital humanities work in social justice and social

change should be situated in relation to institutions of higher education to keep the testimonies of survivors in direct contact with an intellectual community of scholars and students, thus increasing the opportunities for the testimonies to be incorporated with ongoing scholarly work. I see this as a caveat which should inform the use of archives and banks of knowledge, as digital technology affords "all" the ability to bypass the long-established gatekeepers of this knowledge. While open source information is to be actively encouraged, we must simultaneously maintain the role of expertise alongside this ever increasing availability of information to encourage critical thinking and analysis of complex data sets. Summarised by Boyer's (2016, 27) call for scholars to leave their ivory towers and prove the worth of their scholarship "not on its own terms, but by service to the nation and the world", I believe that open access to data and scholarly expertise concerning the interpretation of this data are not mutually exclusive concepts.

Berry (2011) takes this call to action further, emphasising the need for computational approaches which, through inter-disciplinarity, result in a *post-disciplinary* university which unifies the information we are producing in abundance, while creating new methodologies and pedagogies to examine this data. Gil et al (2020, 35) echo this sentiment:

> "We need to start imagining a world in which the Humanities (history, the arts, theory, critique, etc) all exist post-Universities. In a real sense in many countries the Humanities already do live in this world. This other world is trying to tell you something. If you want to really understand the power of these tools, imagine them serving you in this other world."

I would argue that what is being called for here is a substantial cultural change in the technology research realm, premised on re-centring technology in social justice conversations. If we accept that open source knowledge must surpass the confines of the university, then we must also recognise the obligation on the creators of these technologies to *not perpetuate past errors in system design* which contribute to the marginalisation of peoples[2] (Criado-Perez 2019; Ruberg and Ruelos 2020). Furthermore, digital humanists have argued that if we accept the malleability of digital forms, then we must engage with new ways of working with mediation and representation, to the point that culture must also be approached in new ways (Berry 2011).

At the core of digital humanities and social change is defining the values of the digital humanities. A basic digital

literacy concerning these technological processes are essential for any digital humanist, where understanding that (for example), the born digital data of the audio-recorded testimonies of the WMP, cannot be holistically considered without basic information about the way in which the data was processed. Recognising that digital technology and digitised archives are *symbol* processing systems, we are encoding our dominant ways of *thinking* and *knowing* into the digital systems we design. We need to be cognizant of how system and archival design may actually be perpetuating marginalisation of people rather than working to challenge these issues. Digital Humanities are heavily interconnected by a critical examination of cultural, social, and economic trends both in theory and practice; I argue that scholarly contributions from the humanities must be considered in all technological development and processes so that we do not lose sight of the person. We must remain human-centred. Or, in the case of the WMP, survivor-centred. In publicly documenting survivor narratives of the Magdalene Laundries, the digital lens of the WMP broadly considers how we might understand and document the human experience through, with, and mediated by technology. As Smith (1977, 144) reminds us:

> "Technology is more closely related to art than to science—not only materially, because art must somehow involve the selection and manipulation of matter, but conceptually as well, because the technologist, like the artist, must work with unanalysable complexities…a moment's reflection will show that technology underlies innumerable delightful experiences as well as the greatest art, whether expressed in object, word, sound, or environment."

These complexities are not unanalysable in perpetuity, but highlight how a digital humanist works within the frame of time available, their comprehension of the technology, financial support, and availability of materials (Nye 2006). These statements echo the minimal computing concept of need versus choice as driving decision making focused on the *utility* of the technology; the digital humanists may well add: But what are we trying to create? Where is the beauty? The aesthetic? The person? If all of the various disciplines agree that technology is a markedly human experience then we are in a better place to understand how we can guide society's use and control of technology, while recognising that art (doing something that may not be directly required to perform a direct function) holds significant import for humanity (Smith 1970). As technology increases in complexity, the need for the digital humanist correlates. It is the digital humanist's role to introduce their knowledge of social and cultural relationships to restore our focus back to human-centred systems by opposing the oversimplification of our social and cultural worlds through technology.

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[2] The article "Born Digital and Marginalisation: An Empirical Study of How Born Digital Data Systems Continue the Legacy of Social Violence towards LGBTQI+Communities in Ireland" in this edition examines this research finding in detail.

## 5 Conclusion

In conclusion, once we invest power and responsibility in technology, we are using this technology to act on our behalf, assigning the technology agency in decision making (the catchphrase "computer says no" springs to mind), and facilitating the technology to influence cultural practices through the stories we tell and the stories which frame how we code, design, and interpret technology. Stories influence our way of thinking, and born digital storytelling can affect how a listener thinks about that information in very powerful, lasting ways. Nye (2006, 3) explains that "to tell a story or to make a tool is to adopt an imaginary position outside immediate sensory experience…To link technology and narrative does not yoke two disparate subjects; rather, it recalls an ancient relationship." As a platform, the Waterford Memories Project uses a website to disseminate the project data and information. My involvement and creation of the website is inextricably linked to the testimony; my presence (whether visible or hidden) is part of the new story which challenges the silencing of the Irish State and Religious Orders towards the survivors. The *meaning* of the website as a technological tool is "inseparable from the stories that surround it" (Nye 2006, 3).

In the face of silenced archival data, survivor testimony is ever more valuable. The role of born digital testimony data in the WMP and other oral history projects cannot be underestimated when confronting a difficult and contested past. If we ignore the role of stories (which exist at all levels of technological development, use, and dissemination) we do so at our peril. If I were to treat the women's stories purely as data to be archived, disembodied from the storyteller, I have blatantly misunderstood the import of being human-centred. The women's stories are an act of generosity, and it is the broader social and cultural context which give their testimonies contextual meaning. The contemporary lack of access to official records is a faithful reflection of our history; a history which has hidden "fallen" women behind high walls and silenced their voices and which continues to be perpetuated in Irish society. Well, survivors can rewrite history too. Let us listen.

## Declarations

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