PROCEEDINGS

16TH CIRN CONFERENCE 24-26 October 2018

Monash University Prato Centre, Italy

"RESEARCH, PRACTICE AND CREATIVE ENDEAVOUR THAT AIM TO SHAPE AND INFLUENCE POLICY AND PROGRAMS".

Editors: Larry Stillman, Misita Anwar, Centre for Social and Community Informatics, Faculty of IT, Monash University Publication date: 2018.
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BACKGROUND TO THE CONFERENCE

Since the founding colloquium in 2003, the CIRN conferences have been marked by informality, collegiality and interdisciplinary thinking, bringing together people from many different countries in an ideal Italian setting. Themes have ranged across issues such as privilege, gender and sexual identities, forms of knowledge, documentation, participation and community-based research, power, ideals and reality, measurement, and the applied arts.

While we have a particular theme each year we also seek papers (refereed, work-in-progress, non-refereed), presentations and papers (including Graduate student presentations) related to any aspect of Community Informatics Community Archiving, or Development Informatics, or the Art, and Archives Memories and ICTs space. We are particularly interested in papers from researchers and practitioners that can address the challenges of locating community-focussed research within wider theoretical and practice frameworks. We also have a Research Student (Masters and PhD) presence and encourage the presentation of current or planned work in colloquium sessions. This is a great opportunity for interaction with other students in an international setting.

[For the proceedings past events, archives etc, please see https://www.monash.edu/it/our-research/research-centres-and-labs/cosi/prato-conferences. For past websites/events (services have closed down, no one hand crafts sites anymore. 😞) look for ccnr.net between 2002 - 2010 as well as cirn.wikispaces.com 2009-1018 on archive.org.]

OUR (INTER-)DISCIPLINARY FRAME

Community Informatics is primarily concerned with improving the well-being of people and their communities through more effective use of ICTs. Community Informatics foregrounds social change and transformative action in emergent social-technical relationships rather than prediction and control and likewise, Development Informatics or ICT4D is concerned with ICTs in the international development context. This orientation also has much in common with Community Archiving. Community-centric archival research, education and practice are concerned with empowering communities in support of such desirable objectives as democracy, human and civil rights, self-determination, sustainable development, and social inclusion. Recordkeeping and archiving are fundamental infrastructural components supporting community information, self-knowledge and memory needs, thus contributing to resilient communities and cultures and supporting reconciliation and recovery in the aftermath of conflict, oppression. Development Informatics (also called ICT4D) is involved with the use of ICTs in international development settings. The purpose of International Development is heavily contested, and thus, the use and interpretations of ICTs in that space is also subject to a wide variety of interpretations. More recently, those in the Art, and Archives Memories and ICTs have been participating with us in an exploration of how the media, dance and other forms of arts interested in ICTs intersect with community development, community memory and archives.
2018 THEME

Most often, we want our work to have influence.

Whether in Community Informatics, Development Informatics, Community Archives, or Art, and Archives Memories and ICTs projects involving ICTs, we aim for activity that influences not just future projects or research programs, but also government policy. However, the interests of different audiences (the academy, communities on the ground, NGOs, funders, policy makers) are not necessarily congruent when it comes to being influenced by the impacts, outcomes, value and worth of a project program, or more abstract research. Choices need to be made.

The attempt to shape and influence on the basis of research and practice is sometimes expressed as utilization-focussed evaluation "The focus in utilization-focused evaluation is on supporting intended use by intended users. The essence of this approach is a continual examination of and adaptation to how real people in the real world apply evaluation findings and how they experience the evaluation process" (Michael Quinn Patton). But who are the users here? And what is the real world? Who has control?

- Just what do "shape and influence mean?" For what purposes? Do we become too constrained by trying to "shape and influence" institutions?
- What about the general space of public discourse, policy, and influence particularly via new media as an alternate means of shaping and influencing?
- What are good (and bad) examples of shaping and influencing?
- What are the opportunities and constraints with attempting to shape and influence policies and programs? Can it stifle free inquiry and discourse when there are findings that surprise or raise controversy?
- Even if the utilization of research and practice are not the key purpose of project or program activity, what assumptions are made about what counts as important or will have influence in reporting to funders, policy-makers and others, including communities themselves?
- Can the focus on future utilization result in hindering innovation or experimentation? What forms of research and practice are most useful in meeting this challenge? Are they a help or hindrance?
- What is the place of community-based research in such an orientation? Who leads? Who follows? Whose voices count?
- How is research/practice messaged to different audiences for impact?
- Is seeking to influence in a neoliberal environment turning scholarship and practice into commodities for selection? Are there novel perspectives/approaches/methodologies that help expose underlying assumptions implicit in neoliberal approaches to ICT-related contexts? What are innovative solutions to these persistent challenges?
- What are the alignments and discontinuities between bottom-up ideals that are often process driven and the demands of funders and policy-makers for "useful" and "accountable research and practice? What has worked or not worked for you? Can the imposition of requirements be used as a form of power and control? What forms of reporting have been or could be most useful to different audiences?
- We are particularly interest in papers that can report on and theorize these problems in community informatics, development informatics, community archives the arts/archives community.
We welcome papers (refereed, work-in-progress, non-refereed), presentations and papers (including Graduate student presentations) related to any aspect of Community Informatics, Community Archiving, or Development Informatics, or the Art, and Archives Memories and ICTs space. We are particularly interested in papers from researchers and practitioners that can address the challenges of locating community-focused research within wider theoretical and practice frameworks.

**Keynotes**

Natalie Pang, National University of Singapore  
Eduardo Villanueva Mansilla, Pontificia Universidad Catolica Del Peru

**Committee**

Tom Denison, Monash University  
Vince Dzekian, Monash University  
Joanne Evans, Monash University  
Anne Gilliland, UCLA  
Kiera Ladner, University of Manitoba  
Sue McKemist, Monash University (Chair)  
David Nemer, University of Kentucky  
Safiya Noble, UCLA  
Gillian Oliver, Monash University  
Colin Rhinesmith, Simmons College  
Mauro Sarrica, Sapienza University, Rome  
Martin Wolske, University of Illinois  
Larry Stillman, Monash University (conference organisation and administration)

**Peer Reviewers:**

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Misita Anwar, Monash University  
Tom Denison, Monash University  
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Gillian Oliver, Monash University  
Greg Rolan, Monash University  
Larry Stillman, Monash University

**Peer Review Statement**

The Conference Proceedings contains refereed, non-refereed and PhD colloquium papers and Powerpoints from the conference.  
- All full papers in the refereed category were subject to blind peer review by at least two reviewers, and reviewers’ comments returned to the authors. Authors were then required to make changes and if necessary, a further review conducted before final approval.
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### A Grace Hopper Scratch Maze in the Classroom: A Case Study of a Social-Forward Approach to Teaching Digital Literacy

Betty Jane Bayer, Stephanie Lynn Shallcross

**Category:** Graduate Presentation

**University of Illinois at Urbana-Champaign, United States of America**

The Person-Centered Guide to Demystifying Technology invites students to observe, question, design and critique technology in support of their own and other’s "valued beings and doings." Rather than teaching hardware, coding, and network skills for their own sake, this open-source book locates these skills within the framework of mutual shaping, design thinking and person-orientation in order to empower students to relentlessly question and improve the technology around them and in their communities.

Each section of the guidebook culminates with a hands-on design challenge asking students to practice design thinking and technical skills in order to tell a counter-story that is person-oriented. In Part 2 of the book, we describe a "real life" example of four graduate students ideating and iterating code to support counter-stories. This project combined the technical and philosophical frameworks outlined in Part 1 and 2 of the guidebook in order to educate late elementary and middle school age girls about one of the founding mothers of modern technology, Grace Hopper, and inspire them to pursue STEM fields. The group told Hopper’s story through a multi-level maze with scrambled letters that was coded in Scratch and controlled by four push buttons. Besides illustrating possible uses of hardware and coding concepts, this chapter also gives a detailed example of the design thinking process, rapid prototyping, and mutual shaping, with particular attention paid to how it influenced various iterations of this project.

### A Platform of Rights in Records for Refugees, Their Families and Communities.

**Category:** Refereed Paper

Anne Gilliland ¹, Kathy Carbone²

¹UCLA, United States of America; ² UCLA/CalArts
This paper will report on the ongoing project, Records and ICT at the Boundaries of the State: Refugee Needs, Rights and Uses, that is a collaboration of researchers at the University of California, Los Angeles Center for Information as Evidence (CIE) and at Liverpool University Centre for Archive Studies (LUCAS). It will focus on the proposition of a policy agenda emerging out of data and relevant policies gathered to date by the project in Europe, the Middle East and the Gulf, and the United States. The policy agenda seeks international acknowledgement and adoption of a platform of refugees’ rights in the creation, management, preservation, access and government and other uses of records relevant to their persecution or threat thereof, displacement, asylum seeking, resettlement or return. The paper will also address issues of multi-generational and other rights, and related community considerations, official and community understandings of what constitutes "records" and "evidence," technological approaches, and concerns regarding transnational records access and responsibilities.

Co-creating a way to Find and Connect in Aotearoa New Zealand

Category: Graduate Presentation

Belinda Battley
Monash University, New Zealand

In 2017 we held a workshop in Auckland to discuss recordkeeping issues for people in state care, in response to emerging findings in Australia (Humphreys et al 2014; Commonwealth of Australia 2017; Setting the Record Straight 2018) that problems with recordkeeping exacerbate trauma suffered by people in out of home care. (For a report on the NZ workshop, see Battley 2017). We found many similar problems to those identified in Australia, as well as issues specific to New Zealand. We used the findings to achieve changes to legislation setting up a new child welfare agency in New Zealand and provided advice to archivists responsible for records of children in state care which achieved some changes to disposal decisions, but there is still much to be done in this area.

Issues unique to New Zealand include the ongoing disproportionate representation of Maori people in state care: approximately 60% of people in care identify as Maori, while they make up only 15% of the New Zealand population. New Zealand is currently setting up a Royal Commission of Inquiry into historical abuse in state care, and the wide range of groups making submissions on the terms of reference show how many different communities are stakeholders. These included people affected by forced adoption, survivors of abuse in psychiatric institutions, people from the deaf community, and people with physical disabilities, as well as academics, human rights lawyers, gang leaders, social workers and records managers / archivists. Many people represented multiple communities, and many were Maori. A major theme emerging from the submissions is the importance of addressing specific issues relating to the treatment of Maori people by the state, related to failure to uphold the state’s obligations under the Treaty of Waitangi. Recordkeeping issues were also raised as a significant problem.

As a step towards addressing the multiple recordkeeping issues, it is proposed to develop a web resource similar to Australia's Find and Connect, but designed to meet the disparate interests and needs of the many different potential users in our New Zealand context. The proposal is to develop this web resource in partnership from the outset with members of the communities to which people in care belong, with a particular emphasis on ensuring strong involvement from relevant Maori communities.
To achieve this aim, a recent research project into the place of records in one community’s collective memory provides insights. The research, in a hiking club that had been self-sustaining for more than 80 years, developed a reflexive and collaborative methodology for understanding community collective-memory processes. We found that recordkeeping formed part of a complex, adaptive system where interpersonal relationships, shared events and activities, a co-created structure, shared aims, values, and places of belonging were all important elements. These elements must be taken into account when developing recordkeeping and information resources if they are to meet the needs of the community, and the research suggests similar elements could be equally significant for other communities, especially when community members are particularly vulnerable to powerful external structures, as are people in care.

This paper will reflect on the implications of the research findings for developing a methodology to co-create this resource together with the care leaver communities, the progress made so far and some of the anticipated challenges and opportunities.

Common agenda setting through participatory collaboration mapping: a knowledge based-driven approach

Aldo de Moor
Community Sense, Netherlands

Globalizing society faces an ever-expanding web of wicked problems. Community networks are at the heart of building the required collaboration capacity for achieving collective impact. One bottleneck is the process of common agenda setting among such widely diverging stakeholder networks. Participatory collaboration mapping can help build firmer actionable and conceptual common ground between existing projects, programs, and initiatives on which to base the common agenda-setting process in community networks. By jointly creating and aligning collaboration maps, stakeholders can catalyze, augment, and connect existing collective impact initiatives. To be scalable, this requires a knowledge base-driven approach. We introduce the CommunitySensor process model of participatory collaboration mapping for common agenda setting. We then outline the knowledge base architecture supporting this process. We apply the architecture to a case of participatory mapping of agricultural collaborations in Malawi. We illustrate some components of a knowledge base-driven participatory collaboration mapping process for common agenda setting: (1) working with a federation of collaboration ecosystem maps all sharing at least partially the same community network conceptual model; (2) building more actionable common ground through defining relevant conversation agendas; (3) discovering conceptual common ground through semantic community network analysis.

Community informatics in the new age of mediated voices, practices and power

Natalie Pang
National University of Singapore, Singapore
In this talk, I will draw on case studies of community-initiated archiving and informatics in Singapore to discuss the convergence of three phenomena which I argue has important implications and impact for our work in community informatics and archiving. First, technological convergence which is characterised by the growth in information and communication technologies (ICTs) and increased connectivity to various Internet services has contributed to the ease at which communities are able to deliberate and reimagine heritage sites. Second, such practices reflect a convergence of archiving, documentation and other disciplines to create new trajectories - translating into a renegotiation of power dynamics between the state, civil society and citizens. Underpinning these processes is the blending of communities which has immediate and long-term impacts on policies as well as how policies are made.

Community Information Systems as a Bridge between the Ultra-Orthodox and the Startup Nation

Category: Refereed Paper

Dalit Levy
Zefat Academic College, Israel

The paper describes an undergraduate program developed and offered by Zefat Academic College, aiming to be sensitive to the increasing demand for higher education by the multi-cultural population in the upper Galilee part of Israel. The program interweaves societal, economical, informational, and technological facets of businesses, organisations, and communities in order to prepare students to successful Information Systems (IS) careers.

The undergraduate program in Community Information Systems (CIS) has been developed at Zefat Academic College in light of the global ICT4D trends and, in addition, as a response to the educational gap identified between various population sectors in Israel. The program seeks to prepare and grow local IS workforce by advancing understanding of computing, design, human-computer interaction, digital culture, entrepreneurship and other subjects regarded as critical to developing the needed workforce for the 21st century. Imagining information system as a junction connecting (i) human users, (ii) supporting technologies, and (iii) organisational environment, the curriculum includes (i) psychological and sociological aspects, (ii) information technologies and systems, and (iii) issues of organisational culture. The curriculum combines theory and practice while emphasising subjects that are relevant to the workforce and the organisations surrounding the college, thus creating "practice of relevance" for its students. As part of the required core curriculum, 3rd year students are designing, developing, and presenting a real-life project thus combining the knowledge from previous years to construct a digital information system for an organisation of their choice.

The paper's focus is on a group of ultra-Orthodox students who graduated the program last year (2017). The male students in the ultra-Orthodox group were relatively older than the regular college student population and were already fathers in large families. They often were the first in their families to reach the academic world and were not used and sometimes reluctant to study and work in a mixed-gender and multi-cultural environment.

Zefat Academic College therefore supported constructing a special learning environment for the Community Information Systems' ultra-Orthodox group, using the college’s facilities in less crowded evening hours, leaving Fridays off (unlike the regular program), and offering additional summer
semesters. The ultra-Orthodox students took part in a challenging non-stop learning journey towards becoming part of the high-tech community and the professional workforce of what is termed "The Startup Nation" (Senor & Singer, 2009). This special journey will be presented in this paper through the unique case of an elderly caregiver who became a startupist. In light of recent calls for increasing the low employment rate of Israeli ultra-Orthodox Jews in general and for enabling their employment in fields that offer higher-paying jobs in particular, the Community Information Systems program might suggest a fruitful path.

Community Owned Data and Policy Development

*Category: Non-refereed paper*

**Andrew Clark**  
Community Data Net, Australia

This paper describes the use of SMS and online data collection tools that were used to facilitate outcome feedback from people who use Community Care services in the Sydney Metropolitan Area (Australia). The paper outlines how the data collected was used to develop benchmarking measures, inform the development of future services and provided evidence that was used to shape government policy. Community Care services for people who are Ageing or those with a Disability are rapidly growing in Australia. It is expected that total expenditure for these services will reach approximately 40 Billion US Dollars per year within the decade.

How governments and services effectively measure the outcomes of these services remains a critical issue within Australia and Internationally. The United Kingdom has developed a range of strategies to understand outcomes within a broad wellbeing framework. Australia adopted a wellness framework. Both strategies propose a codesign framework that actively seeks feedback and engagement with service users as peers.

The challenge for services is how to engage with service users cost-effectively, often with limited policy skills, limited access to data analysis tools, evidence-based and benchmarking tools.

This project explored ways that service could effectively engage with their service users and trial them. Following a literature review of wellness and wellbeing and innovative data collection, it was decided to send participants a text message linked to an online survey tool with eight questions using a five-point Likert agreement scale. The online form was built in Drupal using the forms module. This was done to reduce costs, enhance privacy and ensure data was collected and stored in ways consistent with Australian Health and Privacy Legislation.

The questions built upon identified good practice within wellbeing literature and the literature of the particular service type being reviewed. It worth noting, that only one paper was found in Australia that related to reviewing this service type that used original data collected from service users. The survey was sent to approximately 2,600 people from six services across Sydney. 90% of people were over the age of 65 years. The response rate was 25%. The highest response rate was 40% for one service. The bulk of responses were received within three days.

Responses were downloaded as xls file and imported into Tableau and analysed and distributed to services as tableau reader file. The data indicated people were having needs met within the wellbeing framework. The data enable service to benchmark themes selves against the aggregate score.
Importantly when affordability responses were linked to SEFIA scores (a national disadvantage index) the responses were found to be predictive of social disadvantage. This was a significant finding and helped validate the tool in the eyes of services. This is now the most significant data set in the world for this service type. Importantly this data is owned by the sector within a creative commons framework. The creation of community-owned data sets is an essential step in the development of community-led policy development and can enhance processes of co design and coproduction.

Given the scale of the response and evidence behind the framework, service providers felt that this tool and process was useful in shaping services and advocating for change. The government welcomed the research as it built upon good practices and offered a way of resolving the policy problem of measuring outcomes.

Data Literacy as a Collective Concept

Gillian Oliver, Misita Anwar
Monash University, Australia

The rural-urban digital divide in the developing world contributes to ongoing economic and societal inequalities. Members of remote rural communities typically have limited opportunities to access the information that could make a difference to their lives and well-being. However, telecommunications capabilities and mobile phone usage can provide the means by which the digital divide can be navigated, and opportunities for empowered citizenship are suddenly within reach. The notion of collective intelligence has been identified as critical in enabling people to take advantage of the opportunity to "...enter into a new 'knowledge space' with the aim of contributing to humanity’s ethical - not just economical - wealth" (Poore, 2011, p.20). The concept of ‘knowledge space’ is drawn from Pierre Levy’s work, and is described as being about "collective imagination, the production of knowledge and the construction of intelligent communities" (Levy, 1999, pp 8-10, cited in Poore, 2011).

In the situation that will be explored in this research project, women in rural communities have been provided with the technological tools (smart phones) to facilitate their access to data that will enable them to respond effectively to problems impacting on raising livestock and growing crops. Many of the women are not able to read or write. The ways in which these women use the data they access and their appropriation of the tools that they use reflect their data literacies. We suggest that there is a collective dimension at play, having observed the interactions of family (including children) and community members (other village women) in the initial deployment of information services. This implies that traditional Western understandings of literacies as individual competencies are not only inadequate as explanatory devices but also fall short and can even misdirect in terms of providing guidance to develop and provide training support.

Oxfam Bangladesh in conjunction with researchers at Monash University has developed a network of community-based organisations in villages in diverse regions in Bangladesh. The aim of the project is to equip women farmers with mobile technology, to facilitate their access to the information resources that will enable them to deal with agriculture and climate related issues (including early warning systems for emergencies) and to link them
with local government, NGOs and the market. The activities of participants in these networks can illuminate the characteristics of data literacy, which can be used to inform the development of contextually sensitive technologies and tools in diverse cultural settings.

Decoding and Recalibrating the Archival and Museum Catalogue  
*Category: Work-in-Progress*

**Heather MacNeil, Jessica Lapp**  
*University of Toronto, Canada*

Rhetorical genre studies investigate the social actions genres perform and emphasize, among other things, the embeddedness of genres in specific social structures and their emergence and disappearance at particular historical moments and places. In the last decade rhetorical genre theorists have paid increasing attention to the ideology of genres: the values and power relationships they embody and perpetuate and the forms of knowledge they enable and constrain. In this presentation Heather MacNeil and Jessica Lapp will look at some of the social actions performed by archival and museum catalogues and the ideologies embedded in those actions.

Considered as a rhetorical genre, the catalogues of archives and museums participate in a fairly straightforward social action, i.e., making institutional holdings known and accessible to the public. In carrying out that social action, however, they also participate in a somewhat more complicated and ideologically charged action, i.e., “the formation and the shaping of knowledge.” In the first part of the presentation MacNeil will look at an ancestral genre of the contemporary archival catalogue - the calendar - and the role it played in the formation and shaping of knowledge in the British Public Records Office during the first century of its existence; and an online object catalogue - that of the Canadian Museum of History - and the ways in which it perpetuates particular understandings of Indigenous material culture as a form of embodied knowledge.

In the second part, Jessica will introduce and contextualize online catalogue entries from the Smithsonian Museum of Natural History and the Huna Heritage Foundation Archive. Reflecting on how a crest pole figure has been catalogued in one instance, and a community photograph in another, the ways in which archival and museum catalogues might be recalibrated in order to serve as devices for generating new knowledge are considered.

Digital Archives as Political Shields: Reflections from a Post Custodial Perspective  
*Category: Refereed Paper*

**Itza Carbajal**  
*University of Texas at Austin School of Information, United States of America*

For the past three decades, the archival field has witnessed an increase in post-custodial transnational partnerships. With examples such as the Archivo Historico de la Policia Nacional (AHPN) de Guatemala or the Genocide Archive of Rwanda, universities in the United States using Post Custodial methods have taken on responsibilities such as providing trainings and access and preservation resources such as digital storage and online access.
Often times these efforts result in the creation of accompanying digital archives housed at the partner institution while the originals remain in their native environment. These digital archives a supposed mirror image of the original physical holdings also constitute as preventive measures against physical dangers, but also political threats.

In order to expand the impact of post-custodial partnerships, the question arises as to whether archival preservation strategies used in Post-Custodial projects can add a layer of protection against politics driven instabilities through the use of international public policy. Using a reflective writing approach, the writer considers recent threats towards the AHPN, local implementation of post-custodial approaches, and possible expansion of the Post-Custodial framework to include principles from the LOCKSS program. The recent example of the AHPN and current attempted efforts to undermine its role as a memory institution highlight the urgency of these discussions. Information workers using post-custodial methods alongside their institutions and networks of support through their experience and insights could potentially provide the necessary analysis of how an approach like post-custodialism can help alleviate dangers beyond just physical deterioration.

Documenting the Erasure of an African-American Cultural Heritage Footprint

Andrea Copeland
Indiana University at Indianapolis, United States of America

In the United States, over the past 50 years, the African-American footprint has continually faced erasure in the name of economic development. In the 60s and 70s, urban renewal and the development of the federal highway system destroyed numerous African-American communities. More recently, gentrification owing to economic development of urban centers has continued the work of displacing black communities and erasing visible representation of African Americans contributions and historical significance from the landscape. My current research project, Digital Heritage and Gentrification: The Histories of Racial Displacement and Urban Transformation on Indianapolis' Downtown Canal, will create a digital archival resource documenting the history of African-American experience in the neighborhoods along the Downtown Canal and the gentrification of those neighborhood since the 1960s. The archive will function as a research source for scholars, community members, and teachers. The project will also document the city's efforts to transform the Canal into exclusive housing and leisure venues that are in most cases completely disconnected from the neighborhood's African-American heritage. In many cases all that is left of the cultural landscape and the place-based histories is archival records or surrogates of physical cultural artifacts. For example, for one of the historically significant buildings, Indianapolis' oldest black church, located on the Downtown Canal and will become a hotel, a team has created a virtual representation of the sanctuary. Given the context of the destruction of the physical evidence of a group's history from the landscape, the creation and use digital archival collections and virtual surrogates presents challenges with regards to respecting intangible heritage rights and the authorship/ownership of the resulting historical narrative shared. In our case, the challenge is heightened by the fact that the university that I and project partners work for is in part responsible for the displacement of this particular community. We've followed recommendations from the Local Contexts initiative to guide our work with the community in the creation virtual
sanctuary. This has certainly been helpful to our work; however, as a researcher who works with communities and archives, I am intimately aware of the need for more resources to guide this type of work.

**Empowering Hacks: Reciprocal Influences of Action Research, Makers with Disabilities and Academic Institutions**

*Category: Graduate Presentation*

Janis Lena Meissner  
Open Lab, Newcastle University, United Kingdom

Maker technologies such as 3D-printers allow 'lay people' to create their own 'stuff'. In theory, everyone can now fabricate everything. However, in practice not everyone has the same opportunities to do so. This is particularly apparent in the context of disability. Despite the general Making ethos of 'everyone can do it', hardly any prior design work (not even on Do-It-Yourself Assistive Technology) has engaged people with disabilities as makers themselves.

This paper presents Empowering Hacks, a collaboration of two (non-academic) novice makers with disabilities and an (able-bodied) researcher around the mission to produce assistive tools at a cheaper rate with customisable outcomes. In this article, the researcher reflects on the specific implications of conducting the project at a research lab of a civic university, including the challenges we faced and the opportunities that arose due to this context. Likewise, it will be reviewed how the project itself eventually had a concrete influence both on all its participants and on the institutional setting that it took place in. Finally, the paper elaborates on how the methodological framing as participatory action research has shaped our research practice and allowed these different forms of influence to emerge, before it concludes with a critical discussion of the project outcomes which this double-ended influencing of research and setting has resulted in.

**Ethical considerations in documenting Malaysian community oral history collections**

*Category: Graduate Presentation*

Hanis Diyana Kamarudin  
Monash University, Caulfield Campus, Australia

This research is based on a PhD research project entitled ‘Engaging community and cultural institutions through oral history collection: the Malaysian case’ which is being undertaken at the Monash University, Australia. History is continuity between society and the past, or between society and the future. Oral history is one of the essential techniques to capture the past history, where it often captures perspectives and experiences not recorded elsewhere. However, oral history programs in Malaysia are still lacking, where the important facts about the national event are still not sufficiently captured and preserved. Ethical aspects need to be concerned especially in the process of mining and digging valuable information from informants.

This study was conducted based on qualitative approach with a survey structured. Twenty respondents with at least three years’ experience in oral history projects were interviewed. This paper will discuss ethical considerations in capturing oral history based on the experience of expert practitioners such as academics and freelance consultants, village people or persons belonging to an ethnic group, students and researchers. By
understanding the ethical aspects and appropriate ways of approaching local community to participate in an oral history project, there will be more significant opportunities in expanding and enriching reliable sources of local contents in Malaysia. The research participants were also asked how community oral history collections could be preserved and managed into the future. Finally, this paper highlights the possible strategies to encourage government and members of the community in capturing and documenting their history to more preservable memory.

Evaluating A Smartphone Phone Project In Bangladesh Though Community Monthly Meeting Reports
Category: Non-refereed paper

Fatema Jannat, Tapas R. Chakraborty, Pinash Aktar, Stillman Larry

1 Oxfam (Bangladesh); 2 Monash University

The use of information technology is burgeoning for information and knowledge, and the practice of agriculture in not just developing countries, but the developing world as well. As an example of this, Oxfam and Monash University have been implementing an action research project, ‘Participatory Research and Ownership with Technology, Information and Change’ (PROTIC) in three fragile ecosystems (coast, sandy river bank and wetland) of Bangladesh. Three hundred female farmers were provided with Smartphones with internet facility. Following the philosophy of Participatory Action Research (PAR) developed by Research Initiatives Bangladesh (RIB), and an analysis of group meetings held with the community, it is considered that the farmers are the social change agents or ‘animators’ in the process of developing transformative leadership for resilience towards the challenges in Bangladesh. The result of the activity is that there have been significant changes in farming practices in the project implementation areas and the voices of women (called animators in this article) have been reflected in the intervention. There have been changes in the development of knowledge and skills by the women with Smartphones and information services, including changes in confidence, language, social status and technical skills of the community.

The paper focuses what has been learned from group meetings held in the project areas as evidence for change. The paper in fact contains two perspectives. First, the primary level of research from a practitioner perspective (the Oxfam authors), and second, contextual remarks from an academic perspective by the third author. In practice, each has influenced the other’s work considerably over 4 years of the 5-year project (2015-9).

Grief, commemoration, and archival plurality: Reflections on the Taken Knowledge Keeper app for families of Missing and Murdered Indigenous Women and Girls

Danielle Allard, Shawna Ferris, Kiera Ladner

1 University of Alberta, Canada; 2 University of Manitoba, Canada
In the summer of 2017, our research team at the University of Manitoba provided research assistance to Eaglevision Productions Inc. and their IT developer, Tactica Interactive, in the development of a mobile software application for friends and family of Missing and Murdered Indigenous Women and Girls. The Taken Knowledge Keeper app is a place where loved ones can securely keep the information that they have about their loved one's case, "help conduct a search if a loved one goes missing and provides a missing-person action plan toolkit" (CBC, 2017). Our role was to interview family members about how they identified and used the information they needed when they lost their loved ones, over time as they worked with the police and other organizations, and as they lived with uncertainty and devastating loss. These interviews were designed to inform what information or materials might be stored in the app by families, and how this section of the app might "look and feel". Interviews revealed significant tensions between the ways that police handle and understand information and documentary materials about taken or murdered women and girls and the ways that their loved ones approach this same material. While police understand this material as instrumental and evidential, families understand it to be much more precious, profoundly personal, and deeply emotional. Jennifer Douglas describes how "recordkeeping might be seen as a means of continuing the bond between the living and the deceased" (2018), referring to this practice as "grief work." Similarly, many of the families with whom we spoke meticulously and carefully saved and organized all materials relating to their loved ones. Many were deeply hurt, frustrated, and angered by police responses to these organizational practices, and by police handling of their loved ones' records. In this paper, we discuss this research process and our own recognition that ultimately the Taken Knowledge Keeper app both reflects and fails to mediate effectively between police and families' conflicting ways of understanding the meaning and value of the materials the app is designed to preserve. Specifically, we examine the extent to which the app serves families' needs to remember and commemorate losses. This raises questions about the limitations of archival pluralism (Caswell, 2013) to create space for marginalized voices to be heard in contexts where some knowledge systems are so deeply privileged and entrenched, such as the police perspective in this case, that it eclipses all other views and meanings of particular archival records or materials.

How can independent community archives survive in China? -Based on the case study of the PiCun Culture and Art Museum of Migrant Labor.

Category: Non-refereed paper

Zhiying Lian¹, Gillian Oliver²
¹ Shanghai University, China, China, People's Republic of; ² Monash University, Australia

There are three models for preserving community archives in China: the first one is to keep community archives in government-funded/established museums or archives. The second is to keep community archives in scholarly organizations. The third involves the community establishing its own archive. This model is very unusual in China. The PiCun Culture and Art Museum of Migrant Labor (PCMML) provides an example of this model as it is the only independent community archives focusing on migrant workers in China. This paper explores the emergence and development of this independent community archives, its impact on community members, and challenges faced including funding and staffing but also those unique to China. PCMML is greatly influenced by a range of national and local government policies and regulations. Based on the case study of PCMML and with reference to Giddens's theory on agency and social structure, this paper concludes that the survival strategies for independent community archives in China are dependent upon three dimensions: the community itself, society, and the government.
Independent community archives need to cultivate the cultural consciousness of community members. PCMML has become a public space to cultivate the cultural consciousness of migrant workers -- only if their cultural consciousness is awakened, will they give their voices. Meanwhile, their voices need to be heard by the government and the whole of the society in a variety of ways, especially by means of new media, and their voices together with the voices from the whole of the society will have an influence on the government and result in social transformation. Certainly, independent community archives are constrained by government policies and regulations, so they need to deal with the relationship with governments strategically in order to strive for more spaces of survival. At the moment, this means that the ideals, actions and plans of independent community archives should be consistent with the guidelines of government and the Party, and they cannot take explicitly political stance.

Note:
Hukou is the household registration in China. According to the Regulation on Hukou Registration of China issued on January 1958, Hukou consists of the rural Hukou and the urban Hukou. The Hukou system constrains the migration of people and is helpful for government to implement localized management of people.

Human Rights in and to Records in the Information Age?
*Category: Workshop*

Joanne Evans¹, Anne Gilliland², Gregory Rolan¹, Sue McKemmish¹
¹ Monash University, Australia; ² University of California, Los Angeles, USA

Various recent research projects addressing particular community contexts and needs have identified specific rights in and to records that they believe need to be instantiated through international and national policy, legal systems, and recordkeeping design as an integral component of tackling wicked problems facing today’s society. This workshop seeks to bring those involved in these efforts together, along with other interested parties, to discuss whether a common platform of rights should or could be developed that would inform an international policy, research, development and advocacy agenda for transforming recordkeeping infrastructure so that it better addresses humanitarian needs. One goal of this agenda will be to review existing research findings and policy statements to see if it is possible to establish common values, principles, rights, and obligations that should underpin such infrastructure in order to support the needs of people who experience various forms of precarity or marginalisation. Another is to articulate better the various roles, uses and requirements of records and recordkeeping infrastructure in addressing wicked problems.

Many, if not all, modern information systems are, in fact, de facto recordkeeping systems even if they have not been designed as such. The records they generate may take on roles as instruments for identity, memory, accountability, and justice; evolve in meaning and importance across generations, communities and nations; and manifest in unexpected ways. Meanwhile, technological advances of the 'big-data' society mean that political and economic informational power is (re)consolidating -with divisive and inequitable societal implications. Our systems, designed for an uncritical and generalised 'happy centre', in fact fail to address the individualized complexity of many groups such as refugees and asylum seekers; those who have been adversely affected by out-of-home care or other childhood abuses; itinerant and migrant workers; indigenous communities; people with disabilities; and generally those lacking the presence, literacy or experience to interact with bureaucratic systems. In each of these
instances, information and recordkeeping systems are emerging to be a root cause or exacerbating force of disenfranchisement from predictability, security, material wellbeing, and/or psychological welfare.

Conversely, recognizing and anticipating people's individualised and complex situations within information and recordkeeping systems both (institutionally and socially generated) and associated policies and legal systems can lead to collective and individual empowerment and justice. Can such enfranchising and empowering systems be based on a set of globally agreed-upon rights in and to documentation or records similar to other suites of rights that have historically been acknowledged and promoted by the UN?

This workshop will be the first step in collectively addressing this question. Its activities will include collating the several UN declarations and charters that already specifically relate to these issues; examining and debating additional recommendations emerging out of recent research; discussing additional considerations raised by workshop members; and deciding upon a potential strategy for further developing and promoting a proposed set of human rights in and to records.

Some immediate questions that come to mind are:
- What is the scope of the values, principles, rights, and obligations that need to be considered?
- Who should be involved in this programme?
- What are some strategies for a research agenda to support the programme?
- What is the intersection of this work with existing community, national, international, and UN bodies and instruments?

It is hoped that participants, through reflection with their own work in practice or academia; and in government, organisational, or community settings, will contribute to a rich and nuanced understanding of the elements that are needed in order to address the immediate and longer-term needs of people who, at some stage of their lives, may find themselves balanced precariously at the fringes of our systems.

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**Maria Angela Ferrario, Emily Winter, Steve Forshaw**

**Lancaster University, United Kingdom**

Artificial Intelligence (AI) has seen a massive and rapid development in the past twenty years. With such accelerating advances, concerns around the undesirable and unpredictable impact that AI may have on society are mounting. In response to such concerns, leading AI thinkers and practitioners have drafted a set of principles - the Asilomar AI Principles - for Beneficial AI, one that would benefit humanity instead of causing it harm. Underpinning these principles is the perceived importance for AI to be aligned to human values and promote the 'common good'.

We argue that efforts from leading AI thinkers must be supported by constructive critique, dialogue and informed scrutiny from different constituencies asking questions such as: what and whose values? What does 'common good' mean, and to whom? The aim of this workshop is to take a deep dive into human values, examine how they work, and what structures they may exhibit. Specifically, our twofold objective is to capture the diversity of meanings for each value and their interrelationships in the context of AI. We will do so both systematically and creatively using tools and techniques developed as part of the Values in Computing (ViC) research.
In practice, we will engage in a small set of facilitated group activities designed to explore the Asilomar AI Principles in the context of a broader values theoretical framework briefly outlined in this paper.

**ICT for Women’s Empowerment in Rural Bangladesh: Issues and Findings**  
*Category: Graduate Presentation*  
Anindita Sarker  
Monash University

The sociocultural environment of Bangladesh is characterized by gender discrimination where women and girls face many hurdles to their empowerment. This discriminatory system impacts on women’s mobility, decision making, and lack of access to information and also sustains this lack of information. This discrimination can be overcome by improving access to information for the women and girls. As a means of transmitting information, a rich body of literature shows that Information and Communication Technologies (ICTs) have the potential to empower women and to overcome socioeconomic isolation and deprivation in their lives in the international development context. However, existing research trends pay more attention to explore the impact of ICT as a general tool without paying sufficient attention to the particular sociocultural challenges that women face in a particular context.

The aim of this research is to explore the potential of ICTs to enable women’s empowerment by understanding the experience of the rural women from the grass-roots. Informed by Critical Theory, it focuses on the social power dynamics and social construction of women’s gender role as a centre topic to understand women’s empowerment.

By using Grounded Theory methods, this research focuses on developing Critical Theory by understanding the participants’ worlds and their experience and challenges of accessing and using ICTs. In addition, participants will be selected from three different locations of Bangladesh (coastal, “haor” or wetlands and sandy islands) to have a comparative understanding on social dynamics and women's experience with ICT. Along with that, contextual interviews will be conducted with experts from NGOs, government and industry. This research will explore the experience of the women users (within and external to specific international development projects) as well as non-users of ICT.

The outcome of the study will help to understand the women’s needs along with the challenges of using ICT in the context of rural Bangladesh. It will focus on addressing the “real needs” deriving from Grounded Theory rather imposing generic solutions for women’s empowerment. Addressing those needs will empower women to be active ICT participants rather than reinforcing status quo solutions.

**Imagined Others: The shifting boundaries of “community” in community archives.**  
*Category: Non-refereed paper*  
Gracen Brilmyer  
University of California, Los Angeles, United States of America
Drawing on data collected from focus groups with users of five different community archives sites in Southern California and using Benedict Anderson's /Imagined Communities/ as a conceptual framework, this paper examines community archives users' imaginations, anxieties, and affect around other archives' participants and the shifting boundaries of community. Anderson, specifically exploring nationalism and nation-ness as cultural artifacts, examines the concept of community through kinship, power, boundaries enacted through individual members as well as collective forces. Anderson states that the nation is /imagined/ because most members will never meet or interact with the majority of other members, however they still possess an image of who comprises their community. Just as members of a nation, as Anderson explores, grapple with endeavors such as the census, the map, and the museum that delineate a community, so too do community archives users, through this research, demonstrate their anxieties and imaginaries around how their community is defined not only by community members, but also by outside forces.

This paper asks: how do members of marginalized groups imagine shifting boundaries of their community by specifically conceptualizing other archival users? Our data shows a wide range of affective responses and imaginaries related to communities and their archival material. Some see themselves as drawing on a community history that they are a part of and solidifying community scope, while others are anxious about new "members" or outsiders who narrow or expand the bounds of a community. This research, located alongside other archival scholarship that explores community archives and affect, pushes how "community", through a critical analysis of nationalism, is continually defined and redefined by not only archival records, but also community imaginaries.

**Not submitting a paper for peer review. I would not like to publish my paper in the proceedings, as I plan to submit it to another journal for publication. Updated abstract is uploaded according to CIRN format.

Impact of Information Culture on Access to Information: A Socio-Technical Perspective from Bangladesh

Category: Graduate Presentation

Jigya Khabar
Monash University, Australia

Purpose - For a developing society, the key issue highlighted is not in the technology, but with social factors such as culture, institutions, organisational issues, and individual identities (Walsham, 2001). Understanding of such factors is significant in order to explicate on how charity and non-governmental organisations (NGOs) can enable a culture, which cultivates information access for developing communities in Bangladesh.

Approach - A qualitative research study will be conducted using semi-structured interviews with the employees of the international charity organisation (Oxfam Bangladesh) and their selected local NGOs working for the development of Bangladeshi women. Lastly, a framework will be constructed based on literature and feedback from the fieldwork.
Research implications - The research aim is to use exploratory study to understand the information culture and produce a framework for better provision of information access. This framework will allow for the understanding of factors contributing to information access, given the information culture in the development sector.

Practical implications - An appreciation of the information culture influences that facilitate information access as an ongoing process will be helpful for international charity organisations like Oxfam Bangladesh as well as local NGOs working towards empowering communities.

Increasing Breast Cancer Awareness using Community Engaged Technology
*Category: Work-in-Progress*

North South University, Bangladesh.

Breast cancer is a major concern in recent years. The problem is critical in a developing country like Bangladesh where there is early prevalence of the disease. This disease can be treated and cured if detected and diagnosed early. However, there are social cultural barriers where women do not discuss about the disease often. The level of awareness remains low among women regardless of their socio-economic context.

We used a user centric study to understand the challenges women face. It was evident that many of them did not know whom to talk, whom to ask and how to connect with others. We worked on a solution that can help them to connect to each other.

We have worked on a mobile application that uses community engagement to increase awareness about breast cancer. The application enables ways where women can connect, socialize physically and then create a supporting aware community.

In the Search of Community: From Recognition to Exploration of Information Needs
*Category: Refereed paper*

Michal Lorenz, Eva Víchová
Masaryk University, Czech Republic

One of the new social roles that libraries are starting to systematically meet, is community role. In the project Social Innovation in libraries, we help community-oriented libraries to design socially innovative services to address urgent civil problems. But these services cannot be designed ad hoc, they must be tailored to the needs and with the help of the communities. Because needy communities are very often non-administered communities, their members are library non-users however. This means that librarians have to leave the walls of libraries and search for the needy communities in the field. In our paper, we focus on technique librarians and others can use to identify communities and explore their needs, including information needs and information practices. Identifying communities and analysis of their needs is a prerequisite for the service design process and implementation of social innovation in community libraries.
Integration of Information and Communications Technologies (ICTs) to strengthen nutrition-sensitive agri-food systems (policies and programmes) into multi-sectoral approach in low- and-middle income countries (LMICs)

Category: Graduate Presentation

Manika Saha
Monash University, Australia

Malnutrition with its all forms: undernutrition, micronutrient deficiency, and obesity (resulting Non-Communicable Diseases) are currently existing while one in three people are malnourished globally. Moreover, all these forms of malnutrition are co-existing in LMICs. Ensuring food-security and nutrition in terms of availability, accessibility and utilization are crucial to combat all forms of malnutrition through nutrition-sensitive agri-food systems. Involving multi-sectors and top-down approaches for policies and programmes implementation are the constraints to get the real picture of the ground level and take the appropriate decisions.

On the other hand, the upper trend of using ICT in LMICs for information sharing brought the revolution in information system but scaling up ICT for agriculture with the nutrition-sensitive lenses are not given appropriate attention yet. The aim of the research is to establish a ICT based information sharing system involving top-down and bottom up approach to link the multi-sectors and build the awareness regrading nutrition-sensitive agriculture food systems. Using action design science methodology, this study will investigate a system framework through an intervention to link multi-sectors by using ICTs. Mixed methods, incorporating survey (quantitative) and qualitative (interviews and FGDs) approaches will bring the broader perspectives of understanding the integration of ICTs and how power dynamics works among the multiple stakeholders.

This research will ultimately help to take necessary action, policies and program formulation and implementation of nutrition-sensitive agri-food systems as well as create the platform for bottom-up approaches through ICTs to share actual needs and status for taking fruitful actions by the policy makers.

Mission Impossible? The challenges (or impossibilities) of influencing practice.

Category: Non-refereed paper

Fiorella Foscarini², Gillian Oliver¹
¹ Monash University, Australia; ² University of Toronto, Canada

In this presentation, Gillian Oliver and Fiorella Foscarini will discuss some of the findings of their study of archival authorities from an information culture perspective. Although the ultimate goal of the study was to help organizational actors identify culturally feasible and desirable actions that would improve their recordkeeping situation (possibilities), it became evident that for some deep-rooted factors influencing people's information behaviour, changes to value orientations or attitudes would only be attainable through extended efforts, if at all (impossibilities). Our information
culture perspective was itself perceived as a threat to established ways of doing things in governmental archival authorities, and therefore encountered some resistance.

Exploring the socio-cultural dimensions of the challenges involved in organizational change is the focus of this presentation. In addition to discussing specific cultural features that tend to impede or slow down the process of change, we will consider the highly conservative nature of the kinds of records that are most frequently used in organizations (e.g., reports, contracts, memos, notifications). Rheto

Rhetorical Genre Studies scholars whose research focuses primarily on "genres of organizational communication" (e.g., Yates and Orlikowski, Bazerman, Pare', Devitt, Schryer, and Spinuzzi) describe the rhetorical force exercised by such genres as "centripetal". By continuously reproducing the form and substance of typical organizational genres, the "exigence", or shared motive, underlying those communication tools gets reinforced, and with it, the institution's ethos. Idiosyncratic, centrifugal impulses that could potentially overturn the status quo do inform local practices, often unconsciously; but they tend to remain invisible and have little effect on the dominant ideology.

This presentation will conclude by discussing the appropriateness of participatory action research in government contexts and questioning realistic expectations for change. Archivists, and the organisational structures in which they operate, are arguably inherently conservative, and there are thus considerable barriers to overcome in achieving change. We argue that a cultural shift is essential if records professionals are to accept their responsibility in revealing the "stabilized-for-now" nature of established records, systems, and procedures, and raising awareness of the multiple information cultures existing within an organization. This awareness of non-conforming practices is the first step to building a truly participatory culture, where the "impossible" can eventually be achieved.'

Mobile technologies for women empowerment: exploring the Bangladesh experience in Borokupot village. Refereed Paper

Category: Work-in-Progress

Manuela Farinosi1, Monisha Biswas2
1 University of Udine, Italy; 2 Monash University

Bangladesh is a fast-growing developing country with 160 million people and 12.9% poverty ratio. It has kept a consistent GDP rate from 6 to 7 with an average of 6.4% growth over the last five years. As a part of Sustainable Development Goals commitment, there will be continued effort on investing on young women and technological advancement to address the poverty and inequality issues and to bridge the digital divide that affects these communities. Over the last decades, women's engagement in economic and political sphere is increasing gradually, but their role and contribution to the family and national level are still under-valued and unrecognized. This paper aims to: a) critically understand how the adoption of mobile technologies can be used to reduce social and cultural barriers for women entrepreneurs in rural Bangladesh and contribute to greater economic development in rural economy; b) discuss how social media (i.e.: Facebook) appropriation is contributing to women empowerment; and c) investigate whether and in which differentiations digital engagement affects established power relations and promote social change. Through a case study focused
on the experience conducted in Borokupot village, we analyse the process of technology driven societal transformation and explore how and for what purposes a group of women entrepreneurs from the coastal part of Bangladesh uses a Facebook group. The findings highlight that social media enable women to better cooperate, sharing knowledge about remedies and inputs of agricultural production, such as pesticides, livestock rearing and vaccination, etc. Moreover some dynamics characterized by online participation inequality lead us to reflect on power relationships between community people, local NGO workers and government officials and on the actual capacity for engagement providing by a top-down project.

ID: 07 / Workshop 2: Workshop /Plenary proposals Topics: Community Archives, Community Informatics, Development Informatics Keywords: Recordkeeping, Information Systems, rights, marginalised

Oblivion is Filled with Memory: A Digital Exhibition of the Salvadoran Civil War.
*Category: Poster display*

Allan Martell, Jelena Knezevic, Linou Dai, Eimeel Castillo Dona
University of Michigan, United States of America

From January through September 2018, the National Museum of Anthropology (MUNA) in El Salvador is presenting an exhibition titled El olvido está lleno de memoria -- "oblivion is filled with memory". Through the perspectives of victims, survivors, and witnesses, the exhibition portrays the human rights violations and loss of life that occurred during the Salvadoran Civil War. To keep these stories alive past the end date of the exhibition, MUNA has reached out to our team to develop a mobile platform for a digital exhibition showcasing one aspect of El olvido está llena de memoria. The creation of this mobile application requires research into similar projects and best practices for communicating information about human rights and civil war digitally, prototype design and implementation, and user testing. The final product will be a digital prototype that will allow MUNA to reconnect with those who attended the initial exhibition as well as allow it to establish a relationship with those who make up the Salvadoran diaspora.

Older Voices: Using digital technologies for community radio archiving
*Category: Graduate Presentation*

Arlind Reuter
Open Lab Newcastle University, United Kingdom

A vast body of literature has explored the connection of community media and civic participation in younger people. However, there is a notable lack of research concerning the ways in which older adults make use of digital media in order to promote their civic participation interests. This project describes a collaborative project with an organisation of older adults in Newcastle upon Tyne, UK, who use the medium of community radio to broadcast about their civic participation interests. Taking on an action research approach using observational research, interviews and a design workshop, their need to connect with the audience and increase the longevity of their content was identified. By introducing a digital tool to support the group in labelling, editing and uploading parts of their radio show, an online archive of the content was created. This allows the radio team to track
audience interests and engage more people in listening to their show. Findings about how a group of older adults make meaningful use of digital technologies as part of their community practises are discussed.

**Platform communities and the emergence of a contested polity: debating the community in community informatics**  
*Category: Keynote*

**Eduardo Villanueva-Mansilla**  
Pontificia Universidad Catolica del Peru, Peru

The Platform Economy has left the "novelty" phase to become a well-known phenomenon, affecting people all over the world. While a few years ago it was all about the very well connected, nowadays it is happening at many levels in many countries, effecting change not just at the digital dimension, but for workers, regulators, and employers, as well as collateral damage to many that are not supposedly involved in the day to day transformations that Platform are spearheading.

The Platform-based working experience may be the future of communities. Not of all communities; but at least of enough new forms of communal bindings, of new, specific forms of community ties, that might require research, from a community of dedicated people that have created, sustained and disseminated knowledge about the way that ICT and Digital Media both affect and create communal experiences, ties and lives all around the world. What better terrain for such researchers as a set of community-like experiences that happen to exist through ICT-based, deterritorialized, almost un-regulatable, work.

This paper explores these ideas and tries to propose an agenda of research discussing the notions of evidence, influence and incidence around the established discourses about the platform economy and the need for a critical approach that engages the subject in a way that allow for continuities while accepting the newer elements of work and community that are emerging through these activities.

**Principles, policy, and practice: transformational Information Systems design**  
*Category: Non-refereed paper*

**Gregory Rolan, Joanne Evans**  
Monash University, Australia

Much has been written about ethical and human-centred Information Systems (IS) design, most recently in the context of machine learning applications that embeds and perpetuates unethical or even inhumane automation. Terms such as 'harm', 'damage', and surprisingly, 'weapon' have entered the language of this discourse. However, these characteristics are not unique to applications of data science but have long manifested in procedural IS that can also exhibit secrecy and establish tight vicious cycles. These, when coupled with a lack of governance feedback, can perpetuate injustice that has community or sector-wide reach. In this paper, we explain how IS design that sets out with the best of intentions or at least, conceived as a 'neutral' system for managing transactional information, can emerge as 'tools that punish'. We argue that there are crucial principles to be taken from Recordkeeping Informatics, concerned as it is with the entanglement of information and people across space and through time on multi-
generational timescales. In fact, it is hard to imagine modern Information Systems that are not also recordkeeping systems for at least someone in some context - even if they have not been designed as such. Using our project for designing transformational recordkeeping systems for people affected by out-of-home Care, we discuss how transdisciplinary and critical approaches are necessary to cover more of the design space and surface issues, rights, stakeholders, and, most importantly, values that may be otherwise hidden from a here-and-now, transactional viewpoint. These are critical to establish appropriate policy, practice, and legal principles to be supported by the Information systems that we design.

Problems with records and recordkeeping practices are not confined to the past: a challenge from the Royal Commission
Category: Non-refereed paper

Frank Golding
Monash University, Australia

This presentation will begin by describing and analysing the campaign by the Care Leaver community and other stakeholders to bring about a royal commission into child abuse in Australia. Care Leavers did not get the royal commission they wanted and expected-other more powerful forces were at play-but the Royal Commission into Institutional Responses to Child Sexual Abuse (Royal Commission) was highly effective in exposing the complex nature and extent of the problem of child sexual abuse, “the core transgression of childhood innocence”. In doing so, the Royal Commission’s findings challenged church/state relations in Australia. This paper aims to show that, although the Royal Commission disappointed many Care Leavers with its narrow focus on sexual abuse, when it eventually reported on records and recordkeeping, the Commission surprised many by moving well beyond its narrow mandate. Issues relating to records and recordkeeping were not originally a prominent part of the Commission’s mandate, but they emerged as one of the crucial issues that influence the quality of the out-of-home Care experience and child protection. This finding has created a fresh context in which Care Leaver advocates, academics and other professionals can work together to further a new agenda for recordkeeping in out-of-home Care.

Repopulating political theory through radical archival practice
Category: Refereed Paper

Mark Andrew Howard, Steve Wright
Monash University, Australia

“Knowledge is only knowledge. But the control of knowledge-that is politics.” -- Bruce Sterling: Distraction
Researchers must continually discriminate between competing sources of evidence, knowledge and theoretical justification, selecting who we believe to be credible informants and what we perceive as reliable testimony. We utilise methods of evaluation that reflect the social processes, institutions and procedures, and interpersonal influences common to our disciplinary milieu. Cumulatively, as Goldman explains, these influences form ’epistemic systems’ intended to promote truth; however, embedded within these systems are schemas of epistemic evaluation that promote or hinder the epistemic outcomes of communities based on their social identity and location. This, we argue, is evident in the predominant positivist and reductionist
sociological accounts of Italian radical social movements, with the latter experiencing censure based on the sociological identity afforded by disciplinary thought. Accordingly, those working in radical community documentation environments and archival situations face political and epistemic choices with regard to how and why they represent certain subjects and materials. We will explore these contentions through the experiences of one such radical archive, Archimovi, which was established 10 years ago in the Italian port city of Genoa, and has utilised various means to extend its engagement with contemporary social movements.

**Study on the Subjectivity of Personal Records**
*Category: Graduate Presentation*

**Wenting Lyu**1, **Cenxi Wang**2
1 Nanjing University, People's Republic of China; 2 Sun Yat-sen University, People's Republic of China,

This article presents a different theoretical approach to consider the concept of subjectivity in the research of personal records. As a long term overlooked issue, the subjectivity plays an explicitly significant role in building up characteristics or personal records, which could be in some sense so different from disciplined records. Thanks to the contribution made by post-modernism, there have been various perspectives towards personal records, generally inspired by scepticism, deconstructionism and so on so forth. Concentrating one theoretical aspects of the concept and the spirit behind existed researches, this article re-discusses the boundary of personal records and further define the subjectivity. Furthermore, this article attempts to enrich the connotation of the topic by addressing three subjective factors of personal records creators, namely 1) self-expression with high autonomy; 2) self-memory with inevitable selectivity and 3) self-construction with particular purpose, and subjective characteristics of personal records generated by creators' subjective factors, namely flexibility, fictionality and rhetoricality. By focusing attention on features of personal records, subjectivity as a conceptual framework enables the archivist to better interpret and represent key factors relating to personal record keeping, custodial history, and archival intervention, which over time shape the meanings of a personal fonds.

**Tailoring Virtual Reality Environments for People with Dementia**
*Category: Graduate Presentation*

**James Martin Hodge**
Newcastle University, United Kingdom

A growing literature in HCI focuses on how to best conduct and design research in sensitive settings with participants who might be considered "vulnerable" or placed as marginalised communities. In HCI and dementia, reminiscence tools and experiences have been heavily utilised and designed for. However, this becomes problematic when the person with dementia no longer recognises past memories. By moving away from traditional ways of reminiscence, designing for dementia should focus on the individual's experiences to engage and associate positive emotions that aren't regarded through recognition by placing the person with dementia as the driving force of the experience. In this work, I describe the use of Virtual Reality, to provide insight into tailoring VR environments based on the person with dementia's choices and needs, and how tailoring environments for individuality, provides a familiar experience that encourages a desire for shared experiences between the individual and their relationships. Our
research calls for design to not be occupied by the past or focus on cognitive deficits but orient towards designing for being in the moment and to make use of full spectrum of interaction and experience.

Towards a Prologemenon for a Theory of Everything

Category: Work-in-Progress

Larry Stillman, Hugo Lotriet
Monash University, Australia

This paper and presentation represents another step in an ongoing struggle over the past 10 or so years to conceive of a comprehensive and critical framework that brings together the social and technical tasks and perspectives that cover what is broadly known as Information Systems and its reach into such areas as Community Informatics, Development Informatics and more broadly, International Development. In the face of huge challenges emerging in the networked era- illiberal governance, neoliberalism, mass-surveillance systems, the dark web, climate change and environmental disasters) there is a need for a strong and value driven framework that can bring together those who deal with technical excellence ("things that work), those who focus on societal empowerment (shades of Marcuse here). "Technological rationality" (Habermas, Marcuse) still triumphs, reflecting the fetishization of technical solutions and commodities within the modern industrial state and its third world outposts (nothing has changed in many ways, since Marx).

The paper was originally inspired by the thoroughly excellent if extraordinarily vast and difficult paper of Hirschheim, R., Klein, H. K., & Lyytinen, K. (1996). Exploring the intellectual structures of information systems development: A social action theoretic analysis. Accounting, Management and Information Technologies, 6(2).

The Hirchheim Klein and Lyytinnen attempts a comprehensive, systematic and structured overview of what it calls "object class systems" linked into complex social theory. By "object class system", Hirschheim, Klein, and Lyytinen meant "a succinct mechanism to abstract the fundamental ways of conceiving and classifying the variations in the targets and behaviours associated with ISD" (Hirschheim, Klein et al. 1996, 17). By structured we mean that there is ordered form of representation (a model) rather than narrative as is found in other papers. This form of modelling sets parameters and boundaries rather than the more open-ended tendencies found in narratives.

But there is a weakness. Hirschheim, Klein, and Lyytinen's object classes and particular and bounded prioritised "objects" (for example, "Formalized Symbol Manipulation Systems are too obscure to be encountered by a broader audience ("the ordinary world"), even though their, and other researchers value set (as found in Critical Information Systems) is overwhelmingly humanistic and concerned for social justice with a call for engagement on social justice issues.

But how do we bring such ontologies and subsequent epistemologies together? And why is it important to do so? This something that strikes to the heart of what a piece of software or hardware as part of a social-technical system is meant for.
First, developing shared ontologies and discourse is an obvious solution, and second, it is important to do so because technical artefacts are so deeply embedded in all aspects of our lives and this is particularly so in the realm of social development, which is so different to the more exacting requirements of developing tools.

We try to pull together several different approaches into a workable model to bring together people with socially critical technical and social orientations more effectively.

Now what has this got to do with the broad theme of the conference? Any evaluation of social-technical systems is ultimately based on clarity of values that are embedded in both social and technical spheres.

Using Participedia in a Community of Practice to Create Value for Public-Involvement Practitioners

Category: Refereed Paper

Marco Adria1, Paul Messinger1, Edrick Andrews1, Chelsey Ehresman2 1 University of Alberta, Canada; 2 Medicine Hat College, Canada

Abstract: Public-involvement practitioners (professionals, advocates, activists) seek fit-for-purpose methods of involving citizens in decisions that affect them. Although no statistics or archives provide a record of democratic innovations in their historical and cultural contexts, Participedia (participedia.net) has created a wiki-based library of some 800 cases for use by public-involvement practitioners and researchers. This study asks how public-involvement practitioners in a community of practice (COP) used Participedia's cases to learn about change and variation in the field and thereby added value to their work. The results of the study support a view of Participedia as a "ground for dialogue," that is, a space and idiom within which knowledge can be co-created, and shared understandings strengthened, through conversations, interactions, and information exchange. The results also provide support for the value to public-involvement practitioners of using a COP to extend and mobilize Participedia cases and other materials. Thirteen participants formed a COP, meeting over a period of three months, using Participedia cases to inform their discussions. To identify and measure the professional and practical value created by COP members, the authors qualitatively analyzed the participants’ responses to survey questionnaires and their contributions to a focus-group discussion. Members of the COP reported immediate value to be the most beneficial. Examples of this type of value include experiencing reduced feelings of isolation; having relevant conversations with participants or receiving useful tips; obtaining opportunities to ask questions before, during, or after meetings; and having fun. Value of other kinds was also generated, including potential value, applied value, and reframing value.

Using public art and technology to move communities from emotional reaction to knowledge-informed action for gun violence prevention

Category: Work-in-Progress

Janice Tisha Samuels1, Rachael Clauson 2, Anais Miodek Bowring3
1 Pepperdine University; 2 Center for Creative Arts Therapy; 3 State Matters
This paper describes a project proposal for a gun violence prevention intervention that uses youth created artwork and knowledge resources like data visualizations to develop interactive voter information displays for the purpose of motivating learning and civic engagement with gun violence prevention among city residents in the United States. The voter information displays will utilize WEB XR, a web-based Augmented Reality protocol that enables users to participate in immersive experiences directly from their web browsers providing access to all regardless of device type. The project’s web-based Augmented Reality platform serves as a portal to a guided immersive experience that is meant to challenge, inform, and inspire participants to learn more about youth affected by gun violence, local and national legislation and regulations for guns, and ways to take instant and long-term action for gun violence prevention. The goal of the project is to provide a sense of connectedness between and among groups and to provide models for moving individuals and their communities beyond emotional reactions to gun violence to knowledge-based strategies for gun violence prevention. The project utilizes an Arts Based Action Research Framework.

Values-First Software Design in Rural Bangladesh

Category: Graduate Presentation

Rifat Ara Shams
Monash University, Australia

The word 'Values' is small but it has unfathomable scale of meaning like attitudes, judgments, choices, attributions and actions against psychological needs as well as social demands. Enhancing values can make a human self-dependent, self-confident and capable of adapting to social, perceptual, situational and behavioural changes. Values are closely related to the word 'Empowerment', because to enrich human values essentially means to empower a human in such a way that it builds the ability to express interests in an autonomous way, raise voice with dignity, take initiatives and make decisions. This word becomes more significant in the context of countries which are socio-economically poor in condition, ecologically fragile and densely populated e.g. Bangladesh, where half of the total population consists of women. Therefore our target is female farmers in rural Bangladesh because agriculture is the largest employment sector in Bangladesh due to its soil fertility and subtropical climate. So no socio-economic, cultural and political development is possible without the empowerment of women in agriculture.

To flourish this concept with the help of technology, Oxfam in Bangladesh took a project called PROTIC (Participatory Research and Ownership with Technology, Information and Change), a part of REE-CALL (Resilience through Economic Empowerment, Climate Adaptation, Leadership and Learning) program, in collaboration with Monash University.

we are hoping to build an interactive and inexpensive Bengali language information system focusing the values of female farmers of rural areas. We will develop the system in collaboration with the Government, NGOs and universities based on the tradition, culture, privacy, equality, local dialect and challenges women face every day. Initially, we will apply our proposed model as a trial version, if it works successfully then we will be able to apply it on different communities even on different countries.

Whose Voices Count? From public records to public memory. Non-refereed paper/practitioner report

Category: Non-refereed paper

Charles Farrugia
### National Archives of Malta, University of Malta, Malta

The traditional accessions policy of national archives world-wide gave preference, if not exclusivity, to public records. This approach is nowadays under challenge in several archives. Private records, often in the form of oral testimony, are gradually finding their place side by side with their public counterparts. The National Archives of Malta recently adopted this approach. Through a project called MEMORJA archivists are becoming not only appraisers of records but actual creators. This initiative initially triggered by the archives was recently reenergised through an electoral manifesto proposal. Thus, to some extent, the proposal became a political target aimed at bottom-up representation of ideals. This politically driven process paved the way for the archives to justify the funds for new recruitment and consolidation of human resources and technological infrastructure. The archives took the opportunity to turn this political measure into tangible professional archival measures aimed at the building of a state-of-the-art audio-visual representation of ‘holistic’ memory of the nation.

This project had direct implications on the functioning of the archivists in charge. Instead of managing the accessions process, they are going out there in search of oral testimonies, ephemera and audio-visual documentation. This approach poses new challenges. To what extent are we trying to strengthen the voice of communities that are underrepresented? What ethical implications does such a process pose? Whose voices are we striving to capture in our community archives? To what extent is this eagerness to strengthen such voices shaping and influencing our accessions, appraisal and outreach processes. This paper questions the decision-making processes applied by the MEMORJA team at the National Archives of Malta. In particular, what areas of focus have been chosen for oral testimony, why and whether there were any conscious influences imparted on such a selection process. To what extent will such decisions shape the future of oral testimony in Malta?

### Women friendly mobile technologies for rural women micro entrepreneurs in Bangladesh

*Category: Graduate Presentation*

**Monisha Biswas**  
Monash University, Australia

Bangladesh is a high-density country with 60 million people and 2.9% of them live below the poverty line. The development scenario of Bangladesh is complex with rural and urban division, men women discrimination, technology focused fast economic growth, increasing inequality and uneven access to basic needs for all sections of population. Without understanding the social and cultural aspects in a society like Bangladesh, it is hard to maximize the benefit like technological interventions like usage of mobile technology functions for women micro entrepreneurs in rural area. Often the rural women entrepreneurs are not able to handle the mobile-based technology at expected level due to lack of formal education, improper bandwidth, high price of mobile and internet usage, complex procedure of financial management procedure by the bank, lengthy and technical information provided by the extension service providers. A mixed approach of socio-technical theories and gender-based theories can offer a theoretical perspective to address this challenging situation.
The purpose of this research is to examine the role of mobile technologies and provide insight about a) communicative transactions and b) social, cultural and economic change processes in the lives of women micro entrepreneurs' in rural Bangladesh. The study will try to explore the following research questions:

1. How do the mobile technologies contribute to the emergence, growth, and transformation of micro-enterprises established by rural women in Bangladesh?
2. What are the challenges do rural women micro-entrepreneurs face in carrying out communicative transactions? How do they manage the challenges in communicative transactions?
3. Which capabilities are important for women led micro-enterprise growth in Bangladesh? How can mobile technologies enhance those capabilities further?

A presentation of this ongoing PhD research will appreciate ideas and theoretical insights from peer students and faculty from this conference to sharpen the research scope further.
A Grace Hopper Scratch Maze in the Classroom: A Case Study of a Social-Forward Approach to Teaching Digital Literacy
Betty Bayer and Stephanie Shallcross
University of Illinois at Urbana-Champaign

Abstract: The Person-Centered Guide to Demystifying Technology invites students to observe, question, design and critique technology in support of their own and other’s “valued beings and doings.” Rather than teaching hardware, coding, and network skills for their own sake, this open-source book locates these skills within the framework of mutual shaping, design thinking and person-orientation in order to empower students to relentlessly question and improve the technology around them and in their communities.

Each section of the guidebook culminates with a hands-on design challenge asking students to practice design thinking and technical skills in order to tell a counter-story that is person-oriented. In Part 2 of the book, we describe a “real life” example of four graduate students ideating and iterating code to support counter-stories. This project combined the technical and philosophical frameworks outlined in Part 1 and 2 of the guidebook in order to educate late elementary and middle school age girls about one of the founding mothers of modern technology, Grace Hopper, and inspire them to pursue STEM fields. The group told Hopper’s story through a multi-level maze with scrambled letters that was coded in Scratch and controlled by four push buttons. Besides illustrating possible uses of hardware and coding concepts, this chapter also gives a detailed example of the design thinking process, rapid prototyping, and mutual shaping, with particular attention paid to how it influenced various iterations of this project.

Keywords: Person-Centered, Community Informatics, Creative Commons, Information Science Instruction, Digital Literacy

Introduction

The Person-Centered Guide to Demystifying Technology, which is inspired and informed by Dr. Martin Wolske’s Introduction to Network Systems course at the University of Illinois, invites students to observe, question, design and critique technology in support of their own and other’s “valued beings and doings” (Sen 1992). Rather than teaching hardware, coding, and network skills for their own sake, this open-source book locates these skills within the framework of mutual shaping, design thinking and person-orientation in order to empower students to relentlessly question and improve the technology around them and in their communities. Another key emphasis of the course is Studio-based Learning, which is based on the master designer-apprentice model. Students learn by doing, not just by passively absorbing information from the professor. Martin has worked with Colin Rhinesmith and Beth Kumar to show how this model can be applied in Information Science classrooms, particularly the multi-step critique process (Wolske, Rhinesmith and Kumar 2014).

As such, whether as specified in the book or in courses and workshops, students are asked to work together in groups on two projects. The first of these hands-on design challenges asks students to practice design thinking and technical skills in order to tell a counter-story that is person-oriented. This paper describes a case study of four graduate students working together on that design challenge. The project combined the group’s burgeoning technical skills (coding in Scratch, e.g.) with a community informatics framework in order to engage late elementary and middle school age girls with the story of one of the founding mothers of modern technology, Grace Hopper, and inspire them to pursue STEM fields. The group told Hopper’s story through a multi-level maze coded in Scratch and controlled by four push buttons. Besides illustrating possible uses of hardware and coding concepts, this paper also provides a detailed example of the design thinking process, Studio Based Learning, and mutual shaping, with particular attention paid to how this framework influenced various iterations of this project.
The Design Thinking Process

We were introduced to a design thinking process outlined in the “Design Thinking for Libraries Toolkit” funded by the Bill & Melinda Gates Foundation’s Global Libraries program (“Design Thinking for Libraries Toolkit”). The design thinking process includes three key, overlapping, phases: Inspiration, Ideation, and Iteration. Below we outline how our group enacted each of the phases.

Figure 1: The design thinking process

Inspiration

The inspiration stage is about understanding the problem and considering all the ways to approach it. As a group of four current and future educators, we knew we wanted to focus on one person, whose story is not well known in the history of technology, and we wanted the game to be fun and accessible for late elementary students. It was also important to us that whatever technology we created would serve to empower women and girls and create community rather than creating competition and/or being about making a profit. In other words, we wanted whatever technology we used to amplify an community informatics feminist ethics of care approach rather than amplifying a big business for-profit agenda (Sweeney and Rhinesmith 2016). However, most of our group had very little technical experience, so even in this phase it would have been easy to become discouraged. Because the assignment allowed us to start with a world we know--teaching and our students--and create something new that would connect with that world, we were empowered rather than overwhelmed. As we knew from working with our own students, “we learn best by doing things that matter most to us” (Wolske 2016)

Fueled by the recent release of the picture book “Grace Hopper: Queen of Computer Code” by Laurie Wallmark, our group chose to focus on Grace Hopper. We were particularly interested in inspiring young girls because women, as a whole, are a group that is underrepresented in technological fields. Often when children are taught the history of technology, women who have contributed to the field are left out. We hoped that by creating a game that was fun and accessible for late elementary students young girls who were interested in technology would be inspired to learn, create and change the way women are
represented in technology field. After all, stories are a form of cultural wealth, and we hope projects like this one will push our students to answer the question Tara Yosso poses-- “whose knowledge counts and whose knowledge is discounted?” --with a strong “everyone!” (Yosso 2006).

Ideation

Ideation is about making ideas tangible. At this stage, we decided to use a maze with scrambled letters to decode. This seemed both feasible technically for us and fun and accessible for our target audience. We decided we wanted to have multiple levels of the game, each telling a different story about Hopper’s life. We were especially enthused about telling the story of Hopper finding the moth—the literal “bug”—in the Mark 2 computer because (A) it’s fun and will engage students, but also (B) the term “bug” is mainstream technology terminology, but few people know it was coined by a woman. Knowing this story—and Grace Hopper’s in general—can allow girls to see themselves in the mainstream history of technology, and in the terms and code we use today.

Figure 2: Maze 1

Figure 3: Moth unscramble

Another key to making our ideas a reality was developing a plan of action based on each team member’s skill set. One person took on a project manager role, and was tasked with taking meeting notes, scheduling weekly meetings, and sending out action items to the team. Another person managed the written portion of the project and recording the group’s progress throughout the design thinking process. The person with the most Scratch experience researched different ways to code the maze. The final group member’s job was to be the editor. She carefully walked through all of the programming to locate any
errors in the programming that required attention, and put the finishing touches on the introduction and conclusion screens of the game. Although we naturally fell into these roles that fit our own personal strengths and weaknesses, we also were flexible working as a team. If the Scratch expert hit an obstacle with Scratch, we would all work on the problem together. If the project manager couldn't make it to one of the meetings, another group member took notes and scheduled the next meeting.

Iteration

Iteration is about testing the prototype, getting feedback, and constantly improving. Needless to say, we went through several iterations of our game. Between studio-based peer and desk critiques, less formal student and instructor feedback, and our own team's testing, we were constantly working to improve our prototype. Throughout this process the real challenge though was keeping our focus person-oriented rather than thing-oriented. Again, our background working with children helped keep us on track. Rather than detracting from our acquisition of the “nuts and bolts of the hardware and software,” “this social-forward approach to digital literacy training...situates such learning within the individual and group goals and values of participants” (Wolske 2018). For example, as we became more skilled in coding and more confident in the basic functionality of our game, we started adding more content to each level. After testing this prototype, the current educators in our group found that the extra information caused visual clutter on the screen that would make it less accessible to some students, especially those with visual deficits or those who are easily distracted. In the interest of keeping our counter-story as tailored to our audience as possible, we decided to get rid of the extra information on each individual level and instead streamline the information into one backdrop at the end of the game. The slide also provided links to more information. This approach would provide the best experience for children of all abilities, and those students who were inspired by Grace’s story could easily continue to learn more about her. Our group’s non-technical experience strengthened the technical aspects of our game, and helped keep us person-centered.

Another example of bringing in our own expertise to strengthen the project was gathering feedback from our target audience--students! One of the members of our team worked in an elementary school library that serves Kindergarten through fifth grade students. She took our prototype in and asked two fifth grade students to test it out. The students identified two areas of concern. In one level, after the Grace sprite gets to the end of the maze and the letters are revealed, the question accidentally covered all of the letters. Based on this feedback, the team was easily able to change the location of the letters to allow them to be seen during the question phase. The second issue the students found was a bigger one: if the mouse pointer touched Grace in levels 2-4, she would return to level 1. This glitch made it impossible to finish the game. Through paired programming, we determined that the issue was in one of the initial sequencing codes, specifically, the code that starts the game. Every time a player clicked Grace, the code...
told the game to restart at level 1. After a few pair and individual programming sessions, we discovered that by simply adding a stop script control to that particular sequence, we were able to "debug" our game. Without rapid prototyping our game and asking students to play it, we would not have found these errors nearly as quickly. The students' feedback was critical to the next iteration of our game. Again, while our technical skills were not particularly strong, our personal experience as educators offset these shortcomings.

![Figure 5: First iteration of code](image)

![Figure 6: Second iteration of code](image)

**Studio-based Learning and Mutual Shaping**

The Preface to the Leadership Edition of A Person-Centered Guide to Demystifying Technology lists the core standards and frameworks used throughout the remainder of the book. One core framework emphasizes studio-based learning. Students learn while doing and creating, instead of receiving instruction through lecture: “In this way, teachers act more like “guides” to assist students in developing and implementing their design choices” (Wolske 2018). In a typical lecture-style class--i.e. an instructor feeding students information with little to no reciprocity--class teams would have ended up with similar results. With Studio-based Learning and mutual shaping, results are unexpected. Our team was shaped by our experiences, our learning, and our interactions with each other. In this way, we were able to create something innovative and valuable for our own work and those we hoped to inspire.
The Studio-based learning process included three separate critiques that shaped our final project in significant ways. At the first in-class peer critique, each team member had to present the team's idea to a small group of peers. Several classmates suggested we simplify the word choices for the unscramble. We had initially chosen very specific words from Grace's life. Although these words represented interesting aspects of Grace’s story, they were not ideal for our primary audience, elementary students. For example, initially one of the unscrambles was “WAVES”, which was the women's branch of the Navy that Grace joined. Elementary students would likely not be familiar with WAVES, so we opted to change the unscramble answer to “Navy,” making the game more accessible for young students.

After the desk critique with Martin, he expressed concern that we were just "telling" a story. He questioned our motivation in choosing Grace Hopper as our counter-story and challenged us to think deeper. After much discussion, the group really focused on using Grace's story to inspire and challenge young girls into STEM fields. As with any teaching tool, it is critical to provide context to the game. We felt strongly that this could be a launching off point for students, especially girls, to create their own games or do their own research into concealed stories in technology. Furthermore, just realizing that a woman is the reason we are coding in English instead of 1's and 0's is pretty incredible. Our hope was that young girls could see that what we are doing with computers today was not just because of the Bill Gates and the Steve Jobs of the world, but because of the Grace Hoppers of the world as well.

Although our shared background in education and experience with youths was a benefit, our project was also enriched by our individual strengths and the additional wisdom of our professor and classmates. We were able to leverage each team member's strengths by using pair and triplet
programming, thorough communication, and taking on specific team roles. As discussed previously, pair and triplet programming helped us to "debug" our game much more quickly than we could have individually. Initially, each team member worked alone on their level, but almost right away we encountered issues with the letter sprites. If one member of the team tried to program a letter sprite, it moved into another level. Through paired programming, we realized that we needed different sprites for each level and that we had to rename those sprites right away with the specific levels name to avoid confusion. Each sprite needed to be coded separately and each sprite needed to have its own costume, i.e. balloon.

Figure 9: 21 sprites required for game

Conclusion: Continued Mutual Shaping

As a team of four future and current educators, our team’s goal for this counter storytelling project was to teach children about Grace Hopper in a way that they could understand and enjoy. We also wanted to nudge them to realize that they too have the capacity to learn about and create technology. Ideally, all this would be able to happen without a teacher or adult having to explain it.

Despite our relative lack of knowledge related to computer hardware and coding, by way of a social-forward information science curriculum, we were able to leverage our own strengths and areas of expertise to successfully achieve our goal. By following the design thinking and Studio-based Learning processes, we were also able to stay positive in the face of setbacks, and remain person-centered even though it would have been easier to just “get it done.” By the end of the semester, our group was amazed and empowered by what we and our peers had accomplished.

Our work on our project continues to shape and influence each member of our team as well as our instructor and future users of the guidebook. One member of our team has plans to use this project as the foundation of her work as an elementary school librarian. One of her goals as a practitioner is to inspire elementary students to design, create, and challenge their thinking by having them work in groups to research a lesser known individual from history and tell their story through a unique game. Furthermore, this project, which is based on an earlier version of the guidebook, shaped the current version of the guidebook. The current iteration of the guidebook will continue to shape future information scientists, and, in turn, they will continue to shape and refine the contents of the guidebook.
Common Agenda Setting through Participatory Collaboration Mapping: a Knowledge Base-Driven Approach

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Abstract: Globalizing society faces an ever-expanding web of wicked problems. Community networks are at the heart of building the required collaboration capacity for achieving collective impact. One bottleneck is the process of common agenda setting among such widely diverging stakeholder networks. Participatory collaboration mapping can help build firmer actionable and conceptual common ground between existing projects, programs, and initiatives on which to base the common agenda-setting process in community networks. By jointly creating and aligning collaboration maps, stakeholders can catalyze, augment, and connect existing collective impact initiatives. To be scalable, this requires a knowledge base-driven approach. We introduce the CommunitySensor process model of participatory collaboration mapping for common agenda setting. We then outline the knowledge base architecture supporting this process. We apply the architecture to a case of participatory mapping of agricultural collaborations in Malawi. We illustrate some components of a knowledge base-driven participatory collaboration mapping process for common agenda setting: (1) working with a federation of collaboration ecosystem maps all sharing at least partially the same community network conceptual model; (2) building more actionable common ground through defining relevant conversation agendas; (3) discovering conceptual common ground through semantic community network analysis.

Keywords: wicked problems, agenda setting, common ground, participatory collaboration mapping, community networks, knowledge bases

Introduction

We are indeed living in interesting times. Climate change is no longer a topic up for academic debate, but seems to be racing towards reaching irreversible tipping points. Environmental degradation; loss of biodiversity, habitats, and livelihoods; the rise of autocracy; wars and mass migration; the upheaval caused by global financial and economic systems that are out of control: the number and magnitude of interconnected wicked problems is increasing by the day.

Wicked problems are called this way for a reason: they have no definitive formulation; have no stopping rule saying when a solution has been found; each such problem is essentially unique and can be seen as a symptom of yet another problem (Rittel and Webber, 1973). Another way to characterize wicked problems is through there being a significant complexity of elements, subsystems and interdependencies; uncertainty with respect to risks, consequences of actions, and changing patterns; and divergence and fragmentation in viewpoints, values, and strategic intentions (Head, 2008). One could furthermore say that wicked problems are unstructured, cross-cutting, and relentless, in the sense that they never go away (Weber and Khademian 2008). Addressing such impactful, open-ended, ongoing problems is therefore essentially a political problem of finding at least partial solutions reconciling "contentious differences among subpublics" (Rittel and Webber, 1973).

Since wicked problems and their solutions are socially defined and power is distributed among many different stakeholders, a collaborative strategy, rather than an authoritative or
competitive strategy is often the only feasible way to go (Roberts, 2000). Addressing wicked problems therefore requires an ongoing effort of networks of stakeholders collaborating across many different dimensions. The challenge then becomes how to build an effective, scalable network with solid collaborative capacity in terms of long- and short-term problem-solving capacity, improved policy performance, and the maintenance of accountability for public action (Weber and Khademian, 2008).

A powerful paradigm for such collaborative networks to help grow sustainable and scalable solutions to wicked problems is for its participants to jointly work towards collective impact (Roberts, 2000; Weber and Khademian, 2008, Gwynne and Cairnduff, 2017). The essence of engaging in the collective impact framework is that a group of important actors from different sectors commits to a common agenda for solving a specific social problem, next to having a shared measurement system, mutually reinforcing activities, continuous communication, and backbone support organizations (Kania and Kramer, 2011). In this framework, many stakeholders come together and collectively engage to define wicked problems in all their complexities and priorities, and jointly develop, implement, and evaluate multifaceted solutions (Gwynne and Cairnduff, 2017). In true cross-sector collaborations for collective impact, however, no single actor monopolizes the power to set goals, shape the common agenda and determine key policies and practices (Henig et al., 2016). Collaborative communities - a new form of community focusing on the growth of alliances (Adler & Heckscher, 2006) - fit this emerging paradigm of collaboration. Still, collaborations for collective impact should generally not (just) be considered at the project or even collaborative community level, but at the societal level (Figure 1). At this level, networks of overlapping communities of stakeholders of many different types - including communities of practice, communities of interest, local communities, online communities, and collaborative communities - align and weave their efforts together on an ongoing basis, focusing on common themes of interest (De Moor, 2018). As such, community networks embed and make the common agendas come alive that drive wicked problem solving.

![Figure 1: Society – a network of communities](image)

We define common agenda setting as the process of creating, using, and evolving a common agenda for collective impact for, with, and by the community network that owns the agenda. Weber and Khademian take a knowledge perspective on such a common agenda, calling it a common knowledge base. This knowledge base - rather than the usual top-down command and control processes - should form the premise of cooperation in wicked problem settings. Each participant sees the wicked problem through its own lens of hard-won individual knowledge - often in tacit form - and is interpreting it in its own community of discourse. The challenge is how to integrate these disparate forms of knowledge into a workable knowledge base particular to the wicked problem at hand. In other words, how can the knowledge base contribute to the collective collaborative capacity of the network,
including demonstrating accountability to the wide range of participating stakeholders (Weber and Khademian, 2008).

Now what could such a "workable knowledge base" look like? How can it be designed, implemented, used, and adapted in practice? How can the knowledge base actually help to support the continuous process of developing of a common agenda in fragmented stakeholder networks? How can this shared understanding be used to arrive at relevant actions towards collective impact? How to engage, align, and scale up the efforts of the many different communities involved in addressing the wicked problem at hand?

In (De Moor, 2017; De Moor et al., 2017; De Moor, 2018), we introduced our CommunitySensor methodology for participatory community network mapping and showed how it can be applied to processes of participatory collaboration mapping for collective impact. In (De Moor, 2017), we outlined the process of the methodology by introducing the community network development cycle. In (De Moor, 2018), we focused on the knowledge structures being generated by and driving the mapping processes by introducing a community network ontology. In the current paper, we explore how the CommunitySensor methodology can be used to buttress the common agenda setting process for collective impact. We do so by first introducing our process model of participatory collaboration mapping for common agenda setting. We then introduce the knowledge base architecture used to support this common agenda setting process. We illustrate how the architecture was used to find different kinds of common ground in Malawian agricultural stakeholder collaborations. We end the paper with a discussion and conclusions.

**A process model of participatory collaboration mapping for common agenda setting**

In (De Moor, 2017), we defined participatory community network mapping as the participatory process of capturing, visualizing, and analyzing community network relationships and interactions and applying the resulting insights to community network sensemaking, building, and evaluation purposes. We introduced the main process model of the CommunitySensor methodology - the community network development cycle - consisting of four stages: community network mapping, sensemaking, building, and evaluation. In the mapping stage, community members map relevant fragments of their community networks. In the sensemaking stage, relevant sets of stakeholders discuss and interpret those partial maps, reaching consensus on focal issues, priorities, and next actions. These mapping and sensemaking processes often need to be reiterated several times in the sensemaking sub-cycle. The issues, priorities, and next actions that are arrived at in the sensemaking stage form inputs for the subsequent community network building process. In the final stage, community members evaluate the results of those interventions, and capture essential results on the map, starting the next iteration of the cycle.

The thrust of the process prescriptions of CommunitySensor is in the mapping and sensemaking stages in which the collaboration context of the community network is being charted and interpreted. As to the community network building stage, the methodology does not prescribe how to intervene in community networks. It augments other methodologies that may already be in use and provide community (network) building guidelines, including methodologies such as cultivating communities of practice (Wenger et al, 2002), network weaving (Krebs and Holley, 2004; Holley, 2012), social innovation approaches (e.g. Murray et al., 2010) or any community network-specific way of building its collaboration capacity.

Still, we need to expand our own process model if we are to more closely align our mapping approach with those related community network building methodologies. Rather than starting from scratch, we aim to ground our conceptualization in existing conceptual frameworks for building and evaluating community networks for collective impact. Two dimensions we need to explore here are how to (1) guide community network building efforts towards collective impact and (2) evaluate the efforts of community networks in contributing
towards these efforts. To this purpose, we ground our process model in the existing collective impact and value creation frameworks. This grounding is exploratory only. In future research, we will explore the connections with those frameworks sketched here in more detail.

**Working together towards collective impact: the collective impact framework**

The first framework we examine is the collective impact framework that has already been used widely to structure scalable collective impact capacity building efforts (Kania and Kramer, 2011; Hanleybrown et al, 2012). It lists five conditions of success: (1) a *common agenda* based on a shared vision, a common understanding of the problem and agreed upon actions; (2) shared *measurement* of results to keep efforts aligned and participants accountable; (3) *mutually reinforcing activities* allowing for differentiation within a mutually reinforcing plan of action; (4) *continuous communication* to build trust, alignment, and common motivation; and (5) *backbone support* organization(s) that helps drive the initiative and coordinate participation.

The key concept we take from the framework is the *common agenda*. Our maps - and views on those maps - of the collaboration ecosystem of a community network in essence form a visual knowledge base representing this common agenda. However, participatory collaboration mapping is not about the knowledge artefacts. Primarily, it is about the processes in which this knowledge is captured in the mapping stage, made actionable in the sensemaking stage, put to work in the building stage, and taken to the next level in the evaluation stage. The other four collective impact framework conditions for success therefore may suggest general process guidelines for setting and implementing the common agenda represented in the maps.

Although we agree with the gist of the collective impact framework, we see some differences with the kind of community networks we are working with, which are often more loosely organized and less resourced. This means that planning and coordination tend to be less structured, and backbone support may not reside in officially designated organizations. Rather than talking about backbone support organizations, we therefore prefer to focus on the *process* of catalyzing collaboration within and across the community networks. Weber and Khademian (2008) talk about "collaborative capacity builders" as those participants having a long-time stake in and commitment to building the collaborative capacity required. Instead of limiting ourselves to that role being played by any particular organization, we see it as a more distributed and emergent coordination process emerging from a collaborative of organizations, communities, networks, and individuals, supported by the common agenda knowledge base. With the term *collaboration catalysis* we refer to this emergent process.

**Evaluating the collective impact of community networks: the value creation framework**

There is much potential for collective impact in such community networks, but how to become aware of it and get it to work? Conventional organizational governance and evaluation frameworks do not suffice to realize that potential. The collective impact framework, for example, does mention shared measurement, but focuses on aligning efforts at the operational level and keeping individual participants accountable. Still, how to evaluate the latent strategic impacts just below the operational surface of community networks? One candidate aiming to go beyond the operational network level, is the value creation framework (Wenger et al., 2011).

The value creation framework aims to promote and assess value creation in communities and networks. It focuses on the learning that takes place in community involvement and networking, while creating an identity around a common agenda or area for learning. The interweaving of personal and collective narratives around a common agenda is key here. For crafting the collective narrative of the community network, network visualization techniques can be very useful by showing the structure of the network and indicating what the
connections are about. The narratives are both about what has happened and what should happen (as in the existing “IST” collaboration ecosystem versus the “SOLL” purposes in our community network ontology (De Moor, 2018)).

At the heart of the value creation framework is a set of interlocking value creation cycles, with increasing collective impact:

- **Cycle 1** is about the **immediate value**: the community network activities and interactions that have value of and in themselves (e.g. getting an answer to a question or a useful meeting).
- **Cycle 2** is about the **potential value** through the construction of knowledge capital the value of which is to be realized later (e.g. social capital).
- **Cycle 3** is about **applied value** by adapting and applying such capital to a specific situation, resulting in changed practice (e.g. creating a working group to tackle a specific next action that came out of a sensemaking session).
- **Cycle 4** is about the **realized value** in the sense of how it actually led to performance improvement (e.g. how the performed action actually changed the way things are done).
- Finally, **cycle 5** is about **reframing value**, the redefinition of what success in the community network means (e.g. transforming the purposes, strategies, and ways of working of the community network).

We will not work out the ways these cycles mesh with our own CommunitySensor stages in this paper. Suffice to say that participatory mapping and sensemaking do not aim to capture the details, but rather the conceptual essence of the collaboration actually or potentially taking place in community networks. The maps acting as conversation agendas are all about contrasting potential with applied and realized values, leading to reframing the collaboration in the next community network development cycle. Using value creation framework evaluation processes with relevant views on the maps (via the knowledge base, as explained in the next section), can strengthen both the mapping and the value creation approaches. One example of how the mapping could concretely connect cycle 2 (potential value) with cycle 3 (applied value) could be identifying hubs of activities and stakeholders on a map, then in facilitated group conversation exploring which initiatives, projects, or programmes on the map they do or should connect to.

![Figure 2: The CommunitySensor process model of common agenda setting](image-url)
Figure 2 shows the tentative CommunitySensor process model of common agenda setting. In italics, the process steps currently drawing from the collective impact and value creation frameworks. In future work, we aim to further refine this model.

**A knowledge base architecture of participatory collaboration mapping for common agenda setting**

Participatory collaboration mapping is essentially an iterative process of expanding and scaling up the conceptual common ground of a community network towards an ever more actionable and impactful common agenda. From a knowledge management point of view, this results in a growing knowledge base of the collaboration ecosystem. In line with Weber and Khademian (2008), we now return to the question how such a knowledge base could contribute to the collective collaborative capacity of the network. We decompose this into the following sub-questions:

- What does it mean to find relevant conceptual and actionable common ground at different scale levels of a collaboration ecosystem?
- What does a visual collaboration ecosystem-knowledge base look like?
- What knowledge structures (e.g. elements & connections, their types and categories, indicators, views) & operations can help to support an evolutionary & scalable common agenda setting-process?
- How to embed those structures & operations in theories & methods of community network building & collective impact?

We provide some tentative answers to these fundamental questions in our treatment of the CommunitySensor knowledge base architecture for common agenda setting (Figure 3).

**Figure 3: The CommunitySensor knowledge base architecture for common agenda setting**

The common agenda consists of all knowledge structures of the collaboration ecosystem that have been mapped and made sense of: element and connection types and type categories; elements and connections conforming to those types; and maps and views constructed out of those elements and types. The mapping stage starts with focusing on one or more focal wicked problems. Based on the mapping language and selected collaboration patterns (in
essence, templates guiding the mapping process), one or more collaboration maps and views on those maps to be used in sensemaking processes are produced (e.g. instead of visualizing the whole ecosystem, a view may only showing the stakeholders involved in the activities of the community network, so that it becomes easier to identify potential new collaborators). Selected maps and views are then used to drive the sensemaking process, for example, as discussion starters in a brainstorming workshop. In such a sensemaking process, issues, priorities, and next actions are defined, and themselves stored in the knowledge base. CommunitySensor itself does not prescribe how to build the community network (stage 3 of its community network development cycle). However, selected views on maps from the knowledge base can be used to augment the development processes in place in the community network. During that process, relevant operational data, indicators, and stories may be stored in the knowledge base, providing further context for the common agenda. Finally, during community network evaluation (typically, at a moment when a community network is explicitly reflecting upon itself, for example when reporting or preparing for a strategic transition), the maps, views, and data can be looked at as an ecological whole to reframe wicked problems and their emerging solutions. The resulting collective impact ideas can then be used as an input for the next mapping iteration. Note that the mapping and evaluation stages typically look at the bigger picture (the collected maps and views, involving representatives of all the stakeholders), while in the sensemaking and building stages, selected views are used relevant to subsets of stakeholders involved in operational collaboration activities.

In the remainder of this paper, we apply this knowledge base architecture lens in particular to the first stage of the common agenda setting process: finding various kinds of common ground in the community network mapping stage (potentially) relevant in the other stages. In (De Moor, 2018), we introduced the community network conceptual model that is at the heart of the CommunitySensor community network ontology. It was developed by analyzing a large number of community network mapping cases and shows important element and connection type (sub)categories, as well as their interrelationships. Key element type categories that can be found in some form in most maps include purposes, interactions contributing to the purposes, participants involved in the interactions, content being used and produced in the interactions, and resources supporting the interactions. This conceptual model provides a semantic foundation for defining a mapping language customized to the needs of a specific community network. It suggests (sub)categories to be taken into account when defining the relevant element and connection types. Similarly, it allows for comparisons to be made across community network maps by comparing the conceptual (sub)categories that different maps may have in common, even though their surface level terms used to label element and connection types may be very different.

The element type categories can also be re-interpreted from the point of view of common agenda setting (Figure 4). The purposes could be said to be about the WHY? of the common agenda; the interactions about the WHAT? and WHEN?; the participants about the WHO? and both the content and resources about the HOW? These common agenda setting (meta)categories are only a first approximation. Still, they indicate how map elements could be used to identify who is to be involved about what, why, and how in the collaboration emerging in the community network. Such marked up, more meaningful map elements can help to identify both actionable (specific issues, priorities, and next actions from the perspective of particular participants) and conceptual (general collaboration properties following from the semantic structure of the community network) common ground.
In the next section, we use these ideas to explore how a knowledge base-driven approach could help in scaling up common agenda setting by discovering both actionable and conceptual collaborative common ground within and across community networks. We illustrate this by analyzing an ongoing case about agricultural participatory collaboration mapping in Malawi. In particular, we will look at the role that the mapping language and collaboration patterns play in defining both individual and common views on the knowledge base in order to arrive at an actionable common agenda. It is only a preliminary analysis, but does already provide interesting insights into the hitherto uncharted territory of using participatory collaboration mapping for common agenda setting purposes.

**Applying the knowledge base architecture: finding common ground in Malawian agricultural stakeholder collaborations**

The Southern African country of Malawi has an agricultural governance system consisting of many layers of organizational structure between the national and the village levels. This can result in collaboration inefficiencies if not carefully coordinated. In a joint initiative by INGENAES (Integrating Gender and Nutrition within Agricultural Extension Services) and the Malawi-based SANE (Strengthening Agricultural and Nutrition Extension) sister project – both being implemented by the University of Illinois – a pilot was started to use participatory collaboration mapping to strengthen the District Agriculture Extension Services System (DAESS). This is the country’s decentralised extension framework for enabling agricultural stakeholders to enhance coordination and collaboration. It consists of a large number of fora and processes for engaging in knowledge sharing within and across levels, from the national (ministry) level, all the way down to the local (village) level. Our aim was to engage in a participatory process of identifying and organising agricultural issues for collective action within and across the governance levels.

The pilot started in September 2017, and is still ongoing. Pilot activities so far have included:
• Defining a community network mapping language based on the CommunitySensor community network ontology and tailored to the Malawian DAESS needs;
• Creating a seed map using this language to capture the essence of the Malawian agricultural collaboration and governance ecosystem;
• Training by CommunitySense of 10 Malawian agricultural extension professionals in both the CommunitySensor methodology and Kumu network visualization tool used to create the online versions of the collaboration ecosystem maps;
• Two field visits applying the methodology to local agricultural communities;
• A stakeholder sharing session with national Malawian agricultural organizations;
• Continuing to use and expand the mapping approach at the regional, district, and national levels.

A federation of collaboration ecosystem maps

In (De Moor, 2018), we described the process of how during the field visits we intensively involved local communities in mapping their own agricultural activities, with a key role for the agricultural extension officers in converting the local physical maps into their electronic equivalents. In the current paper, we look at some key Malawi DAESS maps that have been created since. We do this from the common agenda setting-perspective introduced in the current paper, focusing on the federated knowledge base emerging from these maps.

Figure 5: A federation of Malawi agricultural governance ecosystem maps (adapted from Feed the Future)
We apply our analysis to five maps (Figure 5) that form a cross-section of the DAESS agricultural governance system: (1) a rough sketch of the national collaboration ecosystem produced at the start of the collaboration pilot; (2-3) two collaboration ecosystem maps at the intermediate DAECC (District Agricultural Extension Coordinating Committee) level; and (4-5) two maps at the (aggregate village) ASP (Area Stakeholder Panel) level (the first versions of which were created during our initial field visits). Although the elements and connections vary extensively across the maps, they all use the same underlying mapping language (i.e. the same element and connection types and layout conventions). This should make cross-case comparison possible, as the element (and connection) types used are the same for all maps (Table 1).

Table 1: Classifying Malawi DAESS mapping element types

<table>
<thead>
<tr>
<th>Element Type</th>
<th>Element Type (Sub)category</th>
<th>Common Agenda Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Activity</td>
<td>Purposes (Themes/Topics)</td>
<td>WHY?</td>
</tr>
<tr>
<td>Community/Network</td>
<td>Participants (Communities/Networks)</td>
<td>WHO?</td>
</tr>
<tr>
<td>Extension Method</td>
<td>Purposes (Themes/Topics)</td>
<td>WHY?</td>
</tr>
<tr>
<td>Location</td>
<td>Content (Locations)</td>
<td>HOW?</td>
</tr>
<tr>
<td>Organization / Extension Structure</td>
<td>Participants (Organizations)</td>
<td>WHO?</td>
</tr>
<tr>
<td>Initiative / Project / Programme</td>
<td>Interactions (Initiatives / Projects / Programmes)</td>
<td>WHAT? WHEN?</td>
</tr>
<tr>
<td>Question / Issue</td>
<td>Content (Questions / Issues)</td>
<td>HOW?</td>
</tr>
<tr>
<td>Resource</td>
<td>Resources (Assets)</td>
<td>HOW?</td>
</tr>
<tr>
<td>Target Group</td>
<td>Participants (Target Groups)</td>
<td>WHO?</td>
</tr>
</tbody>
</table>

Figure 6 shows an example of the online version of one of these maps (the DAECC Lilongwe Map), which was produced using the online network visualization tool Kumu we use in CommunitySensor. Note that we have zoomed out significantly to show the overall bird's eye view, making individual element labels not readable. The example is only to give a general idea of the structure of a typical map and to introduce the (color-coded) element types used in the Malawian maps. Note that in this example analysis we do not look at connection types, as element types carry the most semantic meaning and the complexities of connection types – as well as explaining the collaboration patterns prescribing which element types can interconnect - require much more space than available here.

Figure 6: Example Malawi DAESS map
Building actionable common ground: defining relevant conversation agendas

Common agenda setting is first of all about finding common actionable ground across stakeholders. The maps produced in the community network mapping stage provide crucial collaboration context for stakeholders to identify issues, priorities and agree upon next actions in the ensuing sensemaking process. Now, what does this collaboration context look like? The most encompassing view is that of the total collaboration ecosystem, including all elements and their connections (the "bird's eye view"). However, this is only one possible view. In fact, there is a myriad of conceivable views that zoom in on specific parts of the collaboration ecosystem. First of all, all participants have their own interests, expertise, and experience, so different views may be relevant to them individually. However, in terms of (partially) common agenda setting, such individual views are typically aligned in meeting agendas. The purpose of working meetings is not to unify the interests and perspectives of all stakeholders, but to identify enough common ground to move forward with the collaboration, circumscribed by all kinds of factors such as project goals, budgets, political realities etc. One way to use map views is to come up with the conversation agendas that can support such meetings by selecting a set of relevant topics, their interconnections, and – crucial – collaboration context.

Figure 7: An example map view as a potential conversation agenda

In knowledge base terms, such a map view can be defined as a query on the element and connection types or even on specific elements and connections. For example, say that in the Malawi case the purpose of a meeting is to discuss how the (Extension Methods) Training workshops (farmers & staff) and Field days are already being used by the (Target Group) Youth. Such a focus can be formulated as a knowledge base query and applied to individual maps or the federation of maps as a whole. For the Lilongwe DAECC map, this could result in the map view depicted in Figure 7. It shows that there are two projects (AgDiv and SANE) and one organization (LSPCA) that apparently play a key role in this constellation, otherwise they would not have been selected and linked to these specific elements on the map by the community network. Showing this view could be the opening move in a brainstorming session with the stakeholders involved in the agenda setting process to, for instance, define new actions, projects and policies on this particular topic.
Building conceptual common ground: semantic community network analysis

Besides using queries to generate specific conversation agendas, there is another way to identify common (conceptual) ground, which we call semantic community network analysis. Such analysis aims to identify collaboration potential in the structural and semantic properties of the community network. In this exploratory paper, we do not go into the theoretical background of this type of analysis. We refer to (De Moor, 2018) for basic ideas on how collaborative ontology engineering and social network analysis can be used to inform the construction of such analytical approaches. Here, we sketch one possible R&D direction we are currently exploring in terms of common agenda setting. It is still work-in-progress, but provides some concrete starting points on how to use this type of analysis for identifying potential common ground in community networks. We show two examples of such semantic analysis, the first one focusing on the most commonly used element type categories across maps, the second on what are the element type categories of their most connected elements. Of course, the elements and connections mapped are not generated in a controlled experiment, but they are also not meaning-less: the connected elements within a map represent the collaboration ecosystem elicited from and by the stakeholders involved in a carefully designed participatory process, so their classification says something about the conceptual focus of their common agenda. Likewise, by examining conceptual similarities within and across maps, actionable (concrete agenda setting) ideas for scaling up collaboration across community networks could be developed.

Element type category usage

First, we counted the occurrences of all element types used in each of the five Malawi maps and grouped them by element type category. We also included an aggregate of those maps (the Malawi-country map) as a proxy for their federation.

Table 2: Element type category usage in the Malawi DAESS maps

<table>
<thead>
<tr>
<th>MAP</th>
<th>DAESS-Pilot</th>
<th>ASP-Kelolo</th>
<th>ASP-Mbewadzulu</th>
<th>DAEECC-Belaka</th>
<th>DAEECC-Lilongwe</th>
<th>Malawi-Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELEMENTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTERACTIONS</td>
<td>5.9%</td>
<td>5.9%</td>
<td>7.0%</td>
<td>6.2%</td>
<td>3.1%</td>
<td>6.3%</td>
</tr>
<tr>
<td>PARTICIPANTS</td>
<td>28.2%</td>
<td>34.7%</td>
<td>28.1%</td>
<td>56.6%</td>
<td>60.2%</td>
<td>47.9%</td>
</tr>
<tr>
<td>Target Group</td>
<td>11.8%</td>
<td>12.7%</td>
<td>14.0%</td>
<td>16.6%</td>
<td>9.4%</td>
<td>8.8%</td>
</tr>
<tr>
<td>Coordination Platform</td>
<td>0.0%</td>
<td>0.8%</td>
<td>0.0%</td>
<td>10.3%</td>
<td>9.4%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Extension Structure</td>
<td>6.5%</td>
<td>0.8%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>2.3%</td>
</tr>
<tr>
<td>MoA/WD Office</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>1.5%</td>
</tr>
<tr>
<td>MoA/WD Structure</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Organization</td>
<td>7.6%</td>
<td>18.6%</td>
<td>14.0%</td>
<td>24.1%</td>
<td>32.1%</td>
<td>33.8%</td>
</tr>
<tr>
<td>Community/Network</td>
<td>2.4%</td>
<td>1.7%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>CONTENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PURPOSES</td>
<td>20.6%</td>
<td>24.6%</td>
<td>17.5%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>13.8%</td>
</tr>
<tr>
<td>RESOURCES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNITYPED</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Tot nr of elements</td>
<td>170</td>
<td>118</td>
<td>57</td>
<td>145</td>
<td>224</td>
<td>520</td>
</tr>
</tbody>
</table>

Table 2 shows their relative occurrences. In yellow, the most prevalent element type category per map is indicated. At a glance, we can see that across most of the maps, participants are a key category. This makes sense, as WHO? should be involved is of the essence in agricultural agenda setting. When expanding the participants-category, we see that organizations are the most occurring (in orange) subcategory. This also seems logical, as (currently) mostly formal organizations are leading in Malawian DAESS governance. Interestingly, in the (national) DAESS-pilot map, target groups (e.g. lead farmers, female producers), were the most important participants-category (as well as in a shared first place in
the ASP Mbwadzulu-map, and also to quite an extent in the other maps). This might suggest that lists of potential target groups could be compiled from the various maps constructed and effectively used to inform future mapping sessions. Remarkable is also that purposes are so important in the DAESS-Pilot map. Again, this follows, since that map was especially used to capture the overall DAESS structures (which focuses on strategic themes and topics around which collaboration could and should emerge), whereas many of the district and area level maps focus more on the existing collaborations. Still, again this relative lack of purpose-elements at those more operational level collaboration ecosystems suggests that (operationalized) themes and topics might be more explicitly used in mapping exercises to generate new ideas for initiatives. Vice versa, (federated) operational maps could be contrasted with the purposes represented at the national level maps, thus informing policy making and strategic planning by say the ministries and international donors. Another interesting observation is the importance of resources in the ASP-Mbwadzulu case, suggesting that there participants are already working on mapping solutions to addressing collaboration problems (e.g. using communal irrigated land in initiatives). This finding could be used to create ways to provide new focal points for mapping (follow-up) sessions for the other mapping initiatives.

Element type category centrality

A second kind of semantic community network analysis combines our classification of element types with some core social network analysis metrics, to identify what types of elements are most connected. In (De Moor, 2018), we showed three of those metrics built into Kumu: degree (the number of connections an element has), closeness (the distance an element is from all other elements), and betweenness (how many times an element is the bridge/bottleneck between other elements in the network). Table 3 shows the values of these metrics for each map.

Table 3: Element type centrality in the Malawi DAESS maps
Let us for our explanatory purpose focus on closeness centrality, which is often used for identifying which elements can quickly spread information or effects. One interesting observation is that for closeness, all most-connected elements concern initiatives/projects/programmes (with the exception of the DAESS-National map, but NeverEndingFood which was classified as a community/network has de facto all the qualities of an initiative/project/programme). This - literally - central role for initiatives/projects/programmes suggests that this element type category forms a backbone for scaling up common agenda setting processes in complex collaborative governance networks like in Malawi.

Discussion and conclusions

In this paper, we extended our CommunitySensor methodology for participatory community network mapping in order to help it support collective impact efforts around wicked problems. Building on prior work (De Moor, 2017; De Moor et al., 2017; De Moor, 2018), we examined how the methodology can be applied to support a core collective impact process: common agenda setting. To this purpose, we first introduced a process model of participatory collaboration mapping for common agenda setting, positioning CommunitySensor with respect to two related conceptual frameworks: the collective impact framework (Kania and Kramer, 2011) and the value creation framework (Wenger et al., 2011). Starting from this process model, we then introduced the CommunitySensor knowledge base architecture that forms the linking pin between our participatory collaboration mapping approach and common agenda setting processes.

Next, we outlined an essential part of our current R&D agenda: how to create a knowledge base-driven approach for scalable participatory collaboration mapping to support common agenda setting. In the Malawi case, we showed how the common mapping language takes center stage in creating and using the knowledge base. Although in this paper we did not look at the collaboration patterns/templates used to create the maps, we used the underlying community network ontology to classify and analyse the resulting maps. In particular, we applied the ontology to create relevant map views on the collaboration knowledge base, in order to discover (potential) common ground. We illustrated three possible components of such an approach: (1) working with a federation of collaboration ecosystem maps all (at least partially) sharing the same community network conceptual model and mapping language; (2) building more actionable common ground through defining relevant conversation agendas and (3) discovering conceptual common ground through semantic community network analysis. Note that this conceptual common ground is tightly linked to the actionable common ground, how exactly they overlap is still a very open research question.

The Malawi maps we used to illustrate our ideas were not syntactically "perfect", as they only partially conformed to the agreed upon mapping semantics. For example, some connections were not typed; others did not follow meaning constraints (e.g. an organization was stated to be involved in a target group instead of in an initiative/project/programme; and sometimes the intended directions of connections were reversed). Some of the most obvious mistakes we repaired, but we left less obvious cases as-is. Part of such mapping mistakes are caused by lack of enforcement of type constraints by Kumu. However, part of it may also have to do with unclear semantics of especially the connection types. One improvement could be to use more specific and meaningful connection types, so that mappers better know which one to select in a more natural way.

In this paper, we focused on the knowledge representation and analysis dimensions of the participatory collaboration mapping process. Of course, this is only one piece of the socio-technical puzzle, and arguably not even the most important one. Crucial is the willingness and ability of the community involved to engage effectively. As in all Community Informatics (CI) initiatives, many social impediments stand in the way between ideals and results: lack of resources such as time and money, power politics, lack of mapping skills, etc. In a related visual story, we account for some the ways around these hurdles in the Malawi case."
Moor et al., 2017), we showed how we overcame some of these barriers in another case: supporting knowledge sharing and learning in a global agricultural conference by combining mapping and facilitation processes. The CI literature abounds with creative approaches to mitigate such issues, so we refer to that general body of work defining our field.

Our examples of what concrete conversation agendas could look like in terms of meaningful views and of the semantic community network analysis procedures presented were only provisional, and will be more systematically worked out in near-future research. Furthermore, we also aim to expand the alignment of the CommunitySensor community network building and evaluation stages with the collective impact and value creation frameworks, among other established methodologies, in particular cultivating communities of practice (Wenger et al., 2002) and network weaving (Holley, 2012). This alignment with related methodologies is crucial, since a knowledge-based participatory collaboration mapping approach is a necessary, but definitely not a sufficient condition for common agenda setting. Mapping and making sense of the maps produced is not an independent process but to augment other methodologies for community network building and evaluation.

Concluding, as Wenger et al say:

"the collective narrative of a network comes about through external perspectives of ‘what’s happening’. That is why network visualization techniques can be very useful in revealing the structure of the network, indicating what the connections are about and stimulating the construction of a collective narrative (Wenger et al, 2011)".

Through our knowledge base-driven approach to participatory collaboration mapping, we hope to support and augment the scalable weaving process of such a collective narrative. We look forward to join forces with those who have already blazed related methodological trails towards more collective impact.

References


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1 The author thanks Stacia Nordin and the Malawi mapping communities for making their contributions available for this analysis. See (De Moor, 2018) for a summary of this initial Malawi mapping stage and full acknowledgments.
ii http://kumu.io
iii See https://makingcommunitysense.net/2018/09/08/participatory-mapping-of-agricultural-collaborations-in-malawi/ for a visual story of the initial work
The B.A. Program in Community Information Systems as a Bridge between the Ultra-Orthodox and the Start-up Nation

Dalit Levy

Zefat Academic College, Israel

Abstract: The paper describes an innovative program developed and offered by Zefat Academic College, aiming to be sensitive to the increasing demand for higher education by the multicultural population in the upper Galilee, at the north-eastern part of Israel. The undergraduate program in Community Information Systems (CIS) interweaves societal, economical, informational, and technological facets of businesses, organizations, and communities in order to prepare students to successful Information Systems (IS) careers. The paper’s focus is on a group of ultra-Orthodox students who graduated the program last year (2017), including the unique case of an elderly caregiver who became a startupist. In light of recent calls for increasing the low employment rate of Israeli ultra-Orthodox Jews in general and for enabling their employment in fields that offer higher-paying jobs in particular, the Community Information Systems program might suggest a fruitful path.

Keywords: Entrepreneurship, ICT4D, PBL – Project Based Learning

1 Introduction

In the last three decades we have witnessed an invasion of homes, workplaces, public spaces, and both local and global organizations by information technology tools and systems. The advents of the World Wide Web, wireless communications, and miniaturized computing technology have expanded this invasion into mobile devices and remote communities. The widespread everyday use of mobile devices, computers, and information systems reflects a shift in conceptualizing the technology as more social than it was perceived before. More recently, over the last several years, social information systems have gained significant popularity. Social networking sites, social sharing and tagging systems and social media attract several million users a day all over the globe. These kinds of information systems provide their individual users with increased social presence, much broader access to information and knowledge, and powerful means of communication (Stillman & Linger, 2009). At the same time, social information systems emerge as an empowering force for both local and global communities, organizations, and businesses.

Following these changes (Carr, 2008), a new interdisciplinary area of study has evolved, arguing that the social and the technological mutually shape each other. Studies in this area touch several different fields, including computer science, information systems, information science, and some social sciences (Kling, 2007). By examining the social aspects of computing, the fields of Social Informatics and Community Informatics aim to ensure that technical research agendas and information systems designs are relevant to the lives of people and organizations. Community Informatics aims further at empowering communities through the use of technology, especially those groups who are excluded from the mainstream communication systems (Gurstein, 2008).

The increasing interest among different communities of practice in integrating human and social considerations into traditional Information Systems (IS) curricula has led to the development of new academic programs around the globe. These are aimed at establishing a framework within which students develop analytical skills to identify and evaluate the social consequences of ICT-based systems and gain experience in the socio-technical process of designing information systems in business, libraries, health, government, education and beyond. While IS curricula have been traditionally targeted to business schools, the latest model curricula for undergraduate degrees in Information Systems (Topi, 2010) recommended reaching beyond the schools of management and business, stating that the
discipline provides expertise that is critically important for an increasing number of other domains. In Israel, however, most undergraduate Information Systems programs operate either as part of the faculty of engineering or within the context of the business environment and related activities. The undergraduate program in Community Information Systems (CIS) has been developed at Zefat Academic College in light of the global trends discussed above and, in addition, as a response to the educational gap identified between various population sectors in Israel. The program seeks to prepare and grow local Information Systems workforce by advancing understanding of computing, design, human-computer interaction, digital culture, entrepreneurship and other subjects regarded as critical to developing the needed workforce for the 21st century (The College Board, 2017). The curriculum combines theory and practice while emphasizing subjects that are relevant to the workforce and the organizations surrounding the college, thus creating “practice of relevance” (Benbasat & Zmud, 1999) for its students.

2 The CIS Program Structure

Zefat Academic College's undergraduate program in Community Information Systems (CIS) has been approved by the national council for higher education at the end of 2010 and the first students started their course of study in the fall term of 2011. The program's main assumption is that the revolutionary development of information technologies in general and of information systems in particular, changes organizational structure and organizational practices. Therefore, the workforce as a whole will benefit from acquiring basic academic knowledge in information systems, not only the engineers or those in managerial positions (Levy, 2013). The notion of "community" in Community Information Systems is broad, including business communities as well as non-profit organizations, global or local organizations, public communities, cultural communities, and rural communities (Mamba & Isabirye, 2015).

Imagining information system as a junction connecting (i) human users, (ii) supporting technologies, and (iii) organizational environment, the curriculum includes (i) psychological and sociological aspects, (ii) information technologies and systems, and (iii) issues of organizational culture. This interdisciplinary approach can be seen also in Community Informatics undergraduate and graduate programs in Canada, USA, Australia, Italy, South Africa, and other countries (Stillman, et al., 2016) as well as in the emerging field of ICT for Development (Heeks, 2008, Heeks, 2018). The interdisciplinary nature of these fields calls for creating interdisciplinary academic programs that will support educating "more capable learners, more innovative teachers, more creative thinkers, more effective leaders and more engaged global citizens" (Bennett & Sterling, 2011) (p. 626). Such programs enable students' specialization both in the technical and the social aspects of information systems. They also expose learners to the breadth of human arenas and communities supported by information systems like public health, economic development, education, and many more.

The three-years curriculum is structured around "Information Technologies and Systems" as a core area of study (Shoval, 1998). Required core courses provide 70 out of 120 credits, where one credit typically equals fifteen class hours. The core curriculum contains foundation courses in Mathematics and Statistics, Programming and Computer Science (CS) (Zur, et al., 2012), and Information Systems (IS) (see details in Table 1 below).

<table>
<thead>
<tr>
<th>Area of study</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Sum of credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Information Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information Technologies and Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programming and Computer Science (CS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information Systems (IS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core: Information Technologies and Systems</td>
<td>Required credits</td>
<td>25</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>Elective credits</td>
<td></td>
<td>6</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Sum of core credits</td>
<td></td>
<td>25</td>
<td>31</td>
<td>24</td>
</tr>
<tr>
<td>Areas of specialization:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) The Knowledge Society</td>
<td>Required credits in area (a)</td>
<td>8</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>(b) Information in Organizations</td>
<td>Required credits in area (b)</td>
<td>8</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Elective (a) OR (b)</td>
<td></td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Sum of credits in areas of specialization</td>
<td></td>
<td>16</td>
<td>14</td>
<td>10</td>
</tr>
</tbody>
</table>

Additional ten credits are offered through elective courses in the core area of study, such as cybersecurity (von Solms & van Niekerk, 2013), Big Data analytics (Chen, Chiang and Storey 2012), and Bioinformatics (Lesk, 2014). The rest of the credits are equally divided between two supporting areas of study: (a) "The Knowledge Society" and (b) "Information in Organizations". Area (a) includes required courses like digital culture and new media (Bruns, 2008), sociology of the internet, online learning strategies, and evaluating digital communities (Hine, 2015). Area (b) includes required courses like knowledge management and organizational behaviour. The electives include project management, Enterprise Resource Planning (ERP), and an innovative course named “Israel the Start-up Nation” (Senor & Singer, 2009) in which students are visiting high-tech companies and start-ups to experience first-hand the organizational culture of the industry they are about to join.

As part of the required core curriculum, 3rd year students are designing, developing, and presenting a real-life project thus combining the knowledge from previous years to construct a digital information system for an organization of their choice (see examples in Figure 1).

<table>
<thead>
<tr>
<th>Fun Ride</th>
<th>KADISHA</th>
<th>Ultra-Orthodox Vacations App</th>
<th>“Haim Tovim”</th>
<th>Municipal Elections ZEFAT</th>
</tr>
</thead>
</table>

**Figure 1: Example Final Projects** (designed by 2017 graduates of the ultra-Orthodox group)

The structure of the Community Information Systems program separates the core of the curriculum from the electives with the intent of supporting the creation of a sound knowledge base of information systems, at a level appropriate for undergraduate students. At the same time, the courses in both areas of specializations mark the social, cultural, organizational, and human aspects as central to the knowledge base of information systems, thus can support the conceptual development of a multi-faceted body of knowledge. As can be seen in Table 1, students are exposed to the interdisciplinary nature of the program from Year 1. That way the program provides the multidisciplinary knowledge required for entry-level positions in a wide spectrum of organizations, as well as design experience of real-world information systems. One of the program’s pillars is rooted in the disciplinary foundations of Computer Science (CS) and software development. The core Community Information Systems curriculum proposes a computing track tailored for non-computer-science majors in order to give them an understanding of the principles and practices of computing as well as its potential for
transforming the world (Harvey & Garcia, 2011). As a result of such integrated curriculum, the program envisions graduates which are both information-technology-oriented and social-oriented, and thus can empower the communities within they live and work. Four cohorts have graduated the program so far, and most graduates are now employed as knowledge workers in a wide array of organizations.

3 Opening the CIS Program for ultra-Orthodox Students

In parallel to the process of designing and opening the unique B.A. program in Community Information Systems at Zefat Academic College, significant changes have been documented with regard to integrating ultra-Orthodox undergraduates in the higher education system (Cahaner, et al., 2017). Recent reports expect that within the next decade, the ultra-Orthodox sector will reach 16% of the total population (now 12%), and that more than half of its population will be young (under 20). The Israeli higher education system has joined forces in an effort to prepare for these changes, while the number of ultra-Orthodox students in it has already grown from 1,000 in 2007 to more than 10,000 in 2017. Worth noticing is the fact that the breakdown of B.A. subjects taken by ultra-Orthodox students differs greatly from that among the general population, and that only 8% study engineering (including computer science), compared with 18% of the general population in Israel.

The number of ultra-Orthodox Israelis rose above one million for the first time in 2017, including a growth within the city of Zefat and the communities around it. As a college located at the heart of the ancient city, surrounded by all kinds of religious communities including the ultra-Orthodox, Zefat Academic College is sensitive for the needs as well as for the challenges in opening the college’s doors to this population. After a successful initiative of offering an academic degree in social work for ultra-Orthodox women, the Community Information Systems department joined the endeavor in 2013 by tailoring the B.A. program to the needs of ultra-Orthodox men.

3.1 Bridging the Gaps

The ultra-Orthodox class of 15 men from Zefat, Tiberias, Kiryat Shmona and the surrounding communities of the eastern Gallilee, was constructed with the aid of external agencies and philanthropies that generously supported the students during four and a half years of study. This support enabled overcoming the income gap, which is only one of the barriers need to be considered. In special, the college needed to construct a program of study that will overcome the knowledge gap, including a lack of general studies and matriculation certificates, as the following quotation clarifies:

“Most members of the ultra-Orthodox sector have never received a basic educational foundation. Ultra-Orthodox elementary schools for boys teach secular subjects for a limited number of hours and at a level that does not provide a suitable basis for the modern labor market. Most of the ultra-Orthodox (both men and women) do not obtain a matriculation certificate, and thus find it difficult to gain entry to regular institutions of higher education” (Malach, et al., 2016): 85.

In order to meet the acceptance conditions for the Community Information Systems program, the ultra-Orthodox group began with a first-year general preparatory program emphasizing Mathematic, English, and computer literacy, equivalent to high school matriculation certificate. In the second year, the group was offered a structured program of studying towards the national psychometric exam, and in addition took courses like Academic Literacy and Introduction to Information and Communication Technologies. These credits were later qualified towards the 120 credits of the Community Information Systems program. Only after successfully passing the December 2013 national psychometric exam with a sufficient score, the students could begin their course of study in the B.A. program. Their first semester of the program was the spring semester of 2014.
Another gap needed bridging has been more cultural. The male students in the ultra-Orthodox group were relatively older than the regular college student population and were already fathers in large families. They often were the first in their families to reach the academic world and were not used and sometimes reluctant to study and work in a mixed-gender and multi-cultural environment. It is worth noticing however that the ultra-Orthodox society is changing in this respect as well. For example, (Gal, 2018) brings the results of a survey from 2013 showing that a growing percentage of the ultra-Orthodox parents support academic studies for their children.

Zefat Academic College therefore supported constructing a special learning environment for the Community Information Systems’ ultra-Orthodox group, using the college’s facilities in less crowded evening hours, leaving Fridays off (unlike the regular program), and offering additional summer semesters. As Table 2 shows, the complete program included 8 semesters over three years, while regular B.A. studies usually spread over 6 semesters with long summer vacation between the first and the second year and then again between the second and the third year. The Community Information Systems’ ultra-Orthodox students therefore took part in a challenging non-stop learning journey towards becoming part of the high-tech community and the professional workforce of what is termed “The Startup Nation” (Senor & Singer, 2009).

### Table 2. Timeline of the ultra-Orthodox Community Information Systems program

<table>
<thead>
<tr>
<th>Part of the program</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparatory Program</td>
<td>October 2012 – August 2013</td>
</tr>
<tr>
<td>National Psychometric Exam</td>
<td>December 2013</td>
</tr>
<tr>
<td>B.A. Year 1</td>
<td></td>
</tr>
<tr>
<td>1st semester</td>
<td>Spring 2014</td>
</tr>
<tr>
<td>2nd semester</td>
<td>Summer 2014</td>
</tr>
<tr>
<td>3rd semester</td>
<td>Fall-Winter 2014</td>
</tr>
<tr>
<td>B.A. Year 2</td>
<td></td>
</tr>
<tr>
<td>4th semester</td>
<td>Spring 2015</td>
</tr>
<tr>
<td>5th semester</td>
<td>Summer 2015</td>
</tr>
<tr>
<td>6th semester</td>
<td>Fall-Winter 2015</td>
</tr>
<tr>
<td>B.A. Year 3</td>
<td></td>
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<td>7th semester</td>
<td>Spring 2016</td>
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<td>8th semester</td>
<td>Summer 2016</td>
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<tr>
<td>Final Projects Presentation (see examples in Figure 1)</td>
<td>January 2017</td>
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<tr>
<td>Graduation Ceremony</td>
<td>June 2017</td>
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### 3.2 The Case of M.M.

A few days after the holiday of Sukkot in October 2017, only four months after graduating the CIS program and receiving his B.A. diploma, stepped M.M. on to the stage of Zefat Academic College’s auditorium to make a pitch presenting his innovative social-technological idea. The presentation was a part of the Demo Day of the newly established center of innovation and entrepreneurship at Zefat Academic College. Following a summer full of design activities and preparations for this groundbreaking event, happening for the first time at the northern periphery of Israel, seven pioneering teams presented their inventive ideas and technological initiatives in front of key figures of the Startup Nation and potential investors from all around the country.

Among the teams chosen to participate in the pioneering cycle based on the authenticity and maturity of their initiatives, was M.M. and his classmate from the ultra-Orthodox group. The couple collaborated with an academic advisor who is a user-experience (UX) professional, and also a lecturer teaching in the Community Information Systems program, to design what they termed “Haim Tovim”, translated into “Good Life”. The initiative grew out in the third year of studying in the program, while the students needed to find an idea for developing an information system that meets a real-life need, and to design a prototype as a final project using what they had learned and experienced throughout the Community Information Systems program. In addition to his academic studies, M.M. was also working part time as a caregiver for Haim, an elderly person with ALS in a complex nursing state. His idea was to develop a
A comprehensive information system for monitoring the treatment of the nursing patient outside the hospital (at home or protected housing), that will enable the caregiver as well as the patient and the family to make sure that the required treatment has indeed been done. Describing how the idea emerged, M.M. wrote (E-mail communication, September 2017):

"My personal encounter with the giving to others while studying Information Systems gave birth to the idea for the project (which is titled 'Haim Tovim' in honor of my patient). I truly hope that the idea will progress from being a prototype in the academy to a real-world application helping so many people who desperately need it!"

Indeed, during their last two semesters (in the summer and fall of 2016) M.M. and his colleague further developed the idea and the prototype of the system and presented the final project in an exciting event in front of the Community Information Systems department’ students and teachers in January 2017 (see the poster in Figure 1 above). Shortly thereafter, the project got to the finals in a national ultra-Orthodox startups competition. Following the acceptance of the bachelor’s degree in June 2017, M.M. received a technological job offer and retired from his work as a caregiver. However, the original idea to develop an information system for caregivers was not abandoned and in July 2017 the "Haim Tovim" project was accepted to the pioneering cycle of the center of innovation and entrepreneurship. As part of participating in the center’s activities during the summer of 2017, the team further developed the project and designed a “one pager” briefly describing the aims, the market, and the needs. In an email correspondence during the preparations for the Demo Day, M.M. provided a few words on himself and the unique and personal path he had been through prior to starting the academic studies. M.M. was severely hurt twice in his left hand, both times in terror attacks, and had to go through complex medical and psychological treatments that disrupted his normal life (September 2017):

"...We moved to the city of Zefat. After a long time of ups and downs, treatments and personal work, an opportunity arrived for me at Zefat Academic College. In a quick decision that I thank God for, I enrolled in the CIS program. I now realize how much this move improved my life and stabilized them”.

In his Demo Day pitch, M.M. started with this personal story and directed the audience towards realizing the potential contribution of the suggested information system. As a result of the successful presentation, M.M. was invited to present the project in additional professional events, and a window of opportunity was opened for future business development. Currently, the project is being developed by M.M. in collaboration with another graduate of the ultra-Orthodox group and the support of a senior lecturer in the Community Information Systems program. All the three live and work in the high-tech sector at the eastern Galilee, thus serving as a physical bridge between the ultra-Orthodox and the Startup Nation. In a recent email communication M.M. reflected on their progress stating that “we constantly work on promoting the project, (but) as it often happens, behind each wall there is another one...” (E-mail communication, June 2018). The project’s team grows its organizational network hoping to run experimental trials of the information system and attract more investors and supporters.

4 Summary

Accompanying and guiding the ultra-Orthodox group of students throughout their years of studying in the Community Information Systems program at Zefat Academic College has been a unique and rare opportunity for the program’s academic staff to assist in closing some of the abovementioned gaps, as well as to open new horizons for future professional success in the knowledge age of the 21st century (Barzilai-Nahon & Barzilai, 2005). This goes hand in hand with the main goal of the national plan to integrate ultra-Orthodox Israelis into higher-quality segments of the labour market (Malach, et al., 2016) or, as the title of this paper suggests, with bridging between the ultra-Orthodox society and the Startup Nation.
Despite the efforts to keep technology such as computers and televisions out of ultra-Orthodox schools and homes, the mobile revolution of the last decade makes it almost impossible (Rosenberg, et al., 2016) (Benayon, 2012). Since the Community Information Systems program deals with issues connecting social and communal understanding with advanced technological skills, the ultra-Orthodox who have graduated the program might be better able to serve their communities with regard to understanding of both current mobile revolution and future technological developments.

In addition, in light of current trends that call for programming for all and regard coding as the literacy of the 21st century (Hour of Code) the Community Information Systems program holds potential to give students majoring in non-Computer-Science fields an understanding of the principles of computing and knowledge about the practices of computing professionals. Although the ultra-Orthodox graduates are not expected to become professional programmers, their exposure to these basic features of software engineering makes them more able to talk to computer scientists, understand these professionals’ concerns, collaborate with them in developing and maintaining organizational and communal IT projects, and at the same time to develop their own interdisciplinary career on a proper foundation.

As is hinted in M.M.’s story briefly brought above, the students in the ultra-Orthodox group faced numerous challenges, including a lack of general studies (in special, Mathematics and English); the need to support their large families while studying; the absence of ‘role models’ – people from their familiar communities who have experienced academic studies in technological fields; resistance to change and to modernity within their close cycle of family, friends, and religious leaders; to name just a few. A recent study of the phenomenon of ultra-Orthodox women who join high-tech organizations raises similar challenges, but also points to the broader change underway in employment patterns (Gilboa, 2015).

Working at the mixed-gendered, multi-cultural environment of a general academic college, the lecturers, the managers, and the administrative staff needed also to adjust procedures and behaviors to the specific needs of this unique group of learners.

In spite of those and additional challenges not detailed here, the experience has been successful for both the college and the ultra-Orthodox group who graduated in June 2017. In light of recent calls for increasing the low employment rate of Israeli ultra-Orthodox Jews in general and for enabling their employment in fields that offer higher-paying jobs in particular, the Community Information Systems program might therefore suggest a fruitful path.

References


Decoding and Recalibrating the Archival and Museum Catalogue

Heather MacNeil and Jessica Lapp

Community Informatics Research Network Conference
Prato, Italy
October 24-26, 2018
Ideologies of genres

“Discussions about the ideology of genres revolve around questions such as: how do some genres come to be valorized? In whose interest is such valorization? What kinds of social organization are put in place or kept in place by such valorization? Who is excluded? What representations of the world are entailed?”

Freedman and Medway, 1994
Genres and the formation and shaping of knowledge

“Thinking and knowledge production are ... often instances of social action. In ... both corporate entities and disciplinary fields of knowledge, genres tacitly codify and channel thinking while allowing for the possibility of resistance to, subversion of, and creativity within these boundaries ... genres function consequently as repositories of communal knowledge, devices for generating new knowledge, sites for enculturation, and forces to be resisted if and when change becomes necessary.”

Freedman and Smart, 1997

“Participation in a community’s knowledge-making practices does not just produce knowledge; it produces ways of knowing, ways of seeing, ways of believing, ways of being.”

Starke-Meyerring and Paré, 2011
The PRO Calendar

“An abstract of the contents [of a record] by which the particulars of the matter contained in [it] are disclosed.” [Each abstract] should contain the pith and substance of the text for legal purposes; and ...afford sufficient information for historical inquiry.”

Calendars as PRO’s unique contribution to historical scholarship

“The calendars are a species of historical literature peculiar to this country – exclusively of English birth and growth – for no other nation as yet has attempted anything of the kind though both France and Germany are now commencing works of the same description and on the same plan.”

Letter from Hardy to Welby, 7 March 1870, qtd in Cantwell, 1991
“At his accession to the crown he was in the prime of youth and manly beauty. Had he lived in a more poetic age and died before his divorce, he might, without any great effort of imagination, have stood for the hero of an epic poem. He possessed just those qualities which Englishmen admire in their rulers at all times; -- a fund of good temper, occasionally broken by sudden bursts of anger, vast muscular strength and unflinching courage. In stature he towered above all his contemporaries. From the brilliant crowd that surrounded him he could at once be distinguished by his commanding figure, and the superior graces of his person.”

Brewer, 1862
Entry for State Papers, Henry VIII: General Series in *Discovery*, the UK National Archives’ online catalogue

http://discovery.nationalarchives.gov.uk/results/r?_q=State+Papers%2C+Henry+VIII%3A+General+Series
Catalogue entry for “cradleboard” in online catalogue of Canadian Museum of History

https://www.historymuseum.ca/collections/artifact/33727/?q=lll-G-708&page_num=1&item_num=0&media_irn=1102332
Culture area concept

“A region of relative environmental and cultural uniformity, characterized by societies with significant similarities in mode of adaptation and social structure.”

Winthrop, 1991

“A geographical/cultural region whose population and groups share important common identifiable cultural traits, such as language, tools and material culture, kinship, social organization, and cultural history. Therefore, groups sharing similar traits in a geographical region would be classed in a single culture area.”

Berg, 2008
Culture areas in Canada

1910

• Eastern Woodlands
• Arctic
• Plains
• Plateau and MacKenzie Valley
• Northwest Coast

2018

• Northeastern Woodlands and Eastern Subarctic
• Arctic
• Plains
• Plateau
• Western Subarctic
• Northwest Coast/Pacific Coast
“The notion of ‘cultural area’ relegates virtually every [Indigenous] social system and its art to a limited existential dungeon of a primitive two-dimensional existence ‘outside’ of Western society.”

Man, 1990

“However much they stressed the geographical and temporal specificity of the cultures on display, the life group ... tended to freeze those cultures by presenting them ‘in a static and unchanging present’.”

Bennett, 2004
“A hierarchy for man-made objects will necessarily be less perfect and less descriptive than taxonomic classifications. Nevertheless, as with scientific hierarchies, the filters that are employed on each level are describable, they create ever smaller populations, and they provide a place for everything to go.

...Of the possible filters that Nomenclature might have used to divide man-made objects ...function was chosen as the most useful. Every man-made object has a discoverable original function, one way in which the object was originally intended to mediate between humans and their environment. There are three ways that objects mediate: they shelter us from the environment, they act on the environment, or they comment on the environment. These three divisions can be described as ‘Shelter,’ ‘Tools and Equipment,’ and ‘Communication.’”

Blackaby and Greeno, 1988
Object terms and hierarchy associated with “cradleboard” from *Nomenclature 3.0*

**Category 7: DISTRIBUTION AND LAND TRANSPORTATION**

**Definition:** Artifacts originally created to transport or distribute animate and inanimate things. This category also includes artifacts originally created to facilitate transport or as an adjunct to such transportation. This category includes propelled vehicles such as automobiles and wheelbarrows as well as containers that facilitate distribution. Also included are parts of aircraft, spacecraft, land vehicles, rail vehicles, and watercraft.

**Land transportation tools and equipment**

**Human-powered vehicles:** artifacts, powered by human energy alone, originally created to transport people or goods on land without restriction to a fixed route determined by a track or guidance device.

**Primary Object Term:** Carrier, child

**Secondary Term:** Cradle, basket
Cradle, slat
*Cradleboard*
Sling

Bourcier and Rogers, 2010
“Nomenclature 3.0 classifies a baby carrier or tikinaagan as a human-powered vehicle, akin to a bicycle or canoe. This strikes us as a startlingly gendered and modernist classification: childrearing—a highly affective and purposive human activity frequently associated with women—is absent, while transportation is present as the overarching category into which tikinaagan are placed. Such a classification eclipses child-parent relations from our understandings of the object.”

Krmpotich and Somerville, 2016
“Decolonization... does not mean and has not meant a total rejection of all theory or research or Western knowledge. Rather, it is about centring our concerns and world views and then coming to know and understand theory and research from our own perspectives and for our own purposes.”

Tuhiwai Smith, 2012
Eve Tuck argues for decolonization, as a concept and a practice, to be used with specificity, “not just as an emptied synonym for whatever project someone was already wanting to make happen.”

Tuhiwai Smith et al. 2018
Recalibration Through Transparency:
Smithsonian National Museum of Natural History
Smithsonian Crest Pole Figure Model Catalogue Entry

https://www.si.edu/object/nmnhanthropology_8332364

Iterations of the ethnographic and cataloguing record are displayed for the viewer to interpret.

“This interpretation has not been verified and the story of the image in clan history has yet to be recorded”
Recalibration through Situated Knowledge: Mukurtu and the Huna Heritage Foundation Digital Archives
The catalogue record is configured to align with community access protocols and in respect of traditional knowledge.
Traditional Knowledge (TK) Community Voice:

“This Label is being used to encourage the sharing of stories and voices about this material. The Label indicates that existing knowledge or descriptions are incomplete or partial. Any community member is invited and welcome to contribute to our community knowledge about this event, photograph, recording or heritage item. Sharing our voices helps us reclaim our histories and knowledge. This sharing is an internal process.”


Digital archives as political shields: reflections from a Post Custodial perspective

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LLILAS Benson at University of Texas, Austin, Texas U.S.A

Abstract:
For the past three decades, the archival field has witnessed an increase in post-custodial transnational partnerships. With examples such as the Archivo Histórico de la Policía Nacional (AHPN) de Guatemala or the Genocide Archive of Rwanda, universities in the United States using Post Custodial methods have taken on responsibilities such as providing trainings and access and preservation resources such as digital storage and online access. Often times these efforts result in the creation of accompanying digital archives housed at the partner institution while the originals remain in their native environment. These digital archives a supposed mirror image of the original physical holdings also constitute as preventive measures against physical dangers, but also political threats.

In order to expand the impact of post-custodial partnerships, the question arises as to whether archival preservation strategies used in Post-Custodial projects can add a layer of protection against politics driven instabilities through the use of international public policy. Using a reflective writing approach, the writer considers recent threats towards the AHPN, local implementation of post-custodial approaches, and possible expansion of the Post-Custodial framework to include principles from the LOCKSS program. The recent example of the AHPN and current attempted efforts to undermine its role as a memory institution highlight the urgency of these discussions. Information workers using post-custodial methods alongside their institutions and networks of support through their experience and insights could potentially provide the necessary analysis of how an approach like post-custodialism can help alleviate dangers beyond just physical deterioration.

Keywords: post-custodial archives, digital archives

INTRODUCTION

No es suficiente afirmar que la justicia tarda pero llega. La justicia que no se ejerce cuando corresponde, ya es injusta.
- Pierre Dubois

This year marks 45 years since the Chilean coup d’état that would plunge Latin America into one of its darkest periods with not one war or one abusive regime, but countless. Today many of these stories of abuse or resilience remain engraved in song, books, papers, oral stories, photographs, and individual and collective memories. The stories undoubtedly real in the hearts of those who lived them, oftentimes depend heavily on the existence of a corroborating official physical record to ensure credibility and reliability. These same records in turn function as the foundation for the making of historical knowledge or as evidence in legal court systems in turn further establishing the truthfulness of the stories. Evidentiary value in particular for many survivors of these periods of conflict facilitates formal justice seeking efforts whether through court proceedings or truth commissions. Simultaneously the stories found within these records also continuously face erasure or repression each day mostly by those whom which these stories pose an inconvenience or threat. Chile’s turbulent past and the struggle to uncover the truth
behind the stories of numerous disappearances, murders, and government instabilities unfortunately as mention before is not alone.

Fast forward to July of 2018 when news arose of the dismissal of Guatemala’s Archivo Histórico de la Policía Nacional (AHPN) first and longstanding director, Gustavo Meoño Brenner. The AHPN since its discovery functioned as one of the largest collection of records documenting human rights abuses created by the very same actors conducting abuse – the national police. Alongside the ousting of the director of the AHPN, news also spread of the reshuffling of archival management and delay in guaranteeing staff positions essentially disrupting a 13-year structure and work process (Walsh, 2018). While some news outlets including those directly involved with the decision to not renew Meoño Brenner’s employment claimed this to be a normal course of action due to the expiration of contract terms, others cried foul within the walls of the archive (Doyle, K., 2018). As news of these abrupt changes spread across social networks and emails, uncertainty on the future of the AHPN, its staff, and access and care of their archival materials loomed over everyone’s mind.

In the case of the AHPN, fractions of the very same archival materials existing in physical form also dwell across international borders with digital copies in Texas and Switzerland (Archives and Dealing With The Past, 2018). These backups in the form of digital surrogates originated after decades of work in expanding the use of Post-Custodial methods in the archival field in particular for transnational partnerships and projects. Post Custodial projects at many universities including my own institution, the University of Texas at Austin, require the creation of accompanying digital surrogates housed at the partner archival institution in order for the original physical records to remain in their original environment. These digital copies scattered across the globe function as preventive measures against physical damage as well as political threats in case anything were to happen to the originals.

Given the timeliness and urgency of the current situation at the AHPN, this reflective piece presented the 2018 Community Informatics Research Network conference considers this moment as an opportunity to think about future directions of applying Post-Custodial methods. In particular the author seeks to assess current approaches as a way to define best practices for the future in particular for others interested in its application.

As it stands Post-Custodialism in the archival field, while a more recently favourable approach to archival acquisition remains infrequent, inconsistent as well as unsystematic in the ways archival practitioners apply and engage with this concept. For the past two decades, Post-Custodialism has been implemented in a variety of ways in order to ensure the longevity and safety of vulnerable records. As those in the archival field examine new approaches to enhance the archival praxis, this piece proposes the creation of a Human Rights network supported public policy defining a set of principles that would establish expectations of Post-Custodial implementations with an emphasis on addresses political uncertainties such as those being experienced by the AHPN. Network members would guide the creation of public policy that incorporate current Post-Custodial practices alongside selected principles from the Lots of Copies Keep Stuff Safe (LOCKSS) program. This new set of principles the author argues should specifically focus on the importance of duplicity, preservation copies, decentralization, access capabilities, capacity building, collaboration, and shared ownership. Given the current disparities in Post-Custodial implementations, a reflective analysis aids in critiquing and enhancing current interpretations as well as formalizing future perspectives.
THE CASE OF THE AHPN

For the Archivo Histórico de la Policía Nacional (AHPN) danger arose the moment the public received news that the archival collection existed. This occurred when in 2005 the governmental Guatemalan human rights office representatives during an on-site investigation of abandoned barracks in Guatemala City stumbled almost literally into a room full of deteriorating documents. This discovery for many represented the turning point in justice and accountability efforts led by survivors and supporting organizations for the countless atrocities Guatemala witnessed throughout the 20th century. Despite widespread news of the archival discovery, Guatemalan government officials in fact continued to deny the existence of these records documenting the history of the National police since the last 19th century fearing that the documents would expose their complicity or worse jeopardize the impunity of many high ranking officials. This same fear had subverted for many years previous truth seeking efforts such as the Commission for Historical Clarification published report Guatemala, Memory of Silence “since the different State bodies involved hindered, and in many cases impeded access to the files and other documentary sources” (From Silence to Memory Revelation of the AHPN, 2013). Even though the undeniable existence of the police archive spread many supporters believing the documents “to be the largest and most revealing collection of ‘dirty war’ documentation ever unearthed in Latin America” feared possible retaliation from government officials or other associated parties and thus sought ways to ensure its survival (Doyle, 2005).

In 2008 three years after the discovery of the once hidden AHPN records, the University of Texas Libraries through the suggestion of the Bernard and Audre Rapoport Center for Human Rights and Justice at University of Texas, began formal conversations on how to protect and provide access to the unquestionably valuable records. During this time the University of Texas sends a delegation of faculty and staff from various departments and libraries to meet with AHPN representatives in hopes of assisting in the effort to ensure the preservation the AHPN. Shortly after this visit, the university formalizes a partnership through the creation of a “Letter of Understanding… represented by the Bernard and Audre Rapoport Center for Human Rights and Justice” to provide technical and research support (From Custody to Collaboration: The Post Custodial Archival Model at the University of Texas Libraries, 2013). As a top tier public serving university with a long-term commitment to preserving and providing access to Latin American historical materials through the famed Benson Collection, the University of Texas undoubtedly desired access to these influential records. But more importantly it appears that university representatives including library staff, scholars, departmental official sought ways to support without disrupting the work of transitional justice in Guatemala. This can be seen through the momentous decision to house digital copies of the records as well as by providing numerous resources for AHPN staff.

POST CUSTODIALISM AT UT

Nettie Lee Benson Special Collection, a part of the University of Texas (UT) LLILAS Benson Latin American Studies and Collections, archivists and librarians have for more than a decade helped establish Post-Custodialism as an institutional praxis. Two high profile digital collections under our care that resulted from early Post-Custodial practices at LLILAS Benson include the Archivo Histórico de la
Policía Nacional (AHPN) de Guatemala and the Genocide Archive of Rwanda. Both of these projects repositioned university library staff from solely being custodians to take on the role of financial, equipment, and online hosting benefactor, trainer on various archival methods, as well as consultant on groundbreaking digitization and description methods. Prior to the official launch of the AHPN project in 2011, Post-Custodial approaches had already been utilized in other projects associated with the Human Rights Documentation Initiative (HRDI). The HRDI launched in 2008 traces its interest in applying Post-Custodialism methods to a 2007 conference titled “Human Rights Archives and Documentation: Meeting the Needs of Research, Teaching, Advocacy, and Social Justice” co-sponsored by UT Libraries, Center for Research Libraries, and Columbia University (Kelleher, 2010). This exploratory application continues today with a 2017 Andrew W. Mellon Foundation grant award allowing LLILAS Benson to continue the development of the institution’s Latin American Post-Custodial work and implementation.

While many of LLILAS Benson’s digital archival projects are described as Post-Custodial or at times noncustodial, the actual Post-Custodial approaches differ slightly. Despite these differences, a key element witnessed in several of the projects undertaken by LLILAS Benson emphasizes “foster[ing] deep collaborative relationships” (From Custody to Collaboration: The Post Custodial Archival Model at the University of Texas Libraries, 2013). Relationships and relationship building function as the driving force behind the momentous change in acquisition practices as shown by LLILAS Benson’s willingness to adjust traditional archival practices after partners were “unwilling to let materials go, even briefly for the purpose of digitization…”(Shein, 2016). This echoes one of the original principles for Post-Custodialism of expanding stakeholders beyond the archival institution as defined by Gerald Ham where the traditional archivist’s “introspective proclivity has isolated [them] from one another and fragmented [their] work, obscuring the advantages of cooperation and shared ideas” (Ham, 1981).

Ham in thinking through the countless technological changes occurring in society stressed the need for collaboration similar to library practice where “inter-institutional cooperation [in archival practice] is an essential feature of a complex and interdependent technological society” (Ham, 1981). Unfortunately, Ham noted back in the 1980s that wasteful competition for the greater part of traditional archival praxis had become a “deterrent to the effective management of the national record” (Ham, 1981). Although, Ham did not intentionally proposed Post-Custodial practices for use with Human Rights records or transatlantic partnerships, his initial comments indicate a deep need for collaboration between the archivist and the creator or creating body in order to facilitate the work. As a response to these changes as well as a desire to address human rights documentation needs such as preservation and wide access, archival practices at LLILAS Benson have over the years shifted more towards a focus on creators. In fact a majority of publications written by LLILAS Benson staff and supporters such as faculty and students, highlight partnerships as a cornerstone for levelling the political power imbalances between Global North and South. By centering the Global South creators LLILAS Benson acknowledges and attempts to mitigate political imbalances “given historical relations and imbalances of power
between the U.S. and Latin America, and the perceived plundering of cultural patrimony and appropriation of cultural heritage…”

LOTS OF COPIES

Studies report that Human Rights archival collections require special considerations of various “challenges [of preserving] human rights documentation” including security, long-term preservation, and access. In thinking through the initial considerations brought forth by Ham, this piece looks to further conversations on the convergences of technology, archives, and collaboration. Information practitioners such as archivists, librarians, software developers, or digital preservationists continue to adjust to these constant changes by developing new approaches and methodologies on how to manage, control, preserve, and provide perpetual access to these materials. One such approach commonly referred to as LOCKSS (Lots of Copies Keeps Stuff Safe) program and system functions as “low-cost, open source digital preservation tools to preserve and provide access to persistent and authoritative digital content.” At the core of the LOCKSS program sits the understanding that multiple distributed copies ensure long-term preservation as well as mitigation against human, technical, and social threats. This reflective piece argues that while many institutions in particular academic libraries and archives have taken courageous measures to protect human rights records, various situations around the world including austerity measures, political party shifts, and changes in cultural perceptions pose threats to Human Rights recordkeeping and preservation. As such this piece argues for the inclusion of various LOCKSS principles alongside current practices of collaboration, creating preservation copies, and capacity building. The four additional principles derived from LOCKSS preservation principles include duplicity, shared custody, enduring access, decentralization. By incorporating LOCKSS principles into Post-Custodial methods, human rights archives collecting institutions can demonstrate “they care about and collaborate with others they trust who care about the same content” in more ways than one.

RECORDS AS TRUTH

As the uses of the newly found records of the AHPN increase, one could consider the possibilities as both an opportunity and a curse. For the people of Guatemala, these records mean an opportunity to uncover the truth of force disappearances, political repression, and countless murders despite the pain and suffering that the truth may bring. For the perpetrators, the uncovered truth found in those records could mean forced accountability for past abuses or concealment. These efforts at accountability in particular meant a great deal to the people of Guatemala. Prior to the discovery of the AHPN records, countless efforts by truth commissions on behalf of families and official agencies to access historical records mostly faced refusal by government, military, or police officials “on the grounds that they had been destroyed during the war, or simply did not exist.”

While the existence of Guatemala’s police records had been a lie, destruction of records for many centuries and for many countries has been a normal occurrence. But as time passed, perceptions on the need to care for endangered records increased as seen by the 1996 International Council on Archives call for increased documentation of lost or destroyed records. Now some federal governments incorporate standards that require the retention of records through such methods as
legally mandated retention schedules or more specific initiatives and protocols. On an international level, the Universal Declaration on Archives, adopted by UNESCO in 2011 outlined a “general framework for the responsibilities of the profession” (International Council on Archives Human Rights Working Group, 2016). Despite these changes many countries and their governments in regards to the safekeeping of archival materials, continue to lack policy or formal practices to preserve some of their most vulnerable records. At the same time some of these same countries are also struggling to hold previous regimes accountable for past abuses and violations as the people look for reparations and truth.

Reparation in particular requires archival records as they serve as the legal foundation for the struggle against impunity. After many of the dictatorships in Latin America of the 20th century fell, people in an effort to not repeat the past initiated tireless efforts to hold their government accountable for the violence inflicted on them, their families or their ancestors. In the case of the AHPN like many in Latin America today, records of abuse now known to exist represent “an affirmation of a terrible history, but also of the fundamental right of all people to know that history, to understand it, and to arrive at some measure of peace” (From Silence to Memory Revelation of the AHPN, 2013). Despite these struggles, Guatemalans today still see many of the crimes go unpunished and even witness new efforts to squash this right to know by government officials and supporting agencies.

The recent example of the AHPN and attempted efforts to undermine its role as a memory institution highlight the urgency in developing concrete and politically binding strategies for archival preservation. As can be seen in numerous cases around Latin America, efforts at transitional justice continue with a high dependency on investigations and truth seeking legal battles. For many of these cases, investigations whether due to insufficient evidence or because of politically influenced dismissal in the courts can extend decades as seen by the example of Chile’s efforts to bring justice to famed singer/songwriter Victor Jara. Unlike Guatemala and the records found in the AHPN collection, Jara’s case has suffered both time constraints and inadequacies due to insufficient information about military and police activities and organizational structure that could shed light on the who, how, why behind Jara’s cruel and inhumane execution. In the case of Chile, investigators and news coverage often attribute the lack of evidence to the persistent practice of a "‘code of silence’ within the military [even] 36 years after the murder of Victor Jara.” (McSherry, 2015). The case of Jara represents a rare instance of continued local, national, and international support undoubtedly due to Jara and his faithful following, but what can be said of the countless individuals that never reached the level of visibility of Victor Jara’s death? In the case of other human rights abuses, can memory workers using Post Custodial methods guarantee the longevity of archival records that may not be immediately recognized, used, or understood while still providing local communities direct access and control?

ROLE OF POLICY

Human Rights documentation efforts already demonstrate a history of using public policy whether enacted formally by large institutions such as UNESCO or through recommendations by prominent institutions such as the International Council on Archives (ICA) to establish standard practices and professional expectations. Although it would appear that fiscal sponsorship, the offering of consulting support, or political sanctions may be the clearest answer, it must be noted that even public
policy if solely dependent on a formal agency’s support can backfire. This can be seen through the clear involvement of the United Nations Development Program (UNDP) Guatemalan office regarding the removal of Gustavo Meoño Brenner (Doyle, 2018). In a press release issued one day after a government convoy of UNDP and Ministry of Culture and Sports officials demanded that Meoño Brenner leave the office, the Guatemala office of UNDP stated that this change was in line with the overall vision of “institucionalidad y sostenibilidad” referring to long-term institutionalization and sustainability. (United Nations Development Program Guatemala, 2018) Later that same month, the UNDP issues another statement that included more detail than the first describing its history with the AHPN, the commitment to continued support, as well as a peculiar emphasis on the availability of these archives in digital platforms including the copies held at the University of Texas at Austin. Here the author notices a dissonance on how a Post-Custodial project aimed at preserving vulnerable records can also be co-opted by other agencies as an alternative to the physical original. This misreading of why and how Post-Custodialism should be understood and applied leads this piece back to the question of how precise and intentional a project or institutional paradigm must be in order for it to be considered Post-Custodial.

FUTURE DIRECTIONS

As this reflective piece remains a work in progress, future data collecting methods must be conducted in order to address gaps in this piece. Future research must also include a close review of limitations or uncertainties. In particular firsthand accounts of early implementation through the form of oral histories from initial project staff and supporters such as T-Kay Sangwand, Karen Engle, Dan Brinks, Christian Kelleher, Charles Hale, Theresa Polk, and others must be considered. These accounts would provide the necessary insight to better assess the initial vision for the use of Post-Custodialism, its evolution, and what potential it still holds as it relates to the AHPN. Additionally an assessment on limitations must focus on whether digital surrogates can in fact should function as stand-ins for the physical in particular for local users as well as the impact this shift in understanding would have. Lastly, additionally research would also include a review of the necessary adjustments to the current LOCKSS system in order to replicate the mechanisms of the system while also facilitating the protection and preservation of Human Rights records. These findings would define needed technical adjustments to the current LOCKSS system to address the needs of electronic human rights records rather the electronic journals the system currently manages.

CONCLUSION

In conclusion this article began as an effort to better understand how current Post-Custodial practices relate to the ongoing changes at the AHPN. As noted at the beginning the story of AHPN continues to unfold, but the reality of imminent threats towards the collection as well as other similar collections appears inevitable. It remains to be seen if the current government of Guatemala will continue to reshift and disrupt the ongoing work at AHPN. If these changes in fact serve as the starting point for the derailment of justice then the communities that first pledged support during the discovery of the collection must once again take a stand. As a response this reflective essay argues for the consideration of pairing various principles of the LOCKSS program and current Post-Custodial methods employed by the University of Texas at
Austin LLILAS Benson. In an effort to address ever-evolving threats to human rights records, this piece notes the potential impact the combination of the outlined principles could have on the Human Rights archival field.

As Pierre Dubois, French born and Chile based priest during the Pinochet dictatorship, claims in his 1980s interview quote collected by Teleanálisis reporters read at the beginning of this piece the injustices faced by Chileans cannot simply be understood as a long overdue process. Dubois reminds us through his words that if justice is in fact obstructed, it becomes injustice once more. While the country and people of Guatemala strive to seek amends for the abuses in its past, the recognition of abuse as a memory without holding accountable the people responsible will not be enough. As governments change, people come forward, and stories come to light, obstacles placed against the use and long-term care of archival records as evidence must be read against this warning. The need for permanent measures, global collaboration, and visionary conversations is now.

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Empowering Hacks: Reciprocal Influences of Research, Makers with Disabilities and Academic Institutions
Janis Lena Meissner

Abstract: Maker technologies such as 3D-printers allow ‘lay people’ to create their own ‘stuff’. In theory, everyone can now fabricate everything. However, in practice not everyone has the same opportunities to do so. This is particularly apparent in the context of disability. Despite the general Making ethos of ‘everyone can do it’, hardly any prior design work (not even on Do-It-Yourself Assistive Technology) has engaged people with disabilities as makers themselves.

This paper presents Empowering Hacks, a collaboration of two (non-academic) novice makers with disabilities and an (able-bodied) researcher around the mission to produce assistive tools at a cheaper rate with customisable outcomes. In this article, the researcher reflects on the specific implications of conducting the project at a research lab of a civic university, including the challenges we faced and the opportunities that arose due to this context. Likewise, it will be reviewed how the project itself eventually had a concrete influence both on all its participants and on the institutional setting that it took place in. Finally, the paper elaborates on how the methodological framing as participatory action research has shaped our research practice and allowed these different forms of influence to emerge, before it concludes with a critical discussion of the project outcomes which this double-ended influencing of research and setting has resulted in.

Keywords: Making, Do-It-Yourself (DIY), accessibility, social justice, empowerment, institutional settings

Introduction

In the call for papers of the 16th CIRN Conference, the primary concerns of Community Informatics are stated to involve “improving the well-being of people and their communities through more effective use of ICTs”, to “foreground social change and transformative action in emergent social-technical relationships” and to “[empower] communities in support of such desirable objectives as democracy, human and civil rights, self-determination, sustainable development, and social inclusion”1. These concerns resonate well with the celebratory reception of Do-It-Yourself (DIY) technologies and the communities emerging around these. Referred to as the Maker Movement, there is a growing trend of people making their own ‘stuff’ with maker technologies such as 3D-printers, laser-cutters, and programmable electronics-controllers. Indeed, previous work on DIY practices and the use of maker technologies (Making) has identified many different potentials for technology-driven empowerment (Anderson, 2012; Hurst & Tobias, 2011; Kuznetsov & Paulos, 2010; Lang, 2013; Tanenbaum, Williams, Desjardins, & Tanenbaum, 2013b). In theory, everyone can now fabricate everything – even ‘lay people’ without any particular tech-skills or knowledge. However, in practice not everyone has the same opportunities to take part in the Maker Movement. Tools and toolkits remain relatively expensive, and their operation often requires certain technical skills. Given this resource-intensive nature of DIY/Making, it tends to remain an

1 https://sites.google.com/monash.edu/cirnprato2018/home
elitist practice of those with enough disposable time and access to knowledge and tools (Ames et al., 2014; Bean & Rosner, 2014; “Maker Market Study - Maker Faire,” n.d.; Taylor, Hurley, & Connolly, 2016), while those who potentially could benefit most from Making are often still excluded. Many makerspaces were originally established around the mission to share tools, knowledge and skills, yet their members often represent quite homogenous groups of socially rather privileged individuals (mostly male, middle-class, white and well-educated) – and not exactly those marginalized communities which have been traditionally addressed by research with social justice agendas (Dombrowski, Harmon, & Fox, 2016; Payne, 2006). There is an apparent paradox in that the vast capacity of empowering innovation around using maker technologies is not necessarily reflected in the communities evolving around it – and the question remains who it is that gets empowered, why and how (Roedl, Bardzell, & Bardzell, 2015). Empowerment in the social sciences sense involves subjects seeking to overcome social inequalities due to such as for example racism, sexism, ageism and ableism (Payne, 2006). So, if researchers do seek to re-frame their work around a transformative agenda and specifically seek the participation of those marginalized groups, which implications does this have for their research practices, their participants and the setting they operate within?

This paper will share some reflections on this question in the context of makers with disabilities based on experiences from the ‘Empowering Hacks’ project. ‘Empowering Hacks’ is a DIY/Making project based on close collaboration of the author (an able-bodied HCI researcher) and two non-academic novice makers with disabilities (Nicholas Packham and Norman Platt). Together, we used the opportunity to present our project at the CIRN 2018 conference for co-creating a poster to reflect on the project, its process, our achievements and the challenges we faced. In particular, I will highlight how ‘Empowering Hacks’ impacted us individually and how it also enabled us to influence the settings we were operating in.

![Figure 1: “The Trail of the Hacks”, a co-designed poster created by the co-researchers and the author to reflect on the “Empowering Hacks” project](image)
Background: Making with Disabilities

As the tools and toolkits for digital fabrication and rapid prototyping have become available to a wider audience, it has become easier for hobbyists to create their own technologies. Enthusiasts tend to regard this development as the first step towards an prosumer future (Toffler, 1980) where the role of producers and consumers begin to merge and people have the means to provide services for themselves. This idea of DIY-empowerment through personal scale fabrication is of particular relevance in the context of personalized aids for people with disabilities. Many off-the-shelf assistive technology (AT) products are expensive and have limited availability. Furthermore, it is hard to tell before purchasing these products if these actually meet specific individual needs (or personal preferences and taste!), which result in high abandonment rates of these products (Hurst & Tobias, 2011). Personalised and individually manufactured AT could be a promising approach to overcome the short-comings of the profitable one-design-meets-all production paradigm of the mass-market. Maker technologies could provide the necessary tools to realise such an endeavour.

Indeed, a growing body of Human-Computer Interaction (HCI) research has emerged around the idea of Do-It-Yourself Assistive Technology (DIY-AT) (Buehler et al., 2015; Buehler, Comrie, Hofmann, McDonald, & Hurst, 2016; Hook, Verbaan, Durrant, Olivier, & Wright, 2014; Hurst & Tobias, 2011; Rajapakse, Brereton, Roe, & Sitbon, 2014), the umbrella term for non-professional initiatives to customize commercial assistive technologies or to design privately manufactured aids. However, most of this prior work concentrated on occupational therapists or the extended care network being the makers rather than attempting to engage those with disabilities themselves. Furthermore, hardly any of this work has addressed accessibility issues around maker resources wider than those of specific technologies and that not everyone has the same opportunities to take part in making (Bean & Rosner, 2014; Taylor et al., 2016) (especially with a disability).

The ‘Empowering Hacks’ Timeline

The ‘Empowering Hacks’ projects started as a practical critical response to the insights that hardly any (DIY-AT) design literature engaged those with disabilities as designers or makers themselves and that this clearly contradicts with the celebratory discourse around maker technologies being empowering for everyone. Framing it methodologically as Participatory Action Research (Kindon, Pain, & Kesby, 2007; McIntyre, 2008; McTaggart, 1994; Yeates & Amaya, 2014), it was concerned with the question which socio-technological factors could assist people with disabilities in becoming makers themselves while actively experimenting with them.

Nicholas wrote the introduction for our poster and used the following words to describe the motivation of the ‘Empowering Hacks’ project:

This is Empowering Hacks where disabled people were brought together with an academic maker with the goal of solving problems through making. Disabled problems have usually been solved by the able-bodied which miss out key issues that disabled people have. By having disabled people work on the problems that affect them, it should lead to better solutions being found and enabling them to solve their own problems through making. The trail below takes you on the journey of the Hacks including errors / problems encountered and shows progression from amateur makers to makers with a track record.

As this quote shows, ‘Empowering Hacks’ placed emphasis on providing a positive practical example that disabilities don’t automatically imply an inability to engage in Making. The ‘track record’ that Nicholas referred to serves as material evidence of hands-on skill-building for people who are often assumed not to be able to gain sophisticated fabrication skills. This resistance to accepting such stereotypes gave a certain activist aspect to the
project. Especially, as Nicholas, Norman and I decided to align our Maker endeavours with the mission to produce assistive tools at a cheaper rate with customisable outcomes – and thereby fostering an agenda of design by people with disabilities for and with people with disabilities.

**DIY-Abilities**

Our collaboration started with *DIY-Abilities*, a workshop series inviting people with disabilities to learn how to use different mainstream maker technologies and to work on their own personal projects (Meissner et al., 2017). The workshops allowed the author with no previous contact to the local disability community to recruit participants with different impairments and needs of assistance. The resulting creations (as shown in Figure 2) demonstrated a variety of aspirations of what the participants hoped to use their new skills for, including: designing practical accessibility hacks for challenges in their own daily lifes, creating artefacts for helping others and showcasing skill for receiving recognition.

![Figure 2: The creations by DIY-Abilities workshop participants included a boccia ball holder for the wheelchair, a heat-sensing safety device and a modular sculpture.](image)

Nicholas and Norman took part in the DIY-Abilities workshops, training them to the level of novice makers with basic skills in 3D-printing, laser-cutting and electronic in the limited time of the workshop series. It was impressive how quickly they learned and how creatively they could apply their new skills, however DIY-Abilities was a short-term project and had to stop at a point just when their progress as workshop participants was getting really interesting.

**Disabled Makers Designing for People with Disabilities**

Nicholas and Norman were eager to continue making. Despite my recommendation of the local makerspace where they could have continued immediately, they preferred to wait for a year until I found an opportunity to initiate a new series of making sessions at the University which eventually evolved into what we now title the ‘Empowering Hacks’ project. The research was this time more open-ended in terms of its time frame and project aims. In an initial brainstorming session, we discussed what Nicholas and Norman would like to make and which factors would be important to them so that we could later evaluate their designs. Altogether, we decided to work on DIY-AT projects replicating and potentially improving existing products from the ‘disability shop’, attempting to make them cheaper and to personalize them to individual needs.

We started off with 3D-printing a ‘wheelchair golf ball’ for extending the joystick on power chairs. The original product is an actual golf ball with a hole drilled into it so that it can be put over the joystick. At the proud price of 7-15£ (about 13-27 AUD) per ball, it is a popular product among wheelchair users to make it easier to grip and to move the small steering interface. It took Nicholas and Norman only a single session to refresh their skills and replicate the golf ball. After several more maker sessions they created a set of 15 different wheelchair handle designs in total ranging from T-shapes and ring cones to mushrooms (as shown in Figure 3).
This initial project phase was mostly focused on designing, fabricating and training. At the outset there was also a clear role distribution among us: I was serving as a session facilitator and a mentor sharing my skills and supporting Nicholas and Norman’s ideas while they remained to be session participants and learners. These roles came however soon to evolve and be re-negotiated: Nicholas turned into our group’s ‘coding expert’ and started to 3D-modelling at home, asking us for new challenges to work on between the sessions. Norman specialized on operating the 3D printer and post-processing tasks. He was also actively promoting the project to wheelchair using friends or carers and with his interest in photography he also started to create high-quality project documentation. Eventually, Nicholas and Norman even became design researchers themselves by organising and running a test session at the University for evaluating the usability of the wheelchair handle designs. In addition to the feedback we received in the test session, they also considered different comments and suggestions from consulting their wheelchair-using networks to refine the designs iteratively. The wheelchair handles project provided them with an opportunity to both improve their DIY/Making skills and to gain experience in design thinking and assessment.

Gaining Recognition as Makers

Operating between their personal disability-related networks and the workshop facilities at the University, Nicholas and Norman began to develop their maker identities while needing less and less support from my side. Training activities to improve their making skills became less frequent, however they started to increasingly take initiative, come up with new ideas for maker projects, conduct self-paced experiments and actively manage our bigger collaborative endeavours. We all still continued to learn, yet in a very project-based manner and support was given to each other only upon request when needed.

As we came to operate more and more as a team of co-makers and co-researchers, it was the opportunities arising at the different intersections of the academic institution, our personal social networks and the wider public that framed how the ‘Empowering Hacks’ project was developing further. Commissions played particular important roles in this development. No matter if we were asked by Nicholas’s friend to create a bathbomb mold or by Newcastle University’s Historic Computing Group to 3D-print a scaled model of the University’s IBM360/67 supercomputer, such commissions demonstrated how people external to our
project began to recognise our creative skills and allowed us to materialise an even more diverse portfolio of fabricated artefacts.

Empowerment and Challenges

The ‘Trail of the Hacks’ listed some of the artefacts we created as symbolic milestones in the Empowering Hacks timeline. The co-created poster however also reflects that it was in fact the process how we got to these physical creations that was actually empowering about the project. Of particular importance were the aspects of skill-building and the experience of recognition by both the public and the institutions we were operating in – as well as the different challenges we faced on the way.

Skill-Building

In the DIY-Abilities workshops, Nicholas and Norman both stated that skill-building was a main driver for them to participate. By learning fabrication skills such as 3D-printing and electronics programming, both hoped to improve their employability chances in future job hunting, a situation that has been described to be particularly challenging for people with disabilities (Barnes, 2000), so any additional reference in the CV is much valued. The ‘Empowering Hacks’ project eventually provided them with the opportunity to create a physical portfolio of advanced maker skills. Furthermore, their skill-building has manifested in the ways that Nick and Norman started to use the equipment increasingly independently (for example while I was away on holidays). Regardless if this will be helpful in finding a job or not, they stated that this was a confidence boost which gave them optimism and hope. This rising confidence was most likely also related to learning other skills that they didn’t expect to gain in the beginning, such as for example research skills.

Presenting to Different Audiences

Public occasions such as the Maker Faires in Newcastle or Vienna allowed us to present ourselves officially as makers and to see ourselves being part of the wider Maker Movement. Furthermore, several departments of the University (such as the author’s affiliated research lab or the School of Computing) had identified an inspiring potential in our activities and therefore sought to utilise this for internal and external showcasing. Two examples of such occasions were the School’s student project faire (an event organised by the School of Computing for inspiring undergraduate students on what they could do in their dissertation projects) or Enterprise Week (when the research lab was inviting school children and teachers to visit and learn about how researchers work). In both cases ‘Empowering Hacks’ seemed to be a good pick as the institutions wanted to demonstrate diversity of what computing could be and how the research affiliated with the civic university had a tangible impact on (at least) some members of the local public community.

In the beginning, when these new opportunities were arising, Nicholas and Norman were reacting a bit nervous. This was understandable given that they were not used to presenting research outcomes to different audiences on local, national and international platforms and that some of their impairments were likely to make it slightly more difficult to operate in busy and loud environments. Yet, they were eager to ‘do a good job for the University’. Partly, they wanted to show gratitude for all the support our project had received in terms of resources and opportunities, and partly they perceived these opportunities as yet another chance to grow their skills with. Indeed, they did well despite all challenges and eventually took much pride out of these experiences, making them even braver about taking on next tasks.

Altogether these developments around commissions and public dissemination occasions were key to enable Nicholas and Norman adopting a Maker identity and becoming co-researchers (rather than remaining to be just research participants). In this way, the
'Empowering Hacks’ project has not only resulted in several wheelchair handles currently being in permanent use, it also opened up new agencies for their designers to operate within socio-technical spaces they had previously been detached from.

**Challenges**

There were three particular challenges we have been facing in the ‘Empowering Hacks’ project:

Firstly, there are several accessibility issues related to the maker technologies we used. While Nicholas struggles with the movements needed for changing the filament on the 3D printer, Norman has problems with finding the tiny details of professional design software. These issues are overcome in the group usually by delegating task, yet this could be different if maker tools were designed for a greater diversity of users.

Secondly, such accessibility issues also apply to the university as an institutional space. While university buildings need to comply with certain accessibility standards, but not all measures are implemented equally well, and ironically, the University’s health and safety procedures can even form new institutional barriers. For example, while well-meant, the need to create a personal evacuation plan in case of emergencies involved a patronizing assessment for Nicholas and Norman and allows us to receive any visitors with disabilities only on the ground floor of the university building unless they went through the same assessment.

Thirdly, Making is a resource-intensive activity that creates dependencies on materials, tools and time availabilities. Being part of our project, Nick and Norman gained access to the university’s maker facilities and my research funding covers expenses for materials. Indeed, they have started to use these facilities more independently. However, the question remains what will happen after the completion of my PhD when I cannot nominate them as visitors of the University anymore.

**Methodological Reflections**

As a research project, ‘Empowering Hacks’ employed a Participatory Action Research (PAR) approach (Kindon, Pain, & Kesby, 2007; McIntyre, 2008; McTaggart, 1994; Yeates & Amaya, 2014) based on collaborative Research through Design (Bardzell, Bardzell, Dalsgaard, Gross, & Halskov, 2016; Gaver, 2012; Storni, 2015; Zimmerman, Forlizzi, & Evenson, 2007). This methodological framing allowed us to stay flexible and work together in the form of an open-ended exploration. Furthermore, it positioned all three of us as co-researchers who would contribute to framing the study, collecting data, engaging in design and reflecting on outcomes and progress. Most project activities were done together. The project is still on-going and our analysis is not thought to be comprehensive, yet reviewing the timeline allows to discuss several implications of revisiting our methodology on an epistemological, ontological and axiological level (Guba & Lincoln, 1994; Heron & Reason, 1997).

**An Ontology of Aligned Agendas.** On an ontological level it was important to position all co-researchers as stakeholders with different agendas. Doing transformative HCI-research with them that aims to be context-sensitive and generative with tangible outcomes implies that such an endeavour is more than ‘just’ a research project. Rather, it constitutes full-fledged collaboration of these different stakeholders, which implies that their respective agendas need to be considered and aligned with the purposes of the research as well as possible.

**Extended Epistemology.** Sense-making in PAR settings is not up to the researcher alone. Rather, it should be positioned as community-based research, where participatory inquiry (Heron & Reason, 1997) relies on collective action/reflection of everyone involved (Kindon et al., 2007). What is possible and where our collaboration would take us was not depending on my ideas as a researcher, but on the overlapping understandings and cooperative action of all three of us. Thus, an extended epistemology is needed which accounts for the complex...
interrelations between researcher, the participants and their collective exploration of what can be known. Practically and theoretically, this work needed to be flexible.

**Axiology of Generating Unpredictable Impact.** It might be a bit unconventional to use such open-ended explorative approaches, yet in hindsight this was absolutely key for our project. We couldn’t have predicted any of our achievements. However, having the time to let the project evolve and different ideas emerge and develop, provided us with opportunities that went beyond our expectations.

**Conclusion**

The ‘Empowering Hacks’ project enabled two persons with disabilities to take part in the Maker Movement. They represent a group of society who is not usually seen in makerspaces. ‘Empowering Hacks’ can thus be seen as an instance of community-driven Making (rather than employing a traditional technology-centric approaches). As an able-bodied researcher I could only learn about the relevance and full potential of making for people with disabilities through their first-hand experiences. My research could only sample the participants’ rich experiences and their creative capacities through engaging them actively in DIY/Making, enabling them to create artefacts meaningful to them, and eventually turning them into co-researchers. For developing such a community-driven approach, it is therefore necessary to identify a common interest which links all the involved stakeholders together and creates sufficient motivation to be resilient against all arising challenges. Furthermore, it requires facilitating skill-building activities in context-sensitive, empathic and flexible ways, and engaging in a truly trustful relationship where the researcher lets go of traditional power structures and control over a project.

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Evaluating A Smartphone Phone Project In Bangladesh Though Community Monthly Meeting Reports

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Abstract
The use of information technology is burgeoning for information and knowledge, and the practice of agriculture in not just developing countries, but the developing world as well. As an example of this, Oxfam and Monash University have been implementing an action research project, ‘Participatory Research and Ownership with Technology, Information and Change’ (PROTIC) in three fragile ecosystems (coast, sandy river bank and wetland) of Bangladesh. Three hundred female farmers were provided with Smartphones with internet facility. Following the philosophy of Participatory Action Research (PAR) developed by Research Initiatives Bangladesh (RIB), and an analysis of group meetings held with the community, it is considered that the farmers are the social change agents or ‘animators’ in the process of developing transformative leadership for resilience towards the challenges in Bangladesh.

The result of the activity is that there have been significant changes in farming practices in the project implementation areas and the voices of women (called animators in this article) have been reflected in the intervention. There have been changes in the development of knowledge and skills by the women with Smartphones and information services, including changes in confidence, language, social status and technical skills of the community.

The paper focuses what has been learned from group meetings held in the project areas as evidence for change. The paper in fact contains two perspectives. First, the primary level of research from a practitioner perspective (the Oxfam authors), and second, contextual remarks from an academic perspective by the third author. In practice, each has influenced the other’s work considerably over 4 years of the 5-year project (2015-9).

Background
Bangladesh is one of the most vulnerable areas of the world for climate change. The frequency and intensity of natural calamities have increased. The internal migration of males to the cities for work and climate change results in gendered agricultural practice. As a response to this challenge, from an NGO perspective, the easy availability of mobile phones creates an opportunity for information sharing about climate change-responsive agriculture and other services for women farmers.

Consequently, Monash University and Oxfam in Bangladesh have implemented the project, ‘Participatory Research and Ownership with Technology, Information and Change’ (PROTIC) since 2015. It is being implemented in three climate vulnerable ecosystems with 300 female farmers (animators) are taking part in the action research. A conscious decision was made to use Smartphones rather than button phones because of a desire to test the capacity of the community to respond to the next generation of mobile technology with its multifunctional aspects. Even though the phones were at the time of the initiation of the project still expensive, the price is rapidly dropping for basic models and this overcomes the criticism that the project was looking to use a technology that was impossibly expensive. People will probably see a trade off by having such phones – personal freedom, difference forms of convenience because of connection to different forms of useful information, and income.
The project has developed a knowledge hub for female farmers that disseminates weekly SMS, call-back (OBD), and call centre advice. The female farmers are being provided with agricultural and weather advice and apps such as PROTIC Bhutta (Maize) and PROTIC Krishi Sheba (Agricultural Services). Contents and services have been developed and maintained by Win Miaki Ltd, a contracted telecom company working as technical partner of PROTIC. We regard this information sharing activity of the company as constituting a knowledge hub for the project. There has also been an ongoing feedback loop with the PROTIC leadership team and the communities themselves.

The female farmers have been trained to use social media applications like Facebook, and this is subject to further study by the Monash research team, as noted in the final section of the paper. Many women also used video call applications such as IMO. As part of the feedback loop for content and services, the farmers have regular Monthly Meetings facilitated by the local project staff run along participatory lines where they review their learnings and achievements towards the project target of sustainable livelihoods. As a follow-up to the meetings the women conduct rapid research using participatory appraisal tools on the use of the content they have received from the knowledge hub, the challenges and information requirement on the standing crops, support services from the government and other development actors on agriculture. At an early stage the meetings were facilitated by the project staff members, but since October 2017, the community has conducted the meetings. Sound recordings of all the meetings (held in Bangla) are also going to be the subject of further analysis by Monash researchers as detailed in the final section of the paper.

**Purpose of the Paper**

The practitioner part of the paper represents a consolidated report based on 18 participatory meetings (6 in each area), April 2018 – September 2018. The community conducted the Monthly Meetings in the native language Bangla, and project staff facilitated the meetings. The meetings were held in in all three PROTIC areas which are Dakshin Kharibari village of Dimla, Nilphamari in the Charlands (sandy river bank and island areas), Borokuput village of Shyamnagar, Satkhira in the coast and Bhabanipur village of Tahirpur, Sunamganj in the Haor (back swamp) area. PROTIC started in Tahirpur later than other two areas, which has provided the chance to use the learnings of the first two pilot areas.

The purpose of the meetings is to identify the changes that community has experienced because of their exposure to different technologies and knowledge hub in the isolated villages in Bangladesh. It has emphasized the reflections and experiences of the community on the changes that has happened in the lives of villagers because of the Smartphones by Winmiaki, the service provider.

**Method**

The community members have three hour-long monthly action research meetings where discussion is focused on a number of topics as suggested by the project team: (1) the content of the digital advisory services, (2) the adoption of advice, (3) diversification of the use of the Smartphone, (4) influence on the local development actions, and (5) policy intervention and cohesion (blending with the scope of existing policies).

These meetings are organized in local village collectives called as Community Based Organizations (CBOs) that acts as a hub for community development activities. The average number of participants is 15 to 25 in each group. The local project staff facilitate the meetings and compile the meeting outputs in a predefined report format. At the end of each meeting, the community worker files a report on meeting outcomes with Oxfam and as stated, this is the basis of this paper.

The reports from the community workers, as well as face-to-face discussions, including the presence of project staff at consultations have resulted in modifications to the project. Modifications have included such areas as such as types of content (targeted at different regions or seasons), the types of training offered (such as vaccination), as well as support for the women in developing feedback and participation skills in an action research project.
Findings

1. FROM LEARNING TO APPLICATION:

1.1. INNOVATION ON-DEMAND:

1.1.1 Initiating the plan and analyzing: In 2015, PROTIC started the journey towards overcoming the stereotype of technology being just for men. It began sharing the project idea with the local partners, engaged in target identification, area selection and studying the farming behaviour of the surroundings. Smartphones were not a common thing for females, though many had access, but did not own a button phone. Due to increased gendering of agriculture, taking care of fields was added to their list of responsibilities. However, it was the older male or the younger boys in the family who used to own the mobile phone in the family.

1.1.2 Smartphone Distribution and induction to the technology: In 2016, the phones were distributed in the community following trainings on Smartphone use such as introducing different functions of phone, internet use, creating social media profiles and how to maintain them. The trainings were conducted in four batches by professional trainers. With this PROTIC started the journey of innovation and change.

1.1.3 Understanding and getting familiar with the innovation: After the distribution and induction training of the Smartphone, there were different types of approaches identified towards innovation from our community members in terms of adapting new technology. In community meetings estimates of adoption to the three categories below was made:

- **Innovators (10%)**: Innovators were the first individuals to adopt the innovation. They are very social and friendly towards the innovation. Their risk tolerance was higher than others. This group of people started exploring the device and getting to know the new introduced technologies right after the training.
- **Early Adopters (30%)**: The second fastest category of individuals who have easily accepted the innovation, as an individual. They have the highest degree of opinion leadership who would try to convince those who were still confused or scared.
- **Late Majority (60%)**: This specific group of people were very afraid of using the Smartphone and new technologies. As they were quite sceptical and uncomfortable with the innovation, they would store those devices in the traditional metal trunk or locker in their village house. It took them some time to be convinced about the usefulness of new technology usage. They started to adopt after a lot people from their surroundings had adopted the innovation.

The community development staff also visited participants at home and provided friendly consultation to help them learning the use of the device. It took around 6 months for all the animators to learn the basic use of mobile phones, though of course, some were ‘early adopters’.

1.1.4 Exploring and getting used to Social Media (Facebook) and Knowledge Sharing Culture: By July 2016, all animators had their own Facebook accounts. Some have become active users sharing not only their family or activity photos, but also cultivation-related photos and text commentary. The extent of Facebook use and how it is understood by the community is subject to further study by Monash researchers.

They have started to use the other communication apps as well. Male members of their families temporarily migrate to other cities for better livelihood options. After our animators got to know that the Smartphone can be used to make video calls it was hard for them to believe that this was possible. However, when they were trained by our staff, they started to make calls to their family members and relatives in Bangladesh as well as out of
country (primarily India over the border). To exemplify the contribution of learning new technology to the daily lives of our animators, the following story came up:

One day one of our animators had to go to Khulna hospital for her son’s emergency treatment. Her son was suffering from anaemia and he immediately needed blood. She was not ready with the money for this emergency and had make a call to her family for the help. However, as she did not know how to read, she was unable to get the number from the contact list. Then the idea of video call came to her mind and she identified the person from the picture and made a video call for the help. And she was able to arrange the blood for her son. She says, “if I did not know about that type of use of mobile phone, I could not be able to save my son’s life’’ Animator, Barokupot Village.

In May 2017, all the animators received training on PROTIC apps, Bhutta (Maize) and PROTIC Krishi Sheba (Agricultural Services), and they installed the off-line apps on their mobile phones. This provided them with a positive experience of technical connection to something with immediate practical use. Using the Krishi Sheba app, they got to know the information agricultural and safety net facilities of local government institution. They learned about the eligibility and the requirements of different expert services and applied according to them for the services. The Krishi Sheba app was originally developed by a Monash University Master’s student remotely, with the feedback and support from WinMiaki, the project telco. We learned that developing an app remotely and in a different language takes huge time and effort and as well, when providing government-relevant information, there are inevitable bureaucratic delays. The community feedback on the development stage of app in such a process requires also careful attention.

Other apps which have been downloaded and used include new options related to agriculture, livestock, poultry and fish culture as required. They include the free apps provided by Bangladesh government like Krishoker Janala (Window of farmer), Krishi Projukti Vander (Agriculture Technology Storage), Manch Chash (Fish culture), Hans-Murgi Palon (Poultry rearing) etc. With the help of PROTIC staff, they downloaded and started using them.

As an example of use, animators have identified that seven older individuals in one village were eligible to apply for adult allowance for aged people, and they applied accordingly and were supported by the safety net in the year 2018. 20-25 animators have involved with “Kormo Srijon’’ activity of Union Parishad (local government) for 40 days from December 2017 to January 2018. This work opportunity takes place twice a year and the information is available in PROTIC Krishi Seba app.

Some animators have started to explore to innovations and better entrepreneurship options using the Google search engine. For example, in coast area the animators were trying to learn about saline resilient crop (for example, potato, brinjal, brittle), and applied those learning in their cultivation. Furthermore, we know from the Monthly Meetings that at least 70 animators searched for different things on Google (in Bangla) from the start of 2017 onward, as documented in the community development worker reports.

Some have started using social media (Facebook) for entrepreneurship. For example, two animators of PROTIC in Mushininganj, Shatkira, in the Sundarbans, now make boxes for pastry packets and sell them to shops in local and district level market. Earlier they had to go to Khulna for buying materials for making packets and for selling. Through this mobile phone, they add the shop owner and related business person in their Facebook account, share the photo and details of their products on Facebook and messenger, deal with buyer of sweet packets and send in according to their required quantity and quality. In this way, their customer and revenue both have increased. The grocery store owners are also their Facebook friends. This also represents a change in gender relations with strangers.
Because of the informational activity of the project, exposure to the adaptive agriculture advice and methods has arguably increased the agricultural production in the community. Earlier they could only grow things following the traditional timing and methods, but specific agro-meteorological information via the project has opened up new options for them to improve their agricultural production.

For example, in the southern coastal area, before the project, few of them were cultivating vegetables during winter. The percentage who did this was estimated by the villagers at only 10-15%, which has now increased to almost 60% because of on-time information through PROTIC. Nowadays almost 85% villagers cultivate vegetables when the rainy season is included the as they now know methods of cultivating vegetables such as sack cultivation, thermal cock or cork sheet cultivation, 3D methods such as trellises and towers or buckets that are fed fresh water from bottles or rain. They also are trying new organic methods to fight their climate vulnerability and they are experiencing success. This move to different types of vegetables for family consumption all over the year has implications not just for the availability of nutrition, but a variety of nutritional sources.

Through the project, there has not only been a change with vegetables and crops, there have been important developments in poultry rearing and aquaculture. It has been reported that this year, shrimp cultivators made much higher profits than in previous years. The mortality rate has decreased due to the available access to proper information about needed nutrition, diseases and proper medication. Earlier, due to virus attacks shrimp mortality in an enclosure was almost 100% and the community had to farm the shrimp again and wait for the next three months to see the result. Such a result is now unlikely because of the support of information from PROTIC, SMS and local fisheries. Shrimp mortality due to virus attacks is consequently reduced and farmers are not facing losses. The
situation was similar for poultry before 2017. There was a lack of awareness and information about. For instance, if a chicken had died due to ranikhet disease (Newcastle disease), carcasses were just thrown away, including being disposed of in the river. Other ducks and chickens were consequently affected by the virus.

In 2017 PROTIC started to deliver SMS messages about duck and chickens, causes of diseases and measures to prevent and cure the disease. Animators received the information and started to take preventive measures following that information and instructions. Along with that, animators received a highly-successful training on vaccination for poultry and livestock, pictures of which were also put on Facebook. Some of the animators gained high level of expertise now and are called upon to vaccinate other villagers’ poultry and goats. Along with vaccination, animators now practice closed and safe disposal of dead chickens and ducks. As a result, viruses or germs cannot affect other chicken and ducks. The rate of poultry mortality has decreased in 10% within a year.

Almost all the animators are earning now earning 3000-4000 BDT (USD40-50) a year by rearing poultry in their courtyards and adjoining village areas. Two animators now have poultry farms and are conducting poultry business with the support of PROTIC information. There has also been another flow on effect -- a non-animator community member from neighbouring village, established a poultry farm following PROTIC information services with the assistance of one of our animators She is calling herself as a successful business woman.

1.1.5 Adding “Value” to the Innovation: From 2018, to get a better effective advisory service, PROTIC has generated content based on the feedback from the community in a monthly basis. Changes are not confined only to our individual animators. They are working as a collective knowledge hub for their surroundings where they provide their neighbours advice and technological support in their crisis. PROTIC is also collaborating with different actors to encourage innovation and consequently, policy actors and our community members are connected through the technology. However, there is also an awareness of the need for the right information to be provided, to ensure that there no one gets harmed or crops or stocks damaged because of the recommended solution. As examples, information must be attuned to the particular weather conditions or availability of chemicals or other treatments. During content development, information from the core production location used, but we found that using this information can create loss of crops as due to weather fluctuations and foliage time variations in other locations. As an example of information that did not fit local needs, PROTC developed content on mango care based on the major mango zone of Bangladesh but the calendar for various actions was late by more than a week period in the coastal area. This can cause losses to local farmers who have put their trust in electronic information. It also causes an immediate lack of trust in electronic information. Such problems need to be guarded against assiduously.
2. TRANSFORMED PRACTICES

2.1 ECONOMIC EMPOWERMENT:

2.1.1 Earning Sources of Animators: In terms of agriculture cultivation, there is a variation of crops in three different working areas of PROTIC. To understand the local contexts of crop cultivation, livestock, poultry rearing, fish culture and other occupation, the following tables indicates the earning source against the number of animators. Data was collected through Monthly Meetings and other partner surveys.

<table>
<thead>
<tr>
<th>Crop Cultivation</th>
<th>Maize</th>
<th>98</th>
<th>Paddy</th>
<th>67</th>
<th>Chili</th>
<th>54</th>
<th>Peanut</th>
<th>19</th>
<th>Homestead Vegetable gardening</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish Culture</td>
<td>Livestock and poultry rearing</td>
<td>Cattle</td>
<td>76</td>
<td>Goat</td>
<td>27</td>
<td>Chicken</td>
<td>76</td>
<td>Pigeon</td>
<td>03</td>
<td></td>
</tr>
<tr>
<td>Onion</td>
<td>16</td>
<td></td>
<td>Potato</td>
<td>14</td>
<td>Wheat</td>
<td>31</td>
<td>Garlic</td>
<td>08</td>
<td>Ginger</td>
<td>06</td>
</tr>
<tr>
<td>Kaun (one kind of rice)</td>
<td>06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Figure 1: Timescale of Innovations. Note. PROGYA is the associated website/knowledge base to be developed in the future.
2.1.2 Land ownership of crop cultivation: The report of the income survey of PROTIC animators by the project NGO partners shows that there were 89 animators in Char land, 100 animators in coastal area, and 71 animators in Haor area (ownership is mainly in their husbands’ name), and they have ownership of the land they cultivate. The lower number of animators having land in the Char and Haor is also due to landlessness and different systems of land tenure as discussed under 2.1.3. All the animators do not own same amount of land. The following table, and those in other sections below provide a glimpse of the amount of land is owned by of people as well as their agricultural practices. Such information, at the micro-level, is important for the development of future value-added information apps and information.

Note: One decimal = 1/100 acre, which is around 40 square meters.

2.1.3 Crop cultivation in others land: In Haor area, farmers who do not have their own land usually lease land, and in return the yield is divided equally among farmer and land owner. In the coastal area and Char area it was reported that for a person who does not own any land or want to take land from other for cultivation there are three ways of renting land: contract, mortgage, and lease.

i. Taking land in contract: In Char land, 3000 BDT per 1 bigha (a traditional land measure of 1333 m²) land must be given to the land owner for one season (six months). This money is

<table>
<thead>
<tr>
<th>Table 1B: Major crop cultivators In Coasts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paddy, shrimp, fish, crab cultivation, poultry (duck and chicken), and livestock (Cattle and goat) rearing</td>
</tr>
<tr>
<td>Shrimp, fish, crab, vegetable cultivation, poultry (duck and chicken), and livestock (goat and ship) rearing</td>
</tr>
<tr>
<td>Shrimp, fish, crab cultivation, poultry (duck and chicken), and livestock (cattle and goat) rearing and work as day labourer</td>
</tr>
<tr>
<td>Shrimp, fish, vegetable cultivation, poultry (duck and chicken), and livestock (goat) rearing, tailoring, and sweet packet making business</td>
</tr>
<tr>
<td>Shrimp, fish, vegetable cultivation, poultry (duck and chicken), and collecting shrimp fry from the river beside their home</td>
</tr>
<tr>
<td>Paddy, vegetable cultivation, poultry (duck and chicken), and livestock (Cattle and goat) rearing</td>
</tr>
<tr>
<td>Vegetable, fish cultivation and poultry (chicken) rearing</td>
</tr>
<tr>
<td>Vegetable and crab cultivation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 1C: Major crop cultivators In Haor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop cultivation</td>
</tr>
<tr>
<td>Livestock and poultry rearing</td>
</tr>
<tr>
<td>Others</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2: Land ownership of the PROTIC Animators</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROTIC-Char land</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>20-30 Decimal</td>
</tr>
<tr>
<td>31-50 Decimal</td>
</tr>
<tr>
<td>51-75 Decimal</td>
</tr>
<tr>
<td>76-100 Decimal</td>
</tr>
<tr>
<td>More than 100 decimal</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
</tbody>
</table>

Note: One decimal = 1/100 acre, which is around 40 square meters.
not returnable. In the coastal area, 6000-7000 BDT per 1 bigha land must be given to the land owner for one year. Additionally, the contract between farmer and land owner is for at least three or five years. That mean for one year no farmer can have a contract to take land for cultivation with a land owner.

ii. **Mortgaging land:** In Char land, 80,000 BDT per one bigha land must be given to the land owner for mortgaging. The land will be cultivated by the farmer as long as the money is not returned by the land owner. In coast, the practice is same but the amount of paying once to the land owner is 40,000 – 50,000 BDT.

iii. **Leasing land:** In Char land and coast, the land owner will give his/her land to the farmer who want to cultivate, and the condition is that the yield will be divided among land owner and the farmer equally.

### 2.1.4 Technology adaptation in cultivation

According to an income survey done by the partner organisation, all the animators in Char land and coastal land have adapted PROTIC information to cultivation in different ways. As these areas are very vulnerable to climate change traditional farming techniques are not that helpful, and the community needs adaptive farming technology such as mobile-phone based information and applications. 93 animators (who have participated in the survey out of 100) 86 animators have adapted information provided by the in their crop cultivation though seven animators have responded that they do not use modern technology in their cultivation. The responses animators have shared about adaptation have given below.

<table>
<thead>
<tr>
<th>PROTIC-Char</th>
<th>PROTIC-Coast</th>
<th>PROTIC-Haor</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Line method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Using of poison trap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Spreading ash and kerosene</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Bedding method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Making Seed bed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Vegetable cultivation in 3D method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Mulching method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Cultivating sweet pumpkin by spreading polythene under soil ground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Bagging method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• For vegetable cultivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Use saline resilient technologies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Cock sheet cultivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Spreading polythene under soil ground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Clay pot cultivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Tower method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Sack cultivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Using organic pesticides (boiling water with neem leaf and spreading it on the vegetable, mixed extract of mahogany fruit with water and spray on vegetable, detergent mixed water spraying, Gul (one kind of tooth powder usually use as drug) spraying, spraying ash and kerosene)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• For Paddy cultivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Power tiller</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Light trap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Making sitting place for birds inside the paddy field</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• For poultry rearing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Using ash and fungicide in poultry shed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Regular vaccination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Use of Calcium and wormwood medicine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Covering dead domestic animal and poultry under soil.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• For shrimp culture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Regular applying lime and geo-light into enclosure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Use of fertilizer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Applying mixture of chitagura, east powder, and polish.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Bucket cultivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Line method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Sack cultivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Bedding method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Making seed bed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Tower method</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Monthly Reports have established that the learning source of these technical innovations was mostly via PROTIC services—SMS, OBD and call centre in three working area. Some of women from PROTIC-Haor shared that they also got to know about some of the technology from other farmers of the village, and from other NGOs, or via discussions in the Monthly Meetings.

Animators of PROTIC-Char area have shared that they cultivate rice paddy two times in a year (Amon and Boro), maize once in a year and vegetable cultivation is about all round the year. In coastal area, 24 animators cultivate paddy once in a year and three animators cultivate paddy twice in a year. Vegetable cultivation has been reported maximum, among 100 participants, 9 family cultivate vegetable once in a year, 22 twice, and 69 family cultivate three times in a year. In terms of shrimp cultivation, 57 families start shrimp cultivation in February and goes on till December. 31 animators had reported that from December to April they cultivate crabs. All the animators who have participated in this survey in PROTIC-Haor have shared that they only cultivate crop once in a year.

<table>
<thead>
<tr>
<th>Area/Year</th>
<th>2012</th>
<th>2015</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROTIC-Char</td>
<td>Paddy 1 Bigha =5-7 mon (Amon)</td>
<td>1 Bigha =5-8 mon (Amon)</td>
<td>1 Bigha =6-10 mon (Amon)</td>
</tr>
<tr>
<td></td>
<td>1 Bigha =15-20 mon (boro)</td>
<td>1 Bigha =15-22 mon (boro)</td>
<td>1 Bigha =16-25 mon (boro)</td>
</tr>
<tr>
<td>Maize</td>
<td>1 Bigha =8-12 mon</td>
<td>1 Bigha =10-15 mon</td>
<td>1 Bigha =20-30 mon</td>
</tr>
<tr>
<td>Vegetable</td>
<td>12 female farmers are involved with homestead vegetable gardening</td>
<td>20 female farmers are involved with homestead vegetable gardening</td>
<td>100 animators are engaged with homestead vegetable cultivation all round the year.</td>
</tr>
<tr>
<td>Livestock</td>
<td>Cattle = 1-3</td>
<td>Cattle = 1-3</td>
<td>Cattle = 1-7</td>
</tr>
<tr>
<td></td>
<td>Goat = 1-2</td>
<td>Goat = 1-3</td>
<td>Goat = 1-6</td>
</tr>
<tr>
<td></td>
<td>Duck = 2-20</td>
<td>Duck = 2-15</td>
<td>Duck = 2-200</td>
</tr>
<tr>
<td></td>
<td>Chicken = 2-10</td>
<td>Chicken = 2-8</td>
<td>Chicken = 2-25</td>
</tr>
<tr>
<td>Spice crops</td>
<td>Three were engaged with spice cultivation</td>
<td>10 female farmers were engaged with spice cultivation</td>
<td>It has been reported that 55 animators cultivate spice (chili, coriander, black seed, ginger, onion, garlic, and turmeric)</td>
</tr>
</tbody>
</table>

1 Bigha = around 3 acres, 1 mon = 37.3 kilogram.

Animators of from the Charland area have said that initiatives from PROTIC have helped them to increase their yield rapidly. Via consultation with experts in agriculture and livestock through the call centre, information about the following matters has occurred: flood resistant crop varieties; use of the Krishiseba app; regular communication with fertilizer, seed company and dealers, regular weather forecasts, regular communication with local agriculture officer. All this, resulting in the use of modern agriculture techniques has made a demonstrable contribution to active and strategic innovation by the women. Due to floods in the past, it was common to lose the entire paddy crop. Due to PROTIC information services losses have now turned a profit because the women have learned to deal with adversity and diversify their agricultural activity. They can now they can send their children to school, can repair their houses, can afford basic health treatment, and even save money. In a nutshell, their overall wellbeing is being assured.

There has also been an interesting social effect because of the project. The social norm is that women are not allowed to go to market to see anything at all. Now, wholesale buyers come to their village and buy vegetables and other crops from female cultivators who have a surplus. Additionally,
from the Monthly Meetings we know that that 58 animators go to local market for selling their surplus. Animators have also acknowledged that, along with PROTIC there are several NGOs who have contribution to make the changes happen in their life.

**Additional Comments (Larry Stillman)**

The comments below are relevant to future research publications, but they are relevant to understanding the context of the paper that was presented above.

- Participatory Action Research

At first, it was assumed by the project team, as part of its original conceptualization of the process of participatory action research (PAR) as core to the project, that it would be a simple matter for the community-based organisations in the spirit of participatory action research and interpretive research (Walsham, 1995), to hold self-directed meetings with the support of the community workers to discuss the effects of the project. Trainings were held in the first year of the project to encourage the adoption of PAR. Indeed, because there was a history of PAR in Bangladesh going back to the 1980s, it was assumed that this was a living tradition and form of practice. However, this idea of PAR is easier said than done in the current environment of NGO operations in Bangladesh and other countries which have been strongly affected over the years by tight forms of managerialism and accountability requirements which stifle innovation and bottom-up capacity. This issue has been discussed by several writers (Karim, 2014; Lewis, 2016). Consequently, innovation and transformation of the relations of information production (which the project aims for) are easier said than done within the current NGO environment in Bangladesh. From a more theoretical and philosophical perspective, drawing on the work of Heim it can be suggested that the ‘logic’ of managerialist thinking combined with a computing mindset has imposed a kind of calculative ‘Enframing’ on the ‘participatory ambiance of oral culture’ (Heim, 1999, p. 60) to restructure in what is supposed to be a local form what exists as back-and-forth, day-processes, often conducted via talk. Such talk often drawing on customary ways of describing or explaining the world and does not always move along in a logical fashion.

Thus, a high level of autonomous self-directed PAR proved impossible to achieve in practice because organisations are subjected to directed forms of project management and as well as politically important ceremonial or symbolic activity to impress funders which appears to restrict spontenaiety (Noir & Walsham, 2007). The community workers in particular required a specific protocol to work to. The result of this need for direction resulted in a quite specific protocol to be followed by the local NGO workers and the local community organizations, as outlined on page 2 above in order to obtain information about (1) the content of the digital advisory services, (2) the adoption of advice, (3) diversification of the use of the Smartphone, (4) influence on the local development actions, and (5) policy intervention and cohesion (blending with the scope of existing policies).

Once this protocol was achieved, the workers were able to document in a written form, more specific reports along traditional lines, primarily in Bangla, and these have been used to develop the consolidate article as outline above. Of course, these reports only provide, filtered through the particular lenses of the workers, a partial picture of what has happened in the community and these individual reports or community-managed surveys have then been consolidated by Oxfam, working through its particular lens. In addition, these meetings were recorded and are now being analyzed by the project team. Such ‘real time’ data, will likely prove invaluable in providing deeper insight into what was actually said by the village women. Of course, the ‘truth’ of what they say also depends on the degree to which they are prepared to tell their story, and this is a problem with any form of research in the field where factors such as power relationships, or fluency can effect what is said and how it is said.

In an ideal world, with sufficient time and resources, it may have been possible to engage in a much deeper and long-term ethnographic approaches to explore, but this was beyond the capacity of the project, particularly with it being so geographically spread out, between isolated villages, the local NGOs, Oxfam in Dhaka and Monash researchers in both Australia and Italy. And of course, the
villagers’ world is conducted in the Bangla language and often dialect versions of it. This world in turn, is interpreted by the Oxfam staff for the Monash researchers with an inevitable loss of authenticity in data provided. However, it is hoped that PhDs students attached to PROTIC will be able to take up some of these issues in much more detail.

- Indigenous Knowledge and the problem of documentation, Orality and Literacy

“Indigenous knowledge (IK) is any understanding rooted in local culture. It includes all knowledge held more or less collectively by a population that informs interpretation of things. It varies between regions. It comes from a range of sources, is a dynamic mix of past ‘tradition’ and present invention with a view to the future” (Paul Sillitoe, 2006, p. 1)

Very often, indigenous knowledge is expressed in the first instance orally, and it is reprocessed and reordered according to Western concepts of knowledge. Heim, basing his ideas upon Heidegger’s reflections on technology (Heidegger, 1977) and Ong’s reflection on orality (Ong, 1982), thinks of the computer or word processor in particular as working to make humans engage in the “reduction of the metaphysical powers of language to a single aspect of information management” (Heim, 1999, p. 72)

Consequently, as the community absorbs or domesticates Smartphones into everyday life, they become part of an ecology of indigenous knowledge transmission that is increasingly “enframed” (Heim, Heidegger) in a Western way of seeing and ordering the world. From a Monash perspective, had also been hoping that the community development workers could be able to take a more ‘ethnographic’ approach to their work, documenting in writing, or even phoning up Oxfam to report events or activities of relevance to the project outside of the Monthly Meetings. Even though the community development workers were asked by OXFAM and Monash to try to be as open and transparent as possible and let the community speak following the PAR principles. We were probably expecting too much of the community workers, who are not at all trained in a more open and reflective kind of writing, as distinct from “pre-set” accountability reports in a combination of Bangla and institutional English when necessary. Furthermore, there is still a natural power dynamic which can hinder transparent opinion sharing or even reporting that appear critical in the eyes of their employers or even some in the community. This is even though the community development workers are well acquainted and experienced enough in their communities and there is a considerable amount of trust in them by the villagers.

There are of course, potential ways around this problem. One way would be to engage in much deeper, long-term research of an ethnographic type. We can see, for example, that the raw data about agricultural practice outlined in Section 2 above is fairly meaningless to the outside researcher, particularly a researcher interested in sociotechnological transformation. In fact, it reflects the bare bones of recording an indigenous knowledge base, and its skills and productive changes, but it is inadequately reflected in tables of data alone. Crop or fish and shrimp management are of basic importance to the livelihood and well-being of the community, but translating this indigenous knowledge (literally and figuratively) into some form of logic-driven information and knowledge network or app is no easy task. An enormous amount of this knowledge (and skill) is tacit, and often hard to articulate in any form other than by using the tools and learned skills (ask a traditional carpenter to tell you how he builds a boat). The “extraction” of information out of its cultural context, particularly in the case of traditional village life with its structuring by reason of kinship, gender, caste, wealth, and other factors, is fraught with not just ethical, but the problem of meaning: “background and context are crucially important to the understanding and interpretation of human activity systems...and this principle lies behind the holistic rather than reductive approach taken by anthropologists to field data” (P Sillitoe, Dixon, & Barr, 2005, p. 88).

Sometimes in fact, we have found only by accident, though conversation, of a particular incident or circumstance in the project that is of research interest. It is impossible to document everything of relevance, and certainly to expect local community development workers with a lower skills base to ‘think’ as academic researchers. Yet the long-term presence (and in most cases, researcher capacity to work in the local dialect of Bangla) is probably impossible, and this will probably continue to inhibit aspects of research.

As a compromise in all of this, we have asked that the Monthly Meetings be recorded, in the hope that the ‘raw conversation’ can be analyzed though the assistance of our students and others,
using a framework drawn from the literature on technological transitions, examining three key issues, first, the voicing and shaping of expectations and visions of technology, second, the building of social networks, and third the social learning processes “a process by which multiple actors interact and develop an alternative perspective on reality” (Raven, Bosch, & Weterings, 2010, p. 65), a process that is undertaken in appropriating information and a new technical tools.

- Insidensor Outsiders

There are some things that few outsiders to Bangladesh will never understand well enough-to make independent project related or design decisions on sociologically “thick” and complex sociotechnical interactions. Community-based research may be easy to criticize from a university research perspective, particularly since it does not meet methodological ideals. It ultimately depends on the aggregation of information at a community level and its interpretation and aggregation into English. Yet in the absence of any other means of discovery, we deal imperfect information as best as we can. Of course, this problem extends to all sorts of work in international development in many countries.

Thus, more than ever, the complexities of gaining full and ‘true’ understanding of what happens in a community and how a community understands ICTs are bound up with orally-communicated understandings. The details of some stories are hard to understand at times, but are incredibly important for the life and well-being of the villagers, even though they may not appear to be immediately connected to ICT issues. As well, what we hear from Oxfam is very much localized within their own understanding/s of the world, some of it quite tacit and not always elucidated. It is their indigenous knowledge and experience that comes into interaction with the potential of ICTs (much the same as us), but developing ‘mutuality’ is incredibly difficult particularly when a range of different stakeholders are involved with very different interests (for example, ‘values’ in design, or user-interfaces). These cross-cultural issues are very familiar to the world of social psychology or cultural anthropology, but less so when one is directed towards other knowledge outcomes or the production of other things such as artefacts. Thus, much as we may struggle with the ‘natives’ point of view’, they (in a village) may also struggle with how to perform and what to tell and how to understand these strangers (Geertz, 1974).

These diagrams below are derived from the work of Sillitoe and they share something in common with other representations of the problem of knowledge between different players. Here, Sillitoe has located them in the development context. Here, I have modified them for PROTIC adding in for Monash, Oxfam in Bangladesh, Monash research students, local BD researchers, and the communities and the NGOs themselves.

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However, Sillitoe sees this representation as inadequate, as it lacks a multilevel and multidimensional and multi-agentic approach that avoids linear and ‘causal’ interpretations or under or overvaluing of particular perspectives in approaching a problem such as artefactual design. Instead, "we think in terms of meridians on a globe, each representing a different domain of knowledge, which allow us not only to cover variations in knowledge according to disciplines at the science pole and life experience at the indigenous one, but also to..."
accommodate any cultural domain (e.g. according to religion, politics, economics etc.), complying with anthropological holistic demands.

We do not have to envisage the meridians arranged like lines of longitude, all crossing at the same two polar points. We can arrange them randomly about the globe, obviating any tendency to depict knowledge hierarchically.

The globe represents an interaction domain, which may be variously defined (e.g. geographically [e.g. as a local community], institutionally [e.g. as a development agency] or academically [e.g. agricultural science]). We can plot within it the positions of individuals who interact within the domain, according to their knowledge of meridian issues. The meridians act to pull them into a certain location, in effect locating individuals for a range of continua, in their knowledge/culture cluster”

It is hoped that an analysis that is conscious of these ‘meridian dynamics’ though different theoretical lenses will yield richer data about the project dynamics and sociotechnical relations, rather than the more filtered and summary data as found in the consolidated Monthly Reports. Of course, we are working on the assumption that the recordings will in fact reflect an open conversation, in tune with what we assume to be the more free-flowing and informative discussion that will occur. We thus need to be careful in engaging in idealistic truth claims or simplistic -privileging of indigenous knowledge over Western methods of explicating truths (Briggs, 2013)

References


Abstract There are three models for community archives in China: the first one is where community archives are kept in government-funded/established museums or archives. The second is where community archives are kept by scholarly organizations such as universities. The third involves the community establishing its own archive. This model is very unusual in China. The PiCun Culture and Art Museum of Migrant Labor (PCMML) provides an example of this model as it is the only independent community archives focusing on migrant workers in China. This paper explores the emergence and development of this independent community archives, its impact on community members, and challenges faced including funding and staffing but also those unique to China--PCMML is greatly influenced by a range of national and local government policies and regulations. Conclusions are that survival strategies for independent community archives in China are dependent on three dimensions: the community itself, society and the government. Cultural consciousness of the community is the premise for the establishment and sustainability of independent community archives, and independent community archives can be the public space to cultivate cultural consciousness of community members and thus activates community members’ agency to document, preserve and disseminate their own history. At the same time, independent community archives also need to engage with broader society to avoid involution and gain support and understanding. Independent community archives are constrained by government policies and regulations, so it is essential for them to develop strategic relationships with government.

Key words community archives, cultural consciousness, migrant workers, farmer workers

Introduction

There are three models for community archives in China. The first of these is for community archives to be kept by government-funded/established museums or archives, such as the Guangzhou Farmer Workers Museum established by Guangzhou Municipal Government, and The Memorial Hall of the Victims in Nanjing Massacre by Japanese Invaders, founded by Nanjing Municipal Government. The purpose is mainly to preserve and transmit specific history or cultures, and many of these archives or museums also serve as the basis for patriotism education. Appraisal decisions (what needs to be collected and preserved) are made by the government museums and archives. The second model is for academic institutions to develop a community archive, for instance the Sex Slavery History Museum established by Shanghai Normal University. The primary purpose is for historical research, but these archives can also serve as tools for social justice. The third model, and the most
unusual in China, is for a community to establish their own archives. The purpose is to preserve the community’s own history, to be able to tell their own stories in their own voices from their own perspectives.

The PiCun\(^1\) Culture and Art Museum of Migrant Labor (abbreviated as PC MML throughout) provides a clear example of the third model. It is the only independent community archives for migrant workers in China. This paper examines the emergence and development of PC MML, considering the motivation of its founders, the impact on community members and social structures as well as the challenges faced. It begins by explaining the terminology used, and continues with a review of the case study literature of community archives. This is followed by the case study of PC MML, and identification of sustainability strategies for independent community archives. The conclusion warns of an uncertain future for independent community archives in China.

**Terminology**

There are several terms including farmer workers, migrant workers to refer to the people whose Hukou\(^2\) are in villages but who work in cities (see Feng 2017 for discussion of identity issues of this category of individuals relating to archives). The term “farmer worker” was first proposed in China by Professor Yulin Zhang (1984, pp 286-296) and now is comprehensively used by governments, media and academics. For example, the National Bureau of Statistics of China issues the Monitoring and Investigation Report on Farmer Workers annually, and these reports use the term “farm workers” for the laborers whose Hukou are in rural areas while who have been doing non-farm related jobs for over 6 months (inclusive) either locally or elsewhere\(^3\). But recently, this term “farmer workers” has been questioned by more and more scholars and the community members themselves. As Wen & Tian (2017) argue, the term “farmer workers” is a stigma constructed by the body, discourse and power, implying that these people are neither farmers nor workers, thus forming the ternary social structure: farmers--farmer workers--residents in cities, and then preventing farmer workers who have been living and working in cities from being included in cities and from having the same rights as the residents in cities. This label (farmer workers) treats farmers as an identity rather than an occupation, thus eliminating them from the protection of many current systems. Meanwhile, members of the community are also reflecting on the labels imposed externally on them. PC MML organised a workshop to examine the terms used in government policies or dominant reports concerning them. “Farmer workers” is one of the terms that they regard to be discriminatory, so they call themselves migrant workers or new workers instead.

Therefore, this article adopts the term “migrant workers” rather other the term “farmer workers”. The term “migrant workers” describes their migrant status from their hometowns to

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1. Picun is a village located in Caoyang District, Beijing, where there are 30 000 migrant workers living due to the cheap rent there.
2. Hukou is the household registration in China. According to the Regulation on Hukou Registration of China issued on January 1958, Hukou consists of the rural Hukou and the urban Hukou. The Hukou system constrains the migration of people, and is helpful for government to implement localized management of people.
other places, but it emphasizes that these people’s occupations are just like other workers whose Hukou are in cities, so they deserve to be treated equally. While, the term “farmer workers” is not absent from this article, as mentioned earlier, this term is still commonly used in government policies, media reports and academic articles (for example, see Xie et al 2017).

**Community Archives in the Literature**

Literature discussing the definition, development and impact of community archives has increased in recent years (e.g. Flinn 2007; Flinn et al 2009; Stevens et al 2010; Bastian and Alexander 2009; McKemmish et al 2011; Gilliland 2012; Cook 2013; Wurl 2005; Caswell 2017, 2018). The definition of community archives proposed by British scholars Andrew Flinn and colleagues (2009) is widely accepted, namely that community archives are the collections of material gathered primarily by members of a given community and over whose use community members exercise some level of control.

In this paper, our focus is on the literature presenting case studies of community archives. Community archives in different countries have unique features and characteristics, and we can see various landscapes of community archives from these case studies. Andrew Flinn and colleagues (2009; 2010) used ethnographic methodology to explore the motivations, activities and meanings of some independent community archives in the UK. These papers mainly focus on the impacts of independent community archives on mainstream marginalization and on the construction of identity and the relationship between community archives and mainstream archive and other heritage professionals, while pointing out that one of the challenges for the long-term sustainability of a community archive is to find a mechanism and a structure which can sustain the organization beyond the participation of the key founding individuals, and the relationship between sustainability and autonomy needs to be dealt with delicately. Caswell (2014) explains the motivation for and subsequent development of the South Asian American Digital Archive (SAADA). She contends that independent community archives are crucial tools for fighting symbolic annihilation of historically marginalized groups, and the roles of community archivists are not just archivists, but activists who see the past as a tool for empowering communities to work toward a more just future. She also points out that fundraising is the most significant challenge for SAADA, and the need for a long-term and sustainable fundraising strategy. In the case study of JANM (Japanese American National Museum), Paschild (2012) also points out that JANM is facing a fiscal crisis, because on the one hand, JANM still focuses on identity, and its funding model is largely tied to the community that helped establish it, but the demographics of the Japanese American community have transformed over the last several decades. The historical narrative of a Japanese American community rooted to the immigration wave of the early twentieth century and galvanized by the internment experience might no longer resonate with younger generations of Japanese Americans who increasingly identify as multiracial and Asian American. Also, professionalization has promoted JANM as world class, but it leads to its far-reaching menu of programming and services and the perception that the Museum has left behind its grassroots and community-based origins. Paschild argues that JANM should not focus on identity any more. This strategic dilemma is not only a big challenge for JANM, it may also be the challenge for many community archives. Sheffield (2015) also points out that the dilemma is one of the challenges community archives have to face when she delves into
the emergence, development and survival of four lesbian and gay archives in North America. In addition, she contends that these community archives have to grapple with resource constraints, and changes to the socio-political environments that influence the social movements from which they emerge. Sheffield concludes that these community archives have survived because they have responded to changes in the political opportunity structure and maintained clear visions about the purpose and power of their archives.

The emergence and development of community archives in different countries are rooted in different social structures, but the impetus for these independent community archives is similar. The impetus for such projects arose from a range of motivations but in general all were responding to the desire to document, record and preserve the identity and history of their own locality and community (Flinn et al 2009). Community archives face some common challenges, but they may also be facing some unique challenges, therefore they need to develop their own specific survival strategies. This paper aims to enrich the landscapes of independent community archives around world by presenting the case study of PCMML in China, and thus contributes another cultural perspective to the theory of community archives which largely reflects Western democratic environments, and identifies culturally appropriate strategies for sustainability. It also aims to raise awareness among the Chinese archival community to the need to pay attention to the survival and sustainability of independent community archives in the period of social transition and digital transition.

The Case Study

The lead author conducted field work at PCMML in November, 2017, conducting unstructured interviews with two staff of the museum, and then undertaking semi-structured interviews with two co-founders and the two staff during Jan, 2018 to April, 2018. In addition, media reports related to PCMML were also consulted.

Caswell et al (2017) argued: “It is important to attribute quotations to interview subjects by name with their consent as a way of giving intellectual credit and to firm that knowledge is mutually and collaboratively constructed.” This paper identifies the co-founders and one of the staff by name with their consent, while the other staff interviewed wanted to be anonymous.

The two co-founders are Heng Sun and Duo Xu. Heng Sun was a music teacher in a middle school. In 1998, he left his hometown for Beijing, dreaming of becoming a singer. He founded the “Young Migrant Workers Art Troupe” with Duo Xu who also liked music, and had failed to enter university after finishing high school. They volunteered to sing for migrant workers in factories and construction sites. During this period, they had the idea of establishing a museum to record and keep the stories of migrant workers. In order to formalize the existence of the art troupe, they registered a nongovernmental organization (NGO) “Home of Worker mates” in 2002, and in 2008, thirty years after the initiation of reform and opening in China, they founded the museum.

Xiao Fu, one of the staff interviewed, formerly worked in Suzhou and during that time became a volunteer in an NGO for migrant workers. When PCMML was established in 2008 she was invited to join the staff. Although the pay was less than being a worker in Suzhou, she chose to work at PCMML because she thought it was more meaningful. The other staff graduated from Beijing Normal University. He had been a volunteer at PCMML since he was a sophomore, and he was touched by what the founders and other staff of PCMML were
Background to the foundation of PCMML

“Why did we establish this museum? Because we always see a few elites appearing in the mainstream media and history, but the voice and the culture of the laborers who have made a great contribution to the development of the society cannot be heard and kept. In addition, we think we cannot hand over our culture to so-called professionals and elites, because they will not speak for us. So why cannot we ourselves record our own culture? History needs to be recorded in some media to become archives and other visible things so that it can be transmitted to the future generations. Without this kind of history, even if we create history, we cannot enter into the history…..Nowadays, technology enables the laborers to record their own culture, their own history, so we want to establish our own museum to record our history.”

These words were spoken by Heng Sun. They show that the motivation of this museum is to record and preserve migrant workers’ own history, and they do not want to be silent or to be represented by others. This motivation is highly consistent with that driving some communities to establish their independent community archives in Britain “Reacting to these absences and the widespread perception of a lack of interest from or general mistrust of the mainstream heritage sector, some individuals and communities established their own archives…….The establishment of a community archive is, for many, a form of activism that seeks to redress or rebalance this pattern of privileging and marginalizing.”(Flinn et al 2009).

Migrant workers emerged with the policy of reform and opening in China. It has been forty years since this policy was initiated in China, during which time many farmers have left their hometowns and work in cities. They undertake the work that the local residents do not want to do and they have contributed significantly to the development of cities. However, the current systems (especially the Hukou system and the related employment and benefit systems) prevent them from being treated equally as the residents in cities, and various conflicts are as also apparent, such as the discrepancies between villages and cities, the uneven distribution of social resources and wealth. China is still on the way to the modernization and urbanization, and the top priority of Chinese government is to maintain social harmony, so governments have paid attention to the issues concerning migrant workers. Chinese governments have issued some regulations to address some of the problems concerning migrant workers. For example, under the supervision of the then prime minister Jiabao Wen, the State Department of China issued a notice in 2003 that requires governments to solve the problems of wage arrears that farmer workers should have received. Meanwhile, some mainstream media and some academics have also paid attention to the injustice and issues relating to migrant workers. However, the situation of migrant workers has not been improved or changed significantly. According to the 2016 Investigation Report on Farmer Workers issued by National Statistics Bureau, at the end of 2016, 2,369,000 farmer workers had not been paid appropriately4. Some of the stories about migrant workers have been reported in mainstream media, but these reports are just the tip of the iceberg, and disappear very soon, just as Ai and Wei observe, “How many fingers and legs of farmer workers does it

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cost to get the current social wealth? How many farmer workers suffer the pain of being away from their families? All of these cannot be seen by other people, because the mainstream media do not report these fully or the related supervision administrations restrain this kind of report that they regard as negative news.”

Recently, some farmer workers museums have been established by some local governments in China such as Guangzhou Farmer Workers Museum and Shenzhen Farmer workers Museum established separately by Guangzhou Municipal Government and Shenzhen Municipal Government. These museums just keep the records that the local governments think are important to show their achievements of reform and opening, while, the records documenting the real life that the migrant workers live in cities and the injustice they suffer are absent. After visiting the Guangzhou Farmer Workers Museum, Chanqun Ou, a female migrant worker said “I want to see some real things in the museum, but I do not see them……Maybe many years later, factories will not need workers to do work, the children at that time will think the history of farmer workers is beautiful, they will not know the fact that many of us lost their legs and arms in the factories.”

Among all of these voices, those of the migrant workers themselves are absent. They seem to have internalized the label of farmer workers and bear the injustice silently As Chen (2005) observes, they (migrant workers) talk about the people having city Hukou as “city folks”, and about themselves will say “we are farmer workers”. This signifies that they have accepted their identity of outsiders, and accepted their status and living situation in cities. They tend to explain the reality and the injustice done to them and remain silent by using the excuse “we are farmer workers”. Their internalization of the stigma and their silence will maintain and reproduce the inequality, resulting in intergenerational transmission of inequality and poverty (Gao 2013). The establishment of PCMML, therefore, is a form of activism for the community of migrant workers to tell their own stories, to make their voices heard, to make themselves visible, and to make their own history remembered, and then to change their own situation and the current social structures.

The Development of PCMML

With financial support from Oxfam Hongkong, PCMML was founded in 2008. The museum is located in a warehouse in Picun, Caoyang District, Beijing. Picun is a village where 30,000 migrant workers are living due to the cheap rent there. Heng Sun and other cofounders rented the warehouse and decorated it with the help of other migrant workers. The main reason they located PCMML in Picun is to emphasize its accessibility and services to the community of migrant workers, and the role of the community members as “host” to interested visitors rather than as passive subject (Paschild 2012). They first collected over 500 items from migrant workers all around the country by distributing leaflets, and now there have been over 2,000 items donated by migrant workers. Duo Xu explained that they collect all the materials and objects related to the life of migrant workers. Thus, the collections of the


museum include a very broad range of materials including all kinds of certificates such as temporary residential permits and household registration permits, tickets for not bringing or having a temporary residential permit, wage bills, letters, pictures, and paintings drawn by children of migrant workers and their school uniforms, as well as other objects. Each item tells a story about its owner. For example, there is a Decision on Administrative Penalty made to Heng Sun on October 29, 2002, because he did not have his temporary residential permit with him when he was checked by Chengguan, the urban management officers. Four months later, Zhigang Sun, a young migrant worker, was detained by the police and beaten to death for the same reason. All of these items together describe the life of migrant workers in China since the implementation of reform and opening policy, and thus construct their collective memory.

In addition, they encouraged the members to record their own lives using their mobile phones. They launched a program “Xiao Ma’s Story”, asking a worker to interview Xiao Ma, and record his life and work, and ask him to tell his story. They also initiated a workshop to encourage the children of migrant workers to record their life with camera and illustrate their life with painting. These stories and paintings are also collected in PCMMML. Therefore, they adopt a comprehensive collection policy, as Heng Sun explained: “We do not just want to represent troubles. We want to change the current situation. Recording history truthfully is the first step, and then we will strive to find solutions.”

The main function of the museum currently is to exhibit their holdings. The exhibition consists of five parts: the historical development of migrant workers, female migrant workers, children of migrant workers, NGOs for labors, laborers and living conditions of migrant workers. The exhibition has attracted more than 50,000 visitors and drawn attention from former Prime Minister Jiabao Wen and some famous scholars and journalists. In order to help more migrant workers to record and tell their stories in their own words and then to change their lives, the co-founders initiated a range of activities surrounding the museum, including establishing a library, a literary study group, a theater, a cinema room, an elementary school for children of migrant workers, and a college for training young migrant workers so that they can find employment in cities. Heng Sun said that “the community around PCMML is a platform where we (migrant workers) can communicate with each other, we can help and support each other. And for new generations of migrant workers, without the museum, the library, the theater and the other places, they have no places to go except drinking and surfing in internet bars after getting off work, the community can provide active and healthy activities for them, thus promoting communication and improving our lives.”

This platform has had a great influence on the life of many migrant workers. Yusu Fan, for example, a female migrant worker living in Picun, joined the literary study group and began to write her own stories. In 2017, she became well-known for her novel *I am Yusu Fan* which tells stories about her mother who is a farmer, herself as a nanny for a wealthy family in Beijing and her daughters who are the second-generation migrant workers. These stories reflect the social realities in China of the conflict between villages and cities, the living conditions of migrant workers and the social stratification in China. It is the voices from migrant workers themselves, and it is so shocking that not only Yusu Fan herself becomes well-known, PCMML has also become more well-known and attracted more attention across society.
However, PCMML is still facing many problems. Just as Rebecca Sheffield points out, any archival institution struggles with common issues: space, money, and expertise (Sheffield 2015). Similarly with PCMML, but in addition to these common issues, PCMML faces other distinctive challenges.

PCMML calls itself a museum. According to the Regulation on Museum issued by the State Council\(^7\) and the Guideline on the Foundation of Non-government Museum stipulated by the State Administration of Cultural Heritage\(^8\), establishing a museum in China should be reviewed and granted by provincial-level administration of cultural heritage, and each museum should meet the following requirements:

1. It should have fixed site, exhibition halls and storage place in conformity with the state regulations;
2. It should have sufficient funding to support its operation;
3. It should have a certain quantity of systematic collections and necessary research materials;
4. It should have appropriate professionals and managers;
5. It should have facilities, regulations and contingency plan to ensure the safety of the audience.

The regulation sets the same standards for government and non-government museums, which sets a very high bar for non-government museums because it is very difficult for them to meet these requirements. As a result of limited funding, PCMML cannot satisfy these requirements. Currently, PCMML rents the warehouse of Picun village for exhibition purpose, and it does not have any storage place which conforms to state regulations. The facilities of the exhibition hall are very basic, lacking equipment to control the temperature and relative humidity. Oxfam Hongkong had to stop sponsoring PCMML in 2017 because Oxfam is an overseas foundation and is no longer permitted to fund organisations on the mainland of China. The cofounders have developed strategies to earn money to support PCMML including opening stores to sell used clothes donated by other people, and building an orchard, but the profits are not enough to support the operations. There are three staff in charge of the museum, but they are not museum or archives professionals, there are no professional archivists managing the collection, cataloguing, undertaking appraisal or other archival tasks. Professionalization can promote the development of museums, archives and libraries, but professionalization in museum, library, and archives management, however, comes with an accompanying cost (Paschild 2012).

PCMML is technically at the preparatory stage; if it continues to fail to satisfy the requirements, it is at risk of being shut down by the administration. In addition, the survival of PCMML is influenced by a range of local policies. At the end of 2016, PCMML faced being expelled by the Picun village committee, though the land lease contract between PCMML and the landlord does not expire until July 31 2019, and the contract between the landlord and village committee expires in 15 years time\(^9\). The village committee complained that the land

\(^7\) Regulation on Museum, available at: [http://www.gov.cn/zhengce/2015-03/02/content_2823823.htm](http://www.gov.cn/zhengce/2015-03/02/content_2823823.htm) (access on 2 December 2017)


\(^9\) The land where PCMML is located belongs to Picun village committee, the village committee
rent was too cheap and they needed to pay off their heavy debt, so they needed to take back the land and to re-rent at a higher price. The committee intended to drive PCMML away by cutting off the power supply. Similarly, one year later, at the end of 2017, as a result of the fire at Daxin, Beijing which caused the death of 11 people, migrant workers who rented rooms in such villages as Daxin and Picun were forced by local governments to move out of these villages. The museum is facing the similar fate of being driving away from Picun, and under the current situation, where can the founders find a place like Picun to locate the museum in Beijing? If they cannot find a suitable place, what will happen to the museum?

**Sustainability strategies for independent community archives in China**

The ten years since the foundation of PCMML have shown the sheer difficulty of its survival. However, analysis of this case helps identify some sustainability strategies for independent community archives in China. As Giddens observes, human agency and social structure are in a relationship with each other. Structure constrains action or even determines it, while individuals always have some form of agency to transform a situation. An agent is able to act or influence the outside world or resist from such intervention (Giddens 1984, pp 5-26).

The case study of PCMML shows that the community of migrant workers executes their agency to found their own archives to preserve and disseminate their voices, and the archives then become a public space to activate more members’ agency to give their voices, and make the voices heard by the government and the whole of the society, and the whole society will also give voices for the community. Thus, their own voices together with the voices from the whole of the society will have an influence on the government and result in social transformation. It is clear that independent community archives are constrained by government policies and regulations. Hence, sustainability strategies for independent community archives in China are dependent on three dimensions: the community itself, the whole of the society and the government (see figure 1).

**The Community Dimension Strategy**

This strategy makes explicit the need to cultivate the cultural consciousness of the community, previous research has argued that cultural consciousness is the premise for the members of a community to participate in the preservation of their own memory……the intellectuals of a community can be the backbone in the activation of cultural consciousness. “Cultural consciousness”, as articulated by Xiaotong Fei (2005, pp 232), means that people who live in a specific culture shall have a thorough knowledge of their culture, knowing its origin, development, and significance.

The case study of PCMMML supports this argument. It is the cultural consciousness that motivated Heng Sun and Duo Xu to found PCMML and the library, the literary study group, the theatre, the cinema, the elementary school and the college; hence, PCMMML is not just a place to preserve and disseminate the culture and the history of migrant workers, it is also a public space where migrant workers can learn their culture and history, can learn how to
record and document their culture and history, and then cultivate their cultural consciousness and activate their agency. As Heng Sun said, “I did not know who I am before, and I felt very lonely. After doing all of these things (i.e. founding PCMML and other activities), I found my own identity—I am one of the workers community. I feel more confident and know more clearly what I want.” Xiao Fu also said, “I feel here is my home, I am willing to work here though the salary is lower than as a worker in factories, I think what I am doing is meaningful for myself and for other members of my community.” As mentioned earlier, PCMML held a workshop on the “New Workers Dictionary”. They used migrant workers and new workers rather than farmer workers to refer to themselves, which is a kind of self naming, implying the community has had subjective consciousness and cultural consciousness, they understand the politics of naming, and they realize the derogatory nature of the term “farmer workers”.

Therefore, it is the cultural consciousness that activates the community’s agency to record, document, preserve and disseminate their own voices, their own culture and their own history through the museum, the novels, the plays, and the songs, and thus their culture and their stories can be heard and be seen by the government and the whole of the society, and then influence their own life and the current social structures. Hence, cultivating cultural consciousness of the whole community is the premise for the foundation and sustainability of an independent community archives in China.

The Societal Dimension Strategy

Using a range of media to communicate and engage with broader society will motivate societal support and mitigate against involution. The concept of involution was developed by Clifford Geertz, drawing from the American anthropologist Alexander Goldenweiser, to explain cultural patterns that fail to evolve, becoming instead internally more complex (Geertz, 1968, pp 80-81). Chinese social scientists use this terminology to describe the phenomenon where migrant workers gather in the rural-urban fringe zone, slum and shanty towns, and are not integrated into city life even if they find jobs in cities, leading to their geographical and psychological isolation (Chu et al. 2014).

This phenomenon is mainly due to the Hukou system and other related social systems and the consequent injustice to migrant workers including realities of very low salary and no social insurance. Hence, they can only afford to live in those areas, and the differences in the discourse, dress styles and behaviors between urban and rural residents exacerbate the difficulty for migrant workers to integrate into city life. They tend to gather together in the areas where rent is low while the surroundings are very poor and few city residents live. This involution exacerbates the marginalization of the community. As Elizabeth Kaplan (2000) has noted, “History constantly reminds us that the reification of ethnic identity does not foster tolerance or acceptance; it constructs communities and then draws hard, arbitrary lines between them, creating differences and making them fixed.”

Picun is the kind of place where many migrant workers gather. PCMML chose to locate there because the rent is low and they can serve the migrant workers well, but it does not mean that the operation of PCMML has to depend solely on the community. For many independent community archives, their communities cannot provide enough financial and professional support for them. They have to reach out to get support from the whole of the society, which will help them overcome the current challenges they are facing and also help them avoid involution and to exert influence on current social structures. PCMML has used
many kinds of media including the internet, Wechat\textsuperscript{10}, Weibo\textsuperscript{11} and newspapers to disseminate their stories and draw attention from society. This has been beneficial: at the end of 2016, when PCMML was faced with the risk of being driven away from where it is located by the Picun village committee, the news was disseminated on Wechat by the cofounders, and then several mainstream media reported the news, drawing a lot of attention from other aspects of society. Within one day PCMML received the donation of 71,072.42 RMB, and then the village committee announced they would comply with the contract and restored the electricity. Similarly, in July 2017, PCMML initiated fundraising on the Tencent fundraising platform Tencent LeJuan, and the news was disseminated by Wechat, Weibo and via the internet. Within one and half months they raised 244,018.73 RMB mainly from individual donations to support one-year’s operation of PCMML\textsuperscript{12}. In addition, PCMML has also attracted many volunteers including undergraduate and graduate students who can provide some professional support for this museum.

Currently, China is in the process of acute social transition and digital transition. According to the 41th China Statistical Report on Internet Development issued by CNNIC in January 2018, till December 2017, there were 0.772 billion internet users in China, 87.3% of them used Wechat, 64.4% used QQ, and 40.9% used Weibo\textsuperscript{13}. People can access and disseminate all kinds of information online. Meanwhile, the value and the social psychology of Chinese people have also changed and presented binary features including the gaps between ideality and reality, the contending between tradition and modernity, confrontation between villages and cities, and co-existence of negativity and positivity (Zhou 2013).

Forty-year reform and opening have created a large number of social wealth, but it also engenders a range of consequent injustice which have been paid attention and reflected on by the whole society during the recent years, therefore, the issues on marginal or vulnerable communities can easily arouse social sympathy. Independent community archives in China like PCMML, therefore, can draw social attention and support by adopting all kinds of media especially the social media, and thus avoid involution and keep survival and sustainable.

### The Government Dimension Strategy

For community archives to survive, it is essential to develop strategic relationships with government. Currently, the Chinese government has ambivalent attitudes towards independent community archives like PCMML. On the one hand, the Chinese government urges to build a harmonious society\textsuperscript{14}. Thus, for the government, independent community archives like

\textsuperscript{10} Wechat is an APP developed by the Tencent, a leading provider of Internet value added services in China. Wechat users can send text or voice messages, pictures and videos. They can also make video call or talk with each other or with many people simultaneously.

\textsuperscript{11} Weibo is micoblogging in China.

\textsuperscript{12} Crowdfunding PCMML, we did it!, available at: http://www.sohu.com/a/191610831_137204 (access on 5 December 2017)

\textsuperscript{13} The 41th China Statistical Report on Internet Development, available at: http://www.cnnic.net.cn/hlwzyj/hlwzxbg/hlwjbg/201803/P020180305409870339136.pdf (access on 8 May 2018)

\textsuperscript{14} According to the Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning the Building of a Harmonious Socialist Society, the general requirements for building a harmonious society include democracy and rule of law, fairness and justice, honesty and friendship, full of vitality, social order and stability, and harmonious coexistence between man and nature, available at: http://theory.people.com.cn/GB/40557/44459/ (access on 15 May 2018)
PCMML can be beneficial to the building of a harmonious society. For example, as a public space, PCMML can provide a good platform for migrant workers to communicate with each other, to spend their spare time in more meaningful ways, and to learn some knowledge, all of these are helpful to maintain social stability. On the other hand, the establishment of independent community archives is essentially a kind of discourse empowerment, but their discourses cannot be regarded as threatening social harmony. As a public space for migrant workers, PCMML records, preserves and disseminates stories about migrant workers and cultivates their cultural consciousness. It provides help for migrant workers when they suffer injustice, but in so doing they cannot be regarded as opposing the government. Their discourses and their actions should be consistent with the guidelines of Chinese government and the Party, so the museum cannot take an explicitly political stance, though the motivation behind it implies some political stance. This requirement has been noted in other settings—“Taking a political stance would be suicide for the (lesbian and gay) archives” (Sheffield 2015, pp 205), and cannot be regarded as unique to China. However, the nature of political activities will vary according to context, and it is essential to approach this area with sensitivity and deep understanding of power relationships.

PCMML demonstrates awareness of the need to develop and maintain this strategic relationship with government. For example, at the end of 2017, when the migrant workers living at Picun were driven away by the local management officers, Heng Sun wrote on Wechat, “Who are so bold to assault the laborers in our great Capital and create an atmosphere of terror and provoke social conflicts?” and he called for their identification in order to safeguard the security of the Party. PCMML is also obedient to the guidance of government and the Party, for example, a trade union was founded in PCMML in 2009 by the All-China Federation of Trade Unions (ACFTU), the only official national trade union in China. This trade union is supervised by the district trade union of Jinzhan County, Chaoyang District, Beijing. Duo Xu is the leader of this trade union, and the two staff also work with this union. According to the ACFTU Constitution of Chinese Trade Unions, Chinese trade unions are mass organizations of Chinese working class under the leadership of the Communist Party of China. They serve as a bridge and link between the Party and workers. The establishment of this trade union is a gesture implying that PCMML is under the guidance of the Party and workers. The establishment of this trade union is a gesture implying that PCMML is under the guidance of the Party, though PCMML has not attained financial support from government, and they need to raise money to support the operation of the trade union. Moreover, they stopped compiling the “New Workers Dictionary” because related administration required them to stop because there were some overseas scholars participating in the compilation. They turned to fundraising using the platform of mainland media after Oxfam was forced to stop funding them because it is an overseas foundation. Only by dealing with the relationship with government strategically, can independent community archives like PCMML survive and strive for more spaces to sustain, and only by doing so, may independent community archives have a chance to execute their agency to transform social structures.

Conclusion

Community archives help communities not only to remember and document their past but also to understand the present day and its connections to that past (Flinn 2007). We would also say community archives are also significant to the future of communities, just as the slogan posted on the entry gate of PCMML says, “Without our culture, there will not be our history; without our history, there will not be our future.” This slogan also signifies that the awakening of cultural consciousness is the motivation behind PCMML. Only if a community or some members of a community have strong cultural consciousness will they be driven to found their own community archives to preserve and transmit their own culture.

There is a long way to go for an independent community archive to survive in China. They will face the common challenges such as constraints on funding and staffing, and they cannot solve these problems by themselves, so it has become more and more significant for them to gain support from broader society through social media. However, the trickiest issues they need to handle are to get the official recognition from government and to deal with the relationship with government strategically. Thus, on the one hand, they need to tell their own stories in their own words; while on the other hand, their discourse cannot be regarded to be a threat to social harmony or social stability. After all, “It may be that in certain contexts community archive initiatives can reawaken old wounds or foster suspicion towards a specific out-group.” (Flinn A and Stevens M 2009) Therefore, at the moment, the ideals, actions and plans of independent community archives should be consistent with the guidelines of government and the Party, and an explicitly political stance must be avoided.

PCMML is now facing being driven away from its current location because the houses in Picun will be pulled down due to the urbanization of Beijing. It is not easy for PCMML to find a similar place like Picun now, so the co-founders intend to build a digital archives online. They will be faced with some new challenges, for example, due to the internet control, they need to get official approval to establish a digital archive online, and they need to be careful about posting information online.

What lies ahead for PCMML is uncertain. The Chinese archival community pays scant attention to independent community archives, which raises the spectre of being complicit in building “… a social history of society which is empty of its people and which does not reflect real lives and experiences …” (Samuel 1972). However, there is a need to conduct further research in order to fully understand community archives in China and to provide a framework for the interpretation and analysis of community archives in context.
Figure 1: Sustainability strategies for independent community archives in China

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Abstract: Artificial Intelligence (AI) has seen a massive and rapid development in the past twenty years. With such accelerating advances, concerns around the undesirable and unpredictable impact that AI may have on society are mounting. In response to such concerns, leading AI thinkers and practitioners have drafted a set of principles - the Asilomar AI Principles - for Beneficial AI, one that would benefit humanity instead of causing it harm. Underpinning these principles is the perceived importance for AI to be aligned to human values and promote the ‘common good’. We argue that efforts from leading AI thinkers must be supported by constructive critique, dialogue and informed scrutiny from different constituencies asking questions such as: what and whose values? What does ‘common good’ mean, and to whom? The aim of this workshop is to take a deep dive into human values, examine how they work, and what structures they may exhibit. Specifically, our twofold objective is to capture the diversity of meanings for each value and their interrelationships in the context of AI. We will do so both systematically and creatively using tools and techniques developed as part of the Values in Computing (ViC) research. In practice, we will engage in a small set of facilitated group activities designed to explore the Asilomar AI Principles in the context of a broader values theoretical framework briefly outlined in this paper.

Keywords: values in computing, human values, artificial intelligence, ethics.

Background

Andrew Ng, Google Brain’s co-founder and one of today’s most influential AI figures, has likened AI to electricity for its transformative power and pervasiveness (Lynch 2017). AI’s rapid advances and range of application domains - from ‘mundane’ apps (Figure 1), to cancer screening (Ting 2018) and military intelligence (Suchman 2017) - have also raised questions regarding the desirability of such advances for society. A constructive and informed discussion around AI is not always easy given that AI is often shrouded in media hype and technical jargon. There are several definitions of AI. We find Lucy Suchman’s particularly
automate aspects of human activity conventionally understood to require intelligence” (Suchman 2018). We argue that the expression ‘conventionally understood’ (our emphasis) is key. In the last twenty years, the AI field of study has been focused on the “construction of intelligent agents - systems that perceive and act in some environment. In this context, the criterion for intelligence is related to statistical and economic notions of rationality - the ability to make good decisions, plans, or inferences” (Russell 2015). The criterion for intelligence (our emphasis) is here linked to rational thinking as defined by statistics and economics – e.g. in terms of utility, and performance (Russell 2016).

AI / human values alignment?

If we look at Schwartz's values model (Schwartz 1992, 2012 – Figure 2), we notice that concepts such as utility and performance, and in general the concepts underpinning the fields of economics and statistics, tend to emphasise a values subset of the model. Specifically, they link to the subset that includes the values of achievement (e.g. quantifiable success –reward vs punishment in reinforced learning (Russell 2016)), power (e.g. over resources), and security. These are indeed human values, but we must be mindful of the values ‘bias’, which may be inherent to AI, when calls for values alignment in AI are made (Arnold 2017, Hadfield 2016, Riedl 2016). Schwartz’s values model is one of the most extensively and empirically investigated values models to date. It is not free from limitations (Maio 2010), but it is a useful starting point for investigation.

The Asilomar AI Principles

Top AI researchers have long reflected and written on ethical and existential concerns around AI (Bostrom 2005, 2017). In 2017, leading “AI researchers from academia and industry, thought leaders in economics, law, ethics, and philosophy” came together for a five-day conference on Beneficial AI (Future of Life Institute 2017). One the key outcomes of that gathering was an agreement on a set of principles - the Asilomar AI Principles – to provide guidance to the development of beneficial AI (Asilomar AI Principle 2017).

Underpinning them all is a genuine concern for human values, but one that we find quite broad and undefined. Principle 10, for example, focuses on “Value Alignment” between autonomous systems and humans; Principle 23 focuses on “Common Good” and states “Superintelligence should only be developed in the service of widely shared ethical ideals, and for the benefit of all humanity”. Whose and what ethical ideals?

The limitation of ‘Ethics’

Outside the AI-specific domain, a large body of computing research also exists stressing the importance of building technologies that embody human values. This work spans from Values Sensitive Design (Friedman 2006, 2017) to ethical computing (Van de Hoven 2012).

However, also within this large body of research, the tendency seem to focus primarily on values with ethical import (LeDantec 2009), which are a subset of a much broader human
values set that includes wealth, prestige, and power (Figure 2). We find this problematic because these latter are human values too and they do already drive digital technology production and shape their use (Ferrario 2016, 2017). Failing to consider this, risks not capturing the interdependences, tensions, agencies and relations between values.

In addition, values such as ‘freedom’ and ‘public good’ are often poorly articulated, thus running the risk of becoming cultural truisms, “beliefs that are widely shared and rarely questioned” (Maio 1998). Crucially, research (Hanel 2018) has also found that the same value can have different meanings for different people and cultures; and this not only at an abstract personal level, but also at a behavioural, or instantiation, level (Maio 2010)

Towards a better understanding of human values

This poor articulation of values can have far-reaching implications on our personal and social lives. For example, ‘freedom’ may be called upon to protect the fundamental human rights of unlawfully imprisoned civilians, but also to ‘free’ one country from the presence of law-abiding immigrants. The psychologist Greg Maio has recently called for a more scientific understanding of values (Maio 2018), whilst his previous work (Maio 2010) gives poignant examples of the variety of meanings that the same value may have in political discourse.

Our research aims to help address the call for a more ‘scientific’ understanding of values in the computing domain (e.g. systematic, empirically based, reproducible). We do so by drawing principles and techniques from a variety of disciplines and in particular from those that have taken an empirical approach to the study of human values (Schwartz 1992, 2012; Maio 2010). This is not research for the few. Rather, it requires the participation and deliberation of many. In this workshop, we combine such methods with creative design thinking techniques (Forshaw 2012, Newman 2015) to create both a base of common understanding around AI and systematic reasoning around human values.

Our ultimate goal may not be to program values-driven intelligent agents, but to support the next generation of educators and computing professionals with “the deliberative, technical, and critical skills necessary to tell the difference between what is worth pursuing from what is potentially harmful to self and society” (ViC team 2018).

Theoretical Framework, Tools & Approach

![Diagram of values framework](image)

Figure 3. Values as mental representations to be studied on three levels: system (L1), personal (L2), and instantiation (L3).

We considers values as mental representations to be investigated on three levels: at a system (L1), personal, (L2), and instantiation level (L3) – Figure 3. This 3-level theoretical framework is based on an established body of work from experimental psychology, which draws from Schwartz’s values model (Schwartz 1992) and Maio’s work (Maio 2010).
L1 concerns the existence of a values model (Schwartz 1992, 2012) where the mental representations of human values are found to occur according to certain observed patterns. For example, people who value social power highly have been found to value equality less.

L2 relates to the abstract representation that an individual has for each value and the variety of meanings associated to it. For example, the mental representation of ‘freedom’ held members of different political parties.

L3 relates to the way values drive or at least influence actions. The instantiation level is the most difficult to study. One can never assume a direct link between actions and values, and the same value may drive different actions. For example, for some caring for the environment means recycling waste, for another is marching against shale gas extraction.

Tools

Figure 4. Sample Values Q-Sort – this picture shows how the ACM Code of Ethics principles were mapped to Schwartz’s Values Model (Schwartz 2012 in Winter 2018). The AI Values Q-Sort has been designed in a similar way by using the Asilomar AI Principles as statements instead of the ACM Code.

In keeping with this framework, we have designed and developed a selection of tools and techniques for the investigation of values at each level. In this workshop we focus on the use of a Values Q-Sort (Winter 2018) built by mapping Schwartz’s values model (Schwartz 2012) onto the Asilomar AI Principles. In previous work (Winter 2018), we used this method to map the ACM Code of Ethics for Software Engineers (Figure 4), and to capture values perceptions of software practitioners in industry and research.

The Q-Sort is an established mixed method that was developed in the 1930s by the psychologist and physicist William Stephenson (Stephenson 1993). It is specifically designed for the systematic study of subjectivity by providing structure to subjective opinions (Watts 2012). The method involves asking participants to sort a series of statements onto a grid according to their level of agreement with each statement.

Q-sorts are usually carried out individually, but for the workshop they will be used in small groups of ~5 people who will jointly decide on the sorting and discuss and note down values alignment and tensions within their own group. Each group will then report their outcomes and discussion to the other groups, while a facilitated discussion will chart alignments and tensions between each group.
Workshop Aim & Objectives

To understand, reflect, articulate and deliberate on the values implications of AI on society. This aim will be delivered through three specific objectives:
1. A base-line shared understanding of AI, including what AI can/cannot do
2. An understanding of the differences and interplay between ethics and human values, and how they may apply to AI/computing in general
3. A practice-based exposure to the articulation and deliberation of human values in AI/computing in general.

Workshop Outline

Figure 5. 3DP artifacts may be used as part of the values analysis session

We assume that we will have **90min** to conduct this workshop. This workshop is designed to work with ~30 people divided in 6 group of 5, but it can also work with larger or smaller groups. We recently used this methods with 75 students attending the European Alpach Forum this summer (EAF2018)

**Suggested Final Outcome** - the final iteration will involve the co-creation of a ‘Prato version’ of the *Asilomar AI Principles*.

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<th>Task Description</th>
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<tr>
<td>1. Welcome and intro</td>
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<td>2. AI baseline; objective: a high level shared understanding of AI</td>
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<td>- Bound the scope of the AI to be used in the workshop</td>
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<td>3. AI Values Q-sort; objective: group-based articulation and deliberation on AI</td>
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<td>- Q-sort 1st group feedback</td>
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<td>- Q-sort 2nd iteration; final sort for the Prato version of the AI Principles</td>
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<td>4. Debrief; 5 min – debrief on tools – how were they designed; wrap up</td>
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Organisers

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Lecturer, School of Computing and Communications (SCC), Lancaster University, UK; M. McLuhan Fellow in Digital Sustainability, iSchool, University of Toronto, Canada. Maria Angela has a diverse background including computing (AI/on-line intelligent systems), systems design, social psychology and philosophy. She works at the intersection of software engineering (SE) and human computer interaction (HCI) and is an experienced project manager both within and outside academia. Her research adopts agile and participatory methods to technology development and examines the role of digital technology in society.

**Stephen Forshaw**
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INFORMATION CULTURE & ACCESS: A SOCIO-TECHNICAL PERSPECTIVE FROM BANGLADESH

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Monash University

Keywords: information culture, information access, Bangladesh, NGOs, knowledge management

1 Development Sector in Bangladesh

The presence of non-governmental organizations (NGOs) in developing countries is often assumed to indicate a vibrant civil society that can help promote good governance and effective policy implementation where state infrastructure is weak (Mercer, Khan, Daulatuzzaman, & Reid, 2004). The development sector increasingly strives to provide for better standard of living for the communities they target in their region or peripheral. The social development scene in Bangladesh is characterised by a strong presence of non-governmental organisations (NGOs) (Sajjad, 2004). Non-governmental organizations in Bangladesh have established innovative development models that have improved participant livelihood, through efforts in income-generation, social-service provision, and group capacity building (Buckland, 1998).

According to a recent report on Bangladesh by the World Bank (2017), Bangladesh’s economic growth remains resilient in spite of volatile export growth and shrinking remittances. This directs to the potential of development in the country. However, the report also mentions that low levels of technology, outdated management practices, and lagging skills of the workforce contribute to the creation of low quality jobs. The development of targeted communities have deeper impacts on the economy and job market. The reasons listed above may challenge the vulnerable groups in finding jobs, thereby impacting their social development. This is a vicious circle which also influences the development sector as a whole. It is important to understand the landscape of how NGOs get funded and provide for their targeted communities. Sustainability and financial aid are two of the biggest challenges faced by the development sector.

1.1 Information access in Bangladesh

Universal access to information and knowledge is the UNESCO’s overall mandate to promote the free flow of information and making information available at the fingertips of research communities (Uddin, Koehlmoos, & Hossain, 2014). The Prime Minister’s Office in Bangladesh has created the Access to Information (a2i) programme in 2007, with support from UNDP and USAID. The objectives of this program are increasing transparency, improving governance and public services and reducing inefficiencies in their delivery in terms of time, cost and number of visits associated with obtaining government services for underserved communities in Bangladesh (UNDP in Bangladesh, 2018). This programme is a part of Vision 2021 of the country’s current ruling party’s political manifesto. The programme also has a legal foundation aim of providing information to its citizens per “Right to Information Act of 2009” and bring about a change in the Bangladesh Civil Service to a citizen-centric service delivery system (A2i.gov.bd, 2018).
In this study, we look at information culture of the development sector of Bangladesh. We will use this IC knowledge to study the impact it has on information access.

2 Case Study: PROTIC

3 Key concepts
There are various theoretical concepts used in this thesis, which form a major part of the research project. This section defines these concepts with regards to the thesis.

3.1 Information Culture
3.2 Information Access
3.3 Information & Knowledge Management
3.4 Oxfam International & Oxfam Bangladesh
3.5 Local NGOs
3.6 Targeted Communities
3.7 Group Communication

4 Communication in Information Systems
In today’s world, social interaction takes place through technology, and hence it is changed and mediated by the technology (Respício, Adam, Phillips-Wren, Teixeira, & Telhada, 2010). Even in businesses and organisations, information systems follow a logical framework, where information plays a distinctly social, interpersonal role (Feldman & March, 1981). This socio-technical approach is visible in various research projects on information studies and in practice at organisations, many of which heavily rely on the functions and the technology. It is important to understand that there is a great divide between social activities such as coordination, which researchers and practitioners aim to support, and those that are actually supported by technology.

To utilise resources optimally, it is important to look at the support network which comprises of both the interpersonal relationships as well as information systems of any business or organisations. For instance, organisational culture can be a significant point of discussion. Culture is a highly relevant and ubiquitous topic (Kummer & Schmiedel, 2016), which refers to a group’s collective values that determine patterns of behaviour (Schein, 2004; Straub, Loch, Evaristo, Karahanna, & Strite, 2002). These shared norms and values can be distinguished between visible aspects and invisible aspects, both of which play an important role in culture management.

4.1 Knowledge Sharing
Without knowledge, no organisation can survive (Chang, Liao, & Wu, 2017). Knowledge sharing is a people-to-people process (Gangeswari, Roziah, Bahaman, & Maimunah, 2016). Knowledge sharing enables employees to share their insight and experiences to allow faster and cost-effective project completion (Geraint, 1998). Organisational culture is an important factor in creating, sharing and using knowledge in that it establishes norms regarding knowledge sharing and creates an environment in which individuals are motivated to share their knowledge with others (Cabrera & Cabrera, 2002; W. De Long & Fahey, 2000). Organisational culture has significant positive impact on knowledge sharing (Chang et al., 2017).
Knowledge sharing is a part of knowledge transfer, and successful knowledge transfer between different parties strengthens trust and ties (Zhang & Jasimuddin, 2008). Learning and implementation of others’ experiences for social and organisational benefit necessitate the relevance of the concept of knowledge transfer. When we focus on the development sector, knowledge transfer mainly occurs between the non-governmental organisations and the beneficiaries (Sheikh Shamim, Sajjad, & Nerys, 2016). There is little or no research on knowledge transfer from the government or grant agencies towards NGOs. It is important to identify the clients involved for further research and to understand the communication efficiency.

4.2 Theorising information culture and communication

Various researchers have concluded that investment in information communication technologies and implementation seldom yields expected outcomes (Robey & Boudreau, 1999). The key issue is highlighted not in the technology, but with social factors such as culture, institutions, organisational issues, and individual identities (Walsham, 2001). Information culture can be conceptualised at numerous levels of society, organisations, institutions, and individuals. Although it is fundamentally present in our societal history, it is constantly evolving thanks to the changes in the human landscape. Information culture of an organisation can be cultivated, developed, or shaped, subject to appropriate management and institutional formulation (Zheng, 2005).

An important theory which explores the creation and reproductions of social systems and studies social relations is the Structuration Theory by Giddens (1984). His aim was to build a broad social theory which viewed the study of social sciences, not at an individual but at a larger group level with application across space and time. Early applications of this theory was focussed to understand group communication primarily on internal group processes, such as argumentation or technology use. Over time, the focus broadened to include relationships of groups to organisations, groups as inter-organisational bridges and groups in civic society (Giddens, 1984).

Multiple researchers have approached the structuration theory from three different perspectives: institutional, decision-making, and socio-technical (Schwieger, Melcher, Ranganathan, & Wen, 2006). The institutional school of thought explored technology as an opportunity for change rather than as a causal agent of change (Barley & Tolbert, 1997; Kling, 1980). Researchers with this outlook believed that technology did not determine behaviour, people generated social constructions of technology (DeSanctis & Poole, 1994; Orlikowski, 1992). The second perspective of decision-making highlighted the cognitive processes associated with rational decision-making and adopted a psychological approach to the study of technology and change (DeSanctis & Poole, 1994). Lastly, the socio-technical school of thought combined the institutional and decision-making perspectives. The literature for this standpoint emphasized incorporation of the power of existing social practices with the influence of advanced technologies for shaping interactions within the society (DeSanctis & Poole, 1994) to bring about organisational change.

DeSanctis and Poole (1994) continued along the socio-technical line of thought and created the Adaptive Structuration Theory (AST) based on Giddens’ theory. AST is concerned with the implementation and use of information communication technologies in groups and organisations (DeSanctis et al., 2008; DeSanctis & Poole, 1994). It theorises that the impacts
of information communication technologies on group and organisational processes, and their outcomes are governed by the structures incorporated in the technology and on the structures that emerge as users attempt to appropriate the technology to adapt it to the tasks at hand (Poole, 2013).

Traditionally, research on group communication in the structuration theory has primarily focused on Western groups, primarily those in the U.S. context (Poole, 2013). There has been a need to provide for greater attention to groups in other cultures and also to global groups comprised multiple nationalities and cultures would enhance insights in the structuration of group communication.

5 Aim of the research
This research will focus on studying information culture of Oxfam Bangladesh, the local NGOs in Bangladesh, and their group communications by exploring the structure of the information communication technologies and the structure of social actions, from the development perspective. The key concepts in this research are information culture, communicative transactions, recordkeeping culture/records management, information & knowledge management, and access to information.

The research aim to use exploratory study to produce a framework for better provision of information access, to help Oxfam Bangladesh. This study will attempt to understand the information access in accordance with the information culture of various entities in the development sector of Bangladesh.

6 Proposed Research Questions
The following are the proposed research questions for this research, based on the gaps identified from the literature above:

1. How does information culture influence access to information?

   1a. How does information culture of targeted communities influence access to information of local NGOs?
   1b. How does information culture of local NGOs influence the access to information of Oxfam Bangladesh?
   1c. How does information culture of Oxfam Bangladesh influence the access to information of Oxfam International?
   1d. How does information culture of Oxfam International influence access to information of Oxfam Bangladesh?
   1e. How does information culture of Oxfam Bangladesh influence the access to information of local NGOs?
   1f. How does information culture of local NGOs influence the access to information of targeted communities?

2. What levels of Information Culture Framework correlate with information & knowledge exchange through group communication?
   2a. What are the group communication concepts which are influenced by the Information Culture Framework?
   2b. Which group communication framework promotes transparent information & knowledge exchange?
7 Expected Contributions

Theoretical Contribution
The theoretical framework developed as a part of the research outcome is expected to make contributions in the information studies research for development. The application of this framework will be developed based in the context of social development which involves grant providing international NGOs (like Oxfam International/Oxfam Bangladesh) and grant-receiving local NGOs.

These entities work together for various project towards betterment of the community. In the case of Bangladesh, Oxfam works with NGOs for many issues grasping the country, including gender and women’s leadership, economic justice & resilience, and humanitarian capacity building & response. This framework will allow for the understanding of factors contributing to information access, given the information culture in the development sector of Bangladesh.

Practical Contribution
Given the testing of the framework in the research fieldwork in Bangladesh, it is expected that the framework will provide NGOs (both international and local) with benefits of understanding information access even further. Given the context of social work in a developing Asian/South Asian country, this framework will help to understand the NGOs’ information culture and how that can enable information access to the community. Social activists, workers, donors, and grant agencies will benefit from reviewing the culture of NGOs to determine the efficiency of information & knowledge exchange for the enhancement of the targeted communities.

8 References


Breast Cancer Awareness using Community Engaged Technology


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Abstract: Breast cancer is a major concern in recent years. The problem is critical in a developing country like Bangladesh where there is early prevalence of the disease. This disease can be treated and cured if detected and diagnosed early. However, there are social cultural barriers where women do not discuss about the disease often. The level of awareness remains low among women regardless of their socio-economic context. We used a user centric study to understand the challenges women face. It was evident that many of them did not know whom to talk, whom to ask and how to connect with others. We worked on a solution that can help them to connect to each other. We have worked on a mobile application that uses community engagement to increase awareness about breast cancer. The application enables ways where women can connect, socialize physically and then create a supporting aware community.

Keywords: Breast Cancer; Cancer; Communication Platform; Healthcare; Bangladesh; Gender and health.

Introduction

Breast cancer is a global concern of recent years [1, 5, 8]. The disease requires awareness for early detection. There are synchronous efforts to generate awareness worldwide through the pink ribbon awareness [6, 7]. However, the problem is challenging to deal with in Bangladesh. In a country that practices patriarchal values [9], breast cancer has its early exposure [11]. General people should be aware of the problem at an age as early as 20s where it is after 40s in most other regions. The current work focuses on ways to engage community support for breast cancer awareness generation that matches the social cultural practices of Bangladesh.

There have been numerous applications to generate community awareness. There are general applications in English, there are some developed in local languages [10, 12, 13] and there are community based support systems to support and monitor survivors. Research community is actively involved in ways to support breast cancer through innovative solution approaches.

In the context of Bangladesh, there are two major challenges to handle – first, the general level of awareness is low regarding breast cancer. It is not well discussed compared to other diseases. Second, women do not approach for help even if they find initial discomfort. It results in late detection of breast cancer increasing the probability of the disease being spread further.

Breast cancer is the second most common cancer in Bangladesh. Every year, 14,836 women contract breast cancer and 7,142 of them die, as presented by Dr. Habibullah Talukdar Raskin, coordinator of Bangladesh Breast Cancer Awareness Forum, quoting the GLOBOCAN 2012 report [1].

Bangladesh breast cancer awareness society [2] is a Bangladeshi website which hosts various workshops and seminar around the country. Amader Gram Breast Care Center [3] is another Bangladeshi website whose goal is to collect socio-economic breast cancer-related data for research work from the rural area. CheckMate is an android application by which people can learn how to check breast cancer symptoms at home. These are some good resources for the breast cancer patients in Bangladesh. However, none of them is a complete tool where the communication between the patients and the doctors are being focused. These cannot be used as a complete reference of breast cancer in Bangladesh. We are working to make that kind of
complete reference for the breast cancer patients in Bangladesh from which they can get not only adequate information and required guidance but also a strong community help. The goal of our work is to provide a platform that enables women to create a community and arrange small meetups. The meetup will serve the purpose of generating awareness, providing support for each other through physical meetups along with virtual ones.

**Literature Review**

Breast cancer is an active area of research and concern. There is scholarly work along with awareness generation approaches that are discussed here briefly. We define the work in three major categories – informative, connectivity generative and management related work. In broader term, most of the work are defined in global and local context.

**Informative Solutions**

There are applications focusing on generating information on breast cancer. These set of tools are great for awareness generation where general people are not well aware of symptoms and seriousness of breast cancer. Goal of the mobile phone application developed by National Health Institute is to generate awareness among women [14]. There are many other existing applications that are specifically designed to inform users about breast cancer.

**Management**

These categories of tools and support system focuses on the overall health as a better way of living. It focuses on general wellbeing, taking full care of mind and body along with specific focus on breast cancer. There is the BENECA project that focuses on complete management system taking care of concerned people to manage breast cancer [15]. Similar initiative is offered by Rethink Breast Cancer [16] giving users a way to manage overall health related factors along with breast cancer. BECCA app from UK offers similar support for users [17]

**Connectivity**

There are efforts that focus on increasing connectivity as a way to support people to fight against breast cancer. There is an initiative that works with Lyft [18] that offers help for breast cancer victims. There is a similar approach named Squeaky [19].

There are tools that support multiple people in multiple ways such as a combination of information and management; management and connectivity etc.

**Support for Breast Cancer in Bangladesh**

There are very few online platforms for breast cancer in Bangladesh where a patient can find adequate information. Despite a lot of efforts from many of the researchers, not many physical works have been done for technological support. Bangladesh breast cancer awareness society [2] is a Bangladeshi website for breast cancer-related people. They have two offices in Bangladesh. Their main office is in Comilla and another office is in Motijheel, Dhaka. Some Doctors of Bangladesh took an initiative to develop this website for Breast Cancer-related people in Bangladesh. This website used both Bengali and English language. There is a membership button on the website. Anyone can be a member of this website by the register in this section. There also event button where the upcoming event is scheduled. There are also projects, galleries, news, about us and contact us button. Our work is similar to them as both works are for breast cancer-related people. Both of our visions are same. However, our vision is more advanced than theirs. We want to make a communication platform rather than giving information. Where patients can meet with
another patient. They can share their stories, surviving period, experience etc.
Amader Gram Breast Care centre [3] is a Bangladeshi website for breast cancer-related people. They have 3 breast care centre in Bangladesh. Reza Salim is the director of the organization. It has an office in Bangladesh. They are in Dhaka, Khulna, and Bagerhat.
Checkmate [4] is an android application for Breast Cancer-related people. People can learn how to check breast cancer symptoms at home by this application. There is a language preference in the application. Anyone can choose a language between Bengali and English to use this application. Their philosophy “Looking, touching and checking your breast regularly is very important; because this is how you got to know your breasts so well that you notice every single change that happens in them. So this is the absolute way to be aware and find it earlier if there is a problem, which results in a better chance of beating Breast Cancer.”
Anyone with a smartphone can use the application. It has a feature called remind me by which the users can get a reminder about when to check her breast. One can learn many things about breast cancer from this application. This is an information-based application. There is nothing for communication purpose. The patient can only learn things from this application. They cannot communicate with a doctor or other patient with this application. This type of application is very important for people because one can know how to check breast cancer in the home. They also have a reminder function so that one can set up a reminder function to check her breast.
We have focused on the connectivity aspect that takes into consideration the social cultural context of women in Bangladesh.

Background
Bangladesh is a developing country. The country comprises of a majority of youth population. The country also has great mobile phone penetration along with network coverage across the country. This opens up opportunities for technology based solution approaches to address different problems.
We consider the problem of breast cancer. Breast cancer is the most common cancer in women. After Lung cancer, it is the second most deadly cause of cancer in women [1]. A disease like breast cancer concerns women where the problem is addressed once it is at an unbearable stage. Many women seek treatment for breast cancer, in hospitals at third stage or forth state of cancer as mentioned by a doctor of Bangladesh Cancer Institute. The problem exacerbates since early exposure to breast cancer is found in Bangladesh [11]. Here the symptoms can appear at very early age. This is another aspect which requires discussion among the women initiated at earlier ages.
We consider a technology based solution approach that utilizes the social aspect of women where they can make small support communities. The support community can meet up, engage and share information among each other. The concept of support community is common in developed regions and it can have a positive impact through supporting each other in developing regions as well.
We want to connect women in a way such that they can help each other by building a community of people who are facing the same problem. They can share their stories, feelings, frustrations, surviving periods and all the other things. They can get some motivations, they can talk about their own problems, they can find a solution how to survive. This motivated us to make a website for breast cancer-related people, where they can communicate, share their stories, can make friends, can spend a quality time with other patients and raise their voice against breast cancer in Bangladesh. But it is a particularly challenging problem in Bangladesh because women are socially conservative about this kind of problems.
We hope to utilize existing support system and tools to support community that can be used in resource-limited developing countries.
User Centric Study

In this section, we present the user centric study conducted to define the challenges women face to generate breast cancer awareness.

Methodology

We conducted qualitative studies on 12 individual focus group with various number of participants in several regions of Bangladesh. The focus group discussion revolved around understanding on awareness regarding breast cancer, incidents related to it and ways that could be useful to increase level of awareness regarding the study. Female group studies were conducted by female researchers and male group studies were conducted by male researchers considering the social cultural context of Bangladesh where talking about disease related to breast brings in level of discomfort among participants. There were few exceptions were family members were involved, in those cases, mixed gender group discussions were conducted. There were 145 in total. Each focus group sessions lasted about 2 hours on average. The groups are presented in Table 1.

Table 1. Participant Information

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Participants details</th>
<th>Number of Participants</th>
<th>Age</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Quran Recitation Group</td>
<td>18 (Female Only)</td>
<td>30-40</td>
<td>Bashundhara R/A, Dhaka</td>
</tr>
<tr>
<td>2</td>
<td>Guardians, Teachers of School</td>
<td>19 (13 Female, 6 Male)</td>
<td>20-40</td>
<td>Baridhara DOHS, Dhaka</td>
</tr>
<tr>
<td>3</td>
<td>Security Guard, Cleaners</td>
<td>17 (Female Only)</td>
<td>15-25</td>
<td>University, Dhaka</td>
</tr>
<tr>
<td>4</td>
<td>High School Students</td>
<td>18 (Female Only)</td>
<td>10-15</td>
<td>Bashundhara R/A, Dhaka</td>
</tr>
<tr>
<td>5</td>
<td>Family members</td>
<td>18 (Female Only)</td>
<td>40-50</td>
<td>Bogra.</td>
</tr>
<tr>
<td>6</td>
<td>Family members</td>
<td>6 (5 Female, 1 Male)</td>
<td>20-50 (variable)</td>
<td>New Dhanmondi, Dhaka</td>
</tr>
<tr>
<td>7</td>
<td>Friends</td>
<td>8 (6 Female, 2 Male)</td>
<td>20-30</td>
<td>New Dhanmondi, Dhaka</td>
</tr>
<tr>
<td>8</td>
<td>Grandmothers</td>
<td>6 (Female Only)</td>
<td>Above 5</td>
<td>Station Road, Feni</td>
</tr>
<tr>
<td>9</td>
<td>Friends</td>
<td>3 (Male Only)</td>
<td>20-30</td>
<td>Bashundhara R/A, Dhaka</td>
</tr>
<tr>
<td>10</td>
<td>Colleagues</td>
<td>23 (Male Only)</td>
<td>20-30</td>
<td>Badda, Dhaka</td>
</tr>
<tr>
<td>11</td>
<td>Neighbours</td>
<td>5 (Male Only)</td>
<td>Above 50</td>
<td>Bashundhara R/A, Dhaka</td>
</tr>
<tr>
<td>12</td>
<td>Family members</td>
<td>4 (2 Male, 2 Female)</td>
<td>20-40</td>
<td>Bashundhara R/A, Dhaka</td>
</tr>
</tbody>
</table>

Focus group 1 was a group of women who regularly meet up to discuss religion, in particular, aspects of Quran, the holy book of Islam. This group was asked about the study and the discussion preceded their regular religious discussion. This group was contacted through a female researcher who often participates in this discussion. This discussion took place at the house of the female researcher where all the participants agreed to meet up. It was a group of diverse income level ranging from mid to high income families.

Focus group 2 consisted of guardians (all mothers) of a prominent private girl’s school of Bangladesh. The parents were reached out by one female researcher who had contact with the parents. The discussion was conducted in the waiting area of guardians. This was a group of high income level families.
Focus group 3 consisted of security personnel and cleaners, all female group working in a corporate office. This was contacted by a female researcher who initiated conversation with few known personnel which added others later on. This was a low-income group of participants.

Groups 5, 6, 8 and 12 consisted of family members of researchers among which one group consisted of grandmother of a participant and sisters of her grandmother – an all grandmother group. It was conducted by a female researcher and the group was a mid-income level group of participants.

Groups 9, 10 and 11 consisted of all male groups and were conducted by a male researcher. The groups were from mid-income and high-income families.

Interviews were conducted in nine unique locations of three different regions of Bangladesh – Dhaka, Feni and Bogra.

**Moderation and Incentive**

Question designed in the native language of Bangladesh which is Bengali. The wordings of queries were simple and often discussed with examples. The questions were moderated by a lead researcher in each study where gender was considered as mentioned previously.

There was no monetary incentive offered to the participants.

**Research Ethics**

The interview process was well informed to the volunteers prior to the interview process mentioning that the participant may leave the process at any point of time if the participant feels discomfort answering questions or may refrain from answering one or more queries. The entire participant names were anonymized.

**Findings**

The qualitative study revealed major findings regarding existing challenges to generate awareness about breast cancer. There were several concerns which are discussed briefly:

**Patriarchal Views**

The studies revealed that patriarchal practices of the society play an important role in dealing with a disease that mainly impacts women. Men, being the main source of income in households along with holding the decision-making roles require more involvement in the discussions, awareness generation process to provide support for the female members. Societal practices are important where male children are expected to look after the parents while female children should take care of in-law’s families. One elderly participant from wealthy family mentioned about her helplessness in expressing her situation as follows:

> *But I only have daughters, who will take care of me? They are busy with their families.*

Elderly participant, Female, Dhaka.

There are elderly family members who are widowed or who are dependent on children’s earning who face difficulty to express their needs to their children. There were participants who shared that they prefer not to share their problems with their children.
Societal Norms

The discussion on breast cancer faced initial difficulty which was unexpected. The term related to “breast” turned out to be difficult and some of the participant admitted that they have never discussed anything related to it. There was a waitress who refused to talk about it but listened the entire discussion. She later met the female researcher in person and preferred to talk in private.

Major problems came from the male group of participants although all the participants were highly educated (all were graduates from Universities). One initial focus group session ended up without any results since the participants (group 9) refused to discuss about breast cancer at all. The male researcher conducting the session was upset to describe the scenario where all the male participants started to tease him regarding the discussion topic. One of the male participant started looking up at breast photos in the internet and all started to make fun out of it. The male researcher in charge later admitted in his failure due to lack of context initiating his study.

There was hesitation about discussion on breast among the participants of religious studies (group 1). One woman mentioned the comment as follows:

*It is a sin to discuss about shameful body parts.* Religious group. Woman, Dhaka.

At that point, the lead researcher was confused whether to continue the discussion or not. However, others requested to continue the conversations as they were eager to learn more about it.

Connectivity and Isolation

Many participants mentioned about their confusion about finding out resourceful person or someone whom they could discuss about the problems. The problem was more on knowing where to access for resources. This can be referred as a problem of not having adequate connections.

Some women shared their fear of being isolated once breast cancer is detected or similar other disease is detected. One low educated woman shared that her husband might get rid of her if he finds out about any possibility of disease. There was a fear of being isolated.

Personal Fear

Some women as well as men mentioned about preferring to refrain from medical check-ups in the fear of finding out about existing problems. Some women preferred not to know about the disease. One woman outside Dhaka (group 8, grandmother group) mentioned,

*I will be happy to die in peace. I do not want to find out anything now.* Elderly Woman, Feni.

The discussions opened up that there is a requirement for a way women require a supporting community that may help them to pass through challenging periods of time.

Solution Design

Our solution approach consists of minimalistic system that enables one to create a community, allows them to connect through setting up meetings at their convenience. The
major feature of the system revolved around a simple way where a group can set up a physical or virtual meetup.

Features of System

Key focus of the design in building up a trusted community who can share and support each other to generate and increase awareness regarding breast cancer. Following features are presented to illustrated the solution approach clearly.

**Connectivity Groups:** The system allows users to create small social groups. In Bangladesh, there is a common culture of small group meet ups over tea where group of friends would meet up in a common place which we wanted to incorporate in the light of creating a support group. Support groups to solve social problems is not common in this region which is common in western world. This effort tries to utilize the social norm in the solution space. This is the core feature required to create a support community. Meeting interface of how to pick up a meeting time and selection of members for a meeting is shown in Fig. 1 and Fig. 2 respectively.

![Fig 1: Picking suitable time](image1)

![Fig 2: Selecting member for meeting](image2)

**Meet up Place:** Physical meetups take place at places of convenience of the group members who can propose and select a meeting point. Once the meeting time and place is selected, it will be shared with the group members. Meeting place can be selected using a map interface or by manual entry of a particular place. The map interface is shown in Fig. 3 along with the email interface that sends out an email to the group of people in Fig. 4.
Sharing of Stories and Blogs: There are options where group members can share their personal stories and experiences to support others. It should provide a personal connectivity among members of the community.

Evaluation

The system was tried by group of users. The system was sued to set up a meeting of a mixed gender group of 14 people (5 women). Entire meeting time selection, group selection was conducted using the system. The system was well appreciated among the participants.

Discussion

A disease related awareness generation appears to be a difficult one considering its involvement mainly with women along with the sensitivity of where the disease appears
where breast is considered to be a body part that should remain hidden and not to be discussed from the social cultural aspect of Bangladesh.

Our findings revealed that patriarchal views and practices impact the disease related awareness generation and discussion in direct and subtle level. We have found group of male participants who are not interested to discuss about breast cancer at all. It shows the importance of involving male family members in the awareness generation and connectivity process.

Social norms where male children are considered to take care of parents are commonly practiced in Bangladesh. Lack of economic freedom of women has played a role in negligence. However, women who do not contribute to earn money play important role in families and must be acknowledged to improve the current situation.

Social cultural norms take time to change through long term discussion and awareness generation process. However, there must be ongoing effort that connects group of people for small group discussion about breast cancer. These small groups can contain family members, friends or colleagues who are comfortable to share problems and support each other.

Our proof of concept system can be used by communities who have access to computers and have basic computer literacy. We hope to initiate our concept in communities that have such access which can be further expanded over mobile phone SMS based system or other simpler forms of connectivity that is common among low-income, low-literate communities.

**Limitations**

One limitation remains where the male participants were all from Dhaka, the capital city of Bangladesh. It excludes the views outside Dhaka from male participants. We hope to further extended the study to reach out for diverse male participants.

There is a limitation regarding long term evaluation of our developed system where users have used the system over a meeting but not for longer term. The usage to meeting time was a period of one week and we only have a feedback consisting of that meeting and its participants.

In future, we want to run the system for longer period of time covering a diverse group of users to find out how we can generate awareness through connectivity.

**Conclusion and Future Work**

A support community is very important during awareness generation process along with follow up phases of treatment considering the problem of Breast Cancer. It is challenging for the social cultural norms. We have focused on the women of Bangladesh and worked with them to develop a way that can enable better communication among them. We have conducted small cases of evaluation. We wish to have long term follow up studies working with urban as well as rural women to find out a feasible solution approach to increase awareness as well as support through community engagement.

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Mission Impossible?
The challenges (or impossibilities) of influencing practice

Gillian Oliver – Monash University
Fiorella Foscarini – University of Toronto
Overview

• Our story
• Information culture
• Organizational context
• An example from our study of archival authorities
• Ideology and genre
• Limited effectiveness of research in organizational contexts
A Heroic Quest
III
Governance
Trust

II
Information management skills which can be acquired or extended in the workplace

I
Respect for records
Willingness to share information
Preferred information sources
Language considerations
Regional technological infrastructure
Organizational Setting – Archival Authorities
Learning to Talk the Walk Project – Goal and Methodology

• Help organizational actors identify culturally feasible and desirable actions that could improve their recordkeeping practices
• [Participatory] Action Research
• Information Culture Framework
• Deliverables include toolkit for the development of Information Profiles
  • Not an audit or a consultancy report: Information profiles should be written in a style and tone that will help build relationships
Main findings:
• Preference for informal communication (ICF level 1)
• RM training is incidental and accidental (ICF level 2)
• Focus on Archives; Low interest and no trust in EDRMS (ICF level 3)

Conclusions:
• NA has changed tremendously in the last few years
• It is time for NA to take its internal RM seriously
• Suggestion: Build confidence through extensive RM training

Reaction:
• Rejection!
Ideology

• Ideology may be described as a process, as the daily practices of a society’s cultural, economic, and political institutions
  • “A complex, conflictual, and contradictory social practice” (Gramsci 1971)
  • Activities that construct and maintain privilege, knowledge, prevailing rules, relations of power, etc.

• “Metaphorically speaking, ideology endeavours to cover its own traces” (Fairclough 1995)

• “Through their participation in socially organized practices, people take on the subject positions, the social roles, the values, and the visions of the communities they join” (Paré 2002)
Genres and the “Naturalization of Ideology”

• Genres are discursive conventions that embody certain ideologies

• Their automatic, ritual unfolding makes genres appear normal, inevitable, immutable; they are “the way things are done here”
  • “Genres are sometimes danced without conscious awareness and intent on the part of those using them” (Coe 1994)
  • Institutional genres serve primarily to **conserve and standardize**

• As habitual practices, genres contribute to the “naturalization of ideology” (Fairclough 1995)

  Language (ways of talking) ↔ Ideology (ways of seeing)
Why Research Cannot Change Practice

• Genre’s illusion of normalcy can be cracked or exposed
  • But to be effective the “centrifugal force” must be internal to the community

• A discourse is an “identity kit” (Paré 2002)
  • The development of a professional persona is an ideological transformation
    that occurs through participation in workplace genres
  • The “I” subsumed in the professional role of organizational members (subject position) is different from the “I” in the world (social subject)

• Tensions within a community’s “linguistic marketplace” (Bourdieu 1984)

• Academia and workplace are “worlds apart” (Dias et al. 1999)
Older Voices: Using digital technologies for community radio archiving in Later Life

Arlind Reuter

Abstract: A vast body of literature has explored the connection of community media and civic participation in younger people. However, there is a notable lack of research concerning the ways in which older adults make use of digital media in order to promote their civic participation interests. This project describes a collaborative project with an organisation of older adults in Newcastle upon Tyne, UK, who use the medium of community radio to connect to their community. Taking on a participatory action research approach, their need to connect with the audience and increase the persistence of their content was identified. By introducing a digital tool to support the group in labelling, editing and uploading parts of their radio show, an online archive of the content was created. This allows the radio team to track audience interests and engage more people in listening to their show. Findings about how a group of older adults make meaningful use of digital technologies as part of their community practices are evaluated.

Keywords: Later life, Digital Civics, Ageing, Community Radio

Introduction

Community radio as an independent, non-profit and community based participatory medium contributes to public dialogues and can be a way into civic participation for many communities, who are at risk of being overlooked by mainstream broadcasters (UNESCO, n.d.). Older adults, who are at heightened risk of being excluded from civic participatory activities or of becoming invisible to their communities (Walsh, Scharf, & Keating, 2017), are seldom producers of community radio in the UK (Ofcom, 2017). However, some community radio shows made by older adults for older adults exist (Angel Radio, n.d.; Elders Council, n.d.) aiming to affirm older adults as valued members of society, offering support and friendship to peers, promoting older people's talents, and ensuring that these talents are acknowledged by a wider audience.

This paper refers to a collaboration with an existing organisation of older adults who run a monthly community radio show, which is described in another paper (under review). Collaboratively, we identified their challenges to connect better with their audience and to increase the persistence and sustainability of their content. The scope of this paper will mostly cover one part of the deployment, namely the creation of an online archive of content on YouTube to support the group in labelling, editing and uploading parts of their radio show. The project shows that a diverse group of older adults can positively engage in a learning process that makes use of digital technologies to promote their community radio show and thus strengthening their civic participation. This can contribute to our understanding of how older adults can use digital technologies to promote their community radio show and extend the reach of their voices in their community and across the city.
Research Background

Due to its participatory and non-profit nature, community radio opens its programme making to all members of the community and therefore encourages people to become more active in their communities (Adler & Goggin, 2005). Various groups (e.g. ethnic minorities, rural/urban, religious and youth communities) represent themselves in community radio shows, offering a voice to different communities and encouraging diversity regarding cultural, political and/or social contributions (European Parliament, 2007). Some retirement communities host their own radio stations or produce podcasts in order to reach fellow residents and support them with information (“Lonetreevoice.net,” n.d.; “Spark memories radio,” n.d.; “Stream Seniors Radio” n.d.). They open up a space for dialogue about later life and aim to ensure that older adults can have a voice in their communities. Additionally, this supports the process of civic participation in later life: the potential for older people to become more engaged in shaping their communities (Scharf, Medonald, & Atkins, 2016). Civic participation describes a “voluntary activity focused on helping others, achieving a public good or solving a community problem, including work undertaken either alone or in cooperation with others in order to effect change” (Barrett & Brunton-Smith, 2014). And in addition to positive impacts on local communities, civic participation can result in individual benefits in later life, such as health benefits, skill development or an increased life satisfaction (McMunn, Nazroo, Wahrendorf, Breeze, & Zaninotto, 2009; Scharf et al., 2016).

The concept of having a voice, as articulated by McCarthy and Wright, relates directly to civic participation. It can foster connectedness within communities and can lead to social action (McCarthy & Wright, 2015). Older adults who are more likely to be socially excluded (Walsh et al., 2017) face the risk of becoming “invisible” to others in their communities (Blythe et al., 2010). Emphasising having a voice to create a community dialogue between voices, which do not usually engage with one another, can facilitate the process of making the invisible visible. Digital and participatory media technologies, in particular community radio, can be used as a means of sharing experiences, creating dialogue about ageing and strengthening civic participation in later life (Clarke, Crivellaro, Di Mascio, & Wright, 2016).

Methodology

We aimed to explore how older adults as producers of a community radio show can use digital technologies to broaden the impact of their voices, and therefore the impact of their civic participation, within their community and across the city.

This project was carried out in collaboration with an existing organisation of older adults in Newcastle upon Tyne, UK. Some members of the organisation are producers of a monthly community radio show called ‘Older Voices’. They aim “to celebrate the older people of the region, discussing and highlighting issues that affect older residents, along with occasional music” (Elders Council, n.d.), in order to have a voice across their city. The production of the show has been an ongoing process since its inception ten years ago and it is managed by a team of around eight members (aged 65-83 years, 3 male, 5 female). Apart from the effort of putting on a monthly show, the group faces two key challenges: a lack of audience engagement, and resulting uncertainty about their listenership’s demographic characteristics, as well as the lack of persistence of the content that is broadcast once only and not archived in a publicly-viewable form. Recent changes in the organisation’s agenda have prompted a move towards using ICT and social media as a way of staying connected with their digitally literate members and the wider community. For the radio show, this shift raised questions regarding the programme’s “visibility” in their online community and barriers around how to “get online”.
Research Stages and Approach

We responded to the research question in three stages, encompassing: 1) scoping research to explore the setting, 2) co-investigating the challenges the team faces, and 3) realising design responses. A Participatory Action Research (PAR) approach informs the methodology of all different research stages, and supports the process of democratic and collaborative research. This highly contextual and inclusive way of researching was especially important for conducting research with a diverse group of people, stereotypically and erroneously viewed as homogenous and “digitally illiterate” (Hayes, 2011, 2012; Vines, Pritchard, Wright, & Olivier, 2015). PAR describes a repeated process, consisting of cycles of planning, action and reflection, that build on each other and inform subsequent steps (Hayes, 2011), which are reflected in the project’s overall context, but in particular through being embedded in the radio group.

Table 1: Overview of the methods used in the research stages and their outcomes

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Deployment

Throughout the first research scoping stage, three themes emerged that highlight: 1) the social importance of the radio show for the team, 2) a lack of audience engagement, and 3) skill development through the production process. The first theme describes the intuitive social structure, that determines the production of the show. Production tasks are determined depending on specific skills of each member and social connectedness and trust play an important role in the successful production of the Older Voices show. The second theme highlights the group’s challenge of being connected to their audience, which results in doubts of whether the show is of meaningful value for their community. This lack of connectedness to their audience is also reflected in the content of the programme: despite the team’s wish to tailor the content to their audience’s needs and interests, the current content creation relies on ideas and interests of the team members. The third theme relates to the importance of life-long learning. It describes the production of the community radio show as a continuous improvement process for the members and the fact, that indeed they’re not “doing it for the
audience, they’re doing it for [themselves] and [they’re] doing to get better at something” (Participant 1).

These findings were taken to a co-investigator workshop, in which we mapped out the production process and identified general barriers that the team faces in the production of the show. Additionally, the team reflected on the audience question in a co-creation of persona activity: who do they think their audience are and who would they like their audience to be? Ultimately, the workshop results reflect the two main challenges for the group: 1) the need of the team to connect and engage their audience and 2) the lack of persistence in the content, which is broadcast once only. To address those challenges, we collaboratively worked on the realisation of two differing non-intrusive design responses: 1) the implementation of engagement activities (phone-in option, Facebook Live video stream) throughout a live show and 2) the deployment of a digital tool, as described in the scope of this paper.

The Radio Grabber

As a response to the challenge of increasing the persistence of the created content beyond the initial broadcast, a digital tool, which was later named Radio Grabber by the participants, was developed. The Radio Grabber is a tailored programme, to support the group in editing, labelling and uploading their content to an online archive on YouTube, in order to achieve two aims: 1) allow audience engagement to be tracked (such as clicks on particular topics); and 2) to ensure that the content can be re-listened to and accessed by a wider audience. To respect the ongoing production workflow of over ten years and ensure sustainability of the tool beyond the project, the Radio Grabber was designed to be non-intrusive and built on the team’s existing production structures. As part of their existing practice, a detailed running order is created before each broadcast, which reflects the planned content in the given time. The tool therefore needed to take the running order and audio input with the broadcast recording without much additional work from the team.

The team can upload their running order as well as the broadcast recording to the Radio Grabber and both will automatically launch in an audio-editor program (Audacity), similar to one they were somewhat familiar with, but free to use, in order to ensure accessibility. The parts of the running order appear in the editor as labels, associated with the audio file in order to indicate roughly the time where content should be located on the audio recording. As the running orders are very precise to the second, the team need only adjust the labels slightly to match the start and end of each content section in the audio file.

Figure 1: The broadcast recording and associated labels in the Radio Grabber
Once this step is done, the tool encourages the team to make editorial decisions about if and which content should be uploaded and how it should be labelled. This opens up a space for reflection on the production as well as the content-creation process. After adding information about the content regarding broadcast date, host and chat topics or the format (chat, poem, story etc.), the program will generate a video file with the audio and the logo as the background, which is automatically uploaded to the group’s YouTube channel.

Figure 2: The Radio Grabber Interface to label the content snippets

Creating content snippets, rather than uploading the broadcast as a whole, opens up the potential for meta-podcasts, the creation of playlists on YouTube and re-broadcasting. It avoids issues with music copyrights or unwanted advertisements. At the time of writing (October 2018) seven two-hour training sessions on the functionality of the Radio Grabber were conducted with 5 members of the radio team in pairs. The training sessions are continued as part of sustainability of the project. In order to ensure that the process can be replicated by the radio team without our help, a large sized step-by-step guide to the tool was created with screenshots and detailed instructions. Additionally, the Radio Grabber software was installed on some team member’s private computers and the team added another production task on their rota, which is dedicated entirely to the uploading of content.

Evaluation and Reflection

The research aim underpinning this project aimed to explore how older adults can use a digital technology to promote their community radio show and therefore extend the reach of their voices and the impact of their civic participatory activity. With regard to analysing the impact of the Radio Grabber on the engagement of the community with the Older Voices radio show, getting the content out online counts as the first step of generating objectively measurable audience engagement. At the time of writing (October 2018), the radio team has uploaded 24 videos with different chats, poems, thoughts of the month and stories. Over 324 views were recorded with a watch time of around 420 minutes. The impact of the deployment of the Radio Grabber can be evaluated on three levels: 1) the personal impact for each team member, 2) the interpersonal impact within the team and 3) the impact on outreach beyond the team and its intended audience.
Personal Impact

The personal benefits of the Radio Grabber deployment relate to the creation of the archive, as well as to the process of using the tool. The analytics on the YouTube archive indicate that, despite disheartening assumptions that they might be broadcasting to only a few people, there is an actual audience for the Older Voices content. Some participants voiced that looking at the YouTube analytics strengthened their confidence in the show and encouraged them that their voices are heard. This direct feedback of numbers was perceived as an encouragement to keep working on listener engagement as part of the show.

Additionally, the use of the Radio Grabber contributed directly to the skill development of the team, reflecting the third theme as described in the scoping research stage (Community Radio as a continuous improvement process). Despite initial fears of engaging with an unfamiliar technology, all participants reflected that they valued the learning experience with the Radio Grabber.

Interpersonal Impact

In addition to the improvement and development of personal skills, the participants reported that they enjoyed the collaborative and social learning process of engaging with the Radio Grabber. For a community radio team, whose structures are built around the knowledge of each other and which operates intuitively, this activity strengthened the social connectedness within the team and contributed to a shared experience. It is important to note that the team gained self-affirmation and pride through the creation of an online archive using a tailored tool that has been created solely for their own purposes. Even though they have yet to discuss the particular analytics regarding the content creation, an update on the increase on the YouTube views is given in each planning meeting and the team celebrates their success.

The non-intrusive nature and community design of the Radio Grabber shifted the focus entirely to the interpersonal impact of the technology and the benefits of experiencing a technology. Integrating the technology into the workflow strengthened the group’s autonomy throughout the deployment process. This is especially important in later life, as older adults are often stereotypically viewed as digitally illiterate or slow and inefficient users of technologies.

Impact on Outreach

While the creation of an online archive opened up the potential for the content to be accessed more widely, content that was aimed to be accessed by older people in the city of Newcastle is now available to be accessed by a variety of different audiences. The uploading of content opened up networking opportunities for the Older Voices team, as guests on the show can re-listen to their interviews and share it for their own purposes. The potential use of the archive for the organisation’s outreach and online representation is currently discussed. Additionally, the YouTube statistics show that the videos were accessed by people from different countries, such as Italy or Saudi-Arabia, which opens up a space for reflection on who is using the archive, whether there are particular reasons to access the content, and if or how these audiences can be engaged in the programme.

Conclusion

This project contributes to our understanding of how older adults can use a tailored and non-intrusive digital technology to increase the reach of their voices by building an online archive of their community radio content. The deployment of the tool was perceived as valuable by the community with regard to personal skill development, it strengthened social connectedness within the team and resulted in increase of outreach to their existing and new audiences.
References


“Problems with records and recordkeeping practices are not confined to the past”: A challenge from the Royal Commission

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Abstract: This presentation will begin by describing and analysing the campaign by the Care Leaver community and other stakeholders to bring about a royal commission into child abuse in Australia. Care Leavers did not get the royal commission they wanted and expected—other more powerful forces were at play—but the Royal Commission into Institutional Responses to Child Sexual Abuse (Royal Commission) was highly effective in exposing the complex nature and extent of the problem of child sexual abuse, “the core transgression of childhood innocence”. In doing so, the Royal Commission’s findings challenged church/state relations in Australia. This paper aims to show that, although the Royal Commission disappointed many Care Leavers with its narrow focus on sexual abuse, when it eventually reported on records and recordkeeping, the Commission surprised many by moving well beyond its narrow mandate. Issues relating to records and recordkeeping were not originally a prominent part of the Commission’s mandate, but they emerged as one of the crucial issues that influence the quality of the out-of-home Care experience and child protection. This finding has created a fresh context in which Care Leaver advocates, academics and other professionals can work together to further a new agenda for recordkeeping in out-of-home Care.

Keywords: Care Leavers, CLAN, inquiries, royal commission, childhood records, recordkeeping, child abuse, advocacy

The campaign for a royal commission into child abuse in Australia

Disclosures of brutal child abuse and callous neglect in institutional out-of-home Care (OOHC)¹ in Australia are now commonplace. Official inquiries are not new. Shurlee Swain’s catalogue of eighty-three Australian inquiries into institutions providing OOHC held between 1852 and 2013 is proof of that (Swain 2014a). What is different, however, is an emphatic shift from the time of the trilogy of national inquiries—the Stolen Generations (Human Rights and Equal Opportunities Commission 1997), Lost Innocents (Senate Community Affairs References Committee (SCARC) 2001), and Forgotten Australians (SCARC 2004)—towards privileging evidence from Care Leavers as survivors of what Jeffrey Olick called the age of regret (Olick 2007). These three inquiries between them generated more than 1,400 submissions, most of them survivor testimony.

From 2013 to 2017 the Royal Commission into Institutional Responses to Child Sexual Abuse (the Royal Commission) heard direct private testimony from 8,013 survivors of whom just under 50 per cent were abused in “closed” institutions like orphanages, children’s Homes, foster Care and youth detention facilities (Royal Commission 2017a, 378; Breckenridge and Flax 2016, 6). More than 700 of these private sessions were held in adult prisons. Of these prisoners, more than 50 percent had been sexually abused as children in OOHC and a further 33 per cent while in youth detention.

¹ The term “Care” is problematic; hence, it is often capitalised (as in this paper) or used in ironic quotation marks. See Wilson and Golding 2015, 27-29. The term “Care Leavers” is widely used to refer to people who were raised in orphanages, children’s homes and foster Care.
facilities (Royal Commission 2017a, 245). Hundreds of other survivors wrote to the Commission and/or gave evidence in one or other of the 57 public case studies conducted by the Commission, especially the nine case studies which focused on historical residential Care and a further five which focused on contemporary OOHC.

This transformation in the conduct of official inquiries has been a complex process with several interwoven strands. From the 1990s onwards advocacy groups were formed after the emergence of Freedom of Information or Rights to Information legislation and a snowballing demand for release of hitherto unknown or inaccessible childhood records that Care Leavers thought might clarify questions of family identity, allow them to reconnect with their fragmented families, or at least explain the reasons for their incarceration, if not confirm their memories of painful or shameful events in their institutionalised childhoods (De Wilde & Vanobbergen 2017).

I will say more about rights to records and rights in records later, but those rights were nested in a broader children’s rights movement to which Care Leavers became increasingly responsive. There was a stirring of consciousness among Care Leavers that such rights apply to all children, including children who, for no fault of their own, were not able to live with their parents. They remembered that as children in closed institutions, they were denied many of the specific rights that are now detailed in the United Nations Convention on the Rights of the Child (CRC). Table 1 provides numerous examples of the denial of rights such as the right to participate in critical decisions that affect your future, the right to maintain connection with your family even if you must live apart from them, and the right to be protected from all forms of abuse, or negligent treatment, or exploitation while in the Care of legal guardians or any other person who has the custody of the child.

With the formation of advocacy groups in the last decade of the twentieth century and the early years of the new century there is a discernable shift from voice to agency. Groups like CLAN\(^2\) found that the language of rights helped them to gain the community's attention and generate public awareness of the atrocities that happened behind the high walls of often-isolated institutions. Care Leaver testimony gained the attention of the media and challenged the national historical narrative of OOHC (Sköld 2013, 7). In more than a dozen nations, the “global chain of inquiry” (Wright, Swain & Sköld 2017) connected survivors across national borders (Child Rights International Network 2018) including, for example, Ireland where it has been claimed that the emergence of survivor groups has been perhaps “the most impressive development within Irish civil society in relation to children’s rights” (Powell & Scanlon 2015, 193).

Kjersti Ericsson (2015) suggests that the CRC was a precondition for the international wave of inquiries that were established in the 1990s and 2000s, and Katie Wright (2017) notes that the discourse of children’s rights frames the terms of reference of many inquiries and is prominent in many inquiry reports. But I would add acknowledgement that in Australia Care Leaver advocates had been instrumental in bringing some of these inquiries into being. For example, Senator Andrew Murray, a leading member of the two Australian Senate inquiries—and later one of the six royal commissioners—conceded that the 2004 Forgotten Australians Senate inquiry “would never have seen the light of day” had it not been for the persistent lobbying of concerned activists. The language of rights was prominent in Care Leaver submissions (SCARC 2004, e.g. submissions #18, 22, 33, 119, 138).

The demands of Care Leavers gained momentum from one inquiry to another. The powerful testimony provided to the 2004 inquiry led the Australian Senate committee—urged by CLAN (Heinrichs 2004)—to conclude that a royal commission was warranted to examine “the extent of physical and/or sexual assault within institutions and the degree to which criminal practices were concealed by the relevant State and/or Church authorities” (SCARC 2004, 243). However, John Howard’s government rejected that proposal in 2005

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2 Previously Care Leavers Australia Network and now Australasia to acknowledge membership in New Zealand where a royal commission began in 2018.
by quarantining moral leadership at state borders. The offences occurred under state and territory law, so any action was “therefore, a matter for state and territory governments” (SCARC, 2009, 65).

This was a major setback, but as Care Leavers said, “They stole our childhood innocence, but they can never steal our adult voices” (House 2018). CLAN lobbied to have the Senate committee review the progress on the Lost Innocents and Forgotten Australians reports. At that review in 2009, Care Leavers and Senator Murray continued to support a royal commission (SCARC 2009, 66). However, the Senate committee did not re-endorse its earlier recommendation because it doubted a royal commission would succeed in exposing and prosecuting perpetrators (SCARC 2009, 225). How wrong they were.

Shortly after the release of the 2009 Senate report, the Australian government under Kevin Rudd issued a national apology to Care Leavers and former child migrants. The language of that apology had been crafted after consultation with CLAN and others who heard Prime Minister Rudd say, “Sorry—for the physical suffering, the emotional starvation and the cold absence of love, of tenderness, of care…” (Rudd 2009). The agenda was the broad spectrum of maltreatment, with no special attention given to sexual abuse. When a new prime minister, Julia Gillard, announced in November 2012, that there would be a royal commission after all, she linked it directly to that national apology: “It is fitting that I announced this Royal Commission in the same week as we remember the third anniversary of the National Apology to Forgotten Australians and Former Child Migrants on 16 November 2012” (Gillard 2012; CLAN 2012-2013). She and the minister for families, Jenny Macklin, sent separate handwritten messages to CLAN. “The Royal Commission is a tribute to your efforts,” wrote the PM (CLAN 2013, 3). Care Leavers could be forgiven for thinking that what the Government was offering was a more rigorous re-run of ‘their’ Senate inquiries which had covered sexual, physical and emotional abuse, and neglect (Royal Commission 2015, 102).

**The Royal Commission fractured the Care Leaver community**

It soon became clear that this Royal Commission would not be like previous inquiries. Its designated Terms of Reference meant it would not deal with Care Leavers as a community of common interests—only the minority subset that had been sexually abused. Other more powerful forces were at play that designated sexual abuse as “the core transgression of childhood innocence” (Golding 2018a; Golding 2018b; SCARC 2018) Core transgression meant only transgression.

Few would dispute the claim that “The sexual abuse of a child is a terrible crime…the greatest of personal violations…and can have lifelong adverse consequences (Royal Commission 2017b, 5), but the Royal Commission’s mandate excluded those who “only” experienced cruel physical assault, emotional abuse, exploitation of labour, neglect of health and education, subjection to unauthorised medical trials or placement in adult mental health facilities, being stripped of personal identity and terminally separated from their parents and siblings. It mattered not a jot that the UN Convention on the Rights of the Child (CRC) requires the government to take

> measures to protect the child from all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse, while in the care of parent(s), legal guardian(s) or any other person who has the care of the child (UN, Article 19).

The majority of Care Leavers—those who were not sexually abused—were required to put the enduring traumas of their abuse on hold for the five long years of the Commission. And for that duration they were marginalised by the mainstream media. As the current author told the Senate Committee hearing in March 2018: “Headline after headline, radio reports, television reports hammered home the message of sexual abuse...”
The none-too-subtle subtext was that their non-sexual abuse was subordinate and insignificant. The story for the media was scandals in the churches, especially Catholic entities, and prestigious private schools. The Catholic Truth Justice and Healing Council commented that the “…many years of media coverage of clerical sexual abuse most Church authorities and certainly most senior Church leaders felt under siege” And, as a consequence, “Much of what the community, including the Catholic community, has come to know about the abuse scandal has been through the media.” (Truth, Justice & Healing 2018, 5, 48). The media weren’t covering other forms of child abuse.

Elsewhere I have given an account of why the terms of reference of the Royal Commission were confined to sexual abuse—the ‘core transgression of childhood innocence”—and why the Catholic Church featured so prominently (Golding 2018a). In passing, it should be said that the Royal Commission has had significant consequences—both predicted and unpredicted. Notably, it has shaken the churches in Australia, particularly the Catholic Church. The scale of child abuse in Catholic institutions and the failure of the Church leadership in handling the abuse—in its own words, “the disastrous performance… laid bare for all to see”—has weakened the Church’s effectiveness in prosecuting contemporary public issues (Truth, Justice and Healing 2018, 53). This diminishes its power as moral persuaders for example in public debates around marriage equality and euthanasia. The Truth, Justice and Healing Council (2018, 33) concluded, “The church has lost its moral authority”. The parallels with the Irish Republic and Northern Ireland are noteworthy (BBC 2018). However, exploring further these larger issues of church/state relations are not within the scope of this paper.

‘You asked about records’

This paper aims to show that, although the Royal Commission disappointed many Care Leavers with its narrow focus on sexual abuse, when it eventually reported on records and recordkeeping the Commission surprised many by moving well beyond its narrow mandate.

Records had been the core business of the trilogy of earlier national inquiries. In the Stolen Generations inquiry (Human Rights and Equal Opportunity Commission 1997) personal and family records were linked directly to the importance of locating and reunifying families. Similarly, the Child Migrants Inquiry (SCARC 2001) was required to examine matters relating to family reunification across continents, but went further to the issue of records and identity—and that issue was taken even further in the Forgotten Australians report (SCARC 2004).

By contrast, OOHC records and recordkeeping were not among the most explicit elements of the terms of reference of the Royal Commission (2017c, 31). In February 2017, the Chair, Justice McClellan, had written to CLAN, “…when I came out to talk to your people at the [Orphanage] Museum you asked about records. That exchange has always been at the front of my mind. Whether our terms of reference allow (probably not) we are doing what we can on that issue” (McClellan 2017). Among the things it had done was to issue a Consultation Paper on records and recordkeeping practices in September 2016, which prompted some 46 responses including from a number from Care Leavers (Royal Commission 2016). Further, one of the Commissioners, Justice Jennifer Coate, addressed the national conference of the Australian Society of Archivists in October 2016, and delivered a keynote speech at a national summit on records in May 2017 (Coate 2016; Coate 2017). The shift in thinking was becoming apparent. The volume of the Commission’s final report dedicated to records and recordkeeping makes repeated references to general widespread problems that were pervasive and enduring:

in the past, many institutions did not have clear and enforced policies for creating and managing records about children under their care. The fact that we also found poor records and recordkeeping practices in recent times
suggests that the problems with creating and managing accurate records are systemic and enduring (Royal Commission 2017c, 39).

The Commission referred to clear evidence of gross mismanagement: a senior bureaucrat in Victoria, for example, told them in 2015 that his Department had recently discovered a personal file that it had begun searching for in 1999 (Royal Commission 2017c, 51). The Commission referenced, also, the trenchant criticism of the Victorian Ombudsman who, following numerous complaints from Care Leavers, had investigated the management of Victorian state ward records and found them in disarray (Victorian Ombudsman 2012). It referred to the ample evidence that survivors gave them in case studies, private sessions and consultations—and these were not just in relation to sexual abuse.

During our inquiry we heard that access to records has been a recurring concern for survivors of child sexual abuse in a range of institutional contexts, over many decades. Lack of support and guidance, excessive delays, prohibitive costs, inconsistencies in law and practice, refusal to release records and redaction of records were all raised with us as issues affecting survivors’ personal wellbeing and ability to hold institutions to account (Royal Commission 2017c, 39).

The Chair of the Commission, Justice Peter McClellan, had begun to link the Commission’s work in this area to the children’s rights movement. He opened an address to the Conference of the Association of Children’s Welfare Agencies in 2016 with a chronicle of the movement from the Geneva Declaration of the Rights of the Child of 1924 through the Geneva Declaration of the Rights of the Child 1959 and the Australian Government’s ratification of the Convention on the Rights of the Child in 1990 (McClellan 2016). The evidence of the denial of those rights in the testimony of survivors in private sessions and in public hearings profoundly shocked and moved the Commissioners. They heard countless personal accounts of “obstructive and unresponsive processes for accessing records” (Royal Commission 2017c, 30). They were struck by the number of occasions that they “received more complete records about individuals in response to our summonses than the individual received in response to their own requests for access” (Royal Commission 2017c, 39).

The weight of the evidence led the Royal Commissioners in its final report to declare an explicit position on rights to records:

good records and recordkeeping practices are integral to the realisation of many of the rights of children enshrined in the United Nations Convention on the Rights of the Child… to which Australia is a signatory. In particular, the creation and management of accurate and detailed records is fundamental to children’s rights to identity, nationality, name and family relations. The rights of children to be protected from all forms of physical, mental and sexual abuse are promoted by good records and recordkeeping (Royal Commission 2017c, 44).

Although the Commission initially couched its commentary in terms of its remit of sexual abuse, much of its report went well beyond that mandate. It stressed the intrinsic role that records play in institutional conduct and accountability. Indeed, the Commission noted concern that the impact and value of the five high-level principles for records and recordkeeping that it recommended would be needlessly limited by referring only to child sexual abuse. It amended the principles by framing them as being about “child safety and wellbeing, including sexual abuse” (Royal Commission 2017c, 107).
The Commission noted that the trilogy of reports—*Bringing them home, Lost Innocents* and *Forgotten Australians*—had made recommendations to improve recordkeeping practices and access to records. “Nevertheless”, the Commission concluded, “the evidence before us makes it plain that problems with recordkeeping and access to records are not confined to the past, and that the practices and processes of contemporary institutions require improvement to better meet the needs of survivors.” (Royal Commission 2017c, 54)

“Rights are not given voluntarily; they have to be seized”

Improvement? Over the past decade contemporary OOHC authorities in all Australian jurisdictions had acknowledged the need for improvement, and some had even tried to make progress—often ostensibly using a rights-based approach. All jurisdictions have developed charters of rights for children and young people in OOHC (Australian Institute of Health and Welfare 2015), and the Council of Australian Governments’ rights-based National Framework for Protecting Australia’s Children for the period 2009 to 2020 and this Framework gave rise to National Standards for OOHC in 2011 (Department of Families 2011). The language is inspiring. Standard 2, for example, referenced the UN CRC principle of respecting the views of children and giving them a say in decisions that affect their lives (United Nations 1989, Article 12). Older Care Leavers reading Standard 2 would have speculated about the difference that principle might have made to their childhoods had it applied in their day. However, on closer examination, these standards and charters are sometimes more aspirational than honoured. For example, although a “care plan” is a legislative requirement in all jurisdictions, when the children in OOHC were asked about it the vast majority knew nothing about their plan and, of those who knew about it, only one third had been involved in its preparation (McDowall 2013, xix). Yet, the discourse of rights is capable of being weaponised by older Care Leavers. Many looked with great interest at National Standard 10 which read: “Children and young people in care are supported to develop their identity, safely and appropriately, through contact with their families, friends, culture, spiritual sources and communities and have their life history recorded as they grow up”. It went on: “Memories and experiences during their time in care will be recorded in photos and other memorabilia to help them recall the people and events that have shaped their lives (Department of Families 2011, 12). That raised questions for older Care Leavers: if welfare authorities really believe that rhetoric, surely it can’t be too late to find a retrospective application to historical Care records? Rights are surely not suddenly found to exist; they don’t come into being abruptly because of the creation of conventions or charters of children’s rights? If they exist, why should the custodians of their childhood records be allowed to remain “obstructive and unresponsive”? The rights given voluntarily to children in contemporary OOHC were not being offered to older Care Leavers. These rights would have to be seized. In 2015, CLAN began consulting its members and others with an interest, and in successive stages, drafted its own Charter of Rights to Records through 2016 (Golding 2015). Three principles make it somewhat different from other charters that have been handed down by officials:

- A principle of participation through the application of the existing, but little-known, legislated right to challenge historic records where they are deemed to be inaccurate, misleading or out-of-date, and to submit alternative relevant material for inclusion on the record. In contemporary OOHC, this principle would extend to a co-authorship principle whereby children in Care would be encouraged to contribute to the making of records about themselves. In both historical and contemporary OOHC, having multiple perspectives on the narrative of events that form the life of the growing person is likely to result in more truthful and more reliable records.
A principle of control which encompassed a right to know who is accessing the file, and a right to veto readers who do not have the subject person’s permission to read.

And a principle of ownership through an assertion of the right to full and unredacted access to all documents and the handing over of not copies, but the originals, of all personal documents such as family letters and photographs. This principle of ownership is probably the least acceptable proposition in the CLAN charter, because it challenges the very essence of recordkeeping and archiving culture and history.

In subsequent discussion among Care Leavers, this last principle, ownership, has been extended to discussion about moral ownership of records as opposed to legal ownership. The Royal Commission took up this concept briefly, but judged that it would be better policy to manage access issues “in terms of control of personal information, rather than ownership” (Royal Commission 2017c, 102-103). That dichotomy may blind us to a third option. We are beginning to look more closely at a policy based on the concept of a children’s trust. Put simply, a trust is an arrangement in which an adult person or body holds property or rights for the benefit of a child into the future. Children’s personal records would be made and held until they leave the Care system. The advantages are obvious: children would know that recordkeeping is occurring throughout their time in Care; they could contribute to the growing record and ask that critical incidents be recorded and included as they occur; they would take pride in recording their own milestones of achievement; and they would expect to be able to take possession of the record when they are about to move on—or at a later stage by agreement.

On that basis, when a child’s or young person’s time in Care is up—and they want to reconnect with their families, or to understand the reasons they were separated from them—they ought to be able to say:

Thank you for being my guardian. You acted in my best interests, as a good parent would, by making a record of the significant events of my life. Now your job is over, I would like you to hand me the records you made for me.

(Golding 2017)

In more recent times, as we move now into a national redress scheme—and paradoxically increased civil litigation by Care Leavers—CLAN’s thinking has turned also to the inherent conflict of interest when an agency that may have been responsible for maltreatment of the child holds the records that may confirm allegations of abuse. Responding to requests for records should not be influenced by consideration of any real or perceived conflict of interest. One way of minimising the likelihood of files going “missing” or being destroyed by convenient floods, fire or feral rats is to have all historical files transferred to an independent repository, such as the National Archives or State Archives where archivists can be trusted to provide access without fear or favour (CLAN 2017).

I conclude with a brief reference to another parallel development in the change process. For some years, Care Leavers have been very pleased to work alongside a range of historians, archivists, social workers and others who see the need for change in records and recordkeeping in OOHC. In Victoria, for example, CLAN had given evidence in 2011-2012 to the inquiries of the Auditor-General (Victorian Auditor General 2012) and the Ombudsman (Ombudsman Victoria 2012) and strongly supported the development of the national Find and Connect Web Resource (Swain 2014b). This work has given impetus to important collaborations between Care Leavers and professional archivists, historians and related academics (O’Neill, Selakovic, & Tropea 2012; Golding, O’Neill & Story. 2013; and Wilson & Golding 2016).

Most recently, CLAN also worked alongside Monash and Federation Universities and other community groups on an aptly named project, Setting the Record Straight for the
Rights of the Child Initiative. From this project a two-day national summit was organised in Melbourne in May 2017 which brought together “a wide range of community, organisational, government and professional perspectives to address the ‘systemic and enduring’ failings of recordkeeping and archiving systems for those who experience childhood out-of-home care” (Evans 2017). As mentioned, Royal Commissioner, Justice Jennifer Coate, delivered a keynote speech at the summit (Coate 2017). At the end of the two-day program there was general support for the development of a strategic plan that would transform recordkeeping in the OOHC sector. After the summit, CLAN resolved not only to continue to work with the Setting the Record Straight partners but also to develop its own Advocacy and Action Plan on Historical Records (Appendix 2: completed 25 July 2017, revised October 2018). One component of the plan was to continue to lobby the Commission to include certain matters in its final report which went beyond its mandate on records relating to child sexual abuse. Without claiming undue credit, CLAN was pleased with many aspects of the volume of the Royal Commission’s Final Report dedicated to Recordkeeping and Information Sharing (Royal Commission 2017c) especially in framing problems in broader terms than sexual abuse.

Conclusion: incremental or transformative change?

The Royal Commission’s recommendations on records and recordkeeping are not perfect. For example, it decided not to insert a recommendation which had been mooted by CLAN (CLAN 2017) and others, that the five high-level principles for records and recordkeeping be supported by a sixth principle directed at enforcing the other five. The Commission argued that enforcement would best come through national Child Safe Standards in which

*good records and recordkeeping practices are critical to maintaining a child safe institution. They are a core component of Child Safe Standard 1: Child safety is embedded in institutional leadership, governance and culture (Royal Commission 2017c, 110).*

Nevertheless, the recommendations are valuable as much for their political worth as for their substantive content. All jurisdictions have accepted these recommendations—if only in principle, at this stage. CLAN and others have begun to use these recommendations as a rallying cry. For example, in August 2018 CLAN persuaded the President of the Australian Human Rights Commission to write to the New South Wales Government about the need to improve access to Care Leaver records and to reduce the level of redactions in releasing records. In her letter, the President noted that NSW had endorsed the Royal Commission recommendations and urged the Government to implement them promptly and fully (Croucher 2018). It is hoped that the annual Recordkeeping Principles Survey recently launched by the Rights in Records by Design Research Project will have a similar effect of holding authorities to their commitment. The survey aims to capture the views of recordkeeping and other professionals on their capacities to implement the Royal Commission’s recordkeeping principles for child safety and wellbeing in the OOHC sector along with the national principles and guidelines which

3 *Rights in Records by Design* is funded through an Australian Research Council Discovery Grant DP170100198. The Chief Investigators are Associate Professor Joanne Evans (Monash University), Associate Professor Jacqueline Wilson (Federation University), Professor Sue McKemmish (Monash University), Associate Professor Philip Mendes (Monash University), Professor Keir Reeves (Federation University), and Dr Jane Bone (Monash University). The Project is investigating systems to support the recordkeeping rights of people who experience childhood out-of-home Care: https://rights-records.it.monash.edu/about-the-initiative/research-development-agenda/rights-in-records-by-design/rk-principles-survey/
are part of the Department of Social Service’s Find & Connect Services and Projects (Recordkeeping Innovation 2015). Policy is one thing, best practice is quite another thing; and it’s important to know where best practice is occurring and to recommend it to others.

The Royal Commission concluded: “While recent reforms to legislation, policy and practice have improved records and recordkeeping practices, it is clear that institutional practices require further change.” (Royal Commission 2017c, 9). Further change? Will that change simply be incremental in the style, for example, of the Victorian Government’s recent legislative amendment pronouncing that historic Care and Protection orders, which had been treated as criminal records without the children having committed a criminal offence, will no longer be construed as criminal records? (Victoria 2018). Or will that further change be the vision of the national summit Setting the Record Straight for the Rights of the Child Initiative? That is:

a unified, collaborative and strategic plan aimed at transforming recordkeeping and archiving infrastructure so that rather than being the passive ‘subject’ of organisational records, children, young people and their adult selves have voice, agency and autonomy in their records and in recordkeeping processes (Evans 2017).
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<tr>
<th>Convention on the Rights of the Child Article</th>
<th>Breaches by Governments &amp; Other “Care” Agencies</th>
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<td>3. The best interests of the child</td>
<td>Made decisions in the interests of the system</td>
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<td>Housed children in facilities that were</td>
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<td>overcrowded and unsafe</td>
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<td>Stripped children of contact with their</td>
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<td>parents and siblings</td>
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<td>Failed to make plans for children to be</td>
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<td></td>
<td>reunited with the family</td>
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<td>6. Ensuring the child’s development to full</td>
<td>Failed to provide adequate medical and dental</td>
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<td>potential</td>
<td>services</td>
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<td>Denied opportunities for an adequate education;</td>
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<td>many were never able to achieve to their</td>
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<td>intellectual potential</td>
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<td>Young people were not taught basic life skills</td>
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<td>essential to survival in the outside world</td>
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<td>7 &amp; 8. Right to an identity</td>
<td>Changed children’s names</td>
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<td></td>
<td>Called children by numbers not names</td>
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<td></td>
<td>Deprived of all personal possessions</td>
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<td></td>
<td>Broke connection to family and community</td>
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<td>9 &amp; 20. The separation of children from</td>
<td>Took children from poor families by way of</td>
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<td>their families, and on the special protection</td>
<td>unfair and processes that lacked transparency</td>
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<td>of the child temporarily or permanently</td>
<td>Denied rights to family visitors</td>
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<td>deprived of his or her family environment</td>
<td>Withheld personal letters from family</td>
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<td>12. The right to participate</td>
<td>Did not listen to children and young people—</td>
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<td>even when they wanted to report criminal sexual</td>
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<td></td>
<td>and physical abuse</td>
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<td>Did not give children a say in the crucial</td>
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<td>decisions that affected them</td>
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<td>Gave children no opportunities to express their</td>
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<td>opinion about their regular arbitrary changes</td>
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<td>of placements</td>
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<td>Denied children access to basic information</td>
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<td>about their circumstances and fu ture plans</td>
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<td>16. The right to privacy</td>
<td>Provided communal washrooms, toilets without</td>
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<td>doors, mass dormitories and dining halls and</td>
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<td>humiliating public punishments</td>
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<td>19. The right to protection from all forms</td>
<td>The system failed massively as demonstrated by</td>
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<td>of physical or mental abuse, or negligent</td>
<td>a torrent of testimony assembled by the Senate</td>
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<td>treatment, maltreatment or exploitation,</td>
<td>Committee (Forgotten Australians 2004)</td>
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<td>including sexual abuse, while in the Care</td>
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<td>of legal guardians or any other person who</td>
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<td>has the Care of the child</td>
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<td>25. The right of children in OOHC to have</td>
<td>Failed to supervise children’s placements</td>
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<td>their living arrangements looked at regularly</td>
<td>Did not require regular accountability reports</td>
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<td>to see if they are the most appropriate.</td>
<td>from institutions even when government funded</td>
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<td>28. The right to an education</td>
<td>Denied children access to anything more than</td>
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<td>31 &amp; 32. The right to rest and leisure, to engage in play and recreational activities; and to be protected from economic exploitation and from performing any work likely to be hazardous or to interfere with the child's education, or to be harmful to health or physical, mental, spiritual, moral or social development</td>
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<td>Required children to work long hours in institutional laundries, scrubbing floors, making and mending clothes and boots, doing manual labour in vegetable gardens and farms. Took children out of school to do work in Homes Did not pay wages Many former residents suffer today from physical ill-health and injuries directly attributable to what they were forced to do as children. Many describe the loss of their childhood as the greatest deprivation.</td>
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<tr>
<th>34. The right to protection from all forms of sexual exploitation and sexual abuse</th>
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<tr>
<td>The system failed massively as demonstrated by a torrent of testimony assembled by the Royal Commission into Institutional Responses to Child Sexual Abuse (Final Report 2017, especially Vol. 11 and the relevant Case Studies)</td>
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<tr>
<th>39. The right to all appropriate measures to promote physical and psychological recovery and social reintegration of children who were victims of neglect, exploitation, or abuse; torture or any other form of cruel, inhuman or degrading treatment or punishment</th>
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<tr>
<td>Failed to provide counselling or therapeutic services for children even when the need was obvious Failed to prepare young people for transition from institutional life to living in society Made no provision for continuing support for young people leaving institution</td>
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Attachment 2:

CLAN ADVOCACY AND ACTION ON HISTORICAL RECORDS
July 2017, Revised October 2018

This advocacy and action agenda is derived from CLAN’s long and continuing history of advocacy for Care Leaver access to records, from our Charter of Rights in Records (2016) and from the findings and recommendations of the National Summit on Records and Recordkeeping (2017) and the Final Report of the Royal Commission (2017).

The Problem

Achieving access to records is a major and long standing issue:
- The records are often disorganised
- Processes for accessing the records are often confusing or adversarial
- The contents of many personal records are negative and demeaning
- Support for individuals accessing the records is either non-existent or inadequate
- The records are not acknowledged as being the property of the Care Leaver.

Because these issues are pervasive but vary across States and Territories, CLAN will advocate for reforms within all State and Territory governments and departments, employing a seven-point action agenda.

The Action Agenda

1. Immediate Priority Access for Older Care Leavers
   - Endorse and implement the Commonwealth Department of Social Services (DSS) access principles and guidelines
   - FOI/RTI processes based on proactive disclosure i.e. the right of people to know what records are held about them
   - Without removing any rights to full access to records, require record holders to identify key and critical documents to provide a pathway when case files are voluminous
   - Use administrative discretion to release records, not to withhold them
   - Assert the right to full unredacted release of records unless it is clearly unlawful to do so
   - Explain and discuss redactions where they must be used
   - Provide support services for access and interpretation of records
   - Lobby Birth, Deaths and Marriage Registrars for a consistent, agreed and national approach for free access to 2 generations (i.e. me, parents, grandparents) of certificates

2. Support for Adding to/Annotating Official Records and Specifying Access Controls
   - Normalise the existing right to incorporate individual's stories into the record
   - Advocate for the person's story to be presented first in personal archives
   - Enable access wishes to be clearly expressed and honoured, including informed consent for access by researchers

3. Remediation of Legacy Recordkeeping Systems
   - Continue advocacy for resources and clear plans to remediate older systems, particularly name indexing and facilitation of connections to family
   - Develop guidance for organisations transitioning from current service provider to legacy record holder
4. Development of Care Leaver History and Heritage (see also National Orphanage Museum Strategic Plan)

- Encourage and support initiatives that enable individuals Care Leavers and communities to tell their stories of ‘care’ experiences, the impacts of institutional systems, and to create their own histories, exhibitions, memorials, commemorations, storytelling and other activities
- Lobby for Care Leaver history and heritage to be incorporated into primary, secondary, university and other curricula, professional and community education

5. Training for Records Release

- Work collaboratively to develop guidelines and training on how to release records with minimal redaction (i.e. only where absolutely necessary), including informative disclosure of reasons for redactions, accessible processes for appeal, effective monitoring and oversight to ensure fair and consistent practices and specialised release mechanisms over reliance on generic FOI/RTI processes.

6. Research Ethics

- Work collaboratively to devise protocols and obligations for researchers in dealing with access to case files and personal information in out of home care research.

7. Recommendations of the Royal Commission (RCIRCSA) and beyond

This part of the Strategic Plan was previously framed as advice to the RCIRCSA, but in December 2017 the Commission published its Final Report—of which Volume 8 is devoted entirely to Recordkeeping and Information Sharing. We are now recasting this section of the Strategic Plan to accord with the recommendations contained in that report. We endorse the five principles recommended in the Final Report, giving close attention to Principle 5:

*Individuals’ existing rights to access, amend or annotate records about themselves should be recognised to the fullest extent.*

CLAN will also continue to work with the partners who collaborated in the National Summit on Setting the Record Straight for the Rights of the Child held in Melbourne in May 2017. In particular, CLAN will participate in the Rights in Records by Design Project funded through an Australian Research Council Grant—through Monash University and Federation University—which is pursuing many of the issues discussed at the Summit.

A special aspect of this project that CLAN will monitor closely is a national survey of the views of the capacities of recordkeeping and other professionals involved in childhood out-of-home Care of their capacities to implement the Recordkeeping Principles of Child Safety and Wellbeing set down by RCIRCSA and the Records Access Principles and Guidelines developed in 2015 as part of the DSS's Find & Connect Services and Projects. The national survey will become an annual event.

In conjunction with these initiatives, CLAN will take the opportunity to refine its Charter of Rights in Records and to urge recordkeepers to honour that Charter.
Study on the Subjectivity of Personal Records

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¹ Nanjing University, Nanjing, China ² Sun Yat-sen University, Guangzhou, China

Abstract: This article presents a different theoretical approach to consider the concept of subjectivity in the research of personal records. As a long term overlooked issue, the subjectivity plays an explicitly significant role in building up characteristics or personal records, which could be in some sense so different from disciplined records. Thanks to the contribution made by post-modernism, there have been various perspectives towards personal records, generally inspired by scepticism, deconstructionism and so on so forth. Concentrating one theoretical aspects of the concept and the spirit behind existed researches, this article re-discusses the boundary of personal records and further define the subjectivity. Furthermore, this article attempts to enrich the connotation of the topic by addressing three subjective factors of personal records creators, namely 1) self-expression with high autonomy; 2) self-memory with inevitable selectivity and 3) self-construction with particular purpose, and subjective characteristics of personal records generated by creators’ subjective factors, namely flexibility, fictionality and rhetoricality. By focusing attention on features of personal records, subjectivity as a conceptual framework enables the archivist to better interpret and represent key factors relating to personal record keeping, custodial history, and archival intervention, which over time shape the meanings of a personal fondo.

Keywords: Personal records; Subjectivity; Postmodernism

Introduction

At the 13th International Conference on Archives in Beijing in 1996, Terry Cook stated that archival work is shifting from the national system to the social system, in the process of which personal records cause for concern again by its value in maintaining social memory (Cook 1997). As a part of the archival collections, personal records play an important role in the construction of diversified archival resources system, providing a broad and abundant source of archives for the preservation of social memory. Personal records not only constitute the life trajectory of individuals and families, but also contribute to the enduring value to society and nation. Thanks to such recognition of the importance of personal records around the archival community, relevant institutions in different countries and areas have taken more attempts to concern and manage these materials than before. However, before setting out to manage broad personal records, some basic theoretical problems of personal records, such as its concept, character and value, have not been well contemplated and articulated.

In the current practice of personal records management in China, archivists are more accustomed to classifying and filing personal records according to their external
characteristics, such as recording forms, i.e. paper, audio, video, object, etc., as well as writing genres, i.e. publications, manuscripts, news reports, letters, diaries, etc. and so on. This kind of arrangement method actually breaks down the complete life path and psychological tracks of individuals, “rather than exploring other more tenuous aspects: issues of choice, forgery, fiction, self-projection, and personal memorializing often part of the documentation of individuals” (Hobbs 2001).

From early the 21th century, an expanding number of papers about personal archives and personal recordkeeping in various journals have been published by a number of authors, such as Richard Cox, Jennifer Douglas, Catherine Hobbs, Christopher Lee, Heather MacNeil, Sue McKemmish, and Geoffrey Yeo. Although some scholars and archivists have discussed the characteristics of personal records, such as privacy, universality, diversity, authenticity, sociality and so on so forth, the discussion of its subjectivity is still superficial and insufficient. This paper opens up a new perspective by exploring subjective factors of personal records creators before discussing subjectivity of personal records, and further discussing it in different aspects which have different effects on the genre, format and content of personal records. In the first place, this paper addresses the boundary of personal record and its subjectivity on the basis of existed researches on archival definition and characteristics, then discusses main subjective factors of personal records creators: self-expression, self-memory and self-construction, and correspondingly puts forward three characteristics of personal records: flexibility, fictionality and rhetoricality.

Interpretation of Personal Records and Its Subjectivity

The Society of American Archivists lists the types of personal records in their Guide to Donating Your Personal or Family Papers to a Repository, namely letters, memoirs or reminiscences, diaries, scrapbooks or photo albums, professional papers, genealogical information, speeches or lectures, business records, subject files, legal documents, minutes or reports, brochures and flyers, labelled photographs, labelled films or videos or audio tapes. As what most of current definitions have pointed out, personal record is a comprehensive concept embracing private or public records produced by different individuals or social groups, which can be a celebrity, an ordinary people, a family member or a special community (such as minorities and aborigines) rather than by a particular organization or corporate body. Attention should be called here that personal records are not produced or obtained merely by official archival agencies, because “people in their private lives are not programmatic or entirely planned or rule-driven or procedure-bound as they make their documents” (Hobbs 2001).

The subjectivity of archives and archival work has been gradually mentioned by post-modernists in archival community, similarly, personal records research also should pay attention to subjectivity of personal records. Furthermore, considering the influence of records creators’ personal feeling and action on content, context and form, subjectivity of personal records should be further discussed in a broader view, namely that, personal records have their own features by which distinguish them from organizational records. The path this article addresses emphasizes the impact of individuals’ subjective factors in the producing
process of personal records rather than simply objective factors such as legislation, system of organization, regulation and discipline on the creation of personal records.

However, it should be noted that the subjectivity does not mean that the producing of personal records is strictly autonomy from the organizational system and social background. On the contrary, there can be no individual who is completely separated from the society. The human emotion, purpose, thinking mode, values and other subjective factors may change subtly in the process of associating with society.

**Subjectivity of Personal Records**

As mentioned before, the difference between personal records and organizational records lies in the characteristics given by its creators’ subjective factors. Analyzing and clarifying these subjective factors can help us to further interpret and demonstrate the subjectivity of personal records from different levels. Combined with the subjective factors of personal records creators, this paper puts forward three characteristics of personal records: flexibility, fictionality and rhetoricality.

**Self-expression and Flexibility**

As Sue McKemmish asserted in her *Evidence of Me…*, personal recordkeeping is a “kind of witnessing” and “narrative of the self” (McKemmish 1996). Although this argument is open to question, it is undeniable that personal records are the reflection and expression of individuals’ own life. People can record their life freely, and are not completely restricted by legislation, system of organization, regulation and discipline. Thus, the genre, format, content and other elements of a personal record are subjectively determined by creators. Personal record creators express relatively real life experiences, thoughts and emotions in their records nearly without any strict constraints, from which the authenticity and original nature of personal records arises. And that is also the reason why personal records, as most post-modernists stated, can be joined with marginalized group records and vulnerable group records to make up the mainstream narrative system of our country, and provide an indispensable complement to the authentic and complete social memory. In such a highly autonomous condition, the self-expression will inevitably affect the content and form of the personal records.

In terms of external conditions for formation of personal records, the creators are largely unrestricted by objective factors such as legislation, system of organization, regulation and discipline, which makes the genre and format of personal records more flexible and different than those in organizational records, including diary, life photo, memo, note, scrapbook and so on. Moreover, the content of each genre and style of personal records will vary from person to person distinctly. They are generated by creators themselves and do not come into the social exchange or communication directly, and rarely reflect the external transactional background. Such personal records often embody the hidden side of creators, including living habits, interpersonal relationships and personalities. Although they may not be able to sketch the relatively complete picture of particular event, they provide an excellent supplement, even the key, to the integrity and authenticity of personal fonds.

**Self-memory and Fictionality**
In 2001, Verne Harris offered a deconstructive reading of Sue McKemmish’s *Evidence of Me*... Based on the deconstruction and re-construction techniques of Jacques Derrida, he stated:

*Every narrative construction of the past is by definition creative, a work of the imagination. The construction gives to them a shape, a pattern, a closure. So that all ‘non-fictional’ discourse employing narrative inevitably invites ‘fiction’ in. Narrators of ‘non-fiction’, including recordkeepers, no matter how dedicated they are to ‘facts’ and to empirical methods, are confronted by documentary records, collective memories and individual memories shaped by the dance of remembering, forgetting and imagining.*

Thus, “‘my traces’ are not merely ‘evidence’ of ‘me’, they are part of who I am” (Harris 2001). The “fiction” in personal records can be interpreted as the self-memory of creators, that is to say, they create personal records through subjective “memorizing” and “forgetting”. This is another and deeper dimension of subjective factors of personal records creators.

Individuals rule their own self-world, recording what they want to remember and destroying what they want to forget according to their personal wishes and needs. This inevitable selectivity is deeply influenced by the personality, psychology and emotion of creators. It is an innate concern for certain things, certain habits and certain memories of human beings. For example, people with different personalities want to keep different memories, some people like to record the trivial things in life, while others prefer to record the major event nodes. Self-memory is an unconscious choice that must be carried out by creators psychologically. It is an instinct, because no one can record everything they have met in life by their personal records. Everyone has to face selective forgetting caused by their own subjective factors. Hence, in addition to various objective reasons, personal records are more likely to become a kind of creative “fictional” work because of their self-memory.

The psychologically natural choice of personal records creators unconsciously affects the authenticity of personal records. In this world, personal records are not exactly real and complete documentary records of life, but rather the fictitious things mixed with the complex psychological characters and emotional changes of creators. However, the fictionality of personal records does not conflict with the original nature of archives, because personal records are still the first-hand information created from individual lives directly. In the view of postmodernist, the narratives in all texts have fictional elements, inevitably.

**Self-construction and Rhetoricality**

Compared to the self-memory with inevitable selectivity to inner self, self-construction focuses more on the shaping of external self-image, which establishes connections with the physical world beyond individuals themselves through personal records. Erving Goffman, an American sociologist of the twentieth century, has pointed out that when communicating with others, we control the impressions we convey to others by controlling our behavior, selecting the parts we want to show and the parts we want to hide (Goffman 1959). In personal records, just as Catherine Hobbs asserted:

*Certain viewpoints, relationships, and activities therefore get filtered out, suppressed, marginalized, or, conversely, highlighted, made central, part of the meaningful narrative of self-definition that human psychology demands of the self.*
There is a tension in the writing of private documents between controlled “public” action and the unconscious seeping of the “inner” personality onto the page.

Throughout the whole process of personal records, there are two stages that give prominence to self-construction. In general, if people need to disclose their personal records publicly in their daily life, especially open personal social media records in the digital era, they usually consider more of this kind of personal records because of their association with society and others. Through various approaches to this kind of personal records, such as conscious destruction, strict storage and increased exposure, individuals will accomplish self-construction for interpersonal relationship. This is one aspect of self-construction in personal records. It is another thing to say that some personal records creators, usually celebrities, transfer part of records which is highly social valuable to the archives by means of donation or collection. In this process, individuals have the right to choose which records to be donated. Therefore, in order to establish a socially-influential personal image for the public, these personal records will be selected for consideration of individuals’ own emotions or interests, thus completing the self-construction.

Personal records created with particular purpose have rhetorical features with certain prejudices, just like the archival description regulation for meeting national power needs. It is obvious that, unlike the fictionality formed by unconscious selection, rhetoricality is determined by individuals’ deliberate choices. The rhetorical feature of personal records allows certain memories and events to be presented to the public, while other memories and events to keep silence, in order to meet the needs of interests or shape a public image. Hence, rhetoricality is common in the public personal records, usually recording the honors, outstanding contributions, major events, etc. of public figures, and rarely containing records about daily life.

References

Work in Progress Towards a Prologemenon for a Theory of Everything

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Abstract:

The contribution of this paper is a “re-framing” of the original Hirschheim, Klein, and Lyttinen framework for considering the tasks of Information Systems (Design) and its relationship to Information and Community Technologies for Development (ICT4D) in the context of different developments in critical theory, critical realism and sociomateriality to reflect the need to problematize the thinking of different stakeholders (primarily those with a technical or social bent) in the ICT4D sphere. In fact, the issue is one of fundamental interest to considering the place of sociotechnical work in the wider realm of formative interests on how technology in society is understood. The paper’s remarks are consequentially relevant to the consideration of the relationship between technical and social interests as whole in the Information Systems sphere. It is hoped that the approach suggested here could result in shared discourse frames and understandings that better match sociotechnical and social or development agendas of ICT4D resulting in stronger concepts and on the ground, sustainable ICT4D initiatives. More generally, the use of the Capability Approach as a problematizing and evaluation hook provides a conceptual tool or other framework in which to holistically consider sociotechnical activity.

Keywords: Information Systems theory, ICT4D, sociomateriality, critical theory, international development, Capability Approach, program evaluation,

Introduction

The purpose of this paper is to propose a broad or “guiding” framework (Walsham 2017, 36) “discursive coalition” (Sovacool and Hess 2017, 714), or non-deterministic approach to help bridge differences between the technical or Information Systems (IS) “underbelly” of Information and Communications Technology for Development (ICT4D, and ideas found in the domain of International Development. The paper represents a progression from prior papers on sociotechnical relationships under a “technology in society” umbrella (Stillman and Denison 2014b; Stillman and Linger 2009). However, the framework should not be regarded as paradigmatic for disciplines (Kuhn, 1970), but rather, akin to attempting to problematizing conceptual continuities and discontinuities in research programs (Lakatos, 1970, 132).

Although academics would be in agreement that the complex multi-dimensional problems in DI and International Development need a variety of role-players in “extended communities” (Donner 2015, 10) to engage in collaborative multi-inter-, cross- and transdisciplinary research, the differences in the landscape become a challenge in terms of conceptualising roles, contributions, world views and foci, as well as establishing research priorities from a common point of departure. The sociotechnical orientation in the first instance, can be defined as “an approach to design that [considers] human, social and organisational factors, as well as technical factors in the design of organisational systems” (Baxter and Sommerville 2011, 4). Walsham also (2013) identified a conceptual gap between what he refers to as the technical and social wings of DI, that is, those
concerned with artefactual problems and design versus those more concerned with often “wicked” social and social-technical problem-solving. This problem has also been considered as reflecting a structural tension between technical problem-solving agenda, and engagement in broader social and political concerns, which require a wider skill set a community orientation to problem solving in the ICT sphere (Stillman and Linger, 2009).

A sociotechnical orientation can at a base level be defined as “an approach to design that [considers] human, social and organisational factors, as well as technical factors in the design of organisational systems” (Baxter and Sommerville 2011, 4). Walsham (2013) identified a conceptual gap between what he refers to as the technical and social wings of ICT4D, that is, those concerned with artefactual problems and design versus those more concerned with social problem-solving. As well, the problem also engages with the never-ending sociological chicken-and-egg controversies over the relationship between structure and agency interminable debates over micro- and macro-perspectives of the effects of technology in society. For IS in general, Sovacool and Hess identify 96 theories and conceptual approaches, across multiple categories, ranging over at least 22 disciplines, making generic and over-arching perspectives almost impossible to achieve (Sovacool and Hess 2017), and Walsham notes 11 streams for ICT4D (Walsham 2017, 30) This problem can also be considered as reflecting a structural and cultural tension between technical problem-solving agenda, and engagement in broader social and political concerns, which require a wider skill set and values base for problem solving in the ICT sphere (Stillman and Linger, 2009). Different theories and concepts have different goals, and cannot always be matched, nor do they need to be matched due to vastly different ontological and epistemological assumptions.

In fact, the critique of development informatics is familiar to the general critique of narrowly-focussed IS research. The central activity of IS the construction of IS artefacts, and as stated by Stillman and Linger, “other issues (users, interfaces, contexts, uses, techniques, technology) [become] meaningless without an artefact as the object of inquiry”. Yet the “other issues” may well be the focus of other users (NGOs, governments, communities on the ground), and of real import. Completely different discourses that can produce exclusionary homogeneity if left unchallenged need to be challenged, and if possible, bridged. However, modest steps in this agenda are feasible, particularly if approached from the angle of critical theory.

In response to this problem, a body of work informed by critical theory approaches and beyond (sociomateriality, critical realism), is being generated to conceptualise the landscape of DI in the context of Information Systems research and particularly Information Systems Design and to prioritise research priorities and approaches in the field. Examples of these endeavours include Walsham and Sahay (2006), Avgerou (2008 and 2010), Heeks (2014). Furthermore, other papers such as those by Myers and Klein (2011) on principles for ICT research, Andrade and Uruquart on the question of power, (2012), Buskens on gender, and Roberts on critical intent and practice (2015), have been used to take on board the challenge of varieties of critical theory and its application to DI and/or Information Systems.

More recently, the critique of interpretivist thinking has looked upon sociomateriality and critical realism as a means to develop a theoretically more precise approach to the study of sociotechnical relations embedded in a better understanding of the “mangle of practice” (D Cecez-Kecmanovic et al. 2014, 3; Leonardi 2013a) of people and artefacts in across time and space and the multiple affordances (or opportunities) that technologies they offer in sociotechnical contexts (Leonardi 2013b). In the DI domain, Heeks and Wall have proposed that critical realism, be examined as a new paradigm for examining a post- has and “political turn” of ICT4D thinking (R Heeks and Wall 2017).

A guiding framework over all this can offer intellectual direction for research in IS, ICT4D and International Development because it helps with simplification of complex issues. Indeed, the technical underbelly of ICT4D can be considered as “radically incomplete” (Feenberg 2012, vii) because, as with other applications of ICTs, it presents massive artefactual and sociotechnical mutability and interpretive flexibility (W. J. Orlikowski 1992, 409) on the part of designers and users in the face of the every-changing face of technology and real-world challenges and structures (Walsham 2017, 31). These challenges are not always understood by academics or technicians, removed from the field. As an example, International Development faces multiple and complex wicked problems that are linked to the spread of ICTs in the global south
including the capacity for widespread communication with terrorist upsurges that are linked to the both the open and dark sides of the Internet which require an ethical and socially responsible responses social and technical responses. Yet the problems facing each research world can result in mutual unintelligibility and conflicts of social interests, a problem long-ago recognized by Habermas, when mutual intelligibility is required (J. Habermas 1972).

As examples of these practical and theoretical problems, Heeks identifies country context gaps (that is, not-accounting for local conditions), and secondly, what he terms “hard-soft gaps” the presence of deterministic, standardized approaches in contrast to softer approaches which accept institutional and social complexity, and informal and contingent circumstances, including cultural differences (Heeks 2002; Zheng and Heeks 2008). The work of Averbou on identifying institutional implementation problems comes to a similar conclusion, namely that there is a continual disjuncture between aspirational and technological determinism and the reality of development. (Averbou 2003; Averbou 2010; Mitev 2005). This relates back to the “hope versus hype” debate on expectations versus the reality that surrounds the ICT4D field (Patra, Pal et al. 2009).

Despite these reservations, the focus here is upon suggesting a reasonably parsimonious, intelligible and practical framework for productive dialogue between ICT4D/IS and International Development. It has the following potential benefits for the respective fields without it needing to be regarded as the last, authoritative, or paradigmatic word on the matter:

1. It can provide a better understanding of sociotechnical and development orientations in ICT4D. Recurring themes in the literature are unclear boundaries and lack of impact (Johnson and Yonnada, 2009; Donner and Toyama, 2009). Therefore, it should provide the capacity to encompass a wide diversity of disciplines and communities of practice, including International Development.

2. It can provide a powerful framework in terms of initiating discourse around ICT4D in its broadest sense. It can initiate shared language, symbols and metaphors "amenable to bridging" (Donner and Toyama, 2009) for shared priorities amongst researchers with different orientations. If such a discourse frame is created it can assist in ensuring that important (and even competing) knowledge fields are recognised and supported in terms of interdisciplinary, future proposals and funding (Van Biljon and Alexander 2014). This can also prevent "faddish" “hyped” or techno-optimistic research from dominating (Walsham 2017, 29).

3. It has the potential to positively structure the trajectory of research literature or research program (Lakatos 1970), in ICT4D and International Development collaborations, which has been described as directionless (Raitti, 2007), including provision of a conceptual motivation for the prioritisation of papers to be published. It has the potential to elevate literature beyond mere "demonstration" of the potential of technologies (Raitti, 2007, op. cit.) to papers configured with conceptual and theoretical priorities for an evolving research program based on commonalities and differences in mind as well (Walsham 2017).

4. It can contribute to the practice of IS in the context of ICT4D, that is, the design of social-technical artefacts that are more fully responsive to the real world conditions found in international development, rather than being problematic, with “hope and hype” more common than desired, that that there is a continual disjuncture between aspirational and technological determinism and the reality of development (Averbou 2010; Richard Heeks 2002).

Yet, before the proposition of such a framework, there are key concepts that require some discussion before attempting a framework synthesis. The first concept is that of Information Systems, and particularly Critical Information Systems, and the second is International Development.

**Critical Thinking and Sociomateriality in IS and ICT4D**

There is considerable discussion within IS about forms of inquiry. Adopting social science perspectives to non-positivist paradigms (Tuhiwai-Smith 2005; Lincoln, Lynham, and Guba 2011), three major forms of paradigms are considered to cover research methodologies in IS: positivism, interpretivism, and critical theory, though there are suggested further divisions and renderings (such as a participatory paradigm) that are less-relevant to this article. In fact, it is possible to suggest that rather than firm paradigms, we are dealing with multiple interlaced discourses or interpreted methodologies that are not incommensurable (Dubravka Cecez-Kecmanovic and Kennan 2013), and will always be subject to new insights, redefinitions and rhizomic growth.
Discussions highlight the difference between positivism and its desire for nomological (law-like) and predictive statements which exist as value-free, outside of time-space constructions and interpretive, naturalistic, sense-making, constructionist and particularly critical methodologies which accept the position that there accept multiple realities as perceived, felt and experienced by widely different human actors in different social conditions.

Critical theory, which has its roots in the neo- or post-Marxist dystopic strain in the highly influential group of thinkers called “the Frankfurt School” (and their descendants, particularly Habermas), who wrote about modernity, with a particularly strong critique of positivism and crude empiricism. Habermas wrote in a classic statement, “the approach of the empirical analytic sciences incorporates a technical cognitive interest; that of the historical-hermeneutic sciences incorporates a practical one; and the approach of critically oriented sciences incorporates the emancipatory cognitive interest.” (J. Habermas 1971, 308)

Consequently, critical theory serves “to give social agents a critical purchase on what is normally taken for granted” (Macey 2000, 75). It is an oppositional and deliberately partisan ideology to neutral and predominantly white, male, Western hegemony. “Research becomes a transformative endeavour unembarrassed by the label ‘political’ and unafraid to consummate a relationship with emancipatory consciousness” (Kincheloe, McLaren, and Steinberg 2011, 164).

The oppositional stance has brought about “ontologies and epistemologies that differ sharply from those undergirding conventional social science, including, but not limited to, feminist theories, critical race and ethnic studies, queer theory, disability theory, border theories, postcolonial ontologies and epistemologies, and poststructural and postmodern work”, and these have filtered through into IS (Lincoln, Lynham, and Guba 2011, 97).

Despite different theoretical origins or emphases, critical theory in IS is deliberately and intrinsically political, concerned with the uncovering and challenging unequal power relations, unequal or distorted communication and discourses, and more generally, oppression or repression that may occur through conscious or unconscious design decisions with ICTs (Cecez-Kecmanovic, 2011; Hirschheim & Kleine, 1994; Klein, 2009; Mitev, 2006; Myers & Klein, 2011). Critical theory in IS is socially critical and has a moral imperative and political approach to changing the world (Klein 2009) and particularly has an emancipatory intent which “challenges the prevailing view of IS as an important instrument for enabling and strengthening the economic-rationalist and managerialist view of organizations that prioritizes the interests of capital (i.e., of stockholders and managers) over all other interests (other stakeholders, community, society, environment, etc.)” (Dubravka Cecez-Kecmanovic and Janson 2009; Dubravka Cecez-Kecmanovic 2011, 442).

A body of work informed by critical theory approaches has taken on problems in International Development. Examples of these endeavours include Walsham and Sahay (2006), Avgerou (2008 and 2010), Heeks (2014). Furthermore, other papers such as those by Myers and Klein (2011) on principles for ICT research, Andrade and Uruquart on the question of power, (2012), Buskens on gender, and Roberts on critical intent and practice (2015).

Likewise, for Hirschheim and Kleine in the in the Information Systems Domain, “the goal of emancipation is the establishment of conditions for human existence that facilitate the realization of human needs and potentials” (Hirschheim & Kleine, 1994, p. 87) Furthermore, Alvesson and Willmott’s statement that emancipation is a process "through which individuals and groups become freed from repressive social and ideological conditions, in particular those that place socially unnecessary restrictions upon the development and articulation of human consciousness" (Alvesson and Willmott 1992, 432). Ultimately, again based upon Alvesson and Willmott, Myers and Klein suggest that critical research in IS is based upon the principles of insight, critique, and transformative redefinition (Myers and Klein 2011, 23) and such principles are is shared with many other disciplines, increasing its inter-disciplinary utility.

However, as a further step in refining the relationship between people and technology, proponents of what is known as sociomateriality have pulled away from what they view as an overly interpretive, at times subjective, and even overly ethnographic approach to the analysis of social-technical relationships which ultimately brackets out consideration of the strong, and at times dominant influence of sociomaterial objects in forming or influencing different forms of practice (personal, community, institutional, societal). The bracketing can result in a theoretical over-privileging of human activity and agency, rather than seeing the social material and human agents
engaged in a duality in which technologies are can be powerful and saturating influences. As an example, the political role of Facebook at as dominant form of sociomaterial practice has had global consequences on individual perceptions of self, as well as in the political sphere. A theory about Facebook cannot avoid the strong agency that the system has, even though humans have different elements of agency (but they can be duped as well, as major scandals have revealed).

Thus, by sociomaterial objects they mean “the ways that ...physical and/or digital materials are arranged into particular forms that endure across differences in place and time” (Leonardi 2012, 29). Taking into account materiality enables, for example, the posting of new content or the editing of materials (text, photos, video, emoticons and so on) on Facebook. With the opportunities or “affordances” that these arrangements offer to people, “As nonhuman entities, artefacts like information technologies exercise agency through their performativity; in other words, through the things they do that users cannot completely or directly control …. Although each of these actions is instigated by a human (presumably to address a particular, local need), the technology itself acts (exercises material agency) as humans with goals engage with its materiality” (Leonardi 2012, 36). It is in the “space” sociomaterial practice (which is of course, physical or virtual space, linked into the past present and future through the creation of immaterial and material objects) that “the social and material become constitutively entangled”, something for which Leonardi and others have taken across from geology the term “imbrication” as referring to the laying or sedimentation of agency and structures (Leonardi 2012, 35, 2013c). To my mind, this is similar to the concept of interpellation, of the embedding of ideologies and structural interests in actors’ lives and actions, but such is academic discourse (Althusser 1972). Of course, elements of this argument over the materiality and its relationship to structure and agency bear much in common with structuration theory as applied to the study of ICTs (for example the many works of Orlikowski (W. J. Orlikowski 2000; W. Orlikowski and Robey 1991; Yates, Orlikowski, and Okamura 1995), or Actor Network theory, but the next step in the argument about sociomateriality has been taken up in Critical Realism.

More recently, Heeks and Wall have proposed that critical realism be examined as a new paradigm for examining the recent “political turn” of ICT4D thinking (R Heeks and Wall 2017). They highlight the importance of social structures, their reality, and the effects that they have on real events, that can be observed empirically (if the method is right-the danger is a prescriptive neopositivism). They argue that Critical Realism can be used for demonstrating causality (the holy grail of international development programs) and the discovery of underpinning program values as well as explanations for program success, failure, or everything in between. They also argue that it also has relevance to understanding the political turn in ICT4D, particularly because it is interested in questions of power, underlying mechanisms “that shape but do not determine” (R Heeks and Wall 2017, 164).

Critical Realism is a post-positivist argument that about reality: that there is in fact a reality outside of our consciousness or analysis or what is gathered as empirical data: social reality is real, not a social construction or abstraction, that the realms of structure and action or agency need to be regarded as a analytically productive dualism (Leonardi 2013a, 72) rather than a productive duality, where in the eyes of critics of structuration, no credence is given to structure (pace Giddens, Orlikowski and others). The danger with interpretive or constructivist accounts, at least from a cynical realist evaluative viewpoint, is that “since realities are multiple, truth relative, and accounts equally true or false, the best that we as evaluators can do is to produce journalistic narratives [and this] begs the question of rigour and rationality” (Julnes and Mark 1998, 36). This same criticism can be put onto any other field of endeavour that takes an interpretive or constructionist approach. The “ontological character of social reality” and social context needs to be mapped. The assumption is that there are ultimate knowable realities applicable to certain situations and problems, and the task of critical reality is to (philosophically at least) “combining explanation and interpretation, the aim is an historical inquiry into artefacts, culture, social structures, persons, and what affects human action and interaction” (Archer, M., Decoteau, C., Gorski, P., Little, D., Porpora, D., Rutzou, T., Smith, C., Steinmetz, G., & Vandenberghe 2016, 2).

But is this approach also old wine in new bottles? This way of thinking it appears particularly familiar from many Marxist thinkers, some more deterministic than others, beginning with Marx himself who said in the Critique of Political Economy “In the social production of their life, men enter into definite relations that are indispensable and independent of their will, relations of production
which correspond to a definite stage of development of their material productive forces. The sum total of these relations of production constitutes the economic structure of society, the real foundation, on which rises a legal and political superstructure and to which correspond definite forms of social consciousness. The mode of production of material life conditions the social, political and intellectual life process in general. It is not the consciousness of men that determines their being, but, on the contrary, their social being that determines their consciousness”?

Indeed, one critic of Critical Realism as applied to Evaluation (which is supposed to be the topic of this conference) sees Critical Realism as descending into “philosophical grandstanding, as explain-all Marxism, as depth ethnography, and as a diagnostic tool for sustaining positivist inquiry” (Pawson 2015, 56).

Despite this criticism, at least from the standpoint of Critical Realism, it has been found particularly useful in its adaptation in the applied practice (and theoretical developments) in the field of Program Evaluation. Critical Realism is seen highlight the importance of discovering underlying generative mechanisms that produce particular environments, because it takes the point of view the focus of much interpretive-based research is overly concerned with sensemaking, rather than being concerned about valuation or valuing of situations based on harder empirical data (Julnes and Mark 1998). Thus, the point of view of actors may be valuable and concern to incorporate the point of view, the famous “definition of the situation” (Berger and Luckmann 1966) of actors may be critical, but in terms of the evaluator, or researcher’s judgement is it “correct all the time”, or is it part of a much more complex layering? What external factors (politics, material and technological elements, should be brought to bear?) The notion of “correct” here also leads into a discussion of the explication of the moral and ethical or political or scientific ontology and epistemology undertaken by the researcher (for example, if we accord no importance to the evidence or senses of women, or minorities), the logical of inquiry will very much head off in a particular direction. Just what values to we have? What is present, what is absent, what is messy or indeterminate (Henry and Julnes 1998)?

However, at the same time, the attempt to redress the balance of interpretivist or subjectivist point of views by an emphasis on identifying external or particularly causal factors can result in new form of determinism, that can even underplay the considerable sophistication that naturalistic or interpretive forms of inquiry and its descendants can conduct (Lincoln and Guba 1985; Charmaz 2005). Thus, Heeks and Walls’ suggestion that Critical Realism can offer something could be used to explore contingent approaches to causality in ICT4D needs to be underpinned by a very careful exploration of how Critical Realism sits within the overall exploration of cause and effect (Chen 1990), or positivist, interpretive and critical theories and ideologies and the ways in which knowledge is expressed explicating in the well-developed field of Program Evaluation and in that field of inquiry (Wholey, Hatry, and Newcomer 2010).

**International Development**

International Development is an umbrella term for theories and practices concerned with social, political, economic and more recently human and environmental change activity in what has become known known as the Global South. However, has always been contestation about what International Development constitutes as a research field, and the words of Hettne, cited by Potter, "theorizing about development is … a never-ending task". (Potter 2014, 142). Another writer conceives of development as “a shifting set of knowledges (sic) and practices focussed on the developing Other, [which] spoke as much to the realities of the advanced capitalist states and their internal problems as to the realities of the poorest 40 percent” (Watts 2004, 544). This is not the place to provide the reasons or genealogy for this diversity in thinking, but the main trends are clear and widely acknowledged in the literature and can be briefly described.

Development, as a value-laden domain of theories and practices, is not neutral concept, but inhabits a contested space of divergent discourses or competing “regimes of truth” that have come to being since World War II (Foucault and Gordon 1980, 131) spanning many disciplines and social and political orientations, one which is increasingly informed by significant bodies of contemporary research and practice such as post-modernism, contemporary critical and postcolonial theory, the full range of environment studies, and now “intersectionality” focussing on the “simultaneous, multiple
and interlocking oppressions of individuals”, particularly women of colour in particular class, gender and structural formations (Mann & Grimes, cited by Sokoloff and Dupont, 2005, 39). Such insights are of high relevance to sensitized development thinking in ICT4D, though they have not yet been sufficiently incorporated into domain academic activity (Lin, Kuo and Myers, 2015; Enarsson 2015).

Later ideas about development took on a neo-liberal philosophy, where (as in the developed world), the influence of the state was seen in a negative light and emphasis was placed upon market structures, opportunities and personal endeavour as a means for promoting opportunity. Against these approaches, there have been other trends, reflecting a distrust in the supposed good intentions coming from the largely industrialized West. “Development despite its feel-good factor, implies struggle and conflict to acquire resources and freedom of choice for the betterment of life for the majority” (Willis and Kumar, 2009, 116). Thus, in the 1960s and 70s, particularly in Latin America, Marxist critiques of what was seen to be the continuance of inequality and underdevelopment in the developing world and the growth of neo-colonial elites had a strong influence in radical and some NGO circles due to the influence of thinkers such as Fanon or Freire, as well as international anti-colonial conferences, as well as the impact of anti-colonial struggles for independence in countries such as Algeria, Palestine, or Vietnam (Young, 2003).

Non-western activist voices have come to the fore particularly in relation to (anti)dependency theories (Conway and Heynen 2014). The works of western thinkers like Foucault on issues such as power and the construction of knowledge were also influential (Foucault and Rabinow 1991). Critical theory for development, is not “the complacent, ultimately conservative, postmodernism of some critical theorist, but rather, a disquieting or oppositional postmodernism. This postmodern critical theory would attempt to reconstruct the idea and practice of emancipatory social transformation” (Munck and O’Hearn 1999, xiv). In the development context, postmodern critical theory attempts to reconstruct the idea and the practice of emancipatory social transformation”, and this new “normativity” is “constructed from the bottom up, and in a participatory and multicultural fashion” (Santos de Sousa 1999, 42) rather than discourses and practices that result in marginalization, especially women (Escobar 1994; Rossi 2004; Ojha, Cameron, and Bhattacharai 2005).

Furthermore, next generation thinkers, including women scholars from the Global South, have particularly focussed on gender issues and the problem of transformation of different forms of relations of production (including information and knowledge), as found for example in recent handbooks on International Development and gender (Chant 2014; Fernandes 2014; Guhathakurta and Banu 2016).

Grassroots participation for transformative social change, beyond traditional NGO boundaries and controls is also a strong theme in International Development, having come out of radical activity in Latin America and South Asia in particular (Mohan 2014; Fals-Borda and Rahman 1991), even though its idealism has been subject to considerable critique (Bryceson, Manicom, and Kassam 2008). It is closely allied related thinking in community development and critical theory in the social sciences (Brydon-Miller et al. 2011), Even the World Bank has taken on board the notion of transformation, defining transformational engagement as “individual or series of interventions that support deep, systemic, and sustainable change with the potential for large-scale impact in an area of a major development challenge” (Heider 2106).

Finally, with respect to the relevance of program evaluation to International Development theory and practice, it is mission critical. Since the focus of this paper has been on the ICT side of the question, all that should and must be said is that a key cause for the development of Program Evaluation has been the billions of dollars spent since World War II in the developing world on development programs in line with different ideologies (Madaus and Kelleghan 2002, chap. 1; Black 2007). The desire for accountability and deep knowledge of the “who how why what when” impacts has gone through many transformations, reflecting much of the argument referred to above. With respect to the adoption of for example, Critical Realist approaches in International Development, the UK and Australia have funded resources in this area, though of course this is one of many approaches to the problem of getting accountability and process data from the field in complex circumstances (Westhorp 2014).

However, despite the rich insights offered by critical thinking as it affects both Information Systems and International Development, there remains the problem of representing critical approaches parsimoniously, without too many “isms”, in order that dialogue between specialists
remains intelligible. We suggest that aspects of the Capability Approach offer a “questioning framework” for problematizing many activities within a critical framework.

The Capability Approach and its application in ICT4D

Means to evaluate changes in the human condition than beyond crude measures (income, food production) are reflected in the in the influential works of Sen and Nussbaum (Sen 2001; Nussbaum 2000) and others (Robeyns 2016; Alkire 2005), on what is known as the Capability Approach.

However, one of the difficulties with providing a succulent summary of the Capability Approach is that it is not a precise formula for the evaluation of the dimensions of “human well-being”, but as the name implies, an approach, based upon a mixture of philosophical and economic ideas which takes into account not just resources, or subjective measures (feelings, happiness) but people’s capacities and activities. Indeed, this perspective can be applied to simplistic evaluations of the effects of ICTs: focus on material aspects (design, desktop utility, technical utility) as a measure of “success” ignores the social context of technology. Unusually, the Capability Approach it draws upon both Western and Indian traditions (Aristotle, Adam Smith and Indian sages) and the consequent scholarly and policy literature is vast and specialized. Sen’s work has been so influential that it has significantly contributed to the UN Millennium Goals and Human Development Index (Robeyns 2005). Thus, Sen has stated that the “capability perspective . . . does not, on its own, propose any specific formula for policy decisions” (Sen 2009, 232). Consequently, as Robeyns suggests, “many aspects of his work, including theory and measurement are radically underspecified and [because] every application [of the theory] requires additional specifications, there are always a number of different ways in which a particular question can be answered using the Capability Approach” (Robeyns 2006, 371). If anything can be defined, Robeyns has also gone onto say that the Capability Approach is:

“generally understood as a conceptual framework for a range of normative exercises, including most prominent the following: (1) the assessment of individual well-being; (2) the evaluation and assessment of social arrangements; and (3) the design of policies and proposals about social change in society. In all these normative exercises, the capability approach prioritizes certain of peoples’ beings and doings and their opportunities to realize those beings and doings (such as their genuine opportunities to be educated, their ability to move around or to enjoy supportive social relationships). This stands in contrast to other accounts of well-being, which focus exclusively on subjective categories (such as happiness) or on the material means to well-being (such as resources like income or wealth.” (Robeyns 2016).

The result of this approach, according to Sen is the “placing the perspective of freedom at the centre of the stage. The people have to be seen, in this perspective, as being actively involved—given the opportunity—in shaping their own destiny, and not just as passive recipients of the fruits of cunning development program.”(Sen 2001, 53).

An initial attempt to take up the Capability Approach in ICT4D domain was conducted by Stillman and Denison, which at least briefly discussed different interpretations of the Capability Approach as an analytical or evaluative too applied to specific problems in ICT4D. However, what was lacking here was an attempt to ‘framework’ the Capability Approach across the board in Information Systems and its relationships to other sociotechnical activity (such as Development Informatics). In this article, they made allusion to Klein’s work on the Capability approach in its use as an analytical tool in 3 detailed case studies of sociotechnical relations in Latin America (Kleine 2014). However, what is lacking here is a further comprehensive framework across multiple sociotechnical dimensions and this issue is now taken up.

Kleine’s Choice Framework , based on Sen’s work and that of internationally significant research such as the Sustainable Livelihood Framework provides a means to conceptualise what resources contributes to freedom (Kleine 2014, 2010). Unfortunately for reasons of space, dimensions and dynamics of Kleine’s agency mechanism cannot be explored , but at least the framework begins with at least 9 dimensions human agency that allow for the development of
significant questions to explore the nature of sociotechnical relations in development afresh. Furthermore, Kleine’s interpretation of the Capability Approach is reminiscent of Giddens’s model of the dimensions of structuration and its agency–structure duality, another body of concepts that has had great appeal in information systems research as a tool for understanding dynamics in sociotechnical activity (Jones and Karsten 2008).

![Diagram of dimensions of agency and structure](source: Kleine 2010, fig. 1)

The 9 dimensions that contribute to agency, sensitized to variables of gender, age, ethnicity (and other factors such as disability, or location), and thus freedom to act include:

- Educational Resources
- Social Resources
- Psychological Resources
- Natural Resources
- Information Resources
- Material Resources
- Financial Resources
- Geographical Resources
- Cultural Resources
- Health Resources

Each of these aspects of agency in a social or sociomaterial sense can of course be referred back into a vast technical literature in various academic domains, but rather, a task should be to develop in the first instance, common-language statements to be explored through the generation of metaphors “linguistic tools for seeing, understanding, and experiencing one kind of thing in terms of another” (Madaus and Kelleghan 2002, 20).

These Kleine’s dimensions as generative metaphors are the tools for joint-task approach between IS and ICT4D. This task is most easily achieved by mapping Kleine’s dimensions of
human agency into a recognized framework for understanding the core tasks of IS and by extension, the more technical dimensions of ICT4D.

**Towards a Guiding Framework**

Here, the preferred starting point is that of proposed by Hirschheim, Klein, and Lyttinen (1996), for Information Systems Design. There are many theories which can be used to problematize sociotechnical challenge, but considering the established links between Information Systems and ICT4D and that between ICT4D and Community Informatics, the present authors have continued previous work (Stillman and Linger 2009; Stillman and Denison 2014a) in applying the very specific “object class system” of Hirschheim, Klein and Lyttinen (Hirschheim, Klein, and Lyttinen 1996), though further modifications of its modelling to ICT4D. Consequently, we also take the view that the horizontal axis of the original “object class system” of Hirschheim, Klein and Lyttinen can be productively adopted to emphasise an even stronger social perspective.

Sociotechnical activities take place in what Hirschheim, Klein, and Lyttinen called an “object class” for particular tasks, which mean “a succinct mechanism to abstract the fundamental ways of conceiving and classifying the variations in the targets and behaviours associated with Information Systems design (Hirschheim, Klein, and Lyttinen 1996, 17)”. Each “object class” was constructed from what they considered to be key design issues in the design process (for example in the row, instrumental issues), matched to what they regard as key domains of change – technology, language and organization.

![Figure 2. From Hirschheim, Klein and Lytinner, 1996)](image)

Lack of space limits deep discussion, but their over-all conceptualization relates to the tripartite division of knowledge interests of Habermas, which are discussed further below. His
framework has also been of interest to others working in ICT4D, but their interests have been narrower, with Buskens on gender (Buskens 2014; Roberts 2015), and Roberts on critical intent and practice (2015).

The first knowledge interest relates to ‘empirical analytical science’ applies, strictly speaking to traditional Information Systems activity as socially removed. It prioritizes ‘objective’ decision-making, dependent on mathematical and engineering sciences with their emphasis on predictability and control. Both hard technology and social-technical or other interests have a mutual interest in developing products or artefacts that reflect “a rational choice of effective means, that is, forms of instrumental and strategic action” (Bohman 2013). From the point of view of sociomateriality, this knowledge interest is particularly relevant to making known the strong agency of sociomaterial objects, whether at the design or use/adaptation/adoptions stage.

Habermas’ second knowledge interest is practical, with a focus on language in all its forms, and particularly, the removal of distortions and communication barriers. As Habermas has put it, this would result in a “cooperative process of interpretation aimed at attaining intersubjectively recognized definitions of situations” (Jürgen Habermas 1984, 1:69–70). These are settled around forms of argumentation, understanding, and warrants for truth and validity claims, speech justifications, and mutually-recognized sincerity. In particular, the dialogue between “universal pragmatics”, which have “the task of identifying and reconstructing universal conditions of possible understanding” (Jürgen Habermas 1979, 1), according to Arnold, sets up conditions for “a hypothetical horizon, the distance from which indicates the presence, nature and extent of distortion, and a guide to remedial action towards conditions of rationality and consensus” (Arnold, 2003, 233). All this fits in well with the idea of effective participation and communication and mutually intelligible metaphors between the diversity of partners in international development projects (Unwin, 2009c).

The third form of knowledge, critical theory, “finds in its task the furtherance of an interest in emancipation, in the achievement of rational autonomy of action freed from domination” In reality, we should consider all these three knowledge interests to be permeable, with all knowledge interests interacting with others in the design of social-technical systems, akin to Giddens’ tri-partite structuration model of the relationship between communication, power, and normative systems that has been of so much interest to IS researchers (Jones and Karsten 2008; Giddens 1984). This argument can be summarized in the table below.

Now ideally, this framework is modified in several ways to produce problematizing results resulting in productive discourse across the sociotechnical continuum.

First, a ‘consciousness’ of the dynamics of sociomateriality needs to be embedded around and within such a framework so that different stakeholders do not bracket the spectrum or continuum of multileveled artefact-human affordances (with all the variations in between). Second, the perspective of Critical Realism (as one body of evaluative ideas). Third, the Capability Approach provides the discursive and metaphorical hook for productive dialogue between different interests. However, what is still lacking here is a succinct or parsimonious way of richly problematizing the questions for considering the sociotechnical implications for each class or activity, for example, the instrumental action around designing a piece of hardware like the innards of a mobile phone or from a linguistic point of view, a symbolic interaction system (such as an text/visual prompts and interactions for an app) that runs off a mobile app through its screen and sound.

This is where Kleine’s Choice Framework, as discussed above become so practical as a sensitizing tool. For each “object class” the questions about the 9 dimensions of human agency can be posed to those working on technical issues and those focussed on social issues in ICT4D (of course, the two may overlap. To pose the two examples as suggested above, the following scheme is suggested, with two suggested tasks, representing the challenge for social and technical interests. This is brought together in the figures below.

In Figure Three, the overall framework, on the three edges representing social-theoretical intersects with the concerns of critical realism and different forms of Critical Theory is set in motion through use of the Choice Framework as a problematizing tool if a richer sociotechnical workspace for different interests, alert to a wider range of concerns than that which is traditionally found.
The “space” of sociomaterial practice …. physical or virtual space, linked into the past present and future through the creation of material and immaterial objects)

Figure 3
The new framework or approach sets human emancipation and well-being as expressed through the Capability Approach and the Choice Framework as a priority and it highlights the importance of setting in place mutual communication at both conceptual and practical levels underpinned by a richer understanding of social and technical relations between the DI and International Development domains. It is not prescriptive in terms of method or any aspect of research processes. It is not limited to a single unit or level of analysis, but has the potential to span all sociotechnical and International development activity. It can embrace both technical and social dispositions as well as the interaction between these, of particular importance today, given the explosion of possibilities for independent, unmediated and independent social-technical activity from village to metropolis. As a meta-framework it does not exclude any of the core focus areas or priorities that have been proposed by prominent DI researchers, but rather proposes a variety of frames for thinking about these and particularly for input by those who have limited “technical” but a rich social and developmental understanding of what is needed in the development sector.

Everyday language explanations and metaphors can be developed for both research communities and even practitioners affected from each of these object class systems to enhance cross-fertilization that attach themselves to identified design task. Consequently, the reductionist argument implicit in the original framework from Hirschheim et al. for dividing the horizontal axis into “irreducible” and technically task-oriented domains should be abandoned, as others may be identified.

<table>
<thead>
<tr>
<th>What are the a) technical b) social actions required to achieve human freedoms and empowerment based upon:</th>
<th>For a mobile phone as an ‘instrumental’ design object</th>
<th>For an app, as a sense-making object which involves forms of language and communication</th>
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<td>Educational Resources</td>
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<td>Geographical Resources</td>
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<td>Cultural Resources</td>
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<td>Health Resources</td>
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Case Study

TO BE DONE

Discussion

TO BE DONE

Conclusions

TO BE DONE

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Bibliography


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\(^{1}\) These terms require further discussion, but within the limits of this paper.  
\(^{2}\) Postpositivism has been suggested as a another paradigm, which takes the position that the reality assumed by positivism, is only partly knowable and “imperfectly and probabilistically apprehendible” (Guba and Lincoln 1994, 109). Guba and Lincoln prefer to regard call the interpretivist paradigm “constructivism” though whether or not they are different things is relationships between the two is debated (Williamson 2013). Lastly, Lincoln, Guba and Lynham, in a revision of Guba and Lincoln’s original work, added the participatory/cooperative paradigm(Lincoln, Lynham, and Guba 2011) though some would argue that this is a method rather than a paradigm. Other suggested paradigms are those which take on feminist, postmodern or socio-material considerations, though equally, these considerations could be integrated into the current paradigms. Nothing is firm. (Dubravka Cecez-Kecmanovic and Kennan 2013)
Using Participedia in a Community of Practice to Create Value for Public-Involvement Practitioners

Marco Adria\(^1\), Paul Messinger\(^1\), Edrick Andrews\(^1\), Chelsey Ehresman\(^2\), \(^1\)University of Alberta, Canada; \(^2\)Medicine Hat College, Canada

Abstract: Public-involvement practitioners (professionals, advocates, activists) seek fit-for-purpose methods of involving citizens in decisions that affect them. Although no statistics or archives provide a record of democratic innovations in their historical and cultural contexts, Participedia (participedia.net) has created a wiki-based library of some 800 cases for use by public-involvement practitioners and researchers. This study asks how public-involvement practitioners in a community of practice (COP) used Participedia’s cases to learn about change and variation in the field and thereby added value to their work. The results of the study support a view of Participedia as a “ground for dialogue,” that is, a space and idiom within which knowledge can be co-created, and shared understandings strengthened, through conversations, interactions, and information exchange. The results also provide support for the value to public-involvement practitioners of using a COP to extend and mobilize Participedia cases and other materials. Thirteen participants formed a COP, meeting over a period of three months, using Participedia cases to inform their discussions. To identify and measure the professional and practical value created by COP members, the authors qualitatively analyzed the participants’ responses to survey questionnaires and their contributions to a focus-group discussion. Members of the COP reported immediate value to be the most beneficial. Examples of this type of value include experiencing reduced feelings of isolation; having relevant conversations with participants or receiving useful tips; obtaining opportunities to ask questions before, during, or after meetings; and having fun. Value of other kinds was also generated, including potential value, applied value, and reframing value.

Keywords: Deliberative practice, Participedia, communities of practice, professional learning

Introduction

Participedia and the Domain of Democratic Innovations

Fung and Warren (2011) observe that most democratic institutions have failed to keep pace with the demands of citizens for involvement in important policy decisions that affect them. This is in spite of the fact that public involvement is more likely to lend legitimacy to policy decisions and to build public support for them (Mao & Adria, 2013). A significant factor for explaining the lag between citizen expectations and institutional responses is the change and variation characteristic of the domain of democratic innovations:

> Our knowledge of this rapidly expanding universe is shallow, especially when we compare our knowledge of these emerging institutions to those we have been studying for many decades: representative legislatures, executive offices and bureaucracies, municipal councils, and various forms of authoritarianism. What kinds of processes are appropriate for what kinds of issues? What kinds of processes are likely to generate better rather than worse outcomes—more legitimacy, justice, or effectiveness, say—given the characteristics of the issues and the constraints of time and money (Fung & Warren, p. 342)?
Participedia (participedia.net) is a website and research platform that collects crowdsourced data about democratic innovations from around the world. Since its establishment in 2009, Participedia has generated some 800 cases, along with other resources about methods and organizations associated with democratic innovations. Openly licensed with Creative Commons, Participedia’s origins were shaped in significant part by the purposes of researchers. Participedia allows researchers systematically to compare data about democratic innovations (Gastil, Richards, Ryan, & Smith, 2017). However, Participedia is also used by public-involvement practitioners. These practitioners work as advocates, activists, and professional staff in NGOs and government. Practitioners seek methods that are fit for the purpose of involving citizens in decisions that affect them.

The challenge of change and variation in the field for public-involvement practitioners can be illustrated using the example of public transportation. Grossardt, Bailey, and Brum (2003) describe the history since the early 1980s of involving the public in important policy decisions related to how public transportation is planned and designed within a given urban or metropolitan government authority. While research continues to identify public involvement as critical to the success of major transportation-planning initiatives (Khisty, 1996; Reinke & Malarkey, 1996), input from non-practitioners “sometimes fails to include detailed consideration of [public involvement] while describing thoroughly all other phases of the planning effort” (Grossardt et al., 2003, p. 95). Even when public-involvement efforts are made, significant disagreements may arise among members of the public. These disagreements may eventually be “reproduced” in an advisory committee, whose input may not be as specific and as targeted to an appropriate stage of planning as it would have been. The continuing question for public involvement in major transportation projects is, What is the level or quality of engagement with the public that will allow input to be directed to best effects?

To answer this question, a current and comprehensive map of change and variation in the field of public involvement, described in various cultural and economic contexts, is required. Participedia provides resources that help create such a map, a “landscape of new participatory institutions,” as Fung and Warren (2011) call it. Participedia’s use extends beyond transportation planning to all major areas of decision-making in which public involvement has a key function in improving the quality of decisions and of strengthening the accountability and responsiveness of democratic institutions.

This study examines how Participedia, which was created to respond to the shallow universe of knowledge that Fung and Warren (2011) describe, was used by public-involvement practitioners in the context of a community of practice (COP). In particular, it asks how public-involvement practitioners in a COP used Participedia’s cases to learn about change and variation in their field and thereby added value to their work.

The COP-Participedia Experience

Cummings and van Zee (2005) argue that a COP is a social group comprising the three elements of domain, community, and practice. A COP’s domain is an area of interest and shared competence, and these imply a commitment to the domain. Members participate because they have an affinity for and sense of mission related to the domain. A COP’s community is the set of members engaged in activities and discussion together. The community is not necessarily co-located on a daily basis. Members may meet from time to time and then return to separate places of work. A COP’s practice, Cummings and van Zee note, is what distinguishes the community from functioning only as an interest group. Members of a COP practice professionally and possess commitment to, and a sense of mission for, their chosen area. This allows members to, “develop a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems, namely a shared practice” (p. 10).
Members of a COP seek to add value to their practice. In fact, this goal is a defining characteristic of a COP, since it is a primary means by which commitment and a sense of mission in relation to the area of practice are expressed and developed. The value generated in a COP leads to the production and reproduction of the knowledge, skills, and information required to respond to varied citizen audiences, and to the practice’s changing circumstances and contexts.

Members of a shared professional practice seek value in various ways. Wenger, Trayner, and de Laat (2011) distinguish between the value generated by networks versus that generated by communities. A network allows for information exchange and meaningful accruals of value. It is different from a community mainly in terms of the sense of identity offered by a community:

*The network aspect refers to the set of relationships, personal interactions, and connections among participants who have personal reasons to connect... a set of nodes and links with affordances for learning, such as information flows, helpful linkages, joint problem solving, and knowledge creation. The community aspect refers to the development of a shared identity around a topic or set of challenges. It represents a collective intention—however tacit and distributed—to steward a domain of knowledge and to sustain learning about it (p. 19).*

Using this distinction, Participedia represents a set of resources used by a network. Participedia as a network comprises those people managing and developing “affordances for learning,” that is, those who have taken on the responsibility for ensuring that Participedia continues to be available for use. The network also includes those who contribute cases and other materials.

In this study, the COP developed a nascent shared identity. It therefore had the purpose and outcome of establishing a community. Participants shared both a commitment to an area of practice and an intent to generate and accrue value through participation in the community. The group’s shared identity was that of like-minded practitioners wanting to learn more about public involvement through co-present exchanges. The study documents the value created for members of the COP using Participedia resources, to which we refer as the COP-Participedia experience, or simply COP-Participedia.

At this early stage of Participedia’s development it is appropriate to explore the question of whether further innovation may lead to new forms of value for users. In this sense, the COP—which is a well-tested and validated method for mobilizing knowledge (Wenger, 1998)—functioned in the study as an “informal coordination mechanism” of the kind that Jansen, Van Den Bosch, and Volberda (2006) argue, “not only contribute[s] to pursuing exploratory and exploitative innovations, but [is] also more important than formal coordination mechanisms for developing either exploratory or exploitative innovation” (p. 1670). A recent, parallel approach to public deliberation has combined shared political documentary viewing with focus-group discussion (Pitts, Kenski, Smith, & Pavlich, 2017).

**Method**

**Sample**

Thirteen people participated in the study: seven women and six men. Most participants were mid-career professionals, aged 30 to 60, with two participants older than 60. All had studied public and professional communication at the graduate (master’s) level, either by completing a master’s degree in the area or taking an elective course as part of a related graduate program. See Appendix 1 for a complete list of participants and their occupations. Most participants did not know one another before the first COP meeting.
Participants were invited to join the study’s three phases. In the initial phase, participants met in order to select themes of public involvement that were timely and significant for the professional practice of public involvement. Suggestions were solicited from participants, from which an initial list of 10 potential themes was created. The three themes receiving the most votes from the group were then adopted as the themes to be discussed in the subsequent COP-Participedia sessions. The themes, along with the Participedia cases and other resources used in each COP session, are listed in Appendix 2. The Participedia resources were selected by the researchers, who were familiar with the overall structure and resources of Participedia. Also during this initial stage, participants were asked to complete a pre-study survey questionnaire in order to identify the value that they associated with the professional practice of public involvement.

The second phase of the study involved attending three COP sessions. For each COP-Participedia session, Participedia resources were provided to participants to inform and stimulate the discussion. Participedia resources were presented to participants twice. They were presented first in advance of each session via weblink. Participants could examine the materials before the COP-Participedia session. Participants then received the materials a second time via a summary and introduction by the moderator, which occurred at the beginning of each COP-Participedia session. At the end of each session, participants completed a survey questionnaire asking about generation and accrual of value during the session.

The third phase of the project involved attending a focus group in which participants contributed to a moderated discussion about how views and values associated with the practice of public involvement had changed during the COP-Participedia sessions. Also at this final stage, a post-study survey questionnaire was completed. The schedule for participants is provided in Table 1.

<table>
<thead>
<tr>
<th>Week</th>
<th>Activity</th>
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<tbody>
<tr>
<td>1</td>
<td>Rank and choose COP-Participedia session topics&lt;br&gt;Complete pre-study questionnaire (#1)</td>
</tr>
<tr>
<td>2</td>
<td>No activity</td>
</tr>
<tr>
<td>3</td>
<td>COP-Participedia Session 1&lt;br&gt;Complete post-session questionnaire (#2)</td>
</tr>
<tr>
<td>4</td>
<td>COP-Participedia Session 2&lt;br&gt;Complete post-session questionnaire (#3)</td>
</tr>
<tr>
<td>5</td>
<td>COP-Participedia Session 3&lt;br&gt;Complete post-session questionnaire (#4)</td>
</tr>
<tr>
<td>6</td>
<td>No activity</td>
</tr>
<tr>
<td>7</td>
<td>Focus Group&lt;br&gt;Complete post-study questionnaire (#5)</td>
</tr>
</tbody>
</table>

Table 1: Schedule for Study Participants

Sessions were 90 minutes in length and were facilitated by researchers. The direction and development of topics and ideas within the discussions were shaped by participants.
Mixed Method of Survey Questionnaires and a Focus group

The survey questionnaires and the focus group were intended to capture two separate but related potential benefits of the COP-Participedia experience for participants. The survey questionnaires asked participants about information or knowledge that held a specific professional value. For example, a participant might make a new contact with a colleague who had experience or expertise on a shared topic, which could be tapped in the future. Such value could be considered transactional, in that the participant could regard the value as a “takeaway,” and the value would generally have a short lifespan. The focus group was intended to uncover a somewhat different form of value.

Compared with the value stated in the survey questionnaires, the value discussed in the focus group was more broadly based in its origins and synergistic in operation. For example, one or more of the COP-Participedia meetings might have influenced a participant to influence a decision-maker in the workplace on an issue related to public involvement. Similarly, after a session a participant might now think about public involvement differently, using a different conceptual framework. Such value would be relatively enduring, rather than transactional. To help identify the value to participants of their COP-Participedia experience using the survey questionnaires and the focus group, five “cycles” of value devised by Wenger et al. (2011) were adopted.

Cycle 1 is immediate value. This cycle includes activities and interactions that have intrinsic value. Value in this cycle is experienced at once and has immediate effect. Examples of immediate value in the COP-Participedia would be experiencing reduced feelings of isolation; having relevant conversations with participants or receiving useful tips; obtaining opportunities to ask questions before, during, or after meetings; and having fun.

Cycle 2, potential value, can include knowledge that is generated through and during COP-Participedia but whose actual value is not realized until later. For example, a useful skill or relevant piece of information might be obtained in COP-Participedia but not applied or put to use until some time later. Similarly, relationships and connections (social capital) might be enhanced. Access to new resources, an improved reputation, or new learning are other ways of considering the potential value of COP-Participedia.

Cycle 3, which is applied value, follows Cycle 2 and includes those instances in which knowledge, skills, or techniques are applied in practice. A skill may be applied in the workplace, or an idea might be put into practice. Applied value, like potential value, can only be identified and measured some time after a participant joins a COP.

Cycle 4, realized value, represents performance improvement. Like Cycles 2 and 3, it takes place some time after the establishment of the COP and does not have immediate effect. Realized value requires a member of a COP to apply new skills or knowledge and then to measure how this application has resulted in better or more effective operation for an individual, organization, or organizational unit. For example, an innovation that results in selecting a new tool might be followed by an increase in motivation among members of a group in an organization. Questions about realized value were not included in this study’s survey questionnaires or focus group, because identifying and measuring this cycle of value would require follow-up in participants’ contexts some time after the establishment of a COP. Such follow-up was beyond the scope of the study.

Cycle 5, reframing value, is the final and deepest cycle of value. It requires participants to consider how the COP-Participedia experience changed, and perhaps transformed, how they regarded success in the context of public involvement. Such value may eventually result in “renegotiation with the powers-that-be who have the legitimacy to define success” (Wenger et al., 2011, p. 21). An example of realized value would be influencing a decision-maker in the professional workplace.
While participants completed the survey questionnaires individually and without consultations with others, the focus group allowed participants to compare perspectives about reframing value and to range more broadly in their discussions about the value that COP-Participedia offered to their professional practice.

**Survey-Questionnaire Design and Data Analysis**

The five survey questionnaires asked participants to consider how the COP-Participedia experience resulted in the creation of value in Cycles 1 (immediate value), 2 (potential value), and 3 (applied value). The pre- and post-study survey questionnaires and the three post-session questionnaires contained the same items, with the exception that the latter included items about participants’ experience at that day’s COP-Participedia session and about relevant experiences from the preceding week at work and at home. Each question item in the survey questionnaires provided an assertion, to which participants were asked to respond by choosing the extent of their agreement on a five-point scale: Strongly Disagree, Agree, Neutral, Agree, or Strongly Agree. For all survey questionnaires, participant responses indicated whether and how agreement with a statement changed (for example, from Strongly Disagree to Strongly Agree), from the pre-study to the post-study period of time and after the completion of each of the three COP sessions. Appendix 3 provides a complete list of the survey-questionnaire items and the cycles of value they were intended to identify and measure.

To analyze the survey-questionnaire data, the mean responses for each question item were calculated. This provided a measure of participants’ reports of accrued value. A “sum of means” was also calculated for each of the cycles of value.

**Focus-Group Design and Data Analysis**

The focus group allowed participants to consider value-creation in COP-Participedia more deeply and in a reflective way, in collaboration with colleagues. The cycles of immediate, potential, and applied value could be identified and discussed in the focus group, but participants would be asked to consider these cycles of value in connection to whether they had led to changes in how participants viewed their professional work more fundamentally, that is, in terms of the cycle of reframing value.

Eleven of the 13 study participants attended the focus group. The discussion was 90 minutes in length and was transcribed for analysis. The questions posed to participants addressed the following areas, which were relevant to the research question: ‘

1. general questions about whether and how participants had changed their view of public involvement as an area of practice, and participants’ status as practitioners within that area;
2. the experience of learning about and using the network and resources of Participedia;
3. the experience of participating in a community of practice with colleagues.

The complete focus-group guide is provided in Appendix 4. The focus-group transcript was analyzed by the researchers using a form of constant-comparison analysis (Onwuegbuzie, Dickinson, Leech, & Zoran, 2005), which is a qualitative technique first developed and applied by Glaser and Strauss (1967). The technique follows three stages of analysis (Strauss & Corbin, 1998). The transcript data is first reduced using open
coding. Coded units in the transcript were either single words or short phrases of 10 words or less. Table 2 lists the most frequently coded words and the frequency of their occurrence.

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<thead>
<tr>
<th>Coded unit</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>community/communities</td>
<td>52</td>
</tr>
<tr>
<td>(diverse) group(s)</td>
<td>45</td>
</tr>
<tr>
<td>tool(s)</td>
<td>31</td>
</tr>
<tr>
<td>decision(s)</td>
<td>26</td>
</tr>
<tr>
<td>process</td>
<td>25</td>
</tr>
<tr>
<td>technology</td>
<td>25</td>
</tr>
<tr>
<td>conversation</td>
<td>17</td>
</tr>
<tr>
<td>understand(ing)</td>
<td>17</td>
</tr>
<tr>
<td>influence</td>
<td>15</td>
</tr>
<tr>
<td>opinion</td>
<td>10</td>
</tr>
<tr>
<td>experience</td>
<td>9</td>
</tr>
<tr>
<td>solution(s)</td>
<td>9</td>
</tr>
<tr>
<td>discussion</td>
<td>8</td>
</tr>
<tr>
<td>diversity</td>
<td>8</td>
</tr>
<tr>
<td>other people</td>
<td>6</td>
</tr>
<tr>
<td>approach</td>
<td>6</td>
</tr>
<tr>
<td>complexity</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 2: Most Frequently Coded Units and Their Frequency, Identified During Open Coding

In the second stage of analysis using this technique, codes are grouped into categories of like units, using what is called axial coding, to allow the emergence of like meanings. At this stage, five categories in the transcript were established. The coded units were assigned throughout the focus-group transcript. The five categories and their codes are provided in Table 3.

<table>
<thead>
<tr>
<th>LFC (X 135)</th>
<th>SCX (X 47)</th>
<th>SSD (X 46)</th>
<th>BTT (X 192)</th>
<th>STO (X 32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning from COP colleagues and from Participedia</td>
<td>Appreciating the complexity of PI processes</td>
<td>Understanding the diversity of PI audiences</td>
<td>PI tools and techniques</td>
<td>Seeing the outcomes of PI</td>
</tr>
</tbody>
</table>

Table 3: Categories with Corresponding Codes and Frequencies, Developed During Axial Coding

While each category provides a means of creating like meanings, it is not a complete statement or assertion. Therefore, during the third and final stage of analysis, that of selective coding, a complete theme is developed for each of the categories. Each theme provides the basis
for a conclusion drawn from the data. The themes are discussed in the Results and Discussion sections of the study.

Two steps were taken to determine an end point for sampling and coding. These steps correspond, respectively, to sample saturation and theoretical saturation (Glaser & Strauss, 1967). Sample saturation can be considered to occur when all significant words or phrases have been coded. This is the point at which further coding does not generate further data. The proportion of the transcript that was coded was measured. The transcript was 9,895 words in length (48 double-spaced pages). During open coding, an average of 10.42 coded words or phrases were created for each page of the transcript for a total of approximately 500 coded words and phrases for the entire transcript. The transcript contained 859 sentences, meaning that about 60 per cent of the sentence in the transcript featured at least one coded word or phrase. All nouns that were mentioned five or more times in the discussion were coded.

In terms of theoretical saturation, the five categories were tested for conceptual integrity. As shown in Figure 1, the categories developed during axial coding represent an ecosystem of the professional practice of public involvement in the context of the COP-Participedia experience. Category 1 (code LFC) refers to new skills and knowledge, as well as reinforcement of existing skills and knowledge. The category represents participants as they describe learning about public involvement, either through exchanges within COP-Participedia or by gathering information directly from Participedia. Participants in COP-Participedia used the opportunities for discussion with colleagues in the COP, informed by Participedia cases and resources, to “co-create knowledge.” The co-creation of knowledge suggests that participants acted together to reinforced existing knowledge and identified new knowledge. Such co-creation can be associated with synergies (more effective and efficient knowledge generation), and it may result in richer forms of knowledge than would otherwise be possible (Rowley, Kupiec-Teahan, & Leeming, 2013).

Category 2 (code SCX) refers to new and renewed appreciation of the complexity of public-involvement processes. The category includes participant descriptions of how they learn from observing and assessing the practice of public involvement. This is learning from public involvement.

Categories 3 and 4 (codes, respectively SSD and BTT) represent public-involvement inputs. These inputs are, first, a strengthened understanding of the diverse character of the public-involvement audience, and second, the tools and techniques used by public-involvement practitioners.

Finally, Category 5 (code STO) describes new ways of seeing and describing the outcomes of public involvement for stakeholders. These are the public-involvement outputs, which refer to the ultimate effects, in society and in social systems, of public involvement as a field of practice.
The conceptual framework provided a marker indicating that theoretical saturation had been reached. The key components of public involvement as a field of professional practice, along with the basic elements of the COP-Participedia experience, were identified within the five categories.

**Results**

The discussion below summarizes the findings of our study of the effectiveness and impact of COP-Participedia, grouped in subsections dealing with immediate value, potential value, and applied value (following Wenger 1998). Each subsection begins with an overview of relevant results from the survey questionnaires and continues in greater depth by providing qualitative comments from focus-group participants concerning reframing value. This quantitative and qualitative evidence is used to support our interpretation of the results.

The means (averages) of the responses to the questions in the three post-session survey questionnaires are provided in Table 4. The same calculation is shown in Table 5 for the pre- and post-study survey questionnaires. Both tables include a calculation of the “sum of means” for each of the three groups of survey-questionnaire items corresponding to the relevant value cycles.

### Immediate Value

Q1 to Q5 asked participants about immediate value. This value cycle includes activities and interactions generating value that is experienced at once and which has immediate effect. The sum of means for the five questions asking about immediate value increased from 19.89 following Session 1, to 21.36 following Session 2, and 20.88 following Session 3 (see Table 4). The value that participants reported in relation to immediate value was highest when compared with the other two cycles of value (i.e., Q6 to Q10 and Q11 to Q15).

For each of the questionnaire items about immediate value, participants reported an increase in value from Session 1 to Session 2. The mean for each question after Session 2 then decreased somewhat, but only to a level above the Session 1 level. For Q1, for example, the mean increased from 3.67 following Session 1, to 4.18 following Session 2, to 4.00 following Session 3. Participants therefore reported obtaining immediate value during Session 1 of COP-Participedia, and the mean level of this value increased after completion of Session 2. Perceived value continued to increased after Session 3, but at a reduced rate. The final level was 4.00 or higher for each of the five questions about immediate value.

<table>
<thead>
<tr>
<th>Question</th>
<th>Session 1 (stderr)</th>
<th>Session 2 (stderr)</th>
<th>Session 3 (stderr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>The session today was a significant event for my learning about public involvement.</td>
<td>3.67 (.33)</td>
<td>4.18 (.23)</td>
</tr>
<tr>
<td>Q2</td>
<td>The session was relevant to my work.</td>
<td>3.89 (.42)</td>
<td>4.00 (.19)</td>
</tr>
<tr>
<td>Q3</td>
<td>The conversations were high quality.</td>
<td>4.11 (.31)</td>
<td>4.45 (.28)</td>
</tr>
<tr>
<td>Q</td>
<td>Description</td>
<td>Mean 1</td>
<td>Mean 2</td>
</tr>
<tr>
<td>----</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Q4</td>
<td>I enjoyed participating in today’s session.</td>
<td>4.33</td>
<td>4.45</td>
</tr>
<tr>
<td></td>
<td>(0.33)</td>
<td>(0.21)</td>
<td>(0.41)</td>
</tr>
<tr>
<td>Q5</td>
<td>I made connections with others.</td>
<td>3.89</td>
<td>4.27</td>
</tr>
<tr>
<td></td>
<td>(0.31)</td>
<td>(0.19)</td>
<td>(0.27)</td>
</tr>
<tr>
<td></td>
<td><strong>Sum of Means for Q1 – Q5 (Immediate Value)</strong></td>
<td><strong>19.89</strong></td>
<td><strong>21.36</strong></td>
</tr>
<tr>
<td>Q6</td>
<td>I acquired new skills or knowledge at today’s session.</td>
<td>3.56</td>
<td>3.73</td>
</tr>
<tr>
<td></td>
<td>(0.41)</td>
<td>(0.24)</td>
<td>(0.25)</td>
</tr>
<tr>
<td>Q7</td>
<td>I feel inspired about my work because of today’s session.</td>
<td>3.56</td>
<td>3.82</td>
</tr>
<tr>
<td></td>
<td>(0.38)</td>
<td>(0.23)</td>
<td>(0.44)</td>
</tr>
<tr>
<td>Q8</td>
<td>I feel less isolated.</td>
<td>3.38</td>
<td>3.55</td>
</tr>
<tr>
<td></td>
<td>(0.38)</td>
<td>(0.25)</td>
<td>(0.32)</td>
</tr>
<tr>
<td>Q9</td>
<td>I now have opportunities for future learning.</td>
<td>3.56</td>
<td>3.82</td>
</tr>
<tr>
<td></td>
<td>(0.24)</td>
<td>(0.23)</td>
<td>(0.33)</td>
</tr>
<tr>
<td>Q10</td>
<td>I have increased my desire to participate in future sessions with my group.</td>
<td>3.89</td>
<td>4.20</td>
</tr>
<tr>
<td></td>
<td>(0.42)</td>
<td>(0.13)</td>
<td>(0.30)</td>
</tr>
<tr>
<td></td>
<td><strong>Sum of Means for Q6 – Q10 (Potential Value)</strong></td>
<td><strong>17.93</strong></td>
<td><strong>19.11</strong></td>
</tr>
<tr>
<td>Q11</td>
<td>I applied a skill during today’s session.</td>
<td>3.56</td>
<td>3.27</td>
</tr>
<tr>
<td></td>
<td>(0.38)</td>
<td>(0.27)</td>
<td>(0.40)</td>
</tr>
<tr>
<td>Q12</td>
<td>I applied knowledge during the session.</td>
<td>4.00</td>
<td>3.55</td>
</tr>
<tr>
<td></td>
<td>(0.33)</td>
<td>(0.31)</td>
<td>(0.35)</td>
</tr>
<tr>
<td>Q13</td>
<td>What I learned today will help me encourage others to participate in something I care about.</td>
<td>3.89</td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td>(0.31)</td>
<td>(0.23)</td>
<td>(0.31)</td>
</tr>
<tr>
<td>Q14</td>
<td>During today’s session, I shared skills or knowledge with someone.</td>
<td>3.89</td>
<td>3.64</td>
</tr>
<tr>
<td></td>
<td>(0.31)</td>
<td>(0.31)</td>
<td>(0.35)</td>
</tr>
<tr>
<td>Q15</td>
<td>I put an idea or suggestion into practice during today’s session.</td>
<td>3.22</td>
<td>3.36</td>
</tr>
<tr>
<td></td>
<td>(0.36)</td>
<td>(0.31)</td>
<td>(0.38)</td>
</tr>
<tr>
<td></td>
<td><strong>Sum of Means for Q11 to Q15 (Applied Value)</strong></td>
<td><strong>18.56</strong></td>
<td><strong>17.82</strong></td>
</tr>
</tbody>
</table>

**Number of Participants**

9 11 8

**Table 4: Means of Participant Responses to the Post-Session Survey Questionnaires (5=Strongly Agree)**

Turning to the pre- and post-study questionnaires (see Table 5), the mean responses followed the same pattern as in the post-session survey questionnaires.
<table>
<thead>
<tr>
<th>Question</th>
<th>Pre-Study (stderr)</th>
<th>Post-Study (stderr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 I have opportunities at work for learning about public involvement.</td>
<td>3.86 (0.27)</td>
<td>3.85 (0.22)</td>
</tr>
<tr>
<td>Q2 I have opportunities to learn about public involvement that are relevant to my own personal work context.</td>
<td>3.93 (0.27)</td>
<td>4.15 (0.19)</td>
</tr>
<tr>
<td>Q3 I have high-quality conversations about public involvement.</td>
<td>3.29 (0.34)</td>
<td>3.62 (0.27)</td>
</tr>
<tr>
<td>Q4 I enjoy learning about public involvement.</td>
<td>4.64 (0.13)</td>
<td>4.54 (0.14)</td>
</tr>
<tr>
<td>Q5 I make connections with other people when I learn about public involvement.</td>
<td>4.43 (0.14)</td>
<td>4.15 (0.10)</td>
</tr>
<tr>
<td><strong>Sum of Means for Q1 – Q5 (Immediate Value)</strong></td>
<td>20.1</td>
<td>20.3</td>
</tr>
<tr>
<td>Q6 I have opportunities to acquire new skills or knowledge related to public involvement.</td>
<td>3.93 (0.27)</td>
<td>4.15 (0.15)</td>
</tr>
<tr>
<td>Q7 I feel inspired about my work when I learn about public involvement.</td>
<td>4.36 (0.17)</td>
<td>4.08 (0.18)</td>
</tr>
<tr>
<td>Q8 I feel less isolated when I learn about public involvement.</td>
<td>4.14 (0.18)</td>
<td>3.77 (0.20)</td>
</tr>
<tr>
<td>Q9 I have opportunities for future learning about public involvement.</td>
<td>3.64 (0.32)</td>
<td>4.08 (0.21)</td>
</tr>
<tr>
<td>Q10 My desire to learn about public involvement tends to increase rather than decrease.</td>
<td>4.29 (0.13)</td>
<td>4.31 (0.13)</td>
</tr>
<tr>
<td><strong>Sum of Means for Q6 – Q10 (Potential Value)</strong></td>
<td>20.36</td>
<td>20.38</td>
</tr>
<tr>
<td>Q11 I have opportunities to apply a skill related to public involvement.</td>
<td>4.14 (0.14)</td>
<td>4.23 (0.17)</td>
</tr>
<tr>
<td>Q12 I can apply my knowledge about public involvement to problems.</td>
<td>4.29 (0.13)</td>
<td>4.23 (0.17)</td>
</tr>
<tr>
<td>Q13 Learning about public involvement helps me encourage others to participate in something I care about.</td>
<td>4.14 (0.14)</td>
<td>4.08 (0.18)</td>
</tr>
<tr>
<td>Q14 I have opportunities to share skills or knowledge related to public involvement.</td>
<td>4.00 (0.18)</td>
<td>4.23 (0.17)</td>
</tr>
<tr>
<td>Q15 I can put an idea or suggestion related to public involvement into practice.</td>
<td>3.86 (0.23)</td>
<td>4.15 (0.19)</td>
</tr>
</tbody>
</table>
The sum of means for Q1 to Q5, concerning immediate value, rose, although not significantly, from the pre-study level of 20.1 to the post-study level of 20.3. Participants indicated in Q1, Q2, and Q3 that the level of immediate value increased from pre- to post-study, while Q4 (I enjoy learning about public involvement) and Q5 (I make connections with other people when I learn about public involvement) fell somewhat from 4.64 to 4.54 and 4.43 to 4.15, respectively.

Learning from colleagues and from Participedia is a complementary process. Knowledge changes its form from being implicit, that is, unstated or emergent, to being explicit, that is, expressed and then documented (Wenger, 1998). In the focus group, participants discussed immediate value when they stated that the COP-Participedia experience gave them an opportunity to engage in conversations in which they expressed matters of professional concern. Two relevant themes that participants identified and discussed in the focus group were the emergent influence of COP-Participedia discussions both within and beyond the group, and the value of face-to-face communication when compared to other modes of communication such as online interaction.

First, participants reported recognizing the personal and professional influence of one another within COP-Participedia. Participants stated that they learned from one another and that such learning had a quality that separated it from other kinds of learning. Collette, an educational activist and doctoral student, for example, said,

*I found that [COP-Participedia] gave me confidence to speak about my own [public-involvement] project. It gave me a frame to speak about it. It also leveraged the language that I would be able to use, and people could relate to it.*

A change in the language that participants were capable of using as a result of COP-Participedia is a transformative change, because language use is fundamental to conceptualization of a body of knowledge.

Sally, a senior public-involvement specialist in government, referred to a deepening of her commitment and her capacity to advocate and express herself as a public-involvement practitioner: “[COP-Participedia] allowed me exposure . . . to all the other perspectives in the room, to actually start to ‘beam out’ that there's such a broad perspective to what public involvement means.” For her, COP-Participedia carried the same style and effect of learning that had taken place in her master’s degree studies:

*I would feel energized when I left. Like I had fresh air for my brain, I would call it. And then when I went back and went online and continued those discussions, I felt like I was in the room with everybody. I could see [a former fellow student] talking and his mannerisms when he explained something. I understood the context from which he came, his background, in his online presence.*

Horn (2010) points out that conversations among participants in a community of practice can have a latent influence on colleagues who are not co-present. This can generate reframing value,
because effects move beyond the group and can therefore “act back” on it. Participants referred to this influence. Knut stated, “[COP-Participedia] allows me to talk on a . . . better basis of understanding with other people.” Collette referred in a similar way to the value of the mutual influence of the members of a COP but also of the influence that extended beyond COP-Participedia:

Having a variety of professionals meeting and discussing different topics pushes me to the next level. It helps to spark creativity and innovation in the conversation I'm having with decision-makers about how we're going to pull a project together.

Second, focus-group participants commented on the value of face-to-face communication in relation to other modes of communication. They expressed the vibrancy and immediacy of meeting face-to-face. Will, a university instructor and arts activist, described this influence in relation to the symmetry of conversation:

You can have an exchange instead of just a one-sided presentation. . . . I valued just generally getting around the table and having everyone have a voice.

Another value of COP-Participedia discussed by participants was a kind of reversal of the face-to-face mode of COP-Participedia. Participedia is an information repository, to which access is provided online. However, its cases are based on the observation of mainly face-to-face encounters, as mentioned by Knut, a retired engineer:

Participedia is the outcome of the in-person thing. This is the richest way we're ever going to communicate. The moment you go to a Participedia or any other way of communicating, there's the intermediary aspect of the technology. You can only see so many people on the screen. You can only have so many people working on it. If you have different time zones, you are now asynchronous in your communication, although that doesn't mean that they're not useful tools.

Participants expressed the sentiment that coming together with colleagues to discuss matters of mutual interest in COP-Participedia provided a time away from distractions, as well as a welcome pause from the routine of the workplace. Tod, a senior public relations professional in government, expressed a sense of being refreshed within his practitioner context:

[COP-Participedia] was fun . . . and engaging with professionals and colleagues again was good. I was looking forward to coming every week. For me, that was exciting. I've missed a lot of that. You get saddled with your job and you don't explore, expand. So, I really enjoyed this.

This sort of immediate value could have reframing value, too, if participants used it to reconsider or reflect on their professional practice. Participants suggested that the “time away” of COP-Participedia allowed for reconsidering perspectives but that it also qualified as a “place set apart” allowing for renewed vision. Sally stated:

One of the things I find, no matter what work you're doing, you get close to it. And sometimes you can't see the forest for the trees. And sometimes backing up or having a conversation with other people about what you're doing will help you see more clearly what your own path needs to be when you're developing your engagement strategy.
Godfrey, a college communications instructor, summarized the particular character of face-to-face discussion, on which other participants had commented, in his observation of COP-Participedia: “You're never going to beat a dozen people sitting around the table with a common goal.”

Summarizing the first value cycle, participants responded to each of the questionnaire items by reporting an increase in immediate value. The focus group revealed the emergent influence of COP-Participedia discussions both within and beyond the group, and the value of face-to-face communication as compared to other modes of communication.

In relation to the second value cycle, as discussed in the next section, participants were asked to identify and measure potential value. With this cycle of value, practitioners generate value that will be of use in some future context.

**Potential Value**

Q6 to Q10 asked participants about potential value, which includes knowledge that is generated through and during COP-Participedia but whose benefit is not used or applied until later. Participants were not persuaded that they were beneficiaries of this cycle of value as directly or intensively as they were in relation to immediate value. However, participants reported a rising level of value from Session 1 to Session 2, and this level continued to increase after Session 3. The sum of means for this cycle of value increased from 17.93 following Session 1, to 19.11 following Session 2, to 19.63 following Session 3.

The plateau effect seen for the previous five questions (Q1 to Q5) also appeared in this group of question items. It occurred for Q8 (I feel less isolated) and Q10 (I have increased my desire to participate in future sessions with my group), settling from 3.55 to 3.38 and from 4.20 to 4.12, respectively.

Turning to the pre- and post-study survey questionnaires, the sum of means increased for Q6 to Q10, although not significantly, from 20.36 to 20.38. Participants indicated that potential value rose in relation to three questions: from 3.93 to 4.15 for Q6 (I have opportunities to acquire new skills or knowledge related to public involvement), from 3.64 to 4.0 for Q9 (I have opportunities for future learning about public involvement), and from 4.29 to 4.31 for Q10 (My desire to learn about public involvement tends to increase rather than decrease). These responses suggest a future-oriented perspective for COP-Participedia. Having learned about and discussed public-involvement knowledge, skills, and techniques, participants expressed feeling more prepared for professional challenges to come.

Focus-group participants reported that COP-Participedia helped refine and adjust approaches taken to the practice of public involvement, which was a process of acquiring potential value. Such refinement and adjustment occurred through an exchange of views and comparisons of approaches to public involvement. An example was seen in the comment by Lil, a university professional in community-service learning, when she referred to a new or renewed interest in pursuing through Participedia the means by which evaluation can be undertaken in public involvement:

> I know myself and a few peers really struggle with how to evaluate, measures of evaluation, and tools of evaluation. So, I think I will explore [Participedia] further for that.

Barb, a university associate dean, noted that COP-Participedia modeled the process of moderation in its hosted deliberative procedures, something that would be useful in professional practice: “Yes, [COP-Participedia included] moderation, almost what you would get in a focus group, without a focus group.” As Mary, a senior public-involvement consultant, stated,
discussions with colleagues in COP-Participedia provided a means of seeing a new or renewed use for an existing tool or method. This new perspective could have potential value in future:

I felt like there were opportunities, based on what I heard around the table and people's perspectives, to enhance the [tool being discussed] a little bit. So that there's a little bit more there for people wanting to use it to build their own practice of public involvement.

A similar comment was made by Sally:

Engagement is not an equation. . . . It changes; community changes. Every project is so unique. And there's no science to it. It's an art. And so to be able to talk things through with people and be able to come up with new ways of trying to approach people and come at things from different angles, I think that's the value that you get from a community of practice.

The process of validation of current approaches to public involvement taken by participants constituted a value in itself, as Seth, an architect and community activity, noted:

I find [in Participedia] a lot of parallels in real-life situations. You can almost put yourself in that place and say, "Oh, that happened to me," or, "That happens in some of the small groups we're in." So what it does is open one's mind and eyes. You think you're starting something from scratch or are the first person with that idea, but when you get out there, you realize that, "Oh, [other] people are also looking, some have done something similar before."

Finally, the focus-group discussion included reference to areas or methods to avoid or use with caution, which can be considered an additional value to that of finding methods to add to the professional portfolio. Sally stated:

One of the things that I've noticed from people is, they always default to, "Let's do a survey." They miss the planning, but they also focus on single tools and I think that you, just like marketing, have to have a mix of tools that meet a variety of people's needs.

Summarizing the second value cycle, participants reported a rising level of applied value from Session 1 to Session 2, and this level continued to increase after Session 3. Participants learned about and discussed public-involvement knowledge, skills, and techniques, and they expressed the feeling that they were better prepared for professional challenges to come. Focus-group participants reported that COP-Participedia helped refine and adjust approaches taken to the professional practice of public involvement, which was a process of acquiring potential value, that is, value that could be used in future.

The third and final value cycle, discussed below, is applied value. This cycle of value allows for the conversion into professional practice of newly discovered skills, knowledge, and techniques.

**Applied Value**

Q11 to Q15 asked participants about applied value. This value cycle includes instances in which knowledge is used in practice. A skill may be applied in the workplace, or an idea put into practice. The sum of means for this group of questions changed from 18.56 following Session 1, to 17.82 following Session 2, to 19.75 following Session 3.
Participants reported that they generated value when they “shared skills or knowledge with someone” (Q14), with the sum of mean responses dipping slightly from 18.56 following Session 1 to 17.82 after Session 2, then rising to 19.75 after Session 3. Similarly, they reported applying skills or knowledge by putting “an idea or suggestion into practice during the session” (Q15), with the responses rising from a mean of 3.22 to 3.36, and then to 3.63. However, the extent to which participants reported having applied a skill or knowledge during the session (Q11 and Q12) did not rise significantly, with mean responses changing from 3.56 to 3.27 to 3.88, and 4.00 to 3.55 to 3.88, respectively.

For the pre- and post-study survey questionnaires, the sum of mean responses for Q11 to Q15 rose slightly from 20.43 to 20.92. The mean responses rose for each of three of the question items in this group. Q11 (I have opportunities to apply a skill related to public involvement) rose from 4.14 to 4.23. Q14 (I have opportunities to share skills or knowledge related to public involvement) rose from 4.00 to 4.23. And Q15 (I can put an idea or suggestion related to public involvement into practice) rose from 3.86 to 4.15.

Focus-group participants discussed two themes that COP-Participedia offered that were relevant to applied value in connection to reframing (enduring or transformative) value. First, they identified the complexity required to bridge the gap between public-involvement practice and the public sphere. Second, they mentioned the urgent requirement to consider public-involvement outcomes and the expectations of stakeholders, in particular the expectation that public involvement initiatives should lead to substantive and enduring change.

Participants stated that COP-Participedia had served to emphasize for them the complexity of public-involvement processes. This occurred in three ways. It occurred in the depiction of the balance of power among participants and groups in public involvement. It was also introduced by the demand that public-involvement initiatives lead to substantive change and not to a situation in which a problem has been displaced to another part of society. And it became evident in the demands for a comprehensive planning process, which COP-Participedia had clarified.

Complexity was identified by some participants as a distinctive and perhaps overarching value of COP-Participedia. Mary stated this sentiment in relation to the case-based character of Participedia:

The thing that resonated the most was complexity. I appreciated that the cases selected had a level of complexity to them that allowed us to take a good dive into the content and knowledge. And then the level of complexity served us in deliberation around the case studies.

Participants mentioned the value in COP-Participedia of seeing more clearly the power dynamics among individuals and groups participating in public-involvement initiatives. This theme was developed as participants contrasted the rational basis of public-involvement practice with what Seth called a “reductionist” public sphere, using the public debate about Brexit as an example:

[I]t doesn't matter how many seminars, how many newspapers, how much effort is made that goes into the detail about what the European Union is, right? It's still a citizenry that believes, “I don't have time. I don't have to read that. I don't have to go.”

Caitlyn, a community activist, also referred to a polarized public sphere and the complexity this introduced into public-involvement work. Furthermore, as Collette noted, COP-Participedia provided a context within which a differential in literacy or rationality could be considered:

It was interesting that Lil brought up the “inside and outside” thing. . . . The boundaries of our work are tied into the propaganda or rhetoric around our work. And so when we
escape that and come to a broader circle of open ideas, then we can take that back and
spark some new ways of thinking.

Participants pointed out that COP-Participedia allowed for a consideration of aspects of
complexity previously unseen or unnoticed. Mary referred to the cases discussed in terms of their
complex content:

I found the cases in Participedia useful in the fact that they had a level of complexity to
them that if it was just me looking at them through my own lens, I would only be able to
pick out certain aspects that I would be able to relate to based on my own knowledge and
experience. When we came into the conversation, it allowed me exposure, as Sally said,
to all the other perspectives in the room, to actually start to “beam out” that there's such
a broad perspective to what public involvement means.

For her part, Sally suggested that COP-Participedia enhanced the notion that public-
involvement practice required such professional qualities as discretion, judgement, and constant
refinement, in the manner of an “art” rather than a “science”:

Engagement is not an equation. It's not 2+2 is 4. It changes; community changes. Every
project is so unique, and there’s no science to it. It's an art. To be able to talk things
through with people and be able to come up with new ways of trying to approach people
and come at things from different angles, I think that's the value that you get from a
community of practice.

COP-Participedia offered to participants the insight that complexity was inherent in the
expectation that public-involvement initiatives should lead to substantive change. As Seth st ated,

What I find very interesting was the realization about the impact that stakeholders do
have in any situation. So the whole idea that, as a stakeholder, you're affected by an
action that is taken. Or by a decision that emanates from the action of others is a good
motivation to get you involved. . . . Because sometimes, you're inaction is also a choice, is
also a decision.

In a similar vein, COP-Participedia, according to Collette, helped her to see more clearly and
to appreciate more deeply the diversity of public-involvement audiences:

The challenge . . . that has been brought forward from [COP-Participedia], once again,
is that it’s provoking me to figure out how am I to reach diverse groups of people and
bring them in?

Similarly, Caitlyn formulated a rhetorical question to make the point that COP-Participedia
offered the distinct benefit of conceptually linking planning, process, and outcomes: “So, think
about planning and the importance of looking at the whole process. . . . If we do this, what are
the potential outcomes?”

Summarizing the cycle of applied value, participants reported that they generated value when
they “shared skills or knowledge with someone.” They also reported applying skills or knowledge
by putting “an idea or suggestion into practice” during the session. In the focus group,
participants stated that COP-Participedia had served to emphasize the complexity associated with
public-involvement processes. The balance of power among participants and groups in public
involvement created complexity. Complexity was also introduced by the demand that public-
involvement initiatives lead to substantive change. In addition, complexity was revealed in requirements for comprehensive planning processes.

Discussion

Participants identified value in COP-Participedia for each of the cycles of immediate, potential, and applied value in their responses to the five survey questionnaires. The sum of means calculated for these value cycles in both the pre- and post-study and post-session survey questionnaires rose over the course of the study. Then in the focus group, participants developed themes of these three cycles and the additional cycle of reframing value.

Immediate value was of most direct benefit for participants, with the measure increasing from the first COP session to the last for both sets of survey questionnaires. A possible explanation for this is that participants identified the face-to-face mode of communication, which allowed for direct and spontaneous discussion of views, as offering an inherent quality not otherwise available through Participedia. The value of face-to-face discussion would therefore have shaped responses to the questions in this part of the survey questionnaire (for example, The conversations were high quality and I had fun). Focus-group participants returned often to the value of the distinctive feature of COP-Participedia represented by face-to-face communication.

The cycle of potential value was rated quite highly in both sets of questionnaires, but not as highly as immediate value. Participants, for example, did not report on the post-session survey questionnaires that they felt “less isolated” as a consequence of participating in COP-Participedia, although they did not report feeling more isolated. The mean remained at 3.38.

Participants were somewhat less likely to report that they could see future use of the skills and knowledge acquired in COP-Participedia. Perhaps for this reason, the third cycle of applied value was identified by participants as beneficial but not at the level of immediate value. Q11 and Q12, for example, which asked participants whether they had applied a new skill or new knowledge during the session, were not rated as highly as other question items.

Implications for Deliberative Practice

The results of the study support the benefits of COP-Participedia for practitioners in two ways. First, they point to the advantage of viewing Participedia as a “ground for dialogue.” Viewed this way, COP-Participedia leverages face-to-face communication to offer a mode in which a deeper form of understanding about public-involvement practice can be achieved. Second, the study reveals the benefits of a COP as a practical opportunity for practitioners. The opportunity is likely to be of special interest to practitioners requiring or seeking a deeper form of understanding of the field.

Dialogue may be distinguished from other ways of talking together by its characteristics of “confronting one’s own and others’ assumptions, revealing feelings, and building common ground” (Schein, 1993, p. 46). Such dialogue is not simply a useful addition to public involvement as a form of social action. Instead, as Schein notes, dialogue in organizations and in professional work is a condition for action:

Dialogue is a necessary condition for effective group action, because only with a period of dialogue is it possible to determine whether or not the communication that is going on is valid. If it is not valid, in the sense that different members are using words differently or have different mental models without realizing it, the possibilities of solving problems or making effective decisions are markedly reduced (p. 42).
Participedia provided a ground for dialogue, that is, a common space and idiom within which knowledge could be co-created and understanding strengthened, through the conversations, interactions, and information exchange that are characteristic of professional deliberation. Viewing and responding to Participedia as a ground for dialogue generated value for the study’s participants. Such a view of Participedia may be quite different than that held by researchers using Participedia. While a researcher’s view gives priority to Participedia’s capacity to offer reliable and valid data or evidence, a practitioner seeks opportunities to generate, frame, and pose questions about how data can be mobilized and used in practice.

The words of one of the study participants, Collette, expresses the potential of COP-Participedia as a ground for dialogue for practitioners as they seek to develop their skills, knowledge, techniques, and theories of practice. COP-Participedia provided an opportunity to increase, rapidly and effectively, the sense of an identity within a community of practice. To exploit the potential of this opportunity, public-involvement practitioners can use a community of practice to stimulate and nurture the latent value of Participedia:

A community of practice . . . creates a vision of community and people collaborating and solving problems, making options for decisions to be made, and envisioning pathways. . . . So you can predict and create solutions for scenarios that arise.

Such an approach will have particular relevance for public-involvement practitioners who work in independent practice and do not regularly compare approaches with other practitioners. In these situations, practitioners will benefit by the opportunity of engaging in dialogue with other practitioners in contexts similar to COP-Participedia. COP-Participedia might also be useful in organizations or spheres of practice that do no support and enhance a sense of identity for public-involvement practitioners. The community identity developed within a COP can support discussions and exchanges that go deeper into the challenges in practice in the field of public involvement than would otherwise occur.

**Concluding Comments**

The study had three limitations. First, the COP was an emergent community, rather than a fully developed community with an identity discernible by members. Focus-group participants mentioned that the COP had an intentionally superficial purpose in that it had been organized for the particular purpose of the study. On the other hand, participants commented on the value of exchanging insights with colleagues who had similar, if not identical, professional interests and experiences. Second, the study was carried out in one social context with a limited number of participants. It could be replicated in multiple social contexts with a larger number of participants as part of an effort to increase the reliability of its findings. Third, the cycles of potential, applied, and reframing value require an extended period of time offering many opportunities for dialogue. For the purposes of the study, the period of time available for development of a community identity was the four 90-minute meetings. While the study identified immediate value as being of direct interest to participants, extending the life of COP-Participedia would increase the likelihood that longer term value could be generated.
References


## Appendix 1

### Participants and Occupations

<table>
<thead>
<tr>
<th>CODED NAME</th>
<th>OCCUPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tod</td>
<td>Senior public-relations professional in government</td>
</tr>
<tr>
<td>Godfrey</td>
<td>College instructor in communications</td>
</tr>
<tr>
<td>Sally</td>
<td>Senior public-involvement specialist in government</td>
</tr>
<tr>
<td>Knut</td>
<td>Retired engineer</td>
</tr>
<tr>
<td>Barb</td>
<td>University associate dean</td>
</tr>
<tr>
<td>Caitlyn</td>
<td>Community activist</td>
</tr>
<tr>
<td>Mary</td>
<td>Senior public-involvement consultant</td>
</tr>
<tr>
<td>Will</td>
<td>University instructor in arts</td>
</tr>
<tr>
<td>Collette</td>
<td>Educational activist and doctoral student</td>
</tr>
<tr>
<td>Seth</td>
<td>Architect and community activist</td>
</tr>
<tr>
<td>Lil</td>
<td>University professional in community-service learning</td>
</tr>
</tbody>
</table>

*Not in attendance at the focus group:*

| Deb        | Senior public-relations professional in government|
| Israel     | Citizen activist and former broadcaster            |
Appendix 2

COP-Participedia Themes and Resources

Session 1: Innovations for stimulating dialogue across varying stakeholder values and opinions

CASE: Deliberative Poll on Education Policy in Northern Ireland
https://participedia.net/en/cases/deliberative-poll-education-policy-northern-ireland

METHOD: ConsiderIt
https://participedia.net/en/methods/considerit-0
http://www.consider.it

ORGANIZATION: National Coalition for Dialogue and Deliberation
https://participedia.net/en/organizations/national-coalition-dialogue-deliberation
http://ncdd.org/rc/item/tag/ncdd-publications

Session 2: New approaches to understanding and responding to power differentials among stakeholders or citizens

CASE: Reclaim November Ohio!
https://participedia.net/en/cases/reclaim-november-ohio

METHOD: Focus Group
https://participedia.net/en/methods/focus-group

ORGANIZATION: CitizenLab
https://participedia.net/en/organizations/citizenlab

Session 3: New ideas for achieving deep, reflective, and critical thinking in public-involvement initiatives

CASE: The Citizen’s Archive of Pakistan
https://participedia.net/en/cases/citizens-archive-pakistan-oral-history-project

METHOD: Montreal’s Right of Initiative to Public Consultations

ORGANIZATION: Australian Study Circles Network
https://participedia.net/en/organizations/australian-study-circles-network
Appendix 3

Survey Questionnaire Items

Questionnaires completed pre- and post-study

Cycle 1 (immediate value)
1. I have opportunities at work for learning about public involvement.
2. I have opportunities to learn about public involvement that are relevant to my own personal work context.
3. I have high-quality conversations about public involvement.
4. I enjoy learning about public involvement.
5. I make connections with other people when I learn about public involvement.

Cycle 2 (potential value)
6. I have opportunities to acquire new skills or knowledge related to public involvement.
7. I feel inspired about my work when I learn about public involvement.
8. I feel less isolated when I learn about public involvement.
9. I have opportunities for future learning about public involvement.
10. My desire to learn about public involvement tends to increase rather than decrease.

Cycle 3 (applied value)
11. I can apply my knowledge about public involvement to problems.
12. I can apply my knowledge about public involvement to problems.
13. Learning about public involvement helps me encourage others to participate in something I care about.
14. I have opportunities to share skills or knowledge related to public involvement.
15. I can put an idea or suggestion related to public involvement into practice.

Questionnaires completed after each of COP-Participedia Sessions 1, 2, and 3

Cycle 1 (immediate value)
1. The session today was a significant event for my learning about public involvement.
2. The session was relevant to my work.
3. The conversations were high quality.
4. I enjoyed participating in today’s session.
5. I made connections with others.

Cycle 2 (potential value)
6. I acquired new skills or knowledge at today’s session.
7. I feel inspired about my work because of today’s session.
8. I feel less isolated.
9. I now have opportunities for future learning.

Cycle 3 (applied value)
10. I have increased my desire to participate in future sessions with my group.
11. I applied a skill during today’s session.
12. I applied knowledge during the session.
13. What I learned today will help me encourage others to participate in something I care about.
14. During today’s session, I shared skills or knowledge with someone.
15. I put an idea or suggestion into practice during today’s session.
Appendix 4

Focus-Group Guide

Welcome
Thank you for joining us.

Overview of the topic
Today we will be asking you to comment and discuss characteristics of the community of practice (COP) experience using Participedia. We’re interested in your views about both the COP as a method, and Participedia as a source of information or knowledge – and about using the two together, as we have done in the last several weeks.

Today we are especially interested in talking about how the COP experience with Participedia changed, perhaps transformed, how you think about things. In other words we are asking you today how the COP sessions may influence and shape how you practice public involvement from now on.

Chelsey and Edrick will be making notes about who is speaking.

Ground rules
1. Try to remember to mention your first name before speaking.
2. You may say whatever you like during our 60 minutes of discussion – your responses will be anonymous in the final report.
3. I will pose questions but it is up to you to shape the conversation.
4. Respond to one another, rather than to me.
5. Mind the microphones – try not to cover them up or rustle paper near them.
6. Respect and care for one another.
Questions

GENERAL (15 minutes)

First I want to ask generally about your experience.

1. How did our meetings together lead you to change your thinking about what matters most in public involvement? Any examples that come to mind?

2. How are you considering using new ways to measure success in public involvement (through evaluations, for example)?

3. Would anyone like to share a story that illustrates something about your experience over the last several weeks?

4. In what ways did you influence a senior decision maker in some way because of your experience with Participedia and the community of practice?

OPTIONAL:
How has your workplace changed, if at all, as a result of our COP meetings together?

PARTICIPEDIA (20 minutes)

Now let’s think about Participedia as a source of information and knowledge.

5. How has Participedia been most relevant and useful to you as a PI practitioner? Can you give examples?

6. Tell us a story about your experience with Participedia.

7. How will you measure things differently or use new criteria for public involvement as a result of using Participedia?

OPTIONAL:
How did Participedia help or hinder you in your experience of discussing matters related to the practice of PI?

How would you continue to use Participedia? If not, why not?

COMMUNITY OF PRACTICE (20 minutes)

Now we turn to the series of three meetings in which we discussed topics related to public involvement.

8. How important was the community of practice (meeting with other people with a common interest) for you as you understood and used Participedia?

9. Tell us a story about your experience with the community of practice.

10. How did you influence someone who has power in your organization or practice because of your experience in the COP?

OPTIONAL:
How did the COP help or hinder you as you explored topics related to PI?
How would you continue to participate in a community of practice – not necessarily this one. If not, why not?

SUMMARY AND CONCLUSION (5 minutes)

11. Tell us a story that illustrates your experience with Participedia and the COP.

12. Thinking about everything we have talked about in the last several weeks, including today, how would you describe what resonated with you the most or perhaps stimulated your thinking the most?

13. Anything we missed in our discussion today?

Thank you, all!
Using public art and technology to move communities from emotional reaction to knowledge-informed action for gun violence prevention
Janíce Tisha Samuels,1 Rachael Clauson, MAAT, LPC,2 Anaïs Miodek Bowring3
Pepperdine University, Los Angeles, CA1 The Center for Creative Arts Therapy, Downers Grove, IL2 State Matters, Chicago, IL3

Abstract: This paper describes a project proposal for a gun violence prevention intervention that uses youth created artwork and knowledge resources like data visualizations to develop interactive voter information displays for the purpose of motivating learning and civic engagement with gun violence prevention among city residents in the United States. The voter information displays will utilize WEB XR, a web-based Augmented Reality protocol that enables users to participate in immersive experiences directly from their web browsers providing access to all regardless of device type. The project’s web-based Augmented Reality platform serves as a portal to a guided immersive experience that is meant to challenge, inform, and inspire participants to learn more about youth affected by gun violence, local and national legislation and regulations for guns, and ways to take instant and long-term action for gun violence prevention. The goal of the project is to provide a sense of connectedness between and among groups and to provide models for moving individuals and their communities beyond emotional reactions to gun violence to knowledge-based strategies for gun violence prevention. The project utilizes an Arts Based Action Research Framework.

Keywords: Gun violence, policy, art, Augmented Reality, social justice-oriented interaction design.

Introduction

The National Youth Art Movement Against Gun Violence (NYAM) understands that one of the greatest obstacles to meaningful change is a meeting of the minds on what is objective truth. That a fundamental breakdown of the intellectual tools of discernment and analysis by a society renders truth illusive and emotional appeals unmoored, which makes it nearly impossible for individuals, communities and our nation to come together to find humane solutions to social ills like gun violence. In this “post-truth” milieu that the United States has found itself in, misinformation is gaining in its power to disintegrate bonds of solidarity between people that are based on peace rather than animosity and to conceal pathways to shared understanding and meaning that can lead to peace.

Proposal

Shrinking perceived social distances between people and increasing access to and understanding of quality information is a potential deterrent to misinformation. For this reason, NYAM’s proposed Shared Experiences Intervention seeks to reduce gun violence by reshaping people's relationships to their communities, their neighbors, youth, and the information available on gun violence using public art and technology as catalysts for civic engagement and collective understanding. To do this, NYAM will invite young people between the ages of 13 – 25 years old who live in high-risk neighborhoods and/or have a passion for gun violence prevention to use their original artwork, Augmented Reality (AR) and mobile technologies to develop engaging 2D, video-based content, and curated knowledge resources in the form of FAQs, articles, and other data visualizations to create interactive voter information displays.

Like movie theater displays for new films, NYAM’s interactive voter information displays will be free-standing, high-quality cardboard and foam structures that will serve as a dissemination point for the youth created artwork and knowledge resources. The main body of the displays will feature a picture of a group of notable youth activists and celebrities that support gun violence prevention. Each member of the group will hold in their hands either a poster with a youth created artwork or data visualization. The foam
components of the display will provide a 3D element to the image and will have pockets and/or attachments to store and share additional artworks and knowledge resources as display elements that can be taken away. Made in complement with each other, the artwork and knowledge resources are meant to challenge, inform, and inspire students and patrons to learn more about youth affected by gun violence, local and national legislation and regulations for guns, and ways to take instant and long-term action for gun violence prevention. These interactive voter information displays will become part of concurrent traveling exhibits at schools, public libraries, and/or museums in Chicago, the District of Columbia (DC), and San Francisco.

The group image on the interactive voter information displays will be specially designed to obscure the identities of some of the persons pictured in order to elicit interest and an element of surprise when people use NYAM’s web-based interface to interact with the display. To engage with the display, library patrons and students will scan a QR code. Once the QR code is scanned, the participant will gain access to the following immersive experience:

- The participant will be guided to focus the camera on their mobile device on a particular protest poster image being held by one of the youth or celebrity activists on the display. When the camera is engaged and pointed at the image, the artwork will then “come to life” depicting an animated version of the image with embedded educational messaging meant to prompt critical thinking and a personal connection to the messaging in the artwork.
- When the AR animation concludes, the participant will then be asked two on-screen text-based questions. Prompt 1 will ask the participant to describe their emotional response to the artwork and AR experience of the poster. Prompt 2 will ask them to rate their level of willingness to consider intellectual inquiry in addition to emotion when reacting to the issue of gun violence.
- Once the questions are answered, the youth activist or celebrity holding the poster will then verbally ask the participant to review a youth-created knowledge resource (a data visualization) that adds a real-world context to the AR experience on the poster by referencing research and/or current legislation and regulations on guns to move the participant from emotional reaction to critical thinking.
- The participant will then be asked two more on-screen text-based questions. Prompt 3 will ask the participant whether they had previously considered any of the information presented to them in relation to gun violence. Prompt 4 will ask them to rate their current level of knowledge pertaining to research, and current legislation and regulations on the use of guns in their state.
- The participant will then be asked to take one of the following three actions to discover the identities of the mystery personalities on the display image:
  - Register to Vote
  - Write a letter to a politician
  - File a witness slip in support of or in opposition to a legislative bill [or the equivalent of that in DC and SF].
- When one of the three actions have been completed, the full image will be revealed via an AR overlay and an audio message from the activists and celebrities in the photo will congratulate the participant for taking an action, prompt the participant to take a photo with the group and share it with their social media network, and encourage the participant to take more actions for gun violence prevention.

The reward of a compliment from well-respected peers and role models is an important result of a user’s action and of this project. Research shows that compliments improve performance and, thus, serve as a strong motivational strategy for learning and behavior change (Sugawara et al 2012). As such, to continue to build on the initial learning experience and to promote further civic engagement, the participant will have to complete 2 out of the 3 suggested actions to continue to access the AR capability on the NYAM website. Once the user has unlocked the AR capability, they will be able to scan the other
youth created artworks to experience each of their unique AR experiences. If a second action is not completed, the participant won’t be able to interact with the AR experiences connected with takeaway artworks offered as part of the display.

Placement of the interactive voter information displays in communal public spaces is intentional as holding space is critical to marginalized groups; it means that they are not invisible. Additionally, we’ve chosen museums and libraries (public and/or school libraries) as the designated location for the proposed displays because they are already culturally situated as resources for learning and, in the case of libraries particularly, voter registration in the United States.

**Methodology**

NYAM’s Shared Experiences Intervention utilizes an Arts Based Action Research (ABAR) Framework that applies a social justice orientation to interaction design. “Arts-based action research is a blanket term that refers to the use of the arts, in various forms, as the basis for inquiry, intervention, knowledge production and/or information sharing.” (Wilson & Flicker 2014). Involving the city’s youth in transformative learning through individual meaning-making – by encouraging them to ask as part of an emergent process of inquiry, “What role can my personal experiences play in my art practice and for what purpose?” And, as a result of exposure to social justice-oriented art, collective meaning-making – by encouraging peers, policymakers and other stakeholders to ask, “What impact can grassroots art/media in public spaces have on the social fabric of cities?” -- is integral to NYAM’s activist agenda, the goal of which is to support the development of persons and communities in creating alternative futures that transcend current social ills.

NYAM specifically participates in visual research methodologies in its Shared Experiences Intervention because much of what goes on within communities and within an individual can be difficult to communicate, especially, in the case of gun violence when first-and-second-degree trauma are involved, and without an outlet for expression, can go unsaid and unexplored. Tacit knowledge, information that is difficult to transfer from one person to another verbally or in writing, when expressed visually has the power to communicate complex realities, multiple perspectives, and rich interpretations of socio-cultural phenomenon that through semiotic forms like symbol and metaphor can connect separate individuals to a community of shared consciousness (Freedman & Siegesmund 2018).

In the Shared Experiences Intervention, art is data. The artwork developed by youth in an intentional process of inquiry in this project, shapes ideas into images and the resulting images then influence further thought and imagery” (Marshall 2007). The youth created artwork of this project provides insights into how gun violence is experienced and/or processed by this vulnerable and marginalized community and serves as the starting point of analysis for the action research project. “Action research is a disciplined process of inquiry conducted by and for those taking the action” (Sagor 2000). In this instance, this refers to the groups of youth researchers investigating the issue of gun violence on behalf of themselves and their peers.

**Phase 1 – Art Creation [September – January 2018]**

Youth in District of Columbia Public Schools (DCPS), Chicago Public Schools (CPS), San Francisco Public Schools (SFUSD), charter schools, and colleges in these three cities will be invited to participate in this opportunity via a call-for-art. The call for art will be provided to teachers in the form of a lesson plan with a series of three exercises inspired by art therapy principles. Teachers at each location will facilitate the exercises in the call for art, which will encourage youth groups across these cities to reflect on and unpack, through the development of artwork, the deeply layered ways that acts of violence affect each of us uniquely.
As part of the project’s ABAR framework, the call for art offers a method for reflection and meaning-making through art creation that serves not only as a means for self-expression, but another level of purpose, art as epistemological inquiry. An inquiry that supports visual thinking and visual experience as valid tools for knowledge construction and thought leadership (Marshall 2007).

Youth whose artwork is selected for the interactive voter information displays will participate in advanced workshops on art and AR technology to both refine their artwork and to learn about interactive design. During this process of art creation, the youth will explore and discuss the power of symbolism and metaphor in art as well as the role their art will play as part of a public art project. These discussions and explorations will be used to develop the stories and educational messages expressed within their artworks and the AR experiences connected to their artworks.

**Phase 2 – Action Research [September 2018 – April 2019]**

The student action research portion of the Shared Experiences intervention will happen concurrently with and extend beyond the art creation phase. The purpose of this portion is to create within the three participating cities teams of youth with an interest in library science, research, and curation to complete the interactive voter information displays by 1) supporting the youth artwork with meaningful findings on gun violence and gun violence prevention and 2) serving as ambassadors of the completed displays at various locations in their cities. For this portion, one library in either a public library network or a library in a school library network will be chosen in each city to lead the buy-in, development, and dissemination of the interactive voter information displays.

At each lead library, a librarian or teacher will be chosen to recruit a group of youth between the ages of 13-and-25 to lead the initiative. The lead librarians will work with the other librarians in the network of libraries to establish an exhibition schedule for the completed interactive voter information display to travel from library-to-library within a library or school network. The youth recruited at the libraries will be charged with studying the varying viewpoints on gun violence illustrated in NYAM’s repository of previously submitted youth artwork and AR experiences, collecting data in complement with the artwork that explores the local and national impact of gun violence and policy responses to and regulation of guns, and coordinating and facilitating listening parties for peer-to-peer learning and discussion to examine the artwork and the findings within a broader network of peers at various locations.

The group of students recruited for the action research project at the libraries will receive an instructional guide developed by a 3-way partnership between the National Youth Art Movement and the non-profit educational organizations State Matters, whose focus is on providing clarity to ordinary citizens on state level politics and legislation, and Great Books, who specialize in a method of Shared Inquiry, which explores multiple interpretations of text and image-based content. The guide will provide the following:

- Activities for examining prior knowledge, personal experiences and beliefs on the issue of gun violence and for exploring the perspectives of others through the interpretation of artwork.
- Guides for moving from emotional response to critical thinking and methods for developing an inquiry for obtaining new knowledge that is personally meaningful to participants and their peer group.
- Resources for how and where to best collect data on gun violence, and current and proposed policy responses to gun violence.
- Suggestions for how to present findings as knowledge resources and in facilitated discussion.

The findings/lessons learned by this group of youth will be shared out in the materials they create, which will be attached to the interactive voter information displays (i.e. FAQs, articles, videos and other types of data visualizations) and in group discussions at the peer-to-peer listening parties they coordinate at each participating library location.
People tend to learn more deeply when they speak with one another and experience things together (Johnson & Johnson 2009, Smith et al 2009). Therefore, the purpose of the listening parties is to ensure that learning evoked by interaction with the interactive voter information displays is supported with peer-to-peer conversations on gun violence and policy responses to gun violence. Also, there is the hope that participation in the listening parties will potentially provide individuals with the support (and maybe even the support group) they need to continue to join in these types of conversations and to become more civically engaged.

**Desired Outcomes**

The primary objectives and the anticipated outcomes of the Shared Experiences Intervention are to provide a sense of connectedness between and among groups of people through shared exposure to and understanding of the social, political, and personal aspects of gun violence and policy responses to gun violence. And to provide youth with the opportunities, skills, and resources to face the issue of gun violence with empathy, resilience and models for creating and evaluating action steps toward a pathway for change.

Key measures of success for this project include:

- A willingness to consider intellectual inquiry, critical thinking, and the point of view of others in addition to emotion when reacting to the issue of gun violence.
  - A self-report measure attributed to responses to prompts 1 and 2 in the guided immersive experience. Prompt 1 elicits qualitative data and prompt 2 elicits quantitative data.
- A noted interest from participants to connect incidents in their communities (school shootings, police shootings, gang violence etc.) to political policy or lack thereof.
  - A self-report measure attributed to responses to prompts 3 and 4 in the guided immersive experience. Prompt 3 elicits qualitative data and prompt 4 elicits quantitative data.
- Number of youth and institutions served.
  - Quantitative data collected in the interaction logs for the immersive experience.
- Number of people who take action as a result of the interactive voter information displays.
  - Quantitative data collected in the interaction logs for the immersive experience.

**Conclusion**

The Shared Experiences intervention uses art to breach boundaries by engaging the creator and the viewer in an intimate middle ground where differences are acknowledged and discussed. In this intervention youth develop artwork to visually limit the distance between two parties: one party who has been affected by guns and/or gun violence and one party who has not or has differing views on its impact. The youth use 2D artwork and video simulation to evoke thought, awareness, and emotional response from the viewer to establish empathy and understanding for often misunderstood and underrepresented experiences and viewpoints on gun violence.

These artworks, that expose a psychological processing of guns and gun violence among youth, combined with the realities represented by research and policy responses to gun use and gun violence – have the power to bridge the gap between opposing viewpoints of what is truth. Connecting our emotional responses to guns and gun violence to a practice of analyzing data on the issue before taking action has the potential for creating more understanding between groups of people and the possibility for the development of rationale solutions that support peace among a broad base of constituencies.

The data from this intervention will be analyzed to better understand the possibilities for using youth art for connecting people more deeply to the issue of gun violence and shifting passive and/or
instinctive behavior to active and thoughtful behavior on the issue, as well as to improve the efficacy of youth art in service of behavior change and social justice through information communication technologies.

References


Whose Voices Count? From public records to public memory

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Traditionally, accession policies of national archive institutions world-wide gave preference, if not exclusivity, to public records. This approach is nowadays under challenge in a number of archives. Private records, often in the form of oral testimony, are gradually finding their place side by side with their public counterparts. The National Archives of Malta recently embraced this approach. Through a project called MEMORJA archivists are becoming not only appraisers of records but actual co-creators (Farrugia 2006).

This paper aims to address the question of whose voices count when applied to a real life scenario in particular on the MEMORJA project. The venture had direct implications on the functioning of the leading and participating archivists. Instead of managing the accessions process, they are now going out there in search of oral testimonies, ephemera and audio-visual documentation. This approach poses new challenges. And these are the issues analysed in this paper.

Archives and voices

This study poses a number of questions. Whose voices are we striving to capture in our project? What ethical implications does such a process pose? To what extent are we trying to strengthen the voices of communities that are underrepresented? To what extent is this eagerness to strengthen such voices shaping and influencing our accessions, appraisal and outreach processes. This paper questions the decision-making processes applied by the MEMORJA team at the National Archives of Malta. In particular, what areas of focus have been chosen for oral testimony, and what are the characteristics emerging from each theme. To what extent will such decisions shape the future of oral testimony in Malta?

The approach for this presentation consists of an assessment of the processes involved in the current MEMORJA project as compared to the traditional processes. Furthermore, it will delve into such aspects such as the methodological approaches of oral history, archival documentation and an investigation on who is exerting influences – government policy, the archival institution, the available resources, underrepresented communities or a mix of all these?

The debate on whether the archivist should act as a gatekeeper of records and neutral broker of the information embedded in them or be more pro-active in the creation process is a long-standing one. Gradually, in part due to the narrowing in timeframes between the creation phase and the end of the lifecycle brought about by electronic records, archivists started involving themselves much more in the initial stages of the creation of the record. The phenomenon is reflected in the thinking of a number of archival scholars who challenged the whole concept of neutrality and objectivity (Schellnack-Kelly 2017a).

Brien Brothman argues that record-keepers are “creating value, that is, an order of value, by putting things in their proper place, by making place(s) for them” (Brothman 1991). Furthermore, in his writings he re-frames archival work as a form of giving, of making gifts. His main argument is that we have been thinking too much in terms of the archivist’s role as that of keeping and preserving. In his view “the main contention is that a dynamic of giving beats at the heart of the archival endeavour” (Brothman 2010). The role of the archivist in the whole process of the creation of records is also discussed by Richard Cox who wrote that “… archivists need to reflect on how their actions really contribute to the purpose of archives, and most archivists generally assume that their mission is more than assembling random collections of interesting stuff for some ill-defined societal or scholarly purposes” (Cox 2002).

Other authors have put the archive and thus the archivist in the storytelling domain. Schellnack-Kelly highlights this link in the works of both Derrida and Foucault. Derrida argues that “the archive is a construction created from, and an expression of, power. He views every interpretation of the archive as an enrichment, an...
extension of the archive. That is why the archive is never closed. It opens out of the future” (Derrida 1996). This perspective views the archivist as the one embued with the powers to control and determine the constituent elements of memory by collecting the archive (Schellnack-Kelly 2017b).

In a traditional national archive approach, the sources for collecting the archive were pre-determined. The creating bodies within public offices decided what and when to create records in line with the legal obligations, mission statement and working rules, regulations, customs and traditions of the institution.

For a number of years since the 19th century the predominant historical thinking enforced a strict demarcation between orality and literacy. This however, gave way in later years and in today’s society community stories are becoming ever more vital. In the words of John Chircop, communities’ stories, “... not only preserve local traditional knowledge, customs, and a sense of social identity and belonging, but more fundamentally they continue the more intimate, natural, eye-to-eye, emotional contact between persons of different ages” (Chircop 2014).

**MEMORJA: the project**

The current Memorja project steered by the National Archives was not the first of its kind in Malta. As early as 1994 the Malta Oral History Society was set up. Following that, inspired by historian John Chircop the History Department at the University of Malta gave the possibility for the setting up of the Oral History Centre in 1999. These measures led to the first oral history fieldwork which developed into the ‘People’s Voices of the Twentieth Century’ (Chircop 2003)

This came at a time when the National Archives was preoccupied with the lack of access to certain material of national significance, such as photos of the island’s most important historical events. A number of Maltese photographers were also frustrated with the state of affairs in terms of the difficulty in accessing professionally organised photographic archives. Their offer to collaborate in some way triggered the idea of a permanent portrait exhibition. This was the starting point of an ambitious project under the name – the National Memory Project. The event marked the onset of an effort to bring under one-roof components from the Maltese Islands’ national and public memory.

What started out as the initiative of archivists reacting to the changing needs of the profession was later endorsed politically. An electoral manifesto proposal in the run up to Malta’s 2013 elections specifically promised the setting up of an oral history project. Thus, to some extent, the proposal became a political target aimed at bottom-up representation of ideals. This politically driven process paved the way for the national archives to justify the request for funds for new recruitment and consolidation of human resources, while providing the funding for the procurement of the technological infrastructure needed. The archives took the opportunity to turn this political measure into tangible professional archival measures aimed at the building of a state of the art audio-visual representation of ‘holistic’ memory of the nation.

In late-2016, the National Archives of Malta initiated plans for the rebranding of the formerly-titled National Memory Project into MEMORJA, a new oral, sound and visual archive. This change was only agreed upon following intensive brain storming sessions or often heated arguments and clashing perspectives. On one hand there was the argument in favour of using the term public memory, specifically hinting that it is the memory of the people and not the memory of the nation that we are after. The other view was that the institution is a national one, vested by a national remit through legislation. Thus, the argument was that by removing the term national from the title of the project we will render it less national, unique and authoritative. The final decision was to go for the word memorja which itself has a number of advantages. First of all it is a word in Maltese. Thus the message is that we will be preserving elements of the Maltese national identity, central to which there is the language. Secondly, it is a word that is understood by many as it is similar in so many languages.

Since the main objective of the project is to employ cutting edge research, methodologies, theoretical and archival approaches and techniques to collect, record, transcribe, preserve and make available all deposited material detailing the history of the Maltese Islands, the sub-heading oral, sound and visual archives was added.
The ambitious aspirations of the creators of this project are that gradually it develops into the main depositor of national and public memory.

A five-person team started working on this project in January 2017. Members on the team undertook a course in oral history and public memory before they could embark on the fieldwork. MEMORJA aims to record and collect oral history interviews, personal photographs, documents and other ephemera and, as a result, the National Archives of Malta has taken on the dual roles of a memory-capturing institution and one which now creates records, as opposed to the traditional task of preserving government/public records.

As of writing, MEMORJA is in possession of 70 oral history interviews and six written accounts. In addition, all legacy material from the Public Memory Archive (PMA) at the University of Malta’s History Department is gradually being converted from analogue to digital to merge (in digital format) with MEMORJA. It is estimated that this initiative is bringing into the project more than 500 interviews on a variety of themes. But in order to proceed in a structured manner, a number of themes have been identified to be worked upon. Around each theme, a thematic focus group was formed, led by a lead official and bringing together experts who can bring contacts, material or links to all those in the community who can contribute either through interviews, information or other ephemera.

The thematic focus groups

The research themes selected for the initial focus group are:

- British Expatriates in Malta
- Public Administration
- Experiencing War: survival, shelter and food
- Maltese Emigration (The Malta-Lampedusa connection);
- Bell ringing / campanalian culture.

Each was selected with a specific purpose in mind, but mainly in order to fill gaps in our documentation and capture the voices of those who are not documented, for one reason or other. For the scope of this paper, each interviewer of each focus theme was questioned about her/his experience. Interviewers were asked the following questions: a. Do the interviewees convey to you the feeling that there is a sense of justice being carried out in having their voices heard and documented for posterity? and b. Has there been any instance in your interviews whereby the information given contradicts or challenges historical accounts as we know them to date? Their initial feedback is recorded at the end of the description of each theme below.

British expatriates in Malta

British expatriates in Malta seeks to delve deeper into the history of the relationship between the United Kingdom and Malta by recording local history with the help of individuals who lived during the final decades of British Malta (1800-1964). Interviewees – British, Maltese and Anglo-Maltese persons – discuss the military bases, everyday life in post-war Malta, political issues and cultural differences, amongst other subjects. This theme was further expanded when the experiences of service families’ children started being recorded for posterity as well. These children had attended the Naval Children’s School and HM Dockyard Children’s School which had occupied sites at Ta’ Xbiex, Cottonera, Senglea and the Dockyard before moving to Ta’ Xbiex, Cottonera, Senglea and the Dockyard before moving to Tal-Handaq, Hal Qormi.

Questioned about her experience so far, the first interviewer who worked on the British expatriates theme argued that she did not feel that those interviewed felt a sense of justice being carried out through giving them the opportunity for the interview (Blake 2018). However, she did point out that those who have been willing to briefly discuss the Mintoff administration seemed to be pleased that they were voicing some of their personal experiences/feelings.

Public Administration

Civil servants are often regarded as implementing the policies of Government from ‘behind the scenes’. Often, they are voiceless as they have to back government policy, whether they like it or not. However, through their memories, the public can mould an idea of the structure of Public Service ‘iċ-Ċivil’ and of certain episodes which
are now history. The main events that are featuring in these interviews are background stories of the granting of Independence in 1964 and the inner workings of the British Forces’ ‘run-down’. Other ex-public high-ranking officers have experiences related to Malta’s accession to the EU in 2004. Other subjects tackled in these oral reminiscences are former Prime Ministers, their work ethic and their relationships with other government officials, changes to public administration over the decades, different functions and grades, personal experiences and the role of women in the civil service.

Contrary to the feeling conveyed to the first interviewer, in this cohort of interviews, the sense of justice being done was felt by the majority of interviewees. The sense of justice or rather the need to recount what each public officer has achieved when in office was strongly present. In particular, when asked whether they felt there was enough appreciation for their work, some of them said it plain and straight that there was not (Caruana 2018). One of those interviewed and who had served for several years in roles of director and later Permanent secretary position had this to say when questioned about the sense of appreciation for his work:

I do doubt whether there is recognition, especially from the public … I encountered several public officers who work hard and shoulder responsibility, and work competently … When you see, as I have, officers who are really passionate about their work, you cannot deprive them of adequate recognition (Memorja Interviews 2018).3

Most participants in the public administration theme made sure to list and describe all the projects and important tasks that they have accomplished in a certain level of detail. It seems they were eager to make sure that their contribution be registered for future generations.

Experiencing War: survival, shelter and food

Experiencing War: survival, shelter and food aims to document and record a past which is slowly but surely disappearing from public memory. These oral testimonies – of which there is still a substantial number – strive to preserve daily experiences as felt by the people on the ground during the Siege of Malta between 1940-1943. Stories of the outbreak of hostilities and the first bombings on 11 June 1940 are still rife in interviewees’ memories, whereas mass evacuations, the refugee experience, fear and uncertainty, the communal kitchens, racketeering, hunger, sanitation, shelters, soldiers and sirens are still recalled with clarity and lucidity.

Asked about his experience with this cohort of subjects, the thematic leader said that all interviewees about World War II were excited in helping out in the project. Though on one hand they were quite surprised that this initiative took such a long time to be put into practice as they noted that most of the relevant people who were around back then had since passed away. They had surmised that the project was somewhat “a noble gesture of recording this generation’s struggles”.

This was also the thematic group whose interviewees posed a number of challenges to the established line of events. Some even questioned dates as recorded in official documentation. One of the interviews touched on the rather controversial topic of the execution of Carmelo Borg Pisani accused of serving as a spy for Italy in British Malta.4 The 95-year old interviewee insisted that Borg Pisani had landed in Malta in 1941 and not the summer of 1942. The interviewer had to decide whether to challenge this point or not and decided in favour of not interfering for fear of disturbing the flow of the interview. His assessment of the situation was the following:

I did not stop him as that would have ruined the flow of the interview, the interviewee would have doubted himself and would thus have jeopardized the remainder of the interview. Such scenarios can be irritating but these can be cross-checked with existing literature and historical accounts (Baldacchino 2018a).

This was also a theme that reignited a certain level of anger in respondents, due to them supporting one faction or other in the hostilities. One of the respondents touched on the controversial topic of deportation of Maltese to Uganda by the British. He came up with a rather bold statement stating that “…wartime colonial government had incriminating evidence on the deportees and had every right to deport these quislings away from our shores”
As proof of this he quoted a director of his at the Office of the Prime Minister who around 1947-48 had explicitly told him that the files concerning these people were in his safe. Notwithstanding, he was not been able to find them anywhere.

Emigration: The Malta-Lampedusa connection

The Maltese population experienced extensive migratory flows in the inter-war period and the nineteen fifties and sixties. It is estimated that there are twice as much Maltese in the diaspora than in Malta itself. The process is documented in a structured manner in the public records held at the national archives. It is all documented in a top to bottom approach. The state machinery was documenting the shifts in population through passport applications, visa permits, passage-assisted schemes and other official shipping lists or air passenger logbooks. While this approach provided emigration historians with a gold mine of data, they often failed in capturing the human side of emigration.

The movement of people and how this is documented in public archives and its effects on demography of populations is still a current preoccupation. The population is continuously struggling to adapt to an influx of people, some economic migrants from North Africa and other from all over Europe in search for employment. Sociologists, anthropologists, and historians need the official documentation to understand these flows of people. But the documents will only give one side of the story. Oral testimony supplements the official documentation and imbues it with feelings and personal emotions. Amongst the many facets of the emigration saga, there are several sub-plots that have escaped focused studies or have been almost put under the carpet consciously or unconsciously. One of these topics is the contacts and relations between Malta and the Italian island of Lampedusa.

Even though Malta and Lampedusa are separated by a stretch of the Mediterranean Sea, they share similar economic, trade and socio-cultural aspects. Due to logistical realities of this research theme, fieldwork and interviews had were conducted in Lampedusa in September 2017. Throughout the interviews with the individuals who agreed to be recorded, there were two main topics prevalent in contemporary Lampedusans’ memories: first of all there were accounts of stories passed from one generation to another through oral tradition dating back to the first Maltese settlers on the island in the early 1800s. These families had worked predominantly in agriculture. Nowadays only two families with Maltese surnames remain: the de Battista family and the Caruana family. The second aspect touched upon was the commercial and cultural connections between Lampedusa and the Maltese Islands the 1950s and 1980s. Testimonies of Lampedusan fishermen make reference to life at sea, life in Valletta before the British departure, entertainment, the products on sale in shops at the time and the sale of fish stocks.

This particular theme brought with it a number of challenges. The first was the language. Interviews had to be carried out in Italian. Thus a member of staff of the archives who is a native Italian speaker was sent to do fieldwork in Lampedusa. Even this proved challenging as at times the dialects spoken were quite challenging even to a native Italian speaker. The other challenge was building trust between the interviewee and the interviewer. This was hampered by a sense of bitter legacy between the two nationalities in years gone by and also by the logistics. It is challenging to build a trust relation in just a week or two.

Asked about her experience interviewing fellow Italians about their relation with Malta and the Maltese, the interviewer said that all persons approached where interested and glad that their testimonies were being recorded. They appreciated that someone was interested in their experiences of their own story, investigating certain subjects unknown to many, and showing a level of sensitivity to towards their life experiences. On the whole, the narrative given was not much different from that already known. To some extent this is also understandable considering that most of the interviewees were also themselves involved in the writing and production of publications about the history of the island compiled so far (Sestili 2018).

Bell ringing / campanalian culture

This theme can be considered as one that originated from the community and not from the archives. It was inspired by the private initiative of a bell-ringing enthusiast. Over a span of two decades he painstakingly recorded
all bells in all villages in Malta during the various feasts. It was no mean feat considering that this was purely on a voluntarily basis and that he had to deal with hundreds of churches and negotiate the deal. In all, the national archives received 3,600 recordings amounting to 600Gb of data (NAM 2016). From an archival point of view this donation is considered as a goldmine. Furthermore, the enthusiast organised the date according to parish, church, and specific feast and time of the day, and thus provided well-structured metadata.

With all this data, it is now possible for the persons in the focus group to turn their attention on the other aspects of the topic. Bell-ringing relates to the local customs and also certain international rules of the Catholic church. There is a whole terminology associated with it and a lot of technical approaches how to conduct bell ringing. There are persons who have bell-ringing as their hobby, while others provide such services against payment. We want to hear their story, document it and render this aspect from Maltese society part of the permanent memory of society.

Although work on this theme is at its very initial phase, with only one interview concluded and another six persons who have been pre-interviewed, there seems to be agreement that this project will give back some life to this tradition that has been struggling during these times. They identify lack of interest in youths or too much regulations as two main factors rendering bell ringing less important in the life of most towns and villages (Caruana, 2018).

**Discussion**

The current assessment of the project indicated that different themes do pose differing challenges. Some themes are almost exhausted and will soon be closed. Others such as local production and industrial heritage have already been earmarked to be worked upon. It is clear that there are a number of challenges which have come to the fore and that need multidisciplinary discussion as they do have an impact on the way the project progresses and the voices it captures. For practicality purposes the challenges have been grouped under three headings: archival, technological and of a human nature.

**Archival Challenges**

The actualisation of the project has brought to the discussion table several issue of an archival nature. Most questions emanate from the new realities we have to work in. These realities are reorienting the role of the archivist in the institution. This process has a bearing on the issue of job nomenclature, job description and also the type of training and qualifications required to fulfil such a task in the most professional manner. Thus, the process raised questions such as the following: Do we need archivists to carry out this process? To what extent are historians better placed to carry out such process? Is it best to have a national archives officer handling a theme or an enthusiast who already knows the intricacies of the topic and the people involved? Can the interviewer manage to cope with doing the interview and the transcript, as best methodology in oral history dictates? Once the data is captured, how best to organise the data both in the repository and if put online? What about the impact on ownership rights and the interaction of the user with the data.

Such ‘public-private partnership’ in the creation of records raises another archival issue that is very relevant to the discussion about whose voices we are after. It is the dimension of the interaction between the subject of the narrative, his or her family and the archive, which topic was debated from a practitioners’ point of view by Mary Stewart and Cynthia Brown. In their assessment Stewart and Brown outlined how archived recordings provide crucial context to family research and also how the families involved in the interviews or referred to in the same interviews react to them. They also discuss the ethical challenges posed by providing online access to such sources and argue that:

*Oral testimony can pose ethical challenges that are perhaps more emotionally charged than other media – about whose voices are heard, the wide range of comment and reflection on the actions and characters of those described, and the perspectives that they present in the interviews* (Stewart and Brown 2017).

**Technological Challenges**
The project also depends heavily on the technology available. The biggest challenge here was the large amount of recordings carried out in the past by university students. Some were on tape, others on CDs. The quality of the recording was not always optimal. Apart from the conversion needed from analogue to digital, other issues emerged. Some recordings reside on formats that are already becoming obsolete and quite challenging to migrate.

Plans were put into place by our IT people on how to store the date on servers that are not connected to the internet and replicate it on the users server. At that stage the issue of whether to stick to the system of sound recording only was raised up. The same interviewers came to us questioning whether we are missing valuable date in the non-verbs of the interviewees. Thus, the shift is now at hand to start recording not only the sound of the interview but also the visual. This is putting extra pressure on our IT people to invest more energy and finance on the handling of data which will be much larger than if we had to stick to the sound only approach.

This latter move is already being challenged by those who are arguing that if we are going to film we should go for best image quality. What if snippets need to be included in some feature or media production? Again, this adds to the technical challenge. While the traditional dictum in the digitisation of records for archives was always to go for the best resolution possible, in this case we need also to consider the resources of the institution. While technically the sky is the limit to how sophisticated we want to go, the whole project needs to fit in the general resources capability of the managing institution.

There is also the argument of how technically perfect do we need the recording to be? Is it better to interview the data subject in his own daily context where the interviewee feels most comfortable or in a studio environment where we can have optimum sound ambience? On this we have been guided by the current trend in oral projects of capturing the voice in its natural surroundings, even with the background noise and context as it is contributory to the interview. At instances, we have encountered interviewees, mainly from the public administration thematic group who have refused interviews in their own residences. Thus, for such cases we still had to provide a more formal set up in our head office.

**Human Resources Challenge**

Apart from the considerations discussed above, the bottom line is that we are dealing with people and not with records and thus the human consideration is fundamental to the success of such a process. Some interviewees for the British Expatriates theme were thankful for the fact that they were given the space to express their feelings not only with fellow expatriates but with an ‘official / institutional’ body. Participants in the public administration theme considered the project as giving a voice to officers who have been reluctant to speak up due to public service ‘silence code’. For this cohort we realised, that although they were all in high office and had a lot of say in decision-making, they rarely had the opportunities to speak up, as the same office often prohibited them from doing so.

Themes such as Experiencing War and the Emigration are particular for the strong emotional feelings expressed by interviewees. The Second World War and Malta’s role in the hostilities has been documented really well from primary sources. But this project is making it possible to tap into new ground. Instead of statistics and dates which are well known, we are documenting the emotional feelings and strong political affiliations of participants.

The same strong feelings were felt in the interviewees carried out under the Maltese Emigration (The Malta-Lampedusa connection) topic. It became obvious that the Lampedusians view the Maltese as colonisers who brought a certain level of disruption to their island. This dimension of Malta viewed as a colonising country is also worth documenting and the best way to do it is from the peoples’ views and memories. To some extent, the process has helped in a small way to reconcile a bit the two perspectives of the Lampedusians and the Maltese, at a time when both islands are again experiencing similar challenges with migration in the Mediterranean.

Some of the participants also argued that by focusing on a particular theme MEMORJA is helping in keeping alive and strengthening particular traditions or professions. This was the feedback about the bell ringing tradition. This also raises the issue of whether such a project should target dying traditions and act as a catalyst to rejuvenate them. The question for further discussion here is whether we are being too demanding on our archival institutions most of which are already facing big challenges to survive. Is this presenting us with a golden opportunity to realign the role of national archives in society and make them more relevant and politically visible tools for action in communities?
Conclusion

There is no doubt that most archives are realising that society demands a better representation of different voices in national memory repositories. A number of national archives are venturing into new ways of how to achieve this. This challenge comes at a time when archivists are already faced with pressures of financial sustainability. Some are also struggling to handle the digital disruption. Memory projects are encouraging/forcing archivists to adjust to new scenarios whereby they do not work in isolation but within multidisciplinary teams. It is a new reality whereby the voices we need to preserve do not come in ready-made boxes. The MEMORJA project we have in Malta have inspired us to go out of our buildings and to hunt for voices. Some of the voices were underrepresented. Administrative bureaucracy or some other form of social taboo suffocated other voices. There is no doubt that the project is proving successful in identifying these people and have them collaborate and speak up. The other side of the coin is that the whole venture is extremely demanding – the resources needed are quite impressive in terms of finance and technology. But what I consider as the biggest challenge is the human dimension. We need to train the people not only to do the interviews but to prioritise, weigh the opportunities that come up, respect the data subject and reach a fine balance between the interests of the interviewees and the memory of future generations.

Only time will tell whether we are succeeding in our ambitious targets. In my humble opinion we will surely fail if we do not bring such initiatives in the academic domain to stimulate discussion and challenge ideas. The project needs such input to grow. Likewise, the theoretical discussion we hold on the new challenges and archival paradigms cannot be carried out in isolation, distanced from the real life application. I do hope that this paper will give scope for a healthy discussion around the raised points.

References


Memorja interviews 2018.


Supplementary Notes

1 On the 22nd March 2004, the then President of Malta, His Excellency Prof. Guido de Marco inaugurated the National Memory Project at the Legal Documentation Section of the National Archives of Malta.

2 Dominic Mintoff was Prime Minister of Malta during the years 1955-58 and 1971-84. During his premiership there were instances when relations with Great Britain were quite turbulent.

3 Original transcript: Ghandi d-dubji jekk hemmx rikonoximent jien, mill-pubbliku l-iktar... Jiena rajt hafna nies jahdmu hafna u jassumu responsabblita’, u jahdmu b’certa kompetenza....Jigifiedi meta tara, hhalma rajt jien, uffiċjali li verament they’re passionate about their work, ma tistax ma tappażehomx (Frank Mifsud 31st May 2017, Marsaxlokk).

4 Carmelo Borg Pisani (10 August 1914 – 28 November 1942) was a Maltese-born artist and Italian Fascist who, on being discovered during an espionage mission in Malta in 1942, was found guilty by a British war tribunal and executed for alleged treason.