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Rurban as a new “place” for Computer Supported Cooperative Work: Socially Engaged Art as an approach to designing participation in a rapidly developing rural community.

Thesis presented by

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for the degree of

Doctor of Philosophy

University College Cork

School of Applied Psychology

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Declaration

This dissertation is the result of research carried out in the School of Applied Psychology from July 2017 to March 2024.

Except where otherwise stated, this thesis is the result of my own work and has not been submitted for another degree, either at University College Cork or elsewhere.

Maria Murray
School of Applied Psychology
University College Cork
August 2024

"I believe we are all like tomatoes on the same vine, imagine that."

– Eoin Murray, 2012

This thesis is dedicated to my youngest brother, Eoin Murray.

Every day I miss your ideas and insights, warmth and wit.

This achievement is for you.

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Beyond my supervision team, I am grateful for the supportive community of the School of Applied Psychology, UCC. Staff and students have given generously of their time and expertise to support me in this endeavour, and I have often thought that if I had to do this work in isolation, it would never have been completed. My fellow PhD students (and there have been many at this stage!) are some of the most inspiring, dedicated and persistent people I have ever met, and I am lucky to have made lasting friendships among them. I would like to say a particular thank you to Dr Sarah Robinson. After almost weekly coffee / sushi / support meetings, you are like a fourth supervisor at this stage.

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always bringing the fun and the creativity. I look forward to further developing our socially engaged art practice together.

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This PhD has introduced me to the world of academic research, something I really had very little knowledge of prior to undertaking this work. Having the opportunity to attend conferences, talk to other researchers and be part of the SoAP research community has given me hope that the seemingly overwhelming problems we face in this very troubled world can be addressed through the hard work and ingenuity of brilliant and sincere minds. My final acknowledgment is to the broader research community dedicated to a better collective future for us all.

Publications from this thesis

1 Peer-reviewed journal articles

Maria Murray, Nadia Pantidi, and John McCarthy (2024). Designing for Dissensus: Socially Engaged Art to access experience and support participation. In Proceedings of the 2024 ACM Designing Interactive Systems Conference (DIS '24). Association for Computing Machinery, New York, NY, USA, 2851–2865. https://doi.org/10.1145/3643834.3661516

Maria Murray; Geertje Slingerland; Nadia Pantidi; and John McCarthy (2024). Socially Engaged Art approaches to CSCW with young people in rurban communities. Computer Supported Cooperative Work (CSCW). https://doi.org/10.1007/s10606-024-09494-x

Murray, Maria; Nadia Pantidi; and John McCarthy (2023). Agency, Power and Confrontation: The Role for Socially Engaged Art in CSCW with Rurban Communities in Support of Inclusion. Computer Supported Cooperative Work (CSCW). https://doi.org/10.1007/s10606-023-09482-7

Geertje Slingerland; Kavita Agneta Gonsalves; and Maria Teresa Murray (2022). Design Probes in a Pandemic: Two Tales of Hybrid Radical Placemaking from Ireland and Australia In: Proceedings of the 34th Australian Confer-ence on Human-Computer Interaction. Canberra, ACT, Australia. New York: ACM, pp. 126–42. https://doi.org/10.1145/3572921.3572931

Maria Murray; Nadia Pantidi; and Trevor Hogan (2019). Conflict and Belonging: Socially Engaged Art Practice as a Resource for Resilience-Building in Rurban Communities In: Proceedings of the 9th International Conference on Communities & Technologies - Transforming Communities. Vienna, Austria. New York: ACM, pp. 60–64.

https://doi.org/10.1145/3328320.3328388

2 Contributions

The above peer-reviewed journal articles are presented as chapters in this thesis.

As first author of "Agency, Power and Confrontation: The Role for Socially Engaged Art in CSCW with Rurban Communities in Support of Inclusion" and "Conflict and Belonging: Socially Engaged Art Practice as a Resource for Resilience-Building in Rurban Communities", I carried out the fieldwork, conducted the qualitative analysis and lead the paper writing and publication process.

As third author of "Design Probes in a Pandemic: Two Tales of Hybrid Radical Placemaking from Ireland and Australia", I carried out the fieldwork and qualitative analysis of the Northrock data with Dr Geertje Slingerland and participated in the writing and publication process.

Co-authors made the following contributions:

- Professor John McCarthy, Dr Nadia Pantidi and Dr Trevor Hogan: As PhD supervisors, they were involved in discussing and developing ideas, as well as providing feedback on papers.
- Dr Geertje Slingerland: Shared the fieldwork and qualitative analysis of the digital art summer school. Supported the writing and publication process of "Socially Engaged Art approaches to CSCW with young people in rurban communities". Shared the comparative analysis of probes with Dr Gonsalves in "Design Probes in a Pandemic: Two Tales of Hybrid Radical Placemaking from Ireland and Australia". Led the writing and publication process of "Design Probes in a Pandemic: Two Tales of Hybrid Radical Placemaking from Ireland and Australia".
- Dr Kavita Agneta Gonsalves: Conducted the fieldwork and qualitative analysis of the Brisbane project in "Design Probes in a

Pandemic: Two Tales of Hybrid Radical Placemaking from Ireland and Australia". Shared the comparative analysis of probes with Dr Slingerland in "Design Probes in a Pandemic: Two Tales of Hybrid Radical Placemaking from Ireland and Australia". Supported the writing and publication process of "Design Probes in a Pandemic: Two Tales of Hybrid Radical Placemaking from Ireland and Australia".

Abstract

As CSCW looks towards designing more inclusive and representational technologies, it increasingly moves into community-based settings to understand the experiences of underserved populations. One such population is the rapidly developing rural (rurban) community, which despite new scholarship in rural CSCW and HCI, is still very much understudied. These communities are experiencing specific social, cultural, and political challenges due to the steep increase and diversification of the local population. They are also replete with potential for fulfilling and inclusive community life if expansion is handled well. Due to the increasingly complex and multi-layered demographic of the rurban place, pluralistic approaches to participation are required to support challenges and to work towards achieving rurban potential.

This thesis examines the sociogeographic characteristics of rurban communities to ascertain the role for CSCW in supporting these places. It describes requirements for participation based on those characteristics and explores the use of Socially Engaged Art (SEA), a participative, political and activist art practice, as an alternative approach to rurban participation.

Three studies were undertaken in an Irish rurban community, anonymised as Northrock. The first study, a focus group study presented in chapters 4, 5 and 6, developed an understanding of the adult lived experience in Northrock and gave directions as to how to design SEA-informed participatory workshops in the community. Some of the key findings were around the ways identity is constantly contested and remade, as well as the various pathways and barriers to inclusion as experienced by participants. The second and third studies, presented in chapters 4, 7, 8 and 9, involved the design and delivery of SEA-informed digital storytelling workshops and a digital art summer school, both with young people in the community. In both cases, the studies produced highly nuanced data on participant experience, bringing marginalised perspectives to light. The process was adapted for the summer school to centre SEA dynamics of rapid making – reflection – (re)making to provide moments

of critical insight and mutual recognition. The studies discuss the intricacies of the rurban experience and the implications for designing dissensual participation with young people in pressurised communities.

This thesis contributes an understanding of rurban places and the requirements of rurban participation, as well as insights into how SEA might be applied to CSCW to bring invisible experiences and perspectives into dialogue with each other, address power imbalances and contribute to a more representational community identity as it evolves. This is of use to CSCW looking to understand those experiences outside of dominant paradigms to inform the development of polyvocal sociotechnical interventions. In addition, the course of this research raised questions and suggestions about the current nature and potential future of a more political CSCW that actively works towards social change. This thesis explores that potential with the intention of applying CSCW to understand marginalised experiences and challenge dominant narratives around possibilities for community life in pursuit of more equitable and sustainable futures.

Chapter 1: Introduction

1 Place and participation

Place and participation have become two central themes of computing as technology permeates and mediates almost every aspect of our lives. We strive to understand the kinds of behaviours and interactions that various places make available, the power dynamics and socio-cultural factors that impact spatial experience and the role technology has to play in configuring these experiences. We look to design participatory processes that access complex, nuanced and often contradictory human experience in situ as the basis for any useful technology design and in pursuit of more equitable and inclusive futures. These two themes of place and participation are central to this thesis, specifically in the context of the rapidly developing rural community.

In this thesis, I research the rapidly developing rural (rurban) community as a new "place" for computing. I argue for why it is important to attend to rurban communities in their own right and I put forward the unique sociogeographic characteristics, opportunities and challenges of these places. I also investigate alternative approaches to rurban participation that are grassroots, activist and agentic in exploring complex lived experiences that are often difficult to articulate and communicate. This is done in response to the specific characteristics and needs of the rurban community, and to the need to reinvigorate change-making agendas in participation (DiSalvo, Clement, and Pipek, 2012; Bannon, Bardzell, and Bødker, 2018; Harrington, Erete, and Piper, 2019; Holmer et al., 2015; Bødker and Kyng, 2018).

In the next sections, I give some context and background for rurban places and introduce the community in which this thesis is situated. I also introduce the basis for the sociotechnical interventions described in this thesis (Socially Engaged Art) and the conceptual framework in which they are evaluated (Computer Supported Cooperative Work). I describe the conception of this

thesis before putting forward the research aim and questions, the structure of this thesis and the overall contributions of this thesis.

2 Rapidly developing rural (rurban) communities

The dominant paradigm in place-based computing is that of WEIRD[1] urban with a focus on enhancing quality of life and sustainability in cities, emphasizing active citizenship, participation, and placemaking while addressing social issues (Altarriba Bertran et al., 2022; Freeman et al., 2019; Tomitsch et al., 2015). However, the preoccupation with the urban is said to connect with a colonial mindset in computing (Dourish and Mainwaring, 2012) to the detriment of "peripheral places", enforcing the idea that innovation and social progression comes from one particular place and filters out to others, rather than looking towards alternative places as sources of imagination and creativity. Global South computing challenges this discourse and, while engaging with similar themes, critically evaluates the social and political implications of technology. It advocates for contextualized, transdisciplinary approaches, highlighting differences in ethical issues and technological access between the global North and South (Smith et al., 2020; Mim, 2021; Winschiers-Theophilus et al., 2010; Wyche, 2021). In addition to the global South, rural computing has developed as another "peripheral place", often suffering from a perception of lack (Bell, 2007) and a "problem to be solved" (Hardy et al., 2019), though recently this has been challenged most notably with a TOCHI special edition in rural computing (Su et al., 2021).

This thesis contributes another "place" for technology development, that of the rapidly developing rural (rurban) community. My approach to conceptualising rurban as new place draws on the various paradigms of place-based computing in terms of centring concerns around participation, equity and sustainability while prioritizing local knowledge, values and needs and problematising universalist solutions. Rurban communities need to be

[1] Western Educated Industrialised Rich Democratic

attended to in their own right as the transition from rural to rurban can take decades (Buciega, Pitarch, and Esparcia, 2009; Báez et al., 2020; Björling and Rönnblom, 2023) and this attention is crucial to avoid marginalisation and social rupture (Björling and Rönnblom, 2023; Stephens, 2019; Báez et al., 2020). The liminality of the rurban community brings with it an inherent potential for fulfilling and dynamic community life. These communities are intrinsically innovative, adapting to rapidly changing circumstances. While rapid expansion poses many challenges, it also presents opportunities for new ways of living that combine positive aspects of rural and urban life. Embracing these opportunities requires addressing tensions and marginalisations within rurban communities through inclusive participatory processes that shed light on invisible and contradictory experiences. Given the high levels of interdependence and the legacy of tight-knit rural communities (Robinson et al., 2021; Murray, Pantidi, and Hogan, 2019), this is particularly challenging. However, these challenges also offer opportunities for transformative participation, where disruptions to social norms can be leveraged to challenge dominant paradigms and support positive change.

As rurban communities adapt to a rapidly changing demographic (Báez et al., 2020; Bell, 2007; Lysgård, 2016; Sherman, 2021; Torre, 2015) some of the greatest challenges are around supporting inclusion and alleviating possible tensions between the various developing rurban publics (Brennan and Luloff, 2007; Lichter, 2012; Lichter and Brown, 2011; O'Malley, 2022; Shucksmith, 2012; Shucksmith et al., 2012; Stephens, 2019). The diversifying demographic provides unique opportunities to study sociogeographic characteristics that influence place-making, inclusion and identity in relatively small spatial and temporal sites (Murray, Pantidi, and Hogan, 2019; Murray, Pantidi, and McCarthy, 2023; Slingerland, Gonsalves, and Murray, 2022). Understanding these characteristics is crucial in describing the rurban as a new "place" for computing research, and to the evolution of many communities in today's context of global migration (Creighton, Fahey, and McGinnity, 2022; Eliasson, Westlund, and Johansson, 2015; Woods, 2022). Ensuring a nuanced, critical

and representative understanding of the rurban place requires alternative approaches to participation that recognise marginalised voices, challenge dominant paradigms and increase mutual recognition and agency.

The rurban place is a microcosm of some of the most pressing challenges facing us today in terms of migration, sustainability, equity, community, and quality of life. Rurban communities provide opportunities to study up-close dynamics of inclusion and identity in response to these challenges. Such studies give rise to specific requirements for a critical participation to make visible and bring into dialogue the many new and evolving experiences, perspectives, values and needs in the developing rurban community. This thesis both describes the rurban place as a new site for computing and puts forward alternative approaches to participation in these communities.

3 Northrock – an Irish rurban community

This work is situated in a rapidly expanding rural community in Ireland, anonymised as "Northrock". I grew up in this community and have witnessed the transition from the rural farming village of my childhood to a somewhat sprawling and very multicultural almost-suburb of our nearest city. Over the years, I have heard conversations and seen initiatives focused on supporting the community through this expansion, with an emphasis on retaining the positives of rural life while promoting inclusivity and celebration of new community members. While doing initial research for this project, I began attending community meetings focusing on developing resilience and supporting both inclusion and community identity. During this phase of research, I become aware of the level of grassroots community activism and determination amongst community leaders and groups to direct the future of Northrock in a sustainable and intentional way and I was impressed with the level of support offered to both new and long-term residents in need. On speaking to these community leaders and groups, they were very receptive to supporting the work presented here and eager to progress their vision for a

vibrant and inclusive community. These were all encouraging factors in situating the research in Northrock and very motivating for me to produce work that would be of value to those giving so generously of their own time and energy.

In terms of statistics, the latest available data show that the community grew from 1,232 in 1996, to 2,782 in 2006, 5,090 in 2016 and 8,181 in 2022 (Central Statistics Office, 2018, 2019, 2023). The increase in population between 2011 and 2016 was 11.6%, while the state average was 3.7% (SECAD, 2017). Some older community members discussed a time when there were around 400 people in the community, saying that if you went to both Catholic masses on a Sunday, you would meet them all. Now according to participants, there are over 40 languages spoken and over 6 religions practiced in the community. With regard to diversity and cultural background, the 2016 census of Ireland found that 76% of the Northrock population were born in Ireland with 67% of the population identifying as "white Irish" (Central Statistics Office, 2018). These various statistics and accounts of rapid change and diversification were compelling factors in further exploring Northrock to understand rapidly developing rural communities as locations for sociotechnical opportunities and innovation.

The population expansion and diversification are visible in the demographics of the local schools and in attendance and participation at community events and festivals. There has been an increase and diversification of sporting and other recreational and hobby groups in the community. There is a push to recruit new community members to the community council and there are language teaching and other inclusion initiatives happening at many levels. However, regarding physical development, it is remarkably similar to Northrock pre-expansion, despite the rapid changes in its social and cultural make-up. While large housing development has happened in the former farmland surrounding Northrock, the old village (still the heart of the community) is very much the same and somewhat of a template of a typical rural Irish village. It is still concentrated around one main street with the major

points of public meeting being the Catholic church, the GAA[2] sports grounds and the community centre. Many of the local businesses have been there for generations: family run shops, pubs and a takeaway for example. There are however newer businesses that indicate the growing diversity: Indian, Chinese and Thai restaurants, Polish and African shops and African hairdressers. Lobbying by local groups has resulted in more schools being built, as well as the opening of a playground and outdoor gym. Those groups continue to campaign for the development and expansion of amenities to cater for the growing community, and there is a general sense of frustration at these often being agreed upon, but not delivered.

Research across disciplines is only beginning to understand the many implications of rapid expansion and migration on small Irish towns and villages since the turn of the century (Woods, 2022; Parker-Jenkins and Masterson, 2013). Ireland's unique experience in terms of colonialism, a long history of emigration and recent rapid immigration makes it uniquely positioned to provide insights into modern evolutions of collective identity and inclusion (King-O'Riain, 2021; Lee, 1994). However, the effects of badly managed and misunderstood migration are seen across the country today (Fitzgerald, 2024; Murphy, 2024; Sherlock, 2024). Northrock offers an opportunity to study an example of proactive and overall positive approaches to expansion in order to understand how best to support evolving perceptions of community identity for more cohesive and fulfilling community life.

4 Socially Engaged Art (SEA) and Computer Supported Cooperative Work (CSCW)

Having outlined the context in which this work takes place, I now move to introduce both Socially Engaged Art (SEA) and Computer Supported Cooperative Work (CSCW). In this thesis, SEA informed the design and evaluation of participatory CSCW to understand experiences of expansion in

[2] Gaelic Athletic Assocation – National games of Ireland

Northrock, and to identify where and how to best support this expansion through sociotechnical interventions that are critical, creative and support collaboration on shared community goals.

SEA, a pluralistic, critical and arts-based approach to participation, is typically used as an umbrella term for participatory art, community art and some forms of public art (Olsen, 2019). All of these art forms are political, and aim to engage with a specific population to effect some sort of social change through facilitating meaningful dialogical processes, enabling dissent and collective learning around the creation of some output on social themes identified as important by the participants (Bishop, 2006; Diprose, 2015; Edwards, Collins, and Goto, 2016; Olsen, 2019; Tiller, 2014; Verschelden et al., 2012). SEA looks to create spaces of possibility to challenge norms and assumptions, develop agency and provide opportunities in imagining and enacting alternative futures. It is non-prescriptive in terms of media used, the possibilities for change lie in the dialogue surrounding the process of making and sharing work (Coombs, 2014; Fernández López, 2022; Garrido Castellano, 2022). SEA is said to increase social cohesion, both through participation and facilitating social encounters around any tangible outputs (Diprose, 2015; Edwards, Collins, and Goto, 2016; Sharp, Pollock, and Paddison, 2005). The value in SEA is linked with the social and political impact of a project and the process itself aims to be a form of activism (Simoniti, 2018).

I have been involved in SEA in some form or another for the past 20 years, as participant, student and facilitator. The work of Suzanne Lacey, as a socially engaged artist who continually inspires me and has inspired thinking in this thesis, is a good example of the kinds of aesthetics and outcomes inherent in SEA. For example, her *Across and Inbetween* project explored the profound impact of the Irish border on the lives of people who live there in the context of Brexit. Lacy collaborated with over 300 people from counties Fermanagh, Monaghan, Donegal, Leitrim and Cavan to create a series of powerful artworks (performances and installations to make the border visible) and a manifesto to stir public conversation and support border people in self-advocacy (the

Border People's Parliament and the Yellow Manifesto). The Yellow Line was recorded in a three–screen film which was projected onto the front of the Ulster Museum during the 2018 Belfast International Arts Festival. The project was multidisciplinary, impactful, visceral and emotive. It dealt with a serious topic in playful and unexpected ways, developing participant agency while building stronger social bonds and mutual understanding in pursuit of a common goal (The Yellow Manifesto, 2018; Lacy, 2018). Tanja Bruguera is another giant of SEA practice. She is particularly interested in challenging power icons and structures while working to uncover unspoken norms and assumptions regulating behaviour. One of her most famous works, *Immigrant Movement International* functioned as both a community centre (providing various workshops and legal aid) and a conceptual art studio (organising participatory performance art pieces throughout the area) and looked to bring together the migrant community and surrounding society by encouraging active interaction and open discourse. The project blended practical action with exploratory and provocative artistic engagement to gain a richer understanding of migrant experiences to communicate to the wider public (Bruguera, 2011; Kershaw, 2015; Tate, 2012).

While SEA formed the basis of the sociotechnical interventions in this thesis, they were situated within CSCW as a computing discipline focused on supporting collaboration in pursuit of shared goals. I started the PhD with the motivation of bringing my experiences in SEA and digital media design together. I wanted to see how these disciplines could inform each other in the context of supporting more inclusive and equitable communities (specifically in the context of Northrock). As I followed the development (theoretically and practically) of exciting social justice-oriented design areas, I felt SEA could make an important contribution through bringing its own theoretical and practical tradition to bear in support of the congruent aims of social justice-oriented design. As I learned more about different areas of design and computing research through familiarisation with relevant literature, the process of writing and publishing, and discussions with the People and Technology

group in the School of Applied Psychology (where this PhD was situated), a focus on CSCW as the most useful research field for this work developed. CSCW emerged in the 1980s with the intention of grounding the developing of collaborative computing technologies in actual workplace practices (Ciolfi, Lewkowicz, and Schmidt, 2023). At its core, it seeks to examine how technology can support cooperative work, and how processes involving collaborative uses of technology unfold organically to meet people's requirements (Koch, Schwabe, and Briggs, 2015). CSCW is a movement within computing research which focuses on work as a social experience, mediated by technology. It is as interested in designing social systems as much as technological systems (Koch and Gross, 2016). Through engaging with social practice, it has a natural focus on community issues, political issues and sociocultural issues. Due to this and the CSCW commitment to supporting cooperation and collaboration to respond to contingences and achieve collective goals, CSCW became the natural home for this work. The interdisciplinary nature of CSCW, drawing together concepts from computing, sociology, psychology, and organizational studies (Ciolfi, Lewkowicz, and Schmidt, 2023), also suggests its receptivity to the integration of SEA. While the work described in this thesis did not take place in workplaces per se (the typical site for CSCW), it speaks to the value of understanding the kinds of cooperative work involved in community building, as I will return to in the discussion of this thesis. My interest grew into how SEA approaches to participation might be useful to CSCW in rurban communities, to support sustainable expansion while identifying opportunities for sociotechnical development, providing new understandings of how technology can help forge the communities of the future.

5 Thesis conception

The idea for this thesis came from my witnessing the transformation in Northrock over the years, my interest in the application of CSCW to social

challenges and my experience in SEA to explore social issues and develop individual and collective agency.

As previously mentioned, in the 2016 census of Ireland, Northrock had expanded at a faster rate than anywhere else in Ireland (SECAD, 2017). However, it is not an outlier as Ireland has seen unprecedented population growth this century (Parker-Jenkins and Masterson, 2013). This growth has been handled with various degrees of success, but as I saw it, Northrock seemed to be managing the changes very well. Northrock won a national award in 2017 recognising its cohesive nature and community spirit, and many community groups and progressive community leaders were working tirelessly to promote a sense of pride in the community and to build pathways to inclusion. I was interested in learning more about how expansion has been experienced in Northrock and how it might be further supported through SEA-informed CSCW, providing directions for similar communities around Ireland.

My work as a design educator led me to emerging areas of design that I found particularly exciting, such as speculative design (Bray et al., 2022), design futuring (O'Leary et al., 2019), community-based design (Harrington, Erete, and Piper, 2019) and social justice-oriented design (DiSalvo, 2012). These various applications of design seemed to have potential to reimagine and forge new progressive futures, placing participant agency and imagination at the centre of these processes. Participatory design speaks of the ethical challenges of configuring participation in equitable ways and the value of arts-based approaches to address issues around power imbalances, inclusion and social justice (McCarthy and Wright, 2015). The push across these approaches towards socially responsible design to amplify marginalised experiences and to work towards better social realities resonated with challenges faced by Northrock and other similar communities. CSCW, with its focus on cooperation to address contingencies in pursuit of shared goals (Blomberg and Karasti, 2013) seemed a suitable evaluative framework for positioning

participatory work in Northrock that followed the aspirations of the various design approaches mentioned above.

I have a deep appreciation for the application of SEA to explore social justice issues, and my reading in particular of Freire's critical pedagogy (Freire, 1967) and hooks' transgressive education (hooks, 1994) helped my thinking in how well-designed and facilitated SEA can be agentic, affirmative and change-making. Many of the struggles of equitable participation in computing are also explored by seminal SEA literature (Bishop, 2006; Kester, 2011) and there is a host of exciting and effective SEA practice, engaging citizens to develop critical consciousness through collective action on shared social issues (Lacy, 1997; Bruguera, 2017; Van Heeswijk, 2017; Akoto, 2021). I was interested in how SEA theory and practice could inform CSCW participation in pursuit of understanding Northrock experience of expansion and how to support it.

This thesis lies at the intersection of several fields, SEA, CSCW and the various progressive community design approaches mentioned above. I come to this research not as a psychologist, but as a digital media design educator with a background in SEA and a personal interest in how to support transitional rurban communities with a view towards more equitable community life.

6 Thesis aims and questions

The research is motivated by two main aims:

- To extend and build on CSCW "places" by outlining the rapidly developing rural (rurban) community as a new place for CSCW.
- To extend and build on pluralistic, participative approaches to CSCW in pressurised community contexts, drawing on socially engaged art to design rurban participation.

These aims give rise to the following questions:

- What kinds of behaviours and experiences are afforded by rurban places?
- What are the situated social and political concerns of rurban places?

- What are the unique specific requirements of effective rurban participation to understand these various experiences and address these concerns?
- What can socially engaged art (SEA) offer as an alternative approach to doing participatory CSCW to support participants in negotiating the various experiences and concerns present in the rurban place?

7 Structure of this thesis

This PhD is submitted as thesis by publication, and as such is presented mostly as a series of papers written for CSCW and HCI journals and conference proceedings. The papers are presented in the order that best supports the narrative of the thesis, rather than in the order of publication. Below, I give a brief description of each chapter as an overview into how these all link together.

Chapter 2 expands on ideas of place and participation in the context of CSCW and SEA as described in this introduction. It is a precursor to the empirical work in this thesis and goes into detail on the various existing place-based paradigms of CSCW, emerging rural CSCW and the as-yet unexamined rurban CSCW. It makes an argument for engaging with the rurban as a "place" in its own right and supplements available literature on the rurban, taken from across disciplines, with a description of Northrock. Chapter 2 also draws out the requirements for participation in rurban CSCW based on available literature and the description of Northrock. It highlights the need for participatory processes that uncover consensus on community life and facilitate dissensus to challenge hegemonic social norms that exclude or make invisible experiences outside of the dominant paradigm. Based on these requirements, the chapter puts forward my argument for incorporating SEA approaches into participative CSCW with Northrock as a means of accessing both consensus and dissensus. The chapter is an overview of relevant literature and a rationale for integrating SEA into sociotechnical CSCW interventions to understand and support experience of rapid community expansion and evolution.

While chapters 4 to 9 all have methodology sections, these are relatively succinct in keeping with typical academic paper style and word count. Chapter 3 expands on the thinking process behind the methodology and how this connects to SEA and researcher positionality. It was an opportunity to contextualise some of the reflective notes taken throughout the process and to describe how my thinking on my role evolved as the research progressed. It also allowed me to be more explicit on my standpoints around knowledge generation in this work, drawing on approaches from pragmatist and feminist thinking, as well as critical pedagogy. In addition, chapter 2 provided more space to describe the thinking and decision-making process behind the various methods and the three studies (focus groups, digital storytelling workshops and a digital art summer school), and how these drew on socially engaged approaches in their design and analysis.

Chapter 4 (under review at the CSCW conference) is the first chapter reporting on empirical work. It draws from the first two studies in this thesis: focus groups with adults, and digital storytelling workshops with teenagers. It is an introduction to the various participants and community organisations that feature across this thesis. It illustrates the particular strengths and challenges of Northrock as experienced by teenagers and adults and is intended to give an overview of rurban as a new potential "place" for CSCW. It doesn't explicitly connect with socially engaged art approaches to participation but is intended to have a broader contribution towards any CSCW or HCI interested in understanding and engaging with rurban communities. This chapter indicates aspects of rurbanity that suggest the benefit of generative, critical and creative approaches to participation. Findings convey the multi-faceted nature of experience in Northrock, with contrasting realities existing side by side, often oblivious to each other, in relatively small places. The discussion puts forward some of the descriptive, sociocultural and symbolic characteristics of rurban life, drawing connections with relevant CSCW. It also suggests the values, responsibilities and characteristics of rurban CSCW based on the findings, as well as ideas towards participatory CSCW research design in rurban areas.

Chapter 5 (published as a short paper at Communities and Technologies 2019) draws on the focus group study with adults, and it speaks to one of the central issues in a rapidly developing rural community – the evolution of community identities. This chapter looks at how identity is often defined in the community in terms of the "other", and it describes some of the various past and present conflicts that have demarcated identities in the community. These revolved around longevity of residence ("old versus new"), geographic area of residence ("East versus West"), and the boundaries of the community ("internal versus external"). An interesting observation from this paper is around the historical "East versus West" conflict, which is now resolved. That process of historical resolution is now credited by some participants with supporting long-term successful inclusion measures that still benefit the community today. The focus group study was a pre-cursor to any SEA-informed design with the community and the intention was to learn about what aspects of community life might be used as an initial point for exploration in the later SEA-informed studies. To that end, the paper speaks to the value in identifying and engaging with the various conflicts that give rise to different standpoints on identity and suggests placing an investigation of the various identities present, while devising ways to explore conflicts underpinning them, in future SEA with the community.

Chapter 6 (published JCSCW '23) deals with another major theme of this work – the dynamics of inclusion in the rurban community. It is the final paper that draws from the focus group study, and it explores one of the primary concerns of Northrock – how to understand and manage inclusion in equitable and sustainable ways. It also puts forward more specific directions for SEA-informed CSCW based on both the findings and SEA theory and practice, drawing on contemporary SEA projects and connecting them to areas of CSCW. The East versus West conflict discussed in Chapter 4 is again referenced in terms of historical anti-social behaviour, and the Family Resource Centre (FRC) is identified as a critical grassroots organisation that supported those in need in the community both then and in the present day.

Powerful organisations in the community were recognised as both supporting and gate-keeping inclusion at different times. There was an examination of public place in terms of mechanisms of inclusion and exclusion inherent in the configurations of those places, and the migrant experience was a focal point of the paper to ascertain how new community participants navigated inclusion practices. Much like in chapter 4 described above, these various focal points were useful in informing the SEA studies I was beginning to design. Throughout the dialogue, there was a suggestion of things unsaid, or unavailable through the focus group format. As a result, accessing hidden experiences were to prove another focal point in the following SEA studies.

The previous chapters provide an overview of rurban characteristics and directions for rurban CSCW. Chapter 7 (under review at DIS '24) is the first chapter to explore the process of SEA-informed CSCW in support of rurban place-making and participation. Based on the need for a polyvocal and critical rurban participation to identify issues and engage with conflict to evolve understandings of community identity and pathways to inclusion, digital storytelling workshops with teenagers were designed from an SEA standpoint with the aim of identifying consensus and supporting dissensus as described in chapter 2. Findings explore what consensuses on community life were held by the teenagers and recognise that dissensus was still somehow out of reach for these participants. Rigid definitions around "Irishness" that were seen in chapter 4 are further explored here as participants put forward very stereotypical images of Ireland and Irish culture. An amount of "othering" of minority groups was also observed. While the ideas initially generated via the SEA-informed process were rich, insightful and varied, the final outputs were somewhat homogenous and didn't do justice to the depth of discussion leading up to them. I put forward various possible explanations for this and further directions for future SEA-informed CSCW to evoke more dissensual dialogue and outputs. I also contextualise the findings in the present Irish landscape around migration, inclusion and evolving Irish identity.

Chapter 8 (accepted for publication JCSCW '24) endeavoured to design and facilitate SEA-informed CSCW that would evoke dissensus, bring contradictory experiences into dialogue with each other, support conflict in constructive ways and evolve understandings of community and feelings of agency in participants. Findings were around how participants articulated their personal experiences with the aid of the various SEA activities and through the final SEA outputs. Findings also shed light on ways the process supported participants in recognising other experiences and connecting them to social issues. Given that many of the findings in previous chapters related to the different experiences and identities present in the community, and how these were often blanked or homogenised, expanding participant understanding of community experience was considered of significance. The discussion focuses on how accessing of difficult-to-reach experiences might be promoted in future SEA-informed CSCW in similar communities. It also explored how to further the dynamic of critique, crucial in linking personal experiences to wider political issues and in imagining alternative social realities. Supports to the dialogical process are discussed with a focus on the use of readily available, light-weight digital communication, collaboration and creation tools. Overall, this study was markedly more successful in evoking critical dialogue and working towards dissensus, a key overall aim of this work.

Chapter 9 (best student paper, OzCHI '22) in this thesis is a comparative case study between the online digital art summer school as described in chapter 8, and a separate research project that took place in KGUV, Brisbane, Australia. The paper looks at how placemaking via both projects happened in digital environments. It looks at both digital (the Northrock summer school) and analogue (the Chatty Bench Brisbane project) probes and how these evoked digital placemaking and community building. Findings focused on the three following functions of the various activities: supporting participants in articulating their experiences with a view towards working towards social change; enhancing participant connection with places in their community; contributing to participant well-being through fostering social connections

during the pandemic. The discussion of this paper looks at how the various probes (the SEA activities in the summer school and the paper worksheet activities in the Chatty Bench project) acted as vehicles for participant expression in turbulent and uncertain times. The need for probes to be flexible and adaptable was highlighted. The discussion also highlights the use of this online approach to support placemaking in digital places to allow for community building and social connection. As a final chapter reporting on empirical work in this thesis, it offers some new ideas around digital placemaking, specifically in times of crisis. It also speaks to the value of alternative, critical and art-based approaches to participation in different contexts and continents.

The final chapter in this thesis is the overall discussion and conclusion. The first section of chapter 10 addresses the original aims and questions in relation to "rurban". It draws on all studies in the thesis to answer questions on the behaviours, interactions and experiences afforded and mediated by rurban places; rurban social and political concerns; rurban CSCW interventions; and requirements for effective participatory rurban CSCW. The chapter goes on to discuss the use of SEA in rurban CSCW, answering the research question on what SEA can offer as an alternative approach to participation. The section relates what I learned on making as a vehicle for change. I discuss how to realise the goal of equality in difference, and I examine the role of conflict and dissensus in participation. The final section draws out implications for CSCW and explores some of the key questions that arose for me as I did this research. I explore central CSCW contexts and concerns with a view towards linking them towards the particular type of CSCW described in this thesis, which is somewhat of an outlier. I then focus on the key areas of contribution of this work – place and participation, and I contextualise these in social justice-oriented CSCW. Finally, I write on activism in CSCW. Activism is something that does not necessarily sit comfortably with research and needs some interrogation to understand how the two can be aligned. I believe activism has

a role to play in research and I put forward my thoughts on the implications of this and how it might be configured.

8 Contributions of this thesis

This work is situated in CSCW that is interested in exploring new places for computing and alternative approaches to participation that engage with systems of power, inclusion, belonging and marginalisation. The thesis presented here makes three contributions to CSCW. These contributions connect with central CSCW themes of place and participation while extending contemporary thinking on the contexts, functions, and potentiality of CSCW.

The empirical work initiates engagement and understanding of the rurban community as a new "place" for CSCW. This is situated in both an Irish context, in terms of pressures of globalisation and migration on previously rural communities, and in a computing context, in terms of needing to understand peripheral places as rich sources of technological development in pursuit of equitable and sustainable communities. This work contributes insights into the unique configurations and requirements of the rurban place and puts forward the specific design considerations that these give rise to. The research illustrates how the personal, social, cultural and political concerns of the rurban experience are centralised around issues of identity, conflict, inclusion and belonging. I outline the dynamics of these processes in the Irish rurban context and put forward suggestions for how creative use of technology might provide opportunities to imagine, communicate and enact evolving conceptions of identity, belonging and difference. I suggest a role for CSCW in positioning rurban communities as active agents in forging their specific identities as dynamic places where rural characteristics around mutual support and strong social bonds might be combined with urban characteristics of diversity and multiculturalism.

The second contribution of this work is in an alternative approach to participation that is creative, critical and generative. Socially engaged art (SEA)

was integrated into rurban CSCW in this thesis due to the need for polyvocal participation that could reveal consensus and challenge dissensus to recognise less-visible experiences and evolve understandings of community identity. I put forward the potential of SEA as an approach to sociotechnical CSCW interventions with rurban communities that support critical thinking, dialogue and dissent to understand social contexts and imagine alternatives. The SEA-informed studies in this thesis offer a practical guide to researchers that are interested in putting critique and dissensus at the heart of participation, and using technologies in creative ways to access experience, challenge assumptions and bring contrasting perspectives into dialogue. I put forward recommendations on how best to incorporate SEA into CSCW with and for pressurised communities, engaging with personal and political issues around power and agency. The integration of SEA aesthetics is valuable as areas of CSCW take on an activist agenda and move from focusing on designing solutions towards supporting individuals and communities in using technology to imagine and enact their own futures.

The third and final contribution of this thesis came not from the original research questions, but from the process of writing and publishing the work. In the discussion, I put forward a case for why this particular type of community-based, social justice-oriented participatory research belongs in the canon of CSCW. Connecting with current literature on CSCW that expands thinking around "cooperative work" to include that work that people need to do together to better their communities and standards of living, I argue that SEA approaches to participation are valid directions and areas of interest for CSCW. This thesis contributes an understanding of how SEA can function as an approach to doing CSCW that is exploratory and pluralistic. CSCW to meet challenges of globalisation and migration, such as those seen in the rurban community, can benefit from new approaches to research that are agentic, political and even activist, in order to fulfil the potential CSCW has for addressing some of the most pressing issues of our time. Central to this is the conceptualisation of activist sites as a type of "workplace" where many of the

core concepts of CSCW can be observed and supported through technological interventions. This gives rise to questions around the "neutrality" of research and the researcher, both of which I engage with in the later chapters and final discussion of this thesis.

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Chapter 2: New paradigms of place and participation in CSCW

1 Introduction

This chapter takes two central themes of this thesis: place and participation, and examines them in the context of Computer Supported Cooperative Work (CSCW) as the research field of this work, rurban communites as the context of this work, and Socially Engaged Art (SEA) as the sociotechnical intervention in this work. It outlines the existing social geographies of CSCW and puts forward an initial exploration of the sociogeographic characteristics of the rurban place. I contextualise this in existing CSCW place-based paradigms, relevant literature across disciplines and the profile of Northrock, an Irish rurban community. It also suggests Socially Engaged Art (SEA) as providing new directions for participation in rurban places that place dialogical, agentic and generative processes at the centre to uncover nuanced, intangible and often marginalised or invisible experiences.

CSCW emphasises the importance of place in understanding cooperative work and developing technology in response (Ciolfi, 2004; Dourish, 2006; Lampinen et al., 2023; Sanusi and Palen, 2008). CSCW's most dominant geographic paradigm is that of the WEIRD urban, with researchers concerned with designing technologies to enhance and support more sustainable urban living (Heitlinger, Bryan-Kinns, and Comber, 2019). There also exists a growing counter-paradigm from the global South which engages with political questions around participation, power, agency and access (Adamu, 2022). Recently, this counter-paradigm has been expanded by a new interest in rural computing, focusing on the diversity of rurality and the specific technological needs of rural areas as distinct from urban (Hardy, Wyche, and Veinot, 2019; Su et al., 2021), while also emphasising the need to challenge dominant paradigms and resist applying interventions un-adapted from the urban to the rural. One such rural area, the rapidly developing rural (rurban) community,

has been overlooked in CSCW and rural literature more broadly (Buciega, Pitarch, and Esparcia, 2009; Johnson and Lichter, 2020). This thesis chapter marks the beginning of an explicit engagement with rurban communities that allows for understanding these liminal and evolving places and complex arising social dynamics around inclusion and identity that are essentially political in nature. Central to this is uncovering dominant narratives on community life, as well as the experiences these narratives marginalise. CSCW has many examples of participatory research examining power structures to work towards social change and more cohesive communities (Asad and Le Dantec, 2015; Bray et al., 2022; Harrington, Klassen, and Rankin, 2022; Le Dantec and Fox, 2015) and exploring pluralistic approaches to participation (Clarke et al., 2016; DiSalvo, Nourbakhsh, and Holstius, 2008; Holmer et al., 2015; Le Dantec and Fox, 2015; Light et al., 2009; McCarthy and Wright, 2015). This work is situated in and contributes to both place-based and participatory CSCW. As described in Chapter 1, situating the work in CSCW developed over the course of this research. Through discussions with colleagues in the School of Applied Psychology (particularly those in the People and Technology research group) and the process of writing and publishing, I began to understand CSCW as an umbrella term for an area of computing that concerns itself with how people work together to get things done, and how this can be supported by technology (Bannon and Schmidt, 1989; Ciolfi, Lewkowicz, and Schmidt, 2023; Koch and Gross, 2016). While this is a very broad and simple understanding, it indicates a concern with social processes, where "work" is a social, cultural and political endeavour and so questions around equity, power and social justice naturally arise. It also indicates an openness in CSCW to alternative approaches and ways of thinking about computing. Due to the sociocultural and political nature of CSCW, it became the area of computing research which resonated most with the aims of this research as described in Chapter 1.

2 The existing social geographies of CSCW

This section puts forward the social geographics of CSCW with a view towards making explicit the thinking on "place" that informed my conceptualisation of "rurban", and with a view towards situating the rurban within that landscape. I describe the dominant urban paradigm, the political concerns of the global South and how these both influence and inform my thinking on the emerging body of rural CSCW.

2.1 Urban CSCW

Urban CSCW has looked at how technology can support quality of life and sustainability in cities, with a focus on inclusion, participation and placemaking. As the dominant place-based CSCW paradigm. it is infrastructural, but more than that it is social, cultural and political.

Urban CSCW looks to cultivate participation, sustainability, active citizenship, ownership of public space, shared values, stronger social bonds and provide space and tools for citizens to tackle social problems (Altarriba Bertran et al., 2022; Freeman et al., 2019; Tomitsch et al., 2015). It centres the need to understand peoples' physical and social context when designing technology with and for urban communities (Paay and Kjeldskov, 2008). The discourse around space and place is very much embedded in this, in terms of understanding how spaces become places that support or inhibit specific ways of being and interacting, and how this impacts on the wider social experience. In urban CSCW, this has typically been done in the context of WEIRD cities, where social, cultural and political values and design requirements are specific to that context. The issue with urban CSCW being the dominant paradigm is that these various values and design requirements are sometimes assumed universal and blanketly applied to other contexts. This connects with what has been called the colonial impulse (Dourish and Mainwaring, 2012) and leads to the marginalisation of those places outside of the urban, as their own unique values, knowledge and needs are overlooked, they are turned into after-thoughts, or as Hardy et. al put it, "a problem to be solved" (Hardy et al., 2019).

While many of the central tenets of urban CSCW – around participation, placemaking, sustainability, inclusion and active citizenship – are of concern in any sociogeographic place, the dominance of the urban has implications for the development of effective CSCW outside of this context and has the potential to do harm as local knowledge and values are not considered, or even seen.

Next, I outline the position of global South CSCW, which offers directions for challenging dominant paradigms in terms of a specific focus on power, participation, local knowledge, polyvocality, and those people and communities at the peripheries. I would like to acknowledge that the term "global South" itself is inherently vague and inaccurate. I classify "global South" based on the IMF's list of "emerging and developing economies" and as a proxy to the global North, which is based on the IMF's list of "advanced economies" (Hickel et al., 2022).

2.2 Global South CSCW

The various themes of urban CSCW (such as participation, sustainability, active citizenship and inclusion) also manifest in global South CSCW. However, global South CSCW typically involves a critical evaluation of the social and political implications of CSCW in terms of potential for harm and exploitation, as well as an active critique of colonial tendences in computing (Smith et al., 2020; Mim, 2021). The need for contextualised, transdisciplinary and transcultural approaches to CSCW in global South places is seen as central (Smith et al., 2020; Winschiers-Theophilus et al., 2010). This involves examining what kinds of methods are most useful in global South contexts (Wyche, 2021), the variance in ethical issues around technologies (such as social media) between the global North and global South (Wyche, Schoenebeck, and Forte, 2013), challenging WEIRD expectations around technological capacity and access, as well as those around identity and authenticity (Pritchard and Vines, 2013), and how to appropriate technologies

in innovative and unexpected ways for global South contexts (Santani, Ruiz-Correa, and Gatica-Perez, 2018).

Dourish and Mainwaring (2012) discuss the tendency to transfer solutions from the dominant/central space to those on the periphery. They attribute this to the "logic of lack", that puts forward a deficit of technology, imagination and agency in the world outside of the giant hubs of technological innovation. Taking a global South perspective on thinking about place in CSCW requires us to reject thinking around the universality of design, and to recognise that promoting universal knowledge in reality just promotes the dominant paradigm, and so marginalises periphery communities and damages CSCW and HCI as a whole by placing limits on innovation and imagination. Instead, it is necessary to step back from the immediate design of technologies and to examine participant positionality, power distribution, existing local knowledge and, drawing again on Dourish and Mainwaring (2012), to embrace diversity, polyvocality and difference. These concerns connect with political approaches in CSCW with communities and we take these principles into our understanding of rural, and ultimately rurban, places for CSCW.

2.3 Rural CSCW

Rurality is an emerging "place" and appears in both global North and global South contexts. While much rural CSCW and HCI takes place in the global North, these places have also suffered from a "logic of lack" due to an urban bias (Björling and Rönnblom, 2023; Buciega, Pitarch, and Esparcia, 2009), and an application of dominant-paradigm solutions without a recognition of local knowledge, an examination of power relations and a situated understanding of technological requirements. In the rural context, this "logic of lack" is further exacerbated by the quaint and reductionist image of the "rural idyll" (Bell and Jayne, 2010; Lacour and Puissant, 2007; Torre, 2015), a hegemonic social representation of the rural where values such as community, solidarity, simplicity and stability are promoted, as well as strong attachment to place. This is not to say that those values don't exist in rurality, but they exist in a contested

site dealing with difference, tension and transformation. Rural areas can be cast as passive and static, insular and lacking in culture (Lacour and Puissant, 2007; Roberts et al., 2017), while urban sites are seen as agents for change (Olsen, 2019). Rural communities in computing research are often seen as something problematic, something to be solved rather than something to be drawn on for inspiration and motivation in both developing new and adapting existing technologies in surprising and insightful ways (Hardy, Wyche, and Veinot, 2019). An urban bias is seen in much research where rural areas are expected to adapt solutions developed for urban populations (Beel et al., 2017).

One defining characteristic of rurality has been found to be a high level of interdependence. This impacts on CSCW as rural values around neighbourliness and congeniality often influence technology appropriation and participation (Robinson et al., 2021). Rural communities can (counter-intuitively) be more noticeably heterogenous due to their smaller population and so there is extra scope for those not part of the dominant groups to become marginalised from social processes (Liepins, 2000). At the same time however, there are possibilities for political transformation in marginal spaces, which provide opportunities to explore alternative ways of being in the community (hooks, 2009; Liepins, 2000).

To summarise, concerns around participation, sustainability, placemaking, stronger social bonds and active citizenship are ubiquitous across all places. What is not ubiquitous however, is one universal "place" whose knowledge, values and needs can be applied to all contexts. Challenging dominant paradigms in place-based CSCW is essentially political work that examines issues of power, agency and self-determination. Participatory place-based CSCW then, needs to engage with these intentions and work towards understanding the specific social, cultural, political and sociogeographic configurations of any particular place. Design and technological solutions need to be led by local knowledge and needs. Learning from global South literature, this involves careful positioning of both participants and researchers to support equitable and reciprocal sharing of knowledge. It also requires recognising the

many different publics in any community and the multiple experiences, expectations and perceptions inherent in all of them. As I move next to consider the rurban community, I acknowledge that there is no one local knowledge in any community and participatory rurban CSCW needs to recognise and make visible the multiple forms of knowledge available. This involves understanding the kinds of relationships different publics have with each other, the places of the community, and how the development and use of technology might represent these different publics in terms of interests, needs, expectations and values.

3 Rurban as a new place for CSCW

In this section, I outline the rurban as a specific place for CSCW, the unique particularities of the rurban place and why rurban communities and CSCW are of mutual benefit to each other in terms of forging technologies and communities that offer diverse and supportive ways of living. I put forward current understandings of "rurban" drawn from CSCW, HCI and rural studies literature (3.1). The global South perspective advocates that a universal approach does a disservice to peripheral communities. With that in mind, I move from the literature towards a situated example of a rurban community, Northrock, in the South of Ireland (3.2).

3.1 Rurban as a contested place

There are various terms for a rapidly developing rural community, such as "rurban", "peri-urban", "new rurality", "exurban" and "urban fringe" (Busck et al., 2008; Eliasson, Westlund, and Johansson, 2015; Prakash, 2018; Torre, 2015; Woods, 2009). On a semantic level, most of these terms render the "rural" aspect invisible. I use "rurban" to acknowledge both "rural" and "urban" characteristics of rapidly developing rural communities (Busck et al., 2008; Gražulevičiūtė-Vileniškė and Vitkuvienė, 2013). I understand a rurban community as a rapidly developing rural community with intersectional

characteristics of both rural and urban (Buciega, Pitarch, and Esparcia, 2009). These communities are demarcated materially; in terms of proximity to urban centres, expanding population and modes of industry, and ideally; in terms of values, beliefs and traditions that are founded in rurality but evolving in response to new ways of living. My view of rurban communities is not necessarily cohesive with all understandings of rurban put forward. Such as that of Eliasson et. al (2015) when they describe "a transformation of rural communities to communities with urban values and lifestyles", which implies that rural features have somehow been erased; and Cattaneo and Gavalda (2010) referring to "the presence of rural features within an urban context, such as agricultural infrastructure at the verge of a city", which situates these areas fully in the urban. I also question Meagher's (2009) description of the rurban as "a threatened place, a marginalised place". The variances across these and other descriptions illustrate the lack of a unanimous definition, and literature has pointed to diverse experiences both within and across rurban places (Buciega, Pitarch, and Esparcia, 2009). Descriptions of "peri-urban" in the literature are also applicable to "rurban", such as those emphasizing mixed land use and livelihoods and stating characteristics of both urban and rural (Báez et al., 2020; Gonçalves et al., 2017). These areas are said to exist because of demographic and economic growth (Gonçalves et al., 2017). Demographics are impacted on by high levels of in-migration, making the social composition highly heterogenous (Allen, 2003; Prakash, 2018; Gražulevičiūtė-vileniškė and Vitkuvienė, 2013) and social interaction is said to be key in supporting cohesive community expansion (Brennan and Luloff, 2007). The global context of migration and the many refugee crises affect these previously rural communities and tensions can arise due to a rapid influx of new communities (King-O'Riain, 2021; Lichter and Brown, 2011; Shirley Martin et al., 2023; O'Malley, 2022; Woods, 2022). The risks of neglecting the rurban are recognised (Björling and Rönnblom, 2023) with calls for a critical rurban pedagogy that conceptualises rurban space to reduce inequalities (Stephens, 2019). In the European context, there are positive depictions of rurban areas

as well-being areas characterized by growth, and possibilities for more democratic and autonomous social and political processes (Eliasson, Westlund, and Johansson, 2015; Cattaneo and Gavaldà, 2010). However, there is an acknowledgement that when discussion of these communities is framed in the context of "urban sprawl", they tend to focus on challenges from the urban perspective and to see in-migrants as belonging to social groups with higher status than the local people (Eliasson, Westlund, and Johansson, 2015), relating to ideas around rural gentrification and contributing to a disempowered view of the rurban. In *Sociology of Urbanization*, the earliest text I have read that references "rurban", it is stated that "our society has always been controlled by a rural culture" (Sullenger, 1956). This balance of power has certainly been turned on its head and while there are some examples of work exploring the empowering and positive aspects of rurban communities, much of what is written focuses on issues due to urban encroachment and control, and a sense of loss (Meagher, 2009; Eliasson, Westlund, and Johansson, 2015; Prakash, 2018; Busck et al., 2008).

What the various literature highlights is that the rurban place is in a state of becoming. There are multiple interpretations and experiences of rurban life (Björling and Rönnblom, 2023; Lichter and Brown, 2011; Torre, 2015; Woods, 2009) and the rapidly increasing demographic in a still relatively small site makes for a uniquely interesting place for participatory CSCW that looks to understand dynamics of community identity and inclusion. New populations bring with them new knowledge, values, needs and experiences that need to be recognised and reconciled with the existing perceptions of community identity and place. There is a need for participatory processes that make visible these different experiences and perceptions to bring them into dialogue with each other. At the heart of this needs to be the facilitation and encouragement of conflicting voices to do challenge dominant narratives about any particular rurban place. Taking inspiration from global South computing, this includes engagement with power, agency and the acknowledgement of local capacity and expertise. The next section provides a situated real-world example of a

rurban community to help illustrate these various characteristics and challenges.

3.2 Description of an Irish rurban community: Northrock

As described in chapter 1, this research is situated in Northrock in the South of Ireland which has seen rapid diversification of its population over the past 20 years. I grew up in Northrock and still have strong family ties to the community. Being closely positioned to the community is seen as a strength in much of the literature on participation (Wallerstein and Duran, 2008) and rural HCI (Hardy, Wyche, and Veinot, 2019) as it supports actively building trust-centred relationships. It has also given me a degree of insight as I have witnessed the community transforming from the small rural village of my childhood to a much more diverse and sprawling place. Road infrastructure in the community was substantially improved in the 1990s. A large pharmaceutical industry was attracted to the area and there has been major housing development in the area in the last 20 years. These various factors have encouraged Northrock's expansion (SECAD, 2017).

I reference Hardy et. al's (2019) characteristics of rurality in describing Northrock, as I found them useful in assessing how Northrock relates to a traditionally rural community and where it diverges into something new. While traditional economies and businesses associated with rurality include agriculture and other primary industries, the majority of Northrock's population are involved in manufacturing and commerce (SECAD, 2017). Social and health services are generally seen as less diverse and comprehensive in rural areas (Hardy, Wyche, and Veinot, 2019). However, Northrock has strong social support systems in place. These support systems are a factor in both attracting and retaining new communities (Murray, Pantidi, and Hogan, 2019). With regard to population size and density, Northrock diverges from a traditionally rural profile. Typically, rural population demographics find that there are less immigrants and that populations are aging (Hardy, Wyche, and Veinot, 2019). Northrock has a large percentage of immigrants and the largest

age group is 35 to 39 years (SECAD, 2017). With regards to culture and values, Northrock has been found to exhibit some values typical of rural communities, such as a close-knit and supportive, interdependent community (Murray, Pantidi, and Hogan, 2019). In terms of social networks, rural communities are seen as high in bonding social capital with social networks often overlapping (Hardy, Wyche, and Veinot, 2019). This close-knit supportive network is evident in Northrock (Murray, Pantidi, and McCarthy, 2023). Community working groups have discussed biodiversity, economic opportunities, new populations, integration, the idea of the "ideal village", and individual and community well-being (SECAD, 2017) in the context of expansion. As such these areas are indicative of both the strengths of and challenges to Northrock as perceived by the local community.

This overview gives some insights into the dynamics and make-up of one rurban community and illustrates the kinds of challenges and opportunities rapid expansion brings to a rural community. Northrock is still relatively small and with a high level of interdependence, which has implications for a dissensual participatory process as it becomes difficult to challenge the dominant paradigms and perceptions in such a relatively close-knit social group (Robinson et al., 2021). This necessitates very sensitive participatory CSCW processes that allow for the negotiating, challenging and widening of perceptions in a way that is supportive and inclusive to all participants, and does not marginalise potentially vulnerable participants.

Based on the literature review and the characteristics of the Northrock rurban community, I next describe some of the requirements of participatory rurban CSCW and to put forward my case for using Socially Engaged Art (SEA) as an approach to participation that aspires to be pluralistic, creative and critical. This is done to challenge perceptions of what is possible and support participants in becoming active agents in creating and enacting new visions for community life (Bishop, 2006; Freire, 1967; Rancière, 2011).

4 Proposed requirements for rurban participation

As stated in Chapter 1 and at the outset of this chapter, I am interested in understanding if and how SEA might be of use to CSCW, particularly in the context of Northrock. I see a contribution in bringing SEA into the sociocultural and sociotechnical research field of CSCW due to shared interests in supporting cooperation and collaboration on collective social goals. SEA as an exploratory, creative and generative approach to understanding and critiquing social systems is relatively unexplored in CSCW. Integrating SEA has the potential to uncover new insights into sociotechnical processes and influence CSCW design for more equitable technologies and communities. Situating the work in CSCW is also beneficial to SEA as it brings the tradition to a new audience, configuring it to meet the needs of CSCW and so expanding the potential influence of SEA into computing research.

In the sections below, I describe the requirements of participatory rurban CSCW with regard to facilitating diversity, dissent, agency and polyvocality, while recognising and promoting situated local knowledge that centres, rather than marginalises minority rurban experiences. I go on to align these with SEA theory and put forward ideas on how SEA and CSCW can work together to support rurban development in a way that is mutually beneficial to both rurban places and CSCW, in terms of developing situated and thereby more effective technological supports and solutions to rurban challenges.

4.1 Challenging consensus

One of the most apparent hallmarks of the rurban place is the rapidly increasing and diversifying demographic. This gives rise to a heightened need for measures of inclusion, counteracting marginalisation and ways of recognising the many different values and perspectives present in the community.

Spaces become places when consensus is established about what kind of behaviours and interactions are supported and allowed by that place (Dourish, 2006; Harrison and Dourish, 1996). The rurban community will typically have

legacy understandings of place from its recent rural past. However, the rapid diversification of the population gives rise to a new range of possibilities for the interpretation and use of space, and its subsequent development. To leverage this new diversity necessitates challenging consensus around what is possible in rurban places and recognising the many different perspectives, experiences, values and needs of new community members. Different experiences are expected in any community, with multiple identities often at the heart of community literature and a focus on allowing for both unity and difference (Liepins, 2000). However, these differences are heightened in the pressurised rurban community. When thinking about how to challenge consensus in participatory rurban processes, I found it useful to review Jacques Rancière's "Distribution of the Sensible" (Birrell, 2008; Rancière, 2009, 2011), which refers to the tensions in social situations between what is visible and invisible, sayable and unsayable, audible and inaudible, thinkable and unthinkable; what kinds of things and processes are "sensible" and to/for whom they are sensible. Most importantly, how divisive those tensions can often be in communities, leading to a false homogenisation of experience that positions the dominant paradigm as the only experience, while marginalising others. Rancière also provides a definition of "consensus" - a collective unquestioning belief in a specific social order with fixed roles and functions assigned to its members (McCarthy and Wright, 2015). Consensus leads to a lack of awareness of perspectives and experiences that deviate from established norms, rendering inaudible the multiple voices that exist in a community. The challenging of consensus starts first as an internal process in each participant. This recalls the work of Brazilian educator and philosopher, Paulo Freire, where he talks about the need for "conscientization" - when an individual begins to think critically about their experience in the context of their political circumstances. He emphasises that this needs to go hand in hand with some kind of action to challenge these norms, followed by a reflection on that action, and then further (re)action. This process (which Freire terms "praxis") is seen as the means by which an individual challenges and changes their own mindset to effect change

in their wider community (Freire, 1967). Rancière's political analysis is central to McCarthy and Wright's (2015) analysis of the ways in which participation is configured and enacted across a number of different settings, where they state that "the modes of participation available to people are determined by the modes of perception available". Modes of perception specific to one group or another act as a filter on diversity in the community, rendering some aspects and experiences invisible and further promoting false consensus. This presents challenges to inclusive participation in community life and it is the job of participatory rurban CSCW that endeavours to support participants in turning spaces into places, to challenge and expand the "modes of perception available", and to provide multiple modes of participation to make visible marginalised experiences. Challenging consensus around the kinds of experiences and perceptions available in the community and making visible the many different understandings and enactments of rurban place needs to be a feature of participatory rurban CSCW that aims to leverage the new diversity of the rurban community as a strength, with the aim of greater inclusion, as well as greater local agency and imagination in terms of designing technology with and for these communities.

4.2 Supporting dissensus

This focus on diversity and making visible, sayable and knowable various experiences and perceptions gives rise to the question of how to support multiple voices in order to provoke a rurban polyvocality and challenge consensus. This is a question of configuring participation in equitable ways that challenge consensus and provide multiple means of taking part while working to acknowledge the social realities and experiences of all participants (hooks, 1994). There is much insightful work to be drawn on from Participatory Design (PD), CSCW and HCI to inform this. For example, PD and participatory practice in CSCW and HCI centre political concerns around equality, power and agency (Björgvinsson, Ehn, and Hillgren, 2010; Bray et al., 2022; Kuutti and Bannon, 2014) while highlighting the need to continually re-examine our

processes, practices and intentions when doing participatory work in order to keep these concerns foregrounded (Bannon, Bardzell, and Bødker, 2018; Bardzell, 2018; Bray et al., 2022; Holmer et al., 2015). I place the focus on power, agency and social change at the heart of rurban participation. I also take heed of warnings around how participatory practice can exploit, invalidate and disenfranchise local people when handled badly (Bardzell, 2018; Beech, 2008; Wright and McCarthy, 2015).

In response to the need to challenge consensus on rurban place as described above, I revisit Rancière, specifically his description of dissensus. Dissensus, according to Rancière, is an antidote to consensus, a creative and innovative act which challenges widely accepted norms and dominant hierarchies of experience. It comes about when an individual or group draws attention to something they feel is wrong or a wrong that they feel is done to them (individually or as a collective) and asserts their equality with those in solidarity with them, thus making visible aspects of their experience that had been rendered invisible by the accepted social structure. A dissensual response would creatively explore consensus in rurban communities and uncover and articulate what has been unsaid, unheard, and unquestioned with regard to rurban experience and perceptions of place. A key element of this would be the recognition of equality in difference to counteract any homogenisation and to support a recognition of the various ways of being and belonging in the community.

How do we recognise equality in difference? How do we recognise multiple realities and experiences? How is this achievable in interventional CSCW? I draw on bell hooks when I say we specifically need to pay attention to the various voices in our participant groups with regard to who speaks, who listens and why, and that this attention is a path towards recognition of the multiple voices present (hooks, 1994). I also look towards Bishop in that participants themselves need to be recognised as "divided and incomplete" and that participation needs to reject aspirations towards "social harmony" in favour of exposing social repressions (Bishop, 2004). I advocate for designing

participatory processes that re-examine questions of power and centre various forms of local knowledge. Aspiring to a dissensual and praxis-based process can be a support in carefully and sensitively challenging people's perspectives and making visible the various realities and experiences manifest in the community. This care and sensitivity is especially relevant in the rurban community, which retains a level of interdependence found in rural communities (Robinson et al., 2021). With regard to the rurban community and their specific needs around participation, I am interested in pluralistic approaches that are both expressive and generative, and that encourage positive and productive conflict, contradiction and dissent (Clarke et al., 2014; Holmer et al., 2015) in order to provoke standpoints, widen perceptions and build mutual understanding. With that in mind, I consider social engaged art (SEA) as a powerful tool to support dissensual participation, as I outline in the next section.

4.3 SEA as a critical approach to participation

Leading on from those requirements, SEA provides multiple modes of undertaking dissensus, conscientization and praxis. These can be useful to participatory rurban CSCW with regard to communicating multiple different experiences and promoting inclusivity and common goals. The aesthetics of SEA are based around challenging and often confrontational dialogue to create social bonds, mutual understanding and push forward social agendas (Stewart Martin, 2007; Rasmussen, 2017), and the aims of SEA are to strengthen social bonds, democratic feeling and individual agency (Bishop, 2006). SEA creates possibilities in participation that always aspire to be agentic and affirming, with a focus on transformaton and change-making and an emphasis on the value of each person's contribution in terms of their experiences, ideas and hopes for the future. The challenges lie in actualising these possibilities. Bishop (2004, 2006) cautions against assumptions around the extent to which individuals are able to participate and a lack of interrogation of ethical judgements made in favour of congenial participation. Beech (2008, 2009) discusses how an

unexamined participation can serve to alienate and neutralise participants in support of maintaining the status quo and Kester (2011) also emphasises the risk of shallow participation and encourages addressing existing conflicts from a grassroots approach. Olsen (2019) warns against tokenistic SEA work that over-simplifies, or projects assumptions onto, the issues faced by the communities involved. Tiller (2014) discusses the need for SEA to avoid being tokenistic, that it can become a form of "placation" and reminds us that SEA cannot escape some form of "co-option, compromise or complicity". Connections with communities and individuals have to provide genuine opportunities for creative expression and social change (Harrington, Erete, and Piper, 2019). An effective participation then involves uncovering, acknowledging and challenging power dynamics within the participant group itself and the outer context. It involves being open to questioning and sometimes rejecting our assumptions to create a sense of shared commitment towards a common goal. This is a challenging process that can involve a level of resistance. Each participant / researcher / facilitator needs to examine their own biases and be open to an unpredictable process that might challenge their expectations and assumptions and ultimately call them to reject them (Clarke et al., 2016; Petrescu, 2007). There needs to be commitments to understanding particular needs, values, places and issues, as well as respect for the expertise and experience that each participant brings to the process.

The SEA aims of individual agency, increased democratic feeling and stronger social bonds are shared with much CSCW. For example, CSCW has been interested in empowering marginalised groups to become more expressive and directive via digital work in order to increase self-reflection, civic engagement and cultivate social change (Bardzell, 2011; Clarke et al., 2016; DiSalvo, Nourbakhsh, and Holstius, 2008). CSCW has also looked towards supporting citizens in developing and presenting solutions to local problems (DiSalvo et al., 2009). CSCW has aimed to build social connection, develop agency and encourage wider participation in community life (Burgess, Foth, and Klaebe, 2006; DiSalvo et al., 2009; Fischer and Hornecker, 2011; Li et al.,

2020). SEA has been involved in CSCW to question ontologies and re-imagine relationships between people, culture and technology (DiSalvo et al., 2009), to explore complex and painful issues among domestic abuse survivors as they develop a new sense of identity (Clarke et al., 2013), and to fight technological exclusion through connecting with marginalised populations (Light et al., 2009). I advocate for further integration of SEA into CSCW to work towards more equitable and inclusive technologies and futures in rurban places. In the next section, I outline where and how SEA might be applied to participatory rurban CSCW.

4.4 Applying SEA to rurban CSCW

The sociogeographic characteristics of rurban places require imaginative, non-prescriptive and generative methods of participation that prioritise the many different kinds of local knowledge available, position participants as equal and expert in their experiences and challenge dominant consensus and assumptions about the affordances of rurban places. An SEA standpoint has the potential to centre participant values and expertise, work towards creating dissensus and make space for productive contradiction, conflict and dissent while advocating for technological and community development.

Integrating SEA shifts focus from developing technological solutions and towards using technology as a tool in an interventional participatory process working towards alternative futures. Designing these processes, it is necessary to connect with goals arising from community interests and concerns (Carroll and Rosson, 2013; Clarke et al., 2016; Le Dantec and Fox, 2015). In the rurban place, this involves a sustainable and equitable community expansion which retains positive aspects of rural experience while supporting inclusion of all community members and wide participation in community life. Central to this is understanding and supporting the complex dynamics involved in navigating identity and belonging while alleviating potential marginalisations. These experiences are often ephemeral, intangible and difficult to articulate. The generative, creative and praxis-based nature of SEA lends itself to nuanced and

sensitive explorations of these layered experiences in unexpected and non-prescriptive ways. It provides multiple modes of perception and communication through the various avenues of arts-based expression, both to work towards a greater understanding of these experiences and to identify where the rurban community needs further support. In the context of CSCW, such an exploration is useful in accessing hard-to-reach experiences and in working towards technological supports to rurban challenges around inclusion of new communities and changing community identity. Understanding those experiences that are less visible, less tangible and that challenge assumptions on community life offers opportunities to CSCW in developing more insightful and nuanced technological responses to rurban requirements. Using SEA as a vehicle for dissensus to perturb and challenge accepted norms allows participants to engage in challenging and confrontational dialogue that focuses on the SEA process and output, rather than on individual experiences or perspectives.

Before the SEA-informed participatory process itself, researchers need to understand as much as possible the values, needs and experiences of rurban participants in order to support multiple and often conflicting perceptions. With regard to attracting interest and buy-in to the work, this focus on community issues can be augmented with a focus on place-based social structures, cultural and symbolic markers unique to a particular community (Carroll and Rosson, 2013). For example, in an Irish rurban context such as Northrock, institutions such as the Catholic Church and GAA have traditionally been powerful community gatekeepers. There are supportive organisations such as the Family Resource Centre which have worked for decades with some of the most at-risk groups in the community. Connecting with and exploring the work of such institutions and organisations can provide strong entry points into community life. This all requires an amount of "work before the work" to get to know the community, and to have participants get to know the researchers. Researcher positionality is very important here, as researchers are active agents in these participatory processes (Clarke et al.,

2016; Light and Akama, 2012) and this needs to be acknowledged. Participant positionality is also crucial, as participants need to be recognised as experts in the workings of their local communities and ultimately the ones with the solutions to whatever social issues they are facing. In Northrock for example, there are well-known community leaders who can provide an expanse of useful and insightful information. It is also important to connect with newer community members who can offer different perspectives and whose freshness to the community can shed light on prevalent assumptions and norms in community life. Configuring this positionality relates directly to the idea of "equality in difference" and in the recently-rural rurban community, it is an important and delicate task to navigate with regard to long-term and new community members, where longevity in the community is often a marker of pride.

There are vastly differing social and cultural perspectives and experiences in the rurban community and both researchers and participants need to recognise this and be open to accepting different ways of knowing based on experience. Researchers need to give the same commitment as participants to support an equitable process. This requires a high level of reflexivity, empathy, openness and adaptability on the part of the researchers. Researcher / participant relationships are often difficult to initiate, navigate and maintain, depending on time and emotional resources and particularly in the case of SEA, where one aim is to bring opposing perspectives into dialogue with each other. The researcher is required to act as a facilitator for challenging dialogue around social, cultural and political practices (Clarke et al., 2016) in order to disrupt unquestioned narratives and beliefs (Clarke et al., 2014). Despite the challenges, dynamics of relationship building, trusting in process, engaging with complex social challenges and working towards cultivating social change, all make SEA a strong candidate to explore sociocultural and political themes with rurban communities in order to work towards sustainable and equitable community expansion.

Integrating SEA into rurban CSCW places agency, democracy and the development of social bonds at the centre of rurban participation. It involves identifying consensual norms and assumptions, making these visible to all participants and challenging them through a dissensual and praxis-based process that makes room for conflict and contradiction, while navigating the interdependence of the community and supporting mutual understanding. Taking an SEA standpoint in participatory rurban CSCW allows us to integrate the practices and processes of SEA to support a careful negotiation of multiple, sometimes conflicting, experiences and perceptions within the evolving rurban place. It makes the participatory process inherently reflective and critical, as participants are supported in examining and articulating their experiences to work towards alternative visions of community life. For participatory rurban CSCW, this is particularly useful in addressing complex social issues around identity, belonging, inequality and marginalisation.

5 Charting a critical, participatory, rurban CSCW

I expand place-based CSCW to include an emerging place for participatory, social justice-oriented and community-based CSCW: that of the rapidly developing rural (rurban) community. In this, I am inspired by work in global South CSCW that elevates the expertise of local, "peripheral" communities, recognising that marginal places are full of possibility, innovation and imagination. I am also motivated by recent rural HCI that names the politics of loss leading to the potential and vitality of rural life going unrecognised and calls for research in rural contexts. Global South and rural CSCW are political, in that they are concerned with challenging hegemonic power structures to provide new perspectives and opportunities to both CSCW and the populations it serves. Rurban CSCW follows in the same vein and participation that works towards challenging dominant paradigms and making change is central to the fulfilling of these aspirations. I put forward an agenda for participatory rurban CSCW that centralises the sociogeographic characteristics

of rurban life and incorporates an approach to participation rooted in the generative and critical nature of SEA.

There are layers of rapidly evolving histories and understandings of rurban place as new populations arrive with new cultures, approaches and associations of place-based community life and existing populations work to reconcile their experiences and images of community life with these changes. Rurban communities offer great potential for innovation and imagination in community life and technology design, while also being susceptible to failing to adapt and grow with new populations. A high level of interdependence can make it difficult to hear dissenting voices and impacts on technology use and appropriation as it centres values around collegiality and reputation (Robinson et al., 2021). This constitutes a unique challenge to rurban participation, considering the heightened need to hear conflicting perspectives. Examining power structures and challenging dominant narratives involves a level of discomfort, resistance, even anger and pain as participants are asked to question and sometimes let go of those narratives that they have found useful, comforting or supportive. Global South, SEA and decolonial literature all stress the importance of positioning participants as experts and engaging with them on their own terms, in their own places and around issues meaningful to them, while acknowledging any obstacles to participation, and the difficulties inherent in challenging consensus. We need ways of revealing conflicts that are nuanced, subtle, open to interpretation and generative in terms of creating further avenues to explore community life.

This leads me to propose the value of SEA as a pluralistic and dissensual practice that aims to disrupt dominant narratives and highlight multiple perspectives. SEA gives participants multiple modes of participation and expression that are open to individual interpretation and adaption. The aspects of dialogue and making are central in SEA praxis-based processes of action – reflection – (re)action (Freire, 1967). Centralising meaningful dialogue involves asking the question: what is meaningful dialogue in each specific rurban context? And how is this facilitated? Focusing on Rancière's proposal to

investigate the "distribution of the sensible" is useful here as an outcome of a SEA process to widen the perceptions of what is possible and available in community life. SEA involves creative expression of issues through some kind of non-prescriptive aesthetic and political output. Making SEA is empowering and motivating as it gives ownership and agency to participants. It is generative, exploratory and has the potential to be disruptive. It is dialogical in nature and can provide ways-in to difficult topics: describing aesthetics, audience and intentions of a SEA piece can reveal and challenge assumptions, helping people explore a topic in "safer" way while still being encouraged to be radical and experimental.

Facilitating such a process in the rurban context involves a number of challenges. We need to understand how local residents experience rurban life and the specific characteristics their community holds for them. Research needs to be done on the various contested and emerging identities in the community as well as the dynamics of inclusion around new and existing populations before undertaking participatory rurban CSCW. Connecting with community leaders and organisations is essential in identifying what specific issues any one rurban community might have, and in building equitable participant / researcher relationships that are mutually beneficial and non-extractive. Drawing again on Hardy (Hardy et al., 2019; Hardy, Wyche, and Veinot, 2019). we need to recognise where rurban communities are resourceful and resilient, avoid making assumptions about what rurban people might want, need, value or have and apply these insights to the design and use of sociotechnical systems and participatory processes. We also need practical examples of participatory rurban CSCW done from an SEA standpoint to understand how best to both serve these communities and advance rurban CSCW. This thesis aims to address these various research questions and to develop our understanding of both rurban as a place for CSCW, and the benefits and practicalities of applying an SEA standpoint to participatory rurban CSCW through empirical research situated in Northrock.

6 Conclusion

This chapter proposes rurban as a new "place" for CSCW and contributes an initial sketch of rurban sociogeographic requirements. It goes on to contribute ideas around how to design participation in such settings, drawing on SEA as an approach with potential to support rurban requirements, and outlines my future trajectory of work with Northrock to further explore both the rurban place and the SEA approach to rurban participation. Working with rurban communities gives CSCW the opportunity to develop new approaches to cooperative work in small, heterogenous communities with conflicting needs and viewpoints, while identifying and working towards shared goals around community life. Equally, there are implications for the innovative design of technology when we pay attention to the particular needs and expertise of rurban communities. As CSCW seeks to address major challenges around cultivating community and sustainable and fulfilling ways of life, the rurban as an emerging place for CSCW offers exciting possibilities for new approaches to participation and the design of sociotechnical systems. Integrating SEA in rurban participation gives us a range of tools and approaches to sensitive and challenging participation that has the potential to support a rich understanding of experience and to access the imagination and innovation of rurban communities, leading to more effective and useful technology design for and with these communities. This thesis describes my engagement with an Irish rurban community and relates experiments in rurban SEA to inform participation in pressurised and complex community contexts.

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Chapter 3: Methodology

1 Introduction

As many of the chapters presented in this thesis have been written as papers, they contain method sections relating to the particular study, or studies, described in those chapters and cover aspects such as a study design, participant recruitment, data collection and analysis and final results. This chapter describes the overall research standpoint, and why this was appropriate for this context. It also gives more detail on the methodology, methods used, as well as researcher positionality and reflexivity.

Three studies are reported across the chapters of this thesis. The first study, a series of focus groups, provided data on the lived experience of Northrock, and the strengths and challenges of rapidly developing rural life as perceived by the participants. The following studies (digital storytelling workshops and a digital art summer school), explored the integration of socially engaged art (SEA) as an alternative approach to participative CSCW with rapidly developing rural communities. The digital storytelling workshops had a dual aim of learning about the lived experience in Northrock from a teenage perspective and delivering and evaluating participative SEA-informed design workshops to further explore points from the focus groups with the teenagers using the creation of digital stories as a vehicle for this exploration. The digital art summer school adapted the SEA-informed process from the workshops with a view towards developing more provocative artwork as well as more critical standpoints among the participants. All research conducted was qualitative, as it focused on discovering typically non-quantifiable aspects of complex human experience.

The following section discusses the research standpoint, paradigm, methodology and methods used, giving my rationale for why I felt these various approaches and decisions were relevant to these particular research aims. I came into the PhD with experience as a digital media designer and Socially

Engaged Artist. To move beyond design or SEA and to rigorously examine the sociocultural experiences of Northrock, I needed to develop skills in social research and community psychology. I applied to the School of Applied Psychology, UCC. The School has an exemplary People and Technology group, as well as a long and proud tradition in applied, multi-disciplinary, community-based research. This situating of the work had an influence on research design and methodological decisions, as described in this chapter.

2 Research standpoint

Chapter 2 of this thesis set out an argument for why Socially Engaged Art (SEA) is a useful and appropriate approach to participative rurban CSCW. This argument was based on an exploration of SEA theory and practice, and a literature review of place-based, social justice-oriented CSCW and HCI. The key aims of SEA are typically to increase agency, democratic social processes and stronger social bonds through the creation and dissemination of arts-based explorations of social justice issues to effect individual and social transformation (Bishop, 2006; Olsen, 2019). The central aesthetics of SEA are those of dialogue, dissent and confrontation in order to progress those issues (Freire, 1967; Bishop, 2012; Olsen, 2019; Fernández López, 2022). These aims and aesthetics have influenced the design, delivery and analysis of the studies described in this thesis. Paulo Freire's (1967) description of conscientization and praxis as means to work towards critical thinking and activation of participants particularly informed the workshop and summer school studies, where participants created SEA. Taking an SEA lens into designing, delivering and analysing the three studies meant centralising localised knowledge, effective dialogue and participation to support self-expression, reflexivity, mutual recognition and explorations of multiple participant realities.

The next sections describe what research paradigm, methodology and methods this research standpoint connects with. This approach is particularly

useful to participatory, community-based and social justice-oriented CSCW that aims to gain a rich and nuanced understanding of participant experience while providing avenues and supports for participants to articulate, share and critique that experience with a view towards imagining alternatives. This connects with emerging areas of design such as speculative design, design futuring, critical design and adversarial design. It also helps to work towards developing more inclusive and equitable technologies in terms of providing engaging participatory experiences that allow for multiple viewpoints, experiences and realities to be recognised and explored.

2.1 Research paradigm

Having an SEA-informed research standpoint means that in the context of this research, knowledge is constantly created and negotiated through dialogical processes (Ross, 2006; Kester, 2011; Freire, 1967; Birrell, 2008). As SEA aims to address social justice issues in the community and ultimately create change, this research takes a Pragmatist approach that positions the value of knowledge as being related to its usefulness as a tool for action (Cornish and Gillespie, 2009). Pragmatism positions action as the foundation of knowledge and centres the usefulness of that knowledge as a metric of evaluation (Kivinen and Ristelä, 2003). This connects with SEA tenets founded in Freirean philosophy that looks at praxis (as a process of action, reflection and re-action) as the basis of consicentization (in terms of individuals developing the ability to both critique and challenge social experiences and realities) and any resulting social change (Freire, 1967; Verschelden et al., 2012). In the context of Northrock, the need to direct the future of the community in sustainable and equitable ways, while supporting dynamics of inclusion and belonging suggests the suitability of a Pragmatist epistemology when evaluating knowledge created via the research. This focus on sustainability and equity also connects with the Pragmatist focus on the purposes and consequences of knowledge created (Cornish and Gillespie, 2009) – is this knowledge of use to this community? Can the community use this knowledge to help achieve its aims? These are questions

that were continually asked when designing the research described here. Given that I was in the highly critical and analytical context of the School of Applied Psychologist I had the opportunity to discuss Pragmatism and the questions above in reading groups with colleagues from across the School. Ethical questions, such as those around the role of the researcher, positioning of participants and evaluating the "usefulness" of knowledge created, were continually posed by colleagues in the School and this helped me in developing a deeper and more insightful understanding of the implications of a Pragmatist epistemology in this context. The Pragmatist value on practical activity and centring questions around whether or not the knowledge serves a purpose, and what and whose purpose that might be, is directly aligned with SEA intentions of supporting participants in identifying their social justice issues and being more critical, active and agentic in their communities. With regard to the research aims in Northrock, a Pragmatist framing of knowledge within a Constructionist research paradigm is of use in terms of opening up useful points of inquiry with participants to both learn about the community and support dynamics of praxis and consicentization in participative CSCW.

2.2 Methodology

The methodological approach adopted throughout this PhD facilitated understanding the lived experience of rapidly developing rural communities, and the related dynamics, such as identity, inclusion, marginalisation and belonging that happen as a community expands and diversifies. It was also intended to support an investigation into how SEA theories and practices can be of use to CSCW in pressurised communities working on complex social issues. Situating the research in a psychology school, rather than an art or design school, meant that I developed a deep understanding of what informs methodology in terms of an intention to stimulate as well as to inquire, to actively generate knowledge and to adapt methodologies and methods to specific people, places and contexts. While the focus in an art or design school is typically on making, doing this work in a school of psychology gave it a more

critical lens. There were constantly questions posed around ethics, intentions and implications to a level that I had not previously encountered in my art and design education. As a result, I developed a confidence in discussing my research in a critical and sensitive way that could do justice to the lived and felt experiences accessed by the methodology described here.

The methodology drew from SEA theory and practice as well as insights from feminist HCI, critical design and social justice-oriented design. Using art-based frameworks in CSCW and HCI positions methodologies and methods as flexible and generative, rather than prescriptive (DiSalvo et al., 2009). Specifically drawing on SEA centres the goal to effect some social change through dialogical and dissensual processes to recognise, name and challenge social and political realities. It has implications for how methods are deployed that examine power dynamics, are generative, support polyvocality and prioritise local participant expertise while advocating for participant agency. Integrating SEA into a methodology for CSCW repositions technology as a prop to support dialogue rather than a solutionist device (DiSalvo et al., 2009). It also means that the researcher is an active agent and needs to promote participant concerns as a core value in the research (Clarke et al., 2016; Beck and Purcell, 2013). Art-based methodologies are seen to allow greater modes of perception as participants express their experiences through multiple art-based processes and outputs (McNiff, 2008; Cole and Knowles, 2008). Given that the research involved working with diverse participants with many differing experiences of community life, and that the various dynamics mentioned at the beginning of this section are as political and collective as they are personal and individual, a SEA informed methodology was appropriate for the research.

Taking a Pragmatist approach, and informing that approach with SEA principles connects with elements of feminist HCI which focuses on knowledge as a tool for action towards individual and social change (Bardzell, 2011). Feminist methodologies advocate critiquing and resisting the status quo (Reinharz and Davidman, 1992), which is of use in Northrock where assumptions about community identity are potentially limiting and even

harmful to the sustainable development of the community. Feminist HCI also centres the expertise of the participant, actively pushing against hegemonies of knowledge and recognising the validity of individual and situated experience as the basis of localised, contextualised and agentic knowledge (Bardzell, 2011; Fox et al., 2017; Ahmadi et al., 2020). Aspects of a feminist HCI methodology most relevant to this work include an empathetic and equitable relationship with research participants, researcher self-disclosure (for example, on my own experiences growing up in Northrock), a commitment to constant reflexivity, and the use of diverse and mixed methods (Bardzell, 2011).

The methodology was also informed by critical design, which positions design as a provocation and looks to disrupt and challenge social and cultural norms and assumptions (Bardzell et al., 2012). It connects with social justice-oriented design, which brings forward commitments to conflict, reflexivity, personal ethics and politics (Dombrowski, Harmon, and Fox, 2016). These considerations also impacted on the configuration of the methods, as described below.

2.3 Methods

While the methodology described above lends itself to a multitude of methods, two methods of qualitative data collection were used in this research: focus groups and SEA participatory workshops, which are described here. These methods were configured according to the methodological approach described above and aimed to be flexible, generative and participant led while looking towards some useful social change. Central to the configuration of these methods was the idea of dialogue as a vehicle for change (Kester, 2011; Bishop, 2004), and the recognition of multiple, conflicting experiences and perspectives (Bishop, 2004; Rancière, 2011). With regard to participation, both researcher positioning and the positioning of all participants was in line with SEA practice which focuses on agentic and affirming qualities of participation (Clarke et al., 2016; Petrescu, 2007) and influenced by Freirean and Rancièrean principles around equal and non-hierarchical knowledge

exchanges as much as possible. A resulting point of analysis was around the quality of dialogical exchanges to promote dissensus and mutual understanding and recognition (DiSalvo et al., 2009).

Being in a school of applied psychology not only gave me a more nuanced and critical understanding of methodology, but also of the selection and application of methods. I was aware due to the complexity of the community I was working in, and the kind of research I was involved in, that a prescriptive application of any method would not be appropriate, and methods chosen would need to be adapted to the participant groups and specific aims of each study, in order to gain a multi-faceted understanding of Northrock and the use of SEA in CSCW design with this population. The People and Technology group mentioned previously, and the wider School of Applied Psychology centres the lived and felt experience of people with the aim of developing useful knowledge and approaches toward alleviating social and individual struggles. This people-centred approach prompted me to reflect on how the methods chosen could and should be adapted to both the intersectional and diverse identities of participants and my own identity as researcher. Situating the research in CSCW as a field of application also had implications for the necessity of alternative application of methods in response to specific contexts and populations. With this in mind, I describe why and how each method was chosen and applied in the sections below.

2.3.1 Focus Groups

The first study was a series of focus group with Northrock adults. Focus groups are a well-established method in qualitative research. In the case of this research, the focus group format was chosen as it allowed for a participant-led discussion and the production of nuanced data giving us an insight into life in this community, as well as drawing comparisons across participant experiences (Carey and Sutton, 2004; McLean, 2014; Mundell et al., 2004) while positioning participants as experts in local knowledge. Focus groups have been used in exploring social, cultural and creative participant experiences with a view to understanding inclusion in community life (Mundell et al., 2004).

Following a loose structure is compatible with SEA and feminist HCI as it gives space to participants to express their experiences and perceptions (Carey and Sutton, 2004; Bardzell, 2011). As this first study was intended to develop my understanding of the community as a basis for following SEA design, and was not interventional as such, a loose focus group discussion was chosen as an appropriate method that was flexible enough to gather nuanced and diverse information without being prescriptive or directive.

The approach to using focus groups in this research was guided by the research standpoint, paradigm and methodology as outlined above, as well as by conversations with my supervisor and colleagues in the School. The focus groups aimed to provide data on participant experience and to value the local, situated and often conflicting knowledge of each participant, and so it was important participants guided the focus groups as much as possible while taking care to avoid any one voice dominate conversation. Given my own positionality as an active agent in the research, and as a past member of this community, I voiced my own experiences relating to Northrock where appropriate. As such, the focus groups were designed to allow me to have a voice in terms of sharing my own experiences as someone from the community, while not requiring me to direct the process to a large degree. Instead, the application of focus groups in this context was flexible enough to allow a mostly participant-led dialogue, centring those lived and felt experiences I hoped to access. As a result, data was both broad and deep. Delivering the focus groups across multiple demographics helped build a very detailed and multi-faceted picture of life in Northrock and allowed me to identify complex shared and conflicting experiences across community life. While participants in the focus group study did not engage in any SEA discussion or production, the design, facilitation and analysis of the focus groups was guided by the SEA aims and aesthetics as described above. The focus group data is reported on in chapters 4, 5 and 6.

2.3.2 Workshops

The second two studies (the digital storytelling workshops and digital art summer school) were both concerned with trialling the use of SEA to CSCW

in this particular context. As such, they required me to be more active as a facilitator and researcher as they would both be interventional and political in terms of pursuing the aims of SEA. I chose to design workshop studies based on my experience as a SEA facilitator and further informed by insights from discussions in the School and familiarisation with HCI, CSCW and community psychology approaches to workshop design.

Participatory, community-based workshops are a very typical activity in both SEA and HCI (Rosner et al., 2016; Edwards, Collins, and Goto, 2016; Peer and DiSalvo, 2019). The approach to designing these workshops again drew heavily on SEA, centring dialogical and confrontational aesthetics where possible (Bishop, 2006; Beech, 2008; Kester, 2011). SEA-informed CSCW and HCI workshops are not new, and SEA has been used to (for example) explore the experience and support the agency of domestic abuse survivors (Clarke et al., 2013), to include of older people in technology design (Light et al., 2009), to examine sustainability practices (DiSalvo et al., 2009), and to think about how to design more effective and equitable participation (Van Klaveren, 2012; Holmer et al., 2015; Rosner et al., 2016). Discussions with colleagues in the School also brought to bear the community psychology approach to workshops in research (Tarr, Gonzalez-Polledo, and Cornish, 2018; Tint, McWaters, and Van Driel, 2015), which highlighted to me specific concerns around, for example, recording data and what constitutes as data (Tarr, Gonzalez-Polledo, and Cornish, 2018), as well as underlining the need to centre positivity, openness and creativity (Tint, McWaters, and Van Driel, 2015). The influence of the School and the community psychology approach also meant that my understanding and experience of workshop facilitation was expanded to consider the social realities created through the workshops, rather than seeing them as solely as a tool for action or investigation of existing reality (Tarr, Gonzalez-Polledo, and Cornish, 2018). Final workshop design drew on feminist HCI methodology as well as existing SEA-informed participatory workshops that looks towards working with people around complex personal

and political issues to work towards social change using creative and arts-based means while challenging norms and assumptions.

Both workshop studies used SEA in their design (centring activities to support dynamics such as dissensus, conscientization and following a praxis-based format) and the actual work undertaken by participants (creating digital stories and digital art pieces on their experiences). Chapters 4 and 7 report on the digital storytelling workshops, and chapters 8 and 9 report on the digital art summer school.

3 Researcher positionality and reflexivity

The research standpoint described above also had implications for my positionality as a researcher. My own identity as a researcher, design educator, SEA practitioner and also as white Irish, coming from Northrock, having lived there until I was 22 and with continuing strong ties to the community all have extra implications for my positioning within the study and the need for reflexivity.

My positionality is in line with the idea that as researchers in community-based contexts, we are not discovering realities, rather we are participating in enacting them (Le Dantec and Fox, 2015). This recognises the researcher as an active agent in generating data. It also resonates with the idea that in this community-based and social justice-oriented work, knowledge is brought into being through dialogical processes and the researcher is part of that process. Taking this approach meant that it was appropriate for me to be transparent, adaptive, to share my own experiences with participants and to be highly reflexive in examining my own perceptions and values that I brought into the work (Clarke et al., 2016, 2013; Bardzell, 2011).

Due to growing up in Northrock and revisiting often, there was an increased need to have a high level of reflexivity while designing, delivering and analysing these studies. I have an in-depth knowledge of the community and have my own experiences of some of the most impactful events and personalities in

Northrock's development. Being known to the community was very useful in accessing the time and trust of community leaders, and in turn of the participants themselves. This is cohesive with research that details these benefits of being known to a community before developing research with that community (Clarke et al., 2016; Hardy, Wyche, and Veinot, 2019; Unertl et al., 2016; Wallerstein and Duran, 2008). My knowledge of the community also played a role in my thinking on how to design equitable participation with Northrock. I felt an extra responsibility to ensure the research was useful to the participants, the organisations involved and the wider community. Throughout the project and continuing afterwards, I made any knowledge, expertise and resources I have readily available to the various community leaders and groups that I worked with. I was in a position to donate Mac computers to community organisations due to a lab upgrade in my own university. I also ensured that participants signing up to the workshops and summer school would receive some training in digital media, art and design skills. Designing the work with pragmatist SEA principles in mind meant that it needed to be of direct benefit to the community involved and intentions around how to deliver on this needed to be constantly examined, evaluated and acted upon.

With regard to facilitating all three studies, my background knowledge of Northrock was useful in recognising local places and businesses, as well as events and personalities in the community's history as they were mentioned across all three studies. For example, I lived in the community during the East Vs West conflict described in chapter 5 and was aware of these tensions at the time as an inarguable fact of life in the village. This also impressed on me the significance of the fact that "New Rock" participants were completely unaware of these historical tensions, and the testament that was to processes of inclusion that were delivered at that time. Equally, when local businesses were referred to by the name of the owner (eg "Franks"), I did not need to interrupt the flow of dialogue to ascertain what was being discussed.

Overall, my history with the community was of significant benefit to the research, in terms of developing relationships, building trust and gaining access

to some of the key organisations in the community. The extra context that I was able to give to discussions was useful in avoiding interruptions to the flow of conversation and identifying opportunities to steer the conversation in ways beneficial to the research. I found insightful literature around "insider research" (Wilkinson and Kitzinger, 2013) that highlighted how we are always both "insider" and "outsider" to our own research, and discussed various strategies for negotiating this.

Often throughout this thesis, I refer to "researcher / facilitator", because I very much felt the necessity of, and sometimes tension between, the two roles, as seen in the following excerpt from my reflection after one of the digital storytelling workshops:

> The various groups really struggled with defining their theme. [...] This was also thought-provoking in that I felt as a facilitator, I could have supported and guided the students more on their various definitions. I know they could have come up with more insightful work based on their previous discussions, but I felt as a researcher I should remain more impartial and not guide things too much, this seems like a conflict between being actively engaged in the process and holding back for fear of any bias creeping in. Ultimately though I felt this was de-motivating as I came across somewhat lukewarm, telling them it's fine when I know they could do better with some guidance, and also it works against the aim of trying to support them in becoming more critical and active in terms of changes that could be made. This is definitely something I need to continue observing and thinking about.

My thinking on this developed throughout the process of doing the work and reading on the active nature of the role of researcher. I agree with feminist thinking around how assuming or projecting neutrality is false, and works to enforce dominant and hegemonic paradigms (Fox et al., 2017; Bardzell, 2011). I also agree with research that points to the central role of the researcher in participatory processes in terms of actively creating conditions for participation and knowledge creation, and the necessity for intentionality around this (Light and Akama, 2012; Blomberg and Karasti, 2013). Our values and experiences as researchers always influence our research practice (Sengers et al., 2005;

Fryer, 2022) and it is crucial to constantly consider and communicate these throughout the research process. I return to this point in the discussion chapter (10).

Throughout this chapter I have referenced the impact of doing this research in the School of Applied Psychology, rather than an art or design school. Undertaking the work in such an environment very much influenced my own developing identity as a researcher, not solely a design, SEA or even HCI / CSCW researcher, but one embedded in social and community psychology practices. This was influenced in very practical and immediate ways, in the conversations I had with colleagues (both students and staff) in the School, as well as my participating in reading groups such as People and Technology and BigQ. These conversations very much sharpened my attention on ethics, positionality and implications of research. They developed my thinking around generating knowledge, role of researcher and approaches to key concerns such as bias in analysis. A dialogue arose between me, the School and Northrock, where learnings around participation, community engagement, digital media design, SEA and HCI/CSCW were exchanged. If I had done this research somewhere else, there may not have been such a critical and applied lens on methodological and ethical aspects of research development, or the implications of bringing these various threads (design / SEA / psychology) together.

4 Overview of studies

This section provides an overview of how these methods were configured and delivered in the research. Extra information on each study is available in the related chapters in this thesis, and in the appendices.

4.1 The focus groups

The focus group study was the first of three studies comprising the empirical work of this PhD. It involved a series of three focus groups, each one hour

long, with key community groups. These took place between April and May of 2018 and lasted between sixty and ninety minutes. SEA did not feature explicitly in the focus groups. However, the design of the focus groups considered the aims of SEA. For example, facilitating confrontational dialogue, examining social agendas and developing mutual understanding through exploring conflicting perspectives (Martin, 2007; Rasmussen, 2017). These aims guided the formation of the initial prompts used in the focus groups (see appendix) as well as the ways conversations were guided once they began to flow, with an interest in discovering participant values, responsibilities, cultural and social experiences and then bringing these interests into the analysis of the data. Having said that, focus groups were conducted with an open interest in participant experience and any direction was quite loose, with discussion generally flowing in whichever way participants were taking it.

The aim of the study was to learn more about the lived experience in Northrock from the perspectives of adults across different backgrounds and demographics. It was important to involve both new and long-term community members, with a mix of nationalities and ethnicities. The community events and meetings attended earlier in the project put me in contact with some key community leaders. These individuals were all long-term community volunteers and had stewarded the community through many stressful periods. They had an in-depth knowledge of the community, the various groups and agendas within it and how it had developed over the years. They were also determined to influence the trajectory of the community as it expanded and saw the research described here as useful to their own objective of strengthening the sense of community identity and providing opportunities for inclusion of new community members. These individuals were all instrumental in promoting the focus groups, garnering wider interest in the community and providing access to a wide demographic.

Three community groups participated in the study. The first of these was the Family Resource Centre (FRC). The FRC has been active in the community since 1991 and has provided support to those in need throughout

that time. Through these activities, they have first-hand knowledge of the dominant social problems in the community and have supported community members through a multitude of challenges relating to a changing community over the last thirty years. The second community group was the Historical Society, a special interest group that meets monthly to discuss strategies to preserve and promote the culture and heritage of the community. I attended one of their meetings prior to the focus group. Membership is open and the group is mostly retired men who have lived in the community over 15 years. The final group was an Inclusion / Integration group, set up to examine how best to support inclusion of new community members. I attended three of their meetings prior to the focus group. Again, attendance is open. The demographic is quite wide in terms of age and very mixed in terms of gender, ethnicity and nationality. In total, 20 adults took part across the three focus groups.

The focus groups were loosely structured around prompts on: life in Northrock, changes in Northrock over time, and inclusion and village identity as perceived by the participants. Conversation was lively and very much participant-led, taking on new directions outside of the themes. This resulted in quite a varied data set and multi-faceted insights into community life. While this was complex to analyse, it allowed what was truly relevant and important to the participants to come to the fore.

The study provided data on the situated rurban experience of adults from a range of backgrounds, shedding light on community identity and inclusion. The outcomes of the study informed the more effective and sensitive design of the subsequent study, the digital story telling workshops, described below.

4.2 Digital storytelling workshops

Following on from the focus groups, the next study was a series of nine digital storytelling workshops with eighteen teenage girl participants in a local school. The study aimed to shed light on the teenage experience of Northrock, and to provide directions as to how SEA might be used in CSCW with pressurised

communities in order to work towards more sustainable and equitable futures. The workshops took place from February to April 2019 and each was eighty minutes long. The girls were all in transition year (TY), a year after the first Irish state secondary school exam which is typically designated for extra-curricular, personal development activities. The study took place in an all-girls school, as there was at the time no mixed-gender secondary school in the community. I initially contacted the TY coordinator in the school to discuss my idea and to plan how best to design and deliver the workshops in a way that would be beneficial for the school and the girls. Once the details of the workshops were finalised, I wrote an email for the TY coordinator to send to all TY students. The email described the workshops as an opportunity to learn digital storytelling skills (pre-production, video production, editing) while exploring their experience of growing up in Northrock. A high level of participant autonomy and ownership over the process is important in SEA. With this in mind, the participants were given information prior to the workshops which emphasised its hands-on nature and the requirement of participants to play an active and generative role in the process, bringing their own perspectives, experiences and ideas to discussions, ideation and making. At that time in the school semester, TY students had a choice of three "special interest" modules that would not be assessed. Students had the option to come to the first workshop and then decide if they wanted to remain in this module, or transfer to one of the others. After the first workshop, one student who was initially interested in the workshops transferred to one of the other choice modules. The others chose to remain for the duration of the workshops. Participants were also supplied with information and consent sheets prior to the workshops, as seen in appendix 4 (the final ethics application). These emphasised that the participants could withdraw their consent and data at any time during or up to two weeks after the completion of the workshops. The teenagers all knew each other prior to the workshops and had a knowledge of each other's family backgrounds and various interests. This was useful in creating an informal and collegial atmosphere in the workshops. Diversity in

the group was important to represent and engage as wide a range of experiences and perspectives as possible with the aim of expanding awareness and understanding of other realities present in the community. The final participant group was reflective of the diversity of the school involved, which meant that there was a wide range of backgrounds and experiences present.

This was the first study where participants created socially engaged art on their experiences in Northrock. During the study, participants worked with their interpretations of "identity", "inclusion", "culture" and "community". These four focal points were developed from the previous focus group study with adults in the community and were integrated into the digital storytelling workshops to gain the teenagers perspective on some of the adults' key areas of interest and concern. The digital storytelling workshops then used SEA as both a method (to learn about teenage experience in Northrock), and as an intervention (a process undertaken by participants to create some digital output based on their experiences with the intention of supporting them in querying those experiences). Participants were supported in developing their perspectives and ideas, and guided through a video production process to capture and share ideas using a digital storytelling format. The workshop design drew on the Freirean model, where knowledge is recognized, developed and transferred in both directions and care is taken to position each person as an active and equal agent in the process. While this can be difficult to achieve, especially in a school setting where hierarchies of authority are typically very strong, I encouraged this throughout the workshops through participating in activities when I could, going by my first name and being open and transparent about my own experiences and expectations related to the workshops.

The study found that while SEA as a method to gain insights into the girls' experiences worked very well, the workshops had been less successful in moving the girls to critique those experiences with a view towards imagining alternatives. As detailed in chapter 7, the study shed light on surprising, sometimes harmful assumptions and norms around community life, but these went almost unnoticed by the girls, let alone critiqued or disassembled. I felt

on reflection that I had not fully supported the Freirean dynamic of praxis in the workshop design, and I wanted to place rapid making – critique - re-making at the heart of the next study. Creating multiple digital art expressions of a particular experience and sharing those with a group I thought might move participants further in the direction of critical thinking with a view towards developing a sense of agency and purpose around their vision for their community. This was a focal point of the final study, the digital art summer school, which is described below.

4.3 Digital art summer school

The final empirical study in this PhD was the digital art summer school, which took place in in July and August, 2020. While there was an amount of nuanced and insightful data gained on the teenage experience in the digital storytelling workshops, the final outputs were somewhat homogenous, and the participants did not develop a more critical standpoint on their experiences. This study worked to adapt the SEA-informed process to address this concern in the digital art summer school. The summer school workshop design was also adapted from the digital storytelling workshops in terms of participant demographic and location, with a mix of age and genders taking part and an intention to hold the summer school in a shared community space not affiliated with any school. It was positioned as a kind of art-activism, with a very clear invitation to be critical and generative in imagining alternatives from the outset of the process. Participants were also told that they would be introduced to a range of digital making tools and would be given support in developing art and design skills.

The summer school was designed with a colleague, Dr Geertje Slingerland. Geertje approached me at the Participatory Design Conference in Ghent, 2018 with the idea of us collaborating on a study together. This was based on her interest in placemaking, and my interest in using SEA in community settings to investigate social justice issues. We stayed in touch and as the summer school study approached, I invited Geertje to design and deliver the study with me.

We both intended to write up aspects of the study for our PhD theses, and so we were both equally invested in developing and delivering the study. Following the digital storytelling workshops, I felt that a second facilitator would be of benefit in identifying and acting on those moments where we can work with participants to query their ideas further, as there would be more eyes and ears on the participants and less chance for these moments to go unnoticed. It also seemed like a good collaboration opportunity and a chance to learn from another researcher's process.

The summer school was due to run in the Northrock Family Resource Centre in the summer of 2020. As it happened, Ireland was in a strict lockdown that summer and so the initial study design was adapted to an online summer school, delivered over Zoom. This required revising the length of the sessions, losing a planned final exhibition, reconsidering activities and the kinds of media participants might create and maximising the reduced time available to get to know each other and develop and discuss ideas.

The final workshop plan focused on developing critique of personal and other experiences through presentation and discussion of digital SEA. The workshops were designed for dissensual and dialogical participation in line with SEA aesthetics. Activities were facilitated to support participants in connecting their issues to wider social concerns, in developing mutual recognition and understanding and in articulating their own visions for the future of the community through making and sharing visual artefacts on their experiences. The summer school ran across six sessions between July and August 2020 with eleven participants, aged eleven to seventeen. Participants expressed their experiences through digital image: collage, digital painting, illustration and graphic design. The Freirean praxis-based dynamic of rapid making, critiquing, then re-making was facilitated and the participants moved to the next stage of critiquing their and other experiences and imagining alternatives. Seeing participants discuss how their community could be improved, and recognising, validating and even challenging experiences outside of their own, was encouraging. These are pivotal dynamics of SEA and ones I hoped to engender

in the work, supporting the argument for SEA as a valuable tool in agonistic and adversarial community-based design as it develops as a field of CSCW study and practice.

4.4 Analysing the studies

All studies were analysed using reflexive thematic analysis. Thematic analysis was considered appropriate due to its flexibility and openness, allowing me to take the same approach with analysis as I did with data collection - to structure the work around initial focal points but then to let the process unfold somewhat organically and intuitively to determine the direction and outcomes of the work. I hoped to understand what if feels like to live in this community, what are the often-unspoken frustrations and joys inherent in community life. Thematic analysis is open and non-prescriptive enough to allow for such exploration. I followed the reflexive approach recommended by Braun and Clarke (Braun and Clarke, 2006, 2019), which involved an iterative process, cyclically going through the six stages of: familiarization; coding; generating initial themes; reviewing and developing themes; refining, defining and naming themes; and writing up.

The first step of analysis of the focus groups involved transcribing the recordings and keeping notes on any unexpected or reoccurring insights. First level coding involved bringing all data into NVivo, and labelling excerpts with initial codes relating to the research question, the literature review and to unexpected ideas in the data. In second level coding, I compared and contrasted initial codes to identify redundancy, delete unnecessary codes and amalgamate codes with commonality under a larger theme. This stage resulted in five possible themes which were further explored via thematic maps (appendix 1.5) and refined into three final themes of “contested identities”, “dynamics of inclusion” and “rurban experience”.

First step of analysis of the digital storytelling workshops was also transcribing recordings of data, and creating observational and reflections notes after each workshop. The following levels of coding were done in NVivo

following the same format as the focus groups study. Two themes were finalised in this process. These were "understanding the teenage rurban experience" and "designing for dissensus".

The final study, the summer school, was analysed by both Dr Slingerland and me. This was done independently, and over a series of Zoom sessions. We created an initial codebook together, and then separately coded the entire dataset. We then analysed our first level codes together in an online session, producing a list of second level codes. We individually went through the entire dataset again with this second list of codes. We met online to work towards naming themes after this second pass at the data. The final themes were "articulating personal experience", "recognising other experiences" and "doing SEA online".

5 Ethics

Ethics approval was granted for all studies by University College Cork. The studies were not considered to have any significant ethical implications. All participant data was fully confidential and assured anonymity. This required the anonymization of the community to "Northrock". Participation in all studies was voluntary and participants had the right to withdraw from each study at any time up to two weeks after data collection. Data was transferred from recording devices to an encrypted laptop following collection and the recording devices were re-formatted to erase all data. Consent forms and information sheets were signed by the parents or guardians of all minor participants. In the case of the summer school, I gave the University ethics committee extra information around the delivery of the online workshops (e.g. what tools I was using, where participants would join from etc.) and the collection and storage of personal data relating to this. The final approved ethics application can be found in the appendix.

Beyond the requirements of the University ethics procedure, I needed to respond to the ethical concerns inherent in SEA. SEA done carelessly can be

performative, reductive, co-optive and tokenistic (Beech, 2008; Bishop, 2012; Tiller, 2014; Beech, 2009; Kester, 2011; Olsen, 2019). A superficial participation, patronising approaches to positionality and power imbalances within participant groups can aggravate divisions and alienate participants. With that in mind, I continually revisited participant and my positionality throughout the studies, again walking the line between researcher / facilitator and consciously deferring to the expertise of participants in their community. Throughout all studies I stated my positionality and agenda openly in terms of being there to understand and support participant exploration of community life, while also in pursuit of my PhD. For equitable participation, participants need a sense of agency and ownership of the process. With this in mind, I provided consent forms and information sheets to all minors involved, giving them the same information as their parent or guardian and assuring them of their autonomy. To the same end, equality of voice within the workshops was important, particularly when working with participants with varying amounts of social capital in the community. As researcher / facilitator I was conscious to invite contributions from more reticent participants, and to attempt to allocate time equally between participants. I acknowledged that the various problems faced by participants are complex, and that our explorations were just beginning to scratch at the surface of these.

There are also ethical concerns specific to Northrock. As a peripheral community that has already fought exploitation on multiple fronts, Northrock residents are cautious of further attempts at exploitation, as well as outside attempts to influence or define community identity. While the community has seen large residential building projects, Northrock advocacy groups have had to fight for investment in local amenities and services to support a sustainable expansion. Organisations such as the FRC are central to the inclusion of disadvantaged community members and are understandably protective of those they serve. As mentioned, there are large discrepancies in levels of social capital among the population. These various factors all underline the dangers of exploitation and disenfranchisement inherent in participatory research

(Bardzell, 2018; Wright and McCarthy, 2015). Work such as (Harrington, Erete, and Piper, 2019) was central in conceptualising how best to ethically engage with Northrock in terms of understanding the context of the research environment, the challenges to participation faced by participants, the potential for harm in asking participants to critique their community, and negotiating my place in the process. These various ethical considerations intersect with those inherent in SEA, and SEA theory and practice as outlined above was also beneficial in managing these tensions.

6 Summary

This chapter presents my motivation and key methodologies employed as part of my doctoral studies. Based on the research aims and the context of the research, I put forward my research standpoint, including the epistemological and methodological approach taken in designing the various studies that comprise the empirical work of this PhD. This chapter outlines why this approach was deemed appropriate, gives a background on the various methods chosen and how they were applied in this project.

In the following chapters, I present the papers written as a result of the studies described here. These papers are presented in the order that best supports the narrative of the PhD and each paper describes the design of studies, including participant recruitment, data collection and analysis. I also provide extra information on data collection and analysis in the appendices, as well as the various study design documents associated with each study.

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Chapter 4: Teenage and adult experiences of rurban place and implications for (place-based) CSCW

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ABSTRACT

The rapidly developing rural (rurban) community is a liminal place with specific sociographic characteristics and challenges. As a design "space-between", it needs attending to as transitions can take decades and sustainable expansion needs to be managed to counteract social challenges and to develop understandings of place, participation and identity. In this paper, we contribute an understanding of situated teenage and adult Irish rurban experience. We map this understanding to current rural computing and describe the rurban community as a new place for CSCW. We propose the values, responsibilities and characteristics of rurban CSCW and outline participatory research design considerations and opportunities. Findings are drawn from two qualitative studies with an Irish rurban community: focus groups with adults, and workshops with teenagers. We encourage participatory rurban CSCW to centre values around empathy, provocation, agency and diversity, make various experiences, assumptions and hierarchies visible and be sensitive to characteristics around duality, interdependence and in-depth community knowledge.

1 Introduction

Rural computing looks toward understanding and demarcating rural regions as unique places for CSCW, acknowledging the need to attend to peripheral contexts (Dourish and Mainwaring, 2012), as well as the potential and innovation rural places hold for technology design (Hardy et al., 2019). Much of the work in rural computing, and rural studies more broadly, discusses the often unrecognised diversity of rural places (Hardy et al., 2019; Liepins, 2000; Woods, 2012; Bell, 2007). The rapidly developing rural (rurban) community is one such place that can be overlooked in rural / urban dichotomous thinking (Björling and Rönnblom, 2023; Lichter and Johnson, 2023), resulting in both conceptual and empirical problems in place-based research (Lichter and Ziliak, 2017). This is to the detriment of these communities, and to CSCW, as these places, which have a mix of rural and urban characteristics, hold unique opportunities to understand dynamics around place, participation, integration, identity and belonging due to rapid expansion and diversification.

The issues in failing to understand rurban communities as distinct from rural or urban, have been recently acknowledged and explored in rural studies (Björling and Rönnblom, 2023; Stephens, 2019; Lichter and Johnson, 2023; Báez et al., 2020). Failing to engage with these places reinforces spatial inequalities and social hierarchies (Lichter and Ziliak, 2017), impacting quality of community life and blocking recognition of diverse needs and unique opportunities. Rurban communities need support in collaborative work around areas such as inclusion (Murray, Pantidi, and McCarthy, 2023; Lichter, 2012; Sherman, 2018), place-making (Slingerland, Gonsalves, and Murray, 2022) and community identity (Murray, Pantidi, and Hogan, 2019).

CSCW has encouraged researchers to better understand the opportunities and challenges present in diverse rural places (Hardy, Wyche, and Veinot, 2019; Hardy et al., 2019). There is a need to design and develop technology for situated, rather than universal settings and a requirement to understand and engage with the local knowledge and configurations of any particular place for technology design and deployment (Dourish and Mainwaring, 2012). Building

on these various calls, charting the rurban community as a new place for CSCW is of relevance and benefit to CSCW in community settings, broadening understandings of place and participation in terms of how to design cooperative work in support of community building. Rurban challenges require agency and action from rurban citizens and CSCW can play a role in supporting these communities in working together to meet their distinct challenges.

This paper puts forward characteristics of rurban place and experience based on two studies in an Irish rurban community. Drawing on analysis of focus groups with rurban adults, and digital storytelling workshops with rurban teenagers, we put forward characteristics and considerations for rurban CSCW. We advocate for participatory processes that respond to the intersectional identities and experiences in the rurban place while developing agency and capacity to direct equitable and fulfilling community life.

The following section expands on the potential role for CSCW in rurban places and describes the approach we took in beginning to characterise the rurban "place".

2 CSCW in rapidly developing rural places

The TOCHI special edition on rural computing (Su et al., 2021) was a significant landmark in promoting the rural as a place for progressive and innovative computing, and in emphasizing the opportunities present in alternative places. This work contributes to that landscape through mapping the characteristics of one type of rural community, the rapidly developing rural community, for CSCW. While such communities can be studied under the banner "rural" (Brennan and Luloff, 2007; Woods, 2009), in our work we use "rurban" to acknowledge the intersectional rural and urban characteristics of these communities (Busck et al., 2008; Gražulevičiūtė-Vileniškė and Vitkuvienė, 2013; Björling and Rönnblom, 2023), and to highlight the necessity of dealing with these emerging communities as sociogeographic

places in themselves (Björling and Rönnblom, 2023; Lichter and Johnson, 2023). Recent rural studies point to the mutable and permeable nature of perceived boundaries between rural and urban (Lichter and Brown, 2011; Lichter and Johnson, 2023; Lichter and Ziliak, 2017; Woods, 2009) and highlight that the two spatial concepts are interdependent and overlapping (Johnson and Lichter, 2020; Lichter and Ziliak, 2017), resisting easy definition (Woods, 2012). Falling into a false binary conception of rural and urban has the potential for social and economic rupture (Lichter and Ziliak, 2017) and attention needs to be paid to expanding rural communities as liminal and potentially abundant places, offering opportunities for alternative social and political ways of life (Björling and Rönnblom, 2023; Cattaneo and Gavaldà, 2010; Lichter and Johnson, 2023; Stephens, 2019).

Rural communities are recognised by their material, social, cultural and moral values (Woods, 2009). We argue that the rurban community has its own versions of these, ever evolving and contested as the community transitions. Central to this is a rapidly increasing and diversifying demographic (Murray, Pantidi, and McCarthy, 2023), developing community identity (Murray, Pantidi, and Hogan, 2019) and need to support place-making (Slingerland, Gonsalves, and Murray, 2022). Rurban changes are both material (in terms of changing spaces, occupations and populations) and ideal (in terms of shifts in ideas, beliefs and perceptions of rurality). As we work to understand these changes, rural computing provides frameworks of engagement with rural places that provide a structure to rurban studies. Hardy et. al's work on mapping rural HCI (Hardy, Wyche, and Veinot, 2019; Hardy et al., 2019) is influential in developing our concept of the rurban place for CSCW. We draw on various definitions of rural (Halfacree, 1993; Hardy, Wyche, and Veinot, 2019) which describe descriptive, sociocultural and symbolic manifestations of rurality. Following these definitions, descriptive ruralities are based on observable and measurable characteristics. Sociocultural and symbolic ruralities are demarcated through less immediate markers such as values, beliefs, behaviours and attitudes, with symbolic readings of rurality specifically drawing on how

ideas, and language around concepts and feelings create a sense of place (Hardy, Wyche, and Veinot, 2019). In this work, we use these three categories to help us conceptualise the rurban community in our context.

Rural CSCW is a burgeoning field, and it is necessary to draw more broadly on rural studies to inform an approach to understanding rurban sites. Developing collective action and agency is seen as vital for rural communities (Brennan and Luloff, 2007), this may translate even more strongly to the rurban community as outside interests begin to pressure community development (Björling and Rönnblom, 2023). Rural communities are seen as particularly valuing participation, interdependence and social coherence (Lysgård, 2016; Robinson et al., 2021) to support rural dwellers in working together to achieve community aims. Again, this is particularly relevant to the rurban community as it works to integrate new demographics (Murray, Pantidi, and McCarthy, 2023). Developing this point on inclusion, rural communities can be more noticeably heterogenous due to their smaller population and so those outside of dominant groups may become marginalised or excluded from social processes (Liepins, 2000). Communities need to support unity and difference, where identities are connected and contested (Liepins, 2000), a dynamic at the forefront of the rurban community (Murray, Pantidi, and Hogan, 2019). These aspects of rurality centre questions around processes of participation, marginalisation, and belonging in our exploration of the rurban.

CSCW engages with these questions in various contexts, drawing on pluralistic participatory approaches to examine and support community life while recognizing the complexity and fluidity of these places (Carroll and Rosson, 2013; Le Dantec, 2016; Le Dantec and Fox, 2015). For example, Holmer et. al (2015) speak of the need to consider what researchers can imagine doing, what the location or the system can support, and what participants can conceive of doing or want to do. This connects with McCarthy and Wright (2015) when they discuss the need to consider what modes of participation are available and also with Harrington et. al (2022) when they point to the need to challenge what we think is possible when working towards

social change. This raises fundamental questions around how we configure researcher and participant roles in the rurban place, as well as the places and systems in which rurban participation can happen. Central to this is identifying the values, responsibilities and characteristics of rurban participation. As a start, Bardzell (2018) recommends focusing on universal values, namely humanity, democratic participation and formations of solidarity. Clarke et. al (2021) centralise empathy, exploration, criticality, provocation and facilitation as values in design work that seeks to challenge assumptions. We also draw on the tradition of participatory design (PD) in terms of insights into configuring participation in equitable, democratic and agentic ways (Bray et al., 2022; Kuutti and Bannon, 2014), and the need for pluralistic design approaches (Bardzell, 2018; Bray et al., 2022; Holmer et al., 2015).

Rurban communities as a place for CSCW are inherently innovative and imaginative as they accommodate and adapt to rapidly changing circumstances. Rurban areas have their own dynamics in response to these social and cultural changes (Báez et al., 2020) and offer CSCW a chance to study participation, place-making, inclusion and community identity in sites of heightened pressure and change. As CSCW has a mandate to support cooperative work, the social processes and challenges of the rurban site provide opportunities to explore how this might be configured in emerging and unpredictable communities.

This paper puts forward findings from two studies within an Irish rurban community: a series of focus groups with adults and digital storytelling workshops with teenagers, both with a view towards understanding the rurban community as a site for place-based participatory CSCW. We put forward teenage and adult rurban experience to derive characteristics of rurbanity and resultant values, responsibilities and opportunities of rurban participatory CSCW.

3 Studying the lived experience of rurban adults and teenagers

This research aimed: i) to better understand the experience of living in a rurban community from an adult and teenage perspective and ii) to develop directions on what rurban CSCW might look like.

We conducted three focus groups with adult members of the community, and nine digital storytelling workshops with teenage girls in the local secondary school. The focus group format was chosen as it allows for a participant-led discussion and the production of nuanced data, giving an insight into diverse lived experiences (Carey and Sutton, 2004; Carroll and Rosson, 2013; McLean, 2014; Mundell et al., 2004). The workshop format was chosen to give a longer time of engagement with participants and to configure participation around creative, expressive outputs in the hope of accessing deeper, more personal experiences that may be difficult to articulate in the focus group format.

3.1 The community

This research was conducted in an Irish rurban community, anonymized as "Northrock". The population expanded and diversified rapidly, from 1,232 in 1996, to 2,782 in 2006, 5,090 in 2016 and 8,181 in 2022 (Central Statistics Office, 2018, 2019, 2023). Residents recall a time when there was about 400 inhabitants and report that there are now over 40 languages in the community. The 2016 census found 76% of the population were born in Ireland with 67% identifying as "white Irish" (Central Statistics Office, 2019). These statistics indicate the notable expansion and new diversity within the community population, characteristic of the rurban place (Stephens, 2019).

While traditional economies associated with rurality include agriculture and other primary industries, the majority of Northrock's population are involved in manufacturing and commerce (SECAD, 2017). Social and health services are generally less diverse and comprehensive in rural areas (Hardy, Wyche, and Veinot, 2019). However, Northrock has strong social support systems in

place and these help to attract and retain new communities (Murray, Pantidi, and Hogan, 2019). Typically, rural demographics find there are less migrants and that populations are aging (Hardy, Wyche, and Veinot, 2019). Northrock has a large migrant population and the majority age group is 35 to 39 (SECAD, 2017).

Northrock has identified a need to respond to the rapid changes and projected further expansion. A community working group has been established to discuss areas such as biodiversity; economic opportunities; new populations; integration; the idea of the "ideal village", and individual and community well-being (SECAD, 2017). As such these areas are indicative of both the strengths of and challenges to rurban communities as perceived by those communities.

3.2 Participants and data collection

3.2.1 The focus groups

Each focus group was one hour long and with a specific community group. Namely, a family resource centre providing support to families in need, a working group to promote inclusion and integration, and a historical society interested in preserving and promoting Northrock history. Leaders within these groups recruited participants for the focus groups. The focus groups were held in community centres connected to and chosen by the each of the groups. The tables below give a breakdown of our focus group participants.

Table 1: Family Resource Centre (FRC) Focus Group Participants

Participant Code & Alias	Age (Sex)	Background Information
P:1 T:A; Kate	60-70 (F)	Irish born, native Rock, managerial role in FRC
P:2 T:A; Jacinta	50-60 (F)	Irish born, native Rock, works in FRC
P:3 T:A; Barbara	40-50 (F)	Polish born, in the community 7 years, children go to FRC
P:4 T:A; Lena	40-50 (F)	Polish born, in the community 9 years, children go to FRC, now volunteers for FRC
P:5 T:A; Sue	40-50 (F)	Irish born, moved from the city, started a family in Rock
P:6 T:A; Jack	80-90s (M)	Irish born, moved to the community in 1963, was the Garda (police officer) in the community until retirement
P:7 T:A; Ben	60-70 (M)	Irish born, moved to the community in the late 80s
P8 T:A; Joy	40-50 (F)	Nigerian born, in the community 15 years, assisted by FRC

Table 2: Historical Society Focus Group Participants

Participant Code & Alias	Age (Sex)	Background Information
P:1 T:B; John	70-80 (M)	Irish born, native Rock, lived in London for 3 years
P:2 T:B; Anthony	50-60 (M)	Irish born, native Rock, runs local creche, very active community member, has always lived in Rock
P:3 T:B; Pat	60-70 (M)	Irish born, native Rock, has always lived in Rock
P:4 T:B; Harry	60-70 (M)	English born, moved to the community 6 years ago.
P:5 T:B; Jer	70-80 (M)	Irish born, native Rock, now lives in a nearby town

Table 3: Inclusion / Integration Group Focus Group Participants

Participant Code & Alias	Age (Sex)	Background Information
P:1 T:C; Aisha	30-40 (F)	Ethiopian born, moved to the community 9 years ago
P:2 T:C; Mary	40-50 (F)	Nigerian born, moved to the community 15 years ago
P:3 T:C; Rose	30-40 (F)	Nigerian born, moved to the community 12 years ago
P:4 T:C; Anita	20-30 (F)	Albanian born, living in a nearby direct provision centre for the 2 years
P:5 T:C; Eryka	30-40 (F)	Polish born, moved to the community 6 years ago
P:6 T:C; Justina	30-40 (F)	Albanian born, living in a nearby direct provision centre for the 2 years
P:7 T:C; Pauline	50-60 (F)	Irish born, lives nearby for 5.5 years and is very active in the community

The focus groups were semi-structured around the following topics: life in Northrock, changes in Northrock over time, inclusion and village identity as perceived by the participants. Conversation was participant-led, allowing for exploration of themes and ideas outside of the topics. Focus groups were audio recorded and transcribed, with the transcriptions forming the data set. The analytic outcomes of this study informed the design of the subsequent workshops study.

3.2.2 The digital storytelling workshops

For our second study, we conducted nine digital storytelling workshops with 18 teenage participants of various ethnic backgrounds in a local school. At the time, there was only one all-female secondary school in the community. The workshops were offered to transition year students, who are typically around 16 years old. Each workshop was 80 minutes long and participation was on a voluntary basis. The table below (Table 4) describes the participants.

Table 4: Digital Storytelling Workshop Participants

Participant Code & Alias	Age (Sex)	Background Information
P:1; Michelle	15-17 (F)	Irish born, Irish family background
P:2; Martha	15-17 (F)	Nigerian born, Nigerian family background
P:3; Charity	15-17 (F)	Nigerian born, Nigerian family background
P:4; Jess	15-17 (F)	Abu Dhabi born, Irish and New Zealand family background
P:5; Diana	15-17 (F)	Born in Ireland, Nigerian family background
P:6; Deirdre	15-17 (F)	Irish born, Irish family background
P:7; Florence	15-17 (F)	Irish born, Nigerian family background
P:8; Becky	15-17 (F)	Irish born, Irish family background
P:9; Irena	15-17 (F)	Lithuanian born, Lithuanian and Belarussian family background
P:10; Nikola	15-17 (F)	Polish born, Polish family background
P:11; Susan	15-17 (F)	Irish born, Irish family background
P:12	15-17 (F)	Withdrew – took an alternative class
P:13; Steph	15-17 (F)	Irish born, Irish family background
P:14; Beth	15-17 (F)	Irish born, Biafran family background
P:15; Julie	15-17 (F)	Irish born, Irish family background
P:16; Abeni	15-17 (F)	Irish born, Nigerian family background
P:17; Hanna	15-17 (F)	Polish born, Polish family background
P:18; Saoirse	15-17 (F)	Irish born, Irish family background
P:19; Jane	15-17 (F)	Irish born, Irish family background

Workshops revolved around ideation activities and the creation of a final digital story. Four focal points were drawn from the focus groups: culture, identity, inclusion and community. The participants divided into four groups, each group tackling one focal point. Each group was audio-recorded as they developed their ideas. Whole group discussions and presentations were video recorded. Recordings were transcribed and these transcriptions added to the final data set, as well as all physical ideation activities, observation notes of each workshop, pre and post questionnaires and the final digital storytelling outputs.

3.3 Researcher positionality

The first author is from Northrock. She lived there until she was 22 years old and still has strong family and friend ties to the community. This was useful to the research in terms of forging initial relationships with community groups, and in accessing the school for the workshops. Close connections to the community are seen as a strength in terms of building trust and gaining access (Chamberlain, Crabtree, and Davies, 2013; Hardy, Wyche, and Veinot, 2019; Le Dantec and Fox, 2015). They also require a high level of reflexivity and the first author, supported by the research team, engaged in iterative reflection on how her own values, beliefs, experiences and preconceptions might impact the research process (Braun and Clarke, 2019).

3.4 Equitable participation

Taking inspiration from participative practices that centre equity, social justice and localized knowledge (Balestrini et al., 2014; Bardzell, 2018; Harrington, Erete, and Piper, 2019; Le Dantec and Fox, 2015; Wright and McCarthy, 2015), it was important to consider how these research engagements were of benefit to the participants. There is a danger that communities become alienated by the research process if it seems extractive (Harrington, Erete, and Piper, 2019). This ties in with awareness around the importance of cultivating postcolonial mindsets in HCI (Dourish and Mainwaring, 2012). Unfortunately, there was no funding for this project to allow participants to be paid for their time. However, the lead researcher was able to procure Mac computers from her university, due to a lab upgrade. These were donated to the community groups and school involved in the research, before any participant recruitment took place. The teenagers involved in the workshops received digital video training and had access to equipment (such as DSLR cameras) that provided added value for them. The lead researcher has acted as a liaison between the community groups and digital media practitioners (such as videographers and interaction designers) to support community groups in creating media for their organizations. The lead researcher continues to be involved in the community,

for example through feeding the results of the research into an upcoming Northrock 2040 project which puts forward a plan for community development for the next 16 years. However, these measures of exchange of knowledge and skills are not necessarily possible for all researchers doing community-based work. We agree with Harrington et. al (2019) when they discuss the need to support researchers in more longitudinal engagements with community and to centre value for the community in research design.

3.5 Data analysis

Both studies were analysed using a six-stage, reflexive thematic analysis (Braun and Clarke, 2006, 2019, 2021b, 2021a). With regard to the focus groups, the first stage of analysis involved the first author familiarizing herself with the dataset through transcribing audio recordings, making notes of interesting ideas arising and then re-reading the data set to further develop those notes before moving to the next stage of analysis, which involved labelling excerpts from the data with initial codes relating to the research question, the literature review and also to unexpected ideas and meanings in the data. This resulted in 44 initial codes. The final stages involved comparing and contrasting these codes to identify redundancy and to amalgamate codes with commonality under larger themes. In this paper, we present the Adult Rurban Experience theme.

The workshop data were analysed using the same process of thematic analysis. The primary researcher transcribed all video and audio recordings. Observation notes, reflections, outputs of ideation activities and the final digital stories were reviewed with notes taken on areas of interest, informed by the research question, the literature review and the outcomes of the first study. New ideas were also recorded in the creation of the initial code book. First level coding generated 92 initial codes. Second level coding involved comparing and contrasting these codes to amalgamate codes with commonality into potential themes. In this paper, we present the Teenage Rurban Experience theme.

4 Lived experience in Northrock: An Irish rurban community

The first part of the findings (4.1) relates to the adult rurban experience drawing from the focus group analysis. The second part (4.2) is based on the workshop data analysis and relates to the teenage rurban experience. The findings illustrate the intersectionality and diversity of rurban experience.

4.1 Adult rurban experience

Rapid expansion brought challenges as residents adjust to new way of life. However, residents still enjoy rural values based on cooperation and congeniality. The old traditions valued by the community seem to be revitalised and continued by the new residents, but this is not always recognised by the long-term residents.

4.1.1 A more "complicated" way of life

Long term residents discuss changes around demographics, infrastructure, and a perceived loss of traditional values. New residents discuss the challenges of becoming known in Northrock. The following excerpts illustrate some of these complexities, beginning with this succinct expression of the loss old ways of life:

> Pat: We've gone from the old simple life to this complicated life.
> Anthony: It is completely different, from whatever time, everyone went to church and walked home from school. (T:B)

While the way of life is perceived as "completely different", participants discuss the unchanged appearance of the village itself, with only the arrival of ethnic shops to indicate any social or cultural shifts:

> Kate: I suppose the old village itself hasn't changed much either [...]
> Jacinta: The change that would be in village would be the Polish shops and the African shops, and Chinese and they give a real change to us. (T:A)

These statements reflect the duality of rurban life, as slow changes in the "old village" contrast the rapid changes in demographics. They also suggest the loss felt by long-term residents, and scope for the physical places of the community to work as indicators of both old and new ways of life.

Here, Kate discusses changes in demographics and crises as infrastructural and economic developments have created a population increase:

> Kate: we have a lot from Eastern Europe, we have a lot from African countries and we have a lot from the city. [...] we were supposed to get that big factory, and on the strength of that there was a load of houses built [...] we have a good public transport [...] now we're at full capacity and housing is very expensive here and renting is outrageous [...] we've had real issues with homelessness. (T:A)

Kate's statement is an example of the kind of nuanced local knowledge participants bring to the table, she is very much an expert on Northrock and would need to be positioned as such in any participatory work. It is also a measure of the rate of change the participants have lived through, which suggests their ability to conceive of many possible iterations of community life. This rapid rate of change also speaks to the rurban characteristics around unpredictability.

New residents are also adjusting to rapidly changing life. They experience complex social and cultural dynamics that are often made more difficult because of assumptions and misperceptions:

> Aisha: People [...] have their assumption. If you're from Africa you're from some poor slum so you come here and anything you get should please you.
> Eryka: It's the same with people from Poland. (T:C)

This statement signposts harmful limitations on the perspectives of long-term residents around the cultural, social and economic diversity of new community members. Participatory work has a responsibility to challenge these limitations and acknowledge the many benefits new community members bring to Northrock. This also suggests the danger of marginalisation of new

community members. Marginalisation is also felt by some long-term residents as they mourn the loss of old ways of life and old social spaces and traditions.

There is potential here for building empathy and solidarity through participatory work that helps both groups recognize each other's struggles. It also reflects the multiple realities present and the need to recognize both unity and difference. This connects with CSCW interests around social justice, participation, migration and inclusion (Dillahunt et al., 2017; Giglitto et al., 2019; Le Dantec and Fox, 2015).

4.1.2 The rurban "family village"

Participants in the focus groups often discussed Northrock as "the family village", promoting a sense of unity, wholesomeness, and safety:

> Barbara: Northrock is the family village, I met my friends in the preschool when [name] was going first to the preschool, I would meet the other mothers. (T:C)

These excerpts belong to new community members and promote the idea of Northrock as an inclusive and supportive place. Values such as neighbourliness, thought by long term residents to have declined, are still strongly evident in the experiences of these residents. Long-term residents with close ties to new communities also echo this sentiment:

> Anthony: I have dealings with more new Northrock than I have with old Northrock on a daily basis for myself [...] I'd be just walking down the street, and a lot of them are new Northrock, and nearly everyone now would say hello to me. (T:B)

While some of the long-term residents discuss a loss of rural values, the excerpts here indicate that the familial nature of the community is still celebrated by many. Long-term community members who interact regularly with new communities acknowledge that many rural values still endure. This points to the necessity of social interaction to build empathy and solidarity. Aisha and Eryka's description of the assumptions they face as new community members highlight the responsibility to make visible these various experiences

to all sections of the community who might feel marginalised in some way, again to build empathy and solidarity.

4.1.3 New people, old traditions

Here we look at the impact of new populations on old traditions. Some participants exhibit a belief that the expansion of the community has a negative impact on community life, as illustrated below:

> John: Well you see Northrock is probably... I think you'll find that the bigger the population, the less together they are. (T:B)

This highlights again the disconnect between different experiences of community life. Often, new community members praised how friendly the community is, while older community residents felt that had diminished. This has implications for what participants can conceive of in participatory community work and points to a need to make visible the various experiences available to promote feelings of inclusivity and solidarity.

Examples of how new community members have contributed to emerging rurban life are evident in both religious and sporting traditions. Taking the following excerpt for example, the influx of new populations is seen to have improved social cohesion within the sporting community:

> Kate: The badminton club in the community centre was starting to lose members so we [...] asked if they'd consider letting us join the protestant one, and they [...] said that they wanted to preserve their ethos and therefore, we couldn't join [...] that wasn't that long ago you know, 25 or 30 years [...] those kinds of changes have been subtle [...] it's because we got so many new people into the community. (T:A)

This insight highlights the role of social interaction in creating meaning, and how the community is constantly being negotiated and remade due to that interaction. It is also indicative of the positive impact of an expanding and diversifying community demographic on revitalizing sporting traditions. Participants also referenced the positive impact of new populations on the

existing religious community. Regarding participation, it shows the necessity for researchers to understand the configurations of power and marginalisation as they have developed throughout community history, and positions participants themselves as the source of this knowledge with a view towards developing greater empathy, criticality and equity through participatory processes. This again speaks to social-justice oriented approaches to participation in CSCW for community building (Fox, Dimond, et al., 2017; Holmer et al., 2015; Le Dantec and Fox, 2015; Pantidi et al., 2015).

The adult rurban experience involves navigating a rapidly changing way of life, as well as enjoyment of many values and traditions associated with rurality. There seems to exist a consensus among some long-term community members around a decline in rural values. Long-term community members who regularly interact with the newer population do not share this perception, indicating the need to design supports for social interaction across community groups. To this end, an empathetic and provocative participatory process would seek to give all experiences equal visibility with the view to building mutual understanding between residents.

4.2 Teenage rurban experience

The teenagers' perceptions of the community focused on the friendliness, diversity, and supportive nature of Northrock. However, there are contradictions in the value the teenagers placed on these characteristics, frustrations with the lack of social places and sometimes damaging views around who belongs where and why.

4.2.1 Frustrations with place

The community is described as a small, close-knit place many times during the workshops. While this is mentioned as a positive among adults, the teenagers don't necessarily enjoy this. This points to a difference in values, as well as a difference in how this friendliness is experienced:

Jess: Everyone knows each other
Deirdre: Yeah
Jess: That's a bit.... Well that's a bit weird for me

Participants discuss the physical layout of the community, which has been described by the adults as somewhat unchanged, as an indicator of it being a sleepy and uninteresting place. The various African and Polish shops are not of interest to these teenagers, and they are disillusioned with community life:

Martha: Northrock is just so dead. [...] Northrock needs to change for the better. Northrock needs more variety, there's like, there's two African shops, two Polish shops, two butchers, there's so many hairdressers and barbers, & there's like three pubs [...]
Abeni: One street! There's barely any shops.
Martha: Yeah there's nothing to do in Northrock, it's so quiet, honestly [...]

There is a lack of appropriate social spaces for teenagers. Participants focused on places that are cheap to access and without a time limit in staying there, such as shops with seating areas, sports facilities and the playground. This lack is reflected in the following excerpt, where the teenagers rely on the playground as a social space and are excited about the opening of a youth café:

Jess - Yeah I always mention the playground, I love that playground. The youth cafe now as well,
Beth - Yeah, like when is that supposed to be open?

These comments further suggest the multiple values and experiences of rurban life. They point to the possibility of teenagers becoming marginalised and disillusioned as the community expands without creating the social spaces they need. Participatory work with this demographic would need to look at what places in the community could support open and equitable participatory processes. It also points to some interesting design directions around provocation, in terms of making clear the teenagers' frustrations with the community. These requirements can both inform and draw upon CSCW that

explores the potential of public space to forge connection and understanding (Balestrini et al., 2016; Paay and Kjeldskov, 2008).

4.2.2 "Everyone's accepted" in designated roles and places

An acknowledgement of diversity is evident in the following excerpt and is often repeated throughout all workshops and groups. The statement of "everyone's accepted" resonates with much of the adult perceptions of the community:

> Michelle: We've people from all over the globe in Northrock.
> Diana: Yeah all nationalities [...]
> Michelle: Yes, everyone's accepted. People from everywhere.

One of the most discussed and most visible indicators of diversity in the landscape of the community is that of ethnic businesses. The ethnic shops are discussed multiple times across the workshops and feature in the final workshop video outputs:

> Florence: We have two African shops,
> Michelle: Really?! [...]
> Diana: Do you know the little blue one? And then there's one close to the Polish shop. Yeah we have two Polish shops. We used to have two African hair salons, we have different hair salons as well, but now we only have one.

The teenage focus on ethnic businesses is shared by the adults and highlights the importance of these places in making visible the diversity of the community. It also suggests the capacity of places like these to support participation that makes explicit the many different voices and perspectives in the community. However, while ethnic minorities are visible in some commerce roles, professions such as teaching are still quite monocultural, indicating an established social order of assigned roles that is slow to shift. This is illustrated in the following exchange between Jess, who was born in Abu Dhabi to Irish and New Zealand parents; Jane, who is Irish born to Irish parents and Charity, who is Nigerian born and emigrated to Ireland as a child:

Jess: Oh my god, we don't have any Black teachers do we? [...]
Jane: No there aren't any, I don't really know any school.... Like my brother's school had like 1. [...]
Charity: They never take them seriously like, it's kind of funny, but I... like it would be odd... like not odd, but you'd be like "eh?!"

This is a very revealing exchange in terms of how engrained the social order of things is for teenagers. It speaks to damaging limitations around what the teenagers can imagine in their community, as well as limitations in what current systems can support. It points to a need for solidarity, criticality and provocation in participatory CSCW with this community to counteract any potential marginalisation, and to widen perceptions of what is possible. The rurban site then offers unique opportunities to CSCW that is interested in equality, inclusion and transformative participation (Dye et al., 2018; Harrington, Erete, and Piper, 2019) in terms of studying these processes in a small but rapidly changing environment.

4.2.3 Negotiating belonging

Further examining teenage perceptions of who belongs where and why, we find negotiations around who is more "Irish", and markers of belonging based on where people are expected to be. The exchange below undermines Diana's "Irishness", due to her extended family not being Irish:

Diana: So your surname is Irish?
Michelle: I'm very Irish like
Diana: Alright girl [exaggerated local accent], I'm Irish too
Michelle: But like my whole family is Irish
Diana: Yeah, I get you.
Michelle: You're not like, Irish Irish Irish

Diana was born in Ireland and has only ever lived in Ireland. Despite this, she seems to accept Michelle's categorising of her as not "Irish Irish Irish". This suggests that there are tiers of belonging depending on family background,

serving to erect barriers around who really belongs. The fact that this goes unchallenged indicates that changing perceptions of who belongs is somehow not available to the teenagers.

The following is one of several other exchanges that indicated markers of belonging. This takes place between Deirdre, a participant whose family is Irish, and Diana, a participant whose family is Nigerian. It reveals assumptions around who belongs in the ethnic shops and why:

> Diana: African shop, do the African shop (prompting drawing the African shop)
> Deirdre: I've never been there!
> Diana: Yeah.... (sarcastic voice, dramatic pause, everyone laughs) ...We wouldn't expect you to
> Becky: Diana! (more awkward laughing)

This theme was picked up later in the discussion by a Polish participant, who compares going to the Polish shop with going to the African shop:

> Hanna: People go to the Polish shop because [...] it's cheap, and some people like the food...But then, when it comes to African shops and Africa they don't know the food so they might be kind of iffy on buying stuff they don't know.

These exchanges are interesting for both the awkward reaction to the statement that some people wouldn't be expected to go into the African shop, and for the Polish shop being depicted as more familiar while the African shops are seen as too unknown. This gives some insight into levels of belonging based on familiarity to the majority culture, as well as indicating those areas which are held for minority groups. There is potential and power in the marginalised spaces of the community (Liepins, 2000), and it is important for minority groups to have spaces that revolve around their identity and culture. There is also an opportunity in intentionally opening up those spaces to the wider community to support friendship and community building. The awkwardness seen in these exchanges indicates an awkwardness in general around discussing complex topics. The various understandings of belonging

often revolved around race and ethnicity. The rurban site offers an opportunity to study such dynamics up close and in a small and fast-moving place (Lichter, 2012). This is beneficial to CSCW that looks towards greater understanding of the impact of race and ethnicity in technology design and use (Erete et al., 2021; Fox, Menking, et al., 2017; Harrington and Dillahunt, 2021; Ogbonnaya-Ogburu et al., 2020; O'Leary et al., 2019; Schlesinger, Edwards, and Grinter, 2017)

These various exchanges give some insight into how the rapid diversification of the community is perceived and understood by the teenagers. Participatory CSCW with this group would need to do the difficult work of developing capacity to discuss difference and disassemble harmful assumptions on community life.

5 Rurban CSCW: Characteristics, configurations and opportunities

In this section, we propose that for rurban CSCW to be successful, it needs to integrate the values, responsibilities and characteristics of rurban life, as informed by our findings above and rural studies literature. We put forward characteristics of rurban CSCW, configurations for participatory CSCW research design and opportunities for rurban CSCW interventions.

5.1 Characteristics of rurban CSCW

Here, we build on section two to provide a deeper understanding of lived rurban experience as informed by our research, outlining rurban characteristics and drawing connections with CSCW. The structure of this discussion point reflects both rural studies and rural computing's emphasis on recognising rurality through the descriptive, sociocultural and symbolic understandings and experiences of rural places (Hardy, Wyche, and Veinot, 2019; Lichter and Johnson, 2023; Lichter and Ziliak, 2017; Woods, 2009).

5.1.1 CSCW for descriptive characteristics of rurban life

Northrock has seen expansion in terms of population, housing, employment opportunities and transport links. At the same time, there has been logistical and administrative stresses around housing, homelessness and public infrastructure. These issues are cohesive with rural studies that warn of the social and economic dangers in not attending to expanding rural places (Björling and Rönnblom, 2023; Lichter and Ziliak, 2017). There is an opportunity for CSCW to build on existing work around agency and community mobilisation (Asad and Le Dantec, 2015; Pantidi et al., 2015; Roberson and Nardi, 2010) to develop sociotechnical systems to support rurban communities in addressing complex problems, such as homelessness, in small, diverse social groups. Northrock has already shown considerable imagination, innovation and grassroots mobilisation in meeting the challenges of expansion (Murray, Pantidi, and Hogan, 2019; Murray, Pantidi, and McCarthy, 2023) and CSCW can benefit in engaging with such communities to inform the design of technology to support local organisation for community advocacy.

While the community has undergone great changes, the actual core of the community, the village, remains much the same at first glance. Amenities such as social public spaces have not increased despite the rapid logistical and demographic growth. This causes a disconnect between what appears on the surface to still be a sleepy rural community and the growth and diversity of population experienced within. This also holds opportunities for CSCW in designing sociotechnical systems to help rurban communities advocate for themselves in terms of procuring the extra social infrastructures and services that they need to support the rapidly growing population. CSCW interested in equitable design with and for diverse and often marginalised populations to visualise their future (Bray et al., 2022; O'Leary et al., 2019) can play a role in supporting speculative design and visualisation around what the ideal community might look like, including mechanisms to support wide public consultation on such projects and again, ways of lobbying for public funds to

support these most needed changes. It is important to include the perspectives of young people in consultation as the lack of appropriate public places for teenagers come up multiple times. Our teenage participants seemed most disillusioned with the community. However, given that the community is so diverse there is huge potential in leveraging this to promote the community as a culturally rich place of interest in the eyes of both residents and outsiders.

Given that the rurban community has changed so quickly in such a short period of time, there is an opportunity for CSCW interested in digital heritage (Giglitto et al., 2019; Han et al., 2014; Pantidi et al., 2015) to work with individuals who remember a time totally different to the current way of life and bring that into dialogue with completely contrasting experiences. Digital heritage researchers in the rurban community can work with dense and diverse populations to capture and share these stories and experiences in a way that brings communities together, develops community identity in inclusive ways and honours those experiences of the older community members, while celebrating new cultures in current community life.

CSCW engaging with descriptive rurban characteristics might highlight the evolving role of ethnic shops as visible markers for the changes in the community. These shared public places have complex configurations and for place-based CSCW, provide rich opportunities to understand how these configurations impact on wider community participation, identity and cohesion. There is also an opportunity to build on CSCW around food and social cohesion (Grimes et al., 2008) through researching sociotechnical systems for the sharing of culture and experiences around food, while also exploring the importance of having spaces solely for minority groups, striking a balance between opening up to the wider community and preserving familiar cultural spaces for new community members.

The points above around the descriptive characteristics of Northrock give some examples of the kinds of CSCW that would both be useful to rurban places while also pushing forward CSCW into new and innovative territories full of potential for advancing sociotechnical supports to the cooperative work

involved in community building. While these various suggestions connect with specific areas of CSCW, there is an underlying theme of needing to cultivate agency, empowerment and participation (Brennan and Luloff, 2007) to support rurban citizens in working together to solve issues and direct the uncertain future of the community.

5.1.2 CSCW for sociocultural and symbolic aspects of rurban life

Just as the physical characteristics of the old village bely the rapid changes that have occurred, sociocultural characteristics and symbolic definitions were also somewhat contradictory in our findings. Different demographic groups were shown to each have a symbolic image of the community unique to them. These ranged from a perceived loss of traditional rural values around neighbourliness and a mourning of past ways of life; to a celebration of enduring values around solidarity, support, congeniality and safety; to the presence of a negative "rural idyll" (Bell, 2007; Lacour and Puissant, 2007) stereotype. For example, long term residents discussed with a sense of loss how life had changed with many of the rural values they held dear diminishing, such as those around neighbourliness and ease of social connection. In contrast, newcomers to the community experienced the same values as very much alive and contributing to supporting inclusion and bringing them closer to others, often citing the supportive and friendly atmosphere of the community as a reason for settling there. Long term residents discuss a waning of religious life, while in fact traditions around religion were found to be strengthened and expanded in the rurban community due to the arrival of new populations. This positive impact also extended to traditions around sport, where the arrival of new populations revitalized elements of a sporting tradition that had become staid and restrictive. However, the new energy brought to both religious and sporting traditions is not always visible to long term residents, particularly those who interact less with new communities. These various observations show the multiplicity and intersectionality of standpoints and experiences, which also extends to experiences around race and ethnicity. While the community is markedly more diverse, there are boundaries around who belongs where, who

is seen to be suitable for leadership positions and who can lay claim to "Irishness". These restrictive characteristics need to be challenged in rurban CSCW.

Overall, the various symbolic images available were unquestioned by the participants that subscribed to them. Participants were also generally unaware that there were other readings and experiences of the community by their fellow community members. This points to a level of disconnect between different populations and opportunities for sociotechnical interventions to make these various values, experiences and positive developments visible to all in the community, and also to promote them outside of the community. This connects with CSCW that looks to design social technologies that are representational, inclusive, avoid division and work towards counteracting feelings of loss or marginalisation as an important current challenge (O'Leary et al., 2019; Bray et al., 2022; Harrington, Erete, and Piper, 2019). This also highlights methodological considerations for CSCW in rurban places, such as a heightened need for broad representation of community groups to understand and represent the various perceptions and experiences available. There is evidence of varying levels of visibility and agency across different demographics in the community, an insider / outsider mentality in terms of who belongs, as well as dissatisfaction with the physical layout of the community. The dialogue also illustrates how social interaction creates meaning, and ideals such as community support and friendliness are celebrated. Much rural studies emphasise that rurality is highly diverse and mutable (Bell, 2007; Lichter and Brown, 2011; Woods, 2009, 2012). This is supported in our findings and points to an interesting challenge for CSCW in terms of designing participatory processes and social technologies that support multiplicity, polyvocality and contradiction in serving small, but rapidly expanding, populations. It prompts questions around how to design for characteristics such as intangibility and ephemerality in accessing and communicating human experience.

There is a need for participatory rurban CSCW to make visible the various readings and affordances of rurban places, to open up possibilities of place and to support cooperative work towards more inclusive and fulfilling community life. CSCW interested in working towards more equitable futures might look to the rurban place as one rich with potential for fostering alternative communities. Rurban communities are very much in the process of becoming and offer opportunities to reimagine inclusive, equitable and fulfilling community life combining both rural and urban benefits. If not attended to however, there are warnings of the dangers of increased marginalisation, polarisation and social rupture (Lichter and Ziliak, 2017; Meagher, 2009; Sherman, 2018, 2021). All communities are complex and contradictory in many ways, with multiple identities often at the heart of community literature (Liepins, 2000). However, these aspects are magnified and intensified in the relatively small and highly diverse rurban place. As a site for CSCW design, this gives researchers the chance to witness up-close complex social dynamics around belonging, marginalisation, acceptance and inclusion with a view towards designing sociotechnical interventions and innovations to support pressurised communities.

5.2 Configurations and opportunities for rurban CSCW

Not all rurban experiences are visible or accessible and rurban life contains sources of frustration and joy specific to different community groups. Marginalisation is experienced in different ways by both old and new, teenage, and adult community members. There is also much warmth and support to be found in community life. Based on the particular nuances of Northrock rurban life, we outline the values, responsibilities and characteristics of rurban participatory CSCW. We also propose research design ideas for rurban CSCW.

5.2.1 Values, responsibilities and characteristics of rurban CSCW

Across our findings and specific to the rurban context, we saw a need to build mutual understanding, to challenge harmful assumptions and make visible conflicting experiences. With regard to design values then, we specifically place empathy and provocation at the centre of rurban participatory CSCW in order to build community bonds and provoke both standpoints and actions on community issues. We also centre agency, as community members seek to advocate for themselves and the future of the community. These values are particularly important to the rurban place as challenges centre around diversifying demographics, rapidly evolving intersectional identities and the need for grassroots organization to develop and advocate for the community as it expands. Rural values around friendliness and support were seen as a central strength to the community, as was the new diversity as a result of expansion. However, for many participants the lack of visibility of experiences outside of their own was an impediment to the recognition of these values. With that in mind, we need participatory processes that communicate diverse experiences of these values to the wider community. Again, this need is specific to the rurban place as it seeks to celebrate and promote values such as friendliness and support in a context of rapid change and a sense of loss felt by some of the more long-term residents.

This lack of awareness of others' experiences leads to challenges for new communities and alienation of long-term community members. This also contributes to moments where salient differences were simply not seen or ignored, eliciting a normalizing process which can render difference invisible. One of the central responsibilities of rurban CSCW in pursuit of collaboration on community goals is to make visible the various perspectives and experiences and bring them into dialogue with each other with the view to enhancing visibility and agency of those marginalised, as well as building mutual understanding across groups. The possibilities of marginalisation of minority groups in rurban communities are well documented (Meagher, 2009; Sherman, 2018; Shucksmith et al., 2012) as is the need to develop processes

specific to rurban to ease this transition (Stephens, 2019). There has also been calls to centre the participatory and technological needs of minorities in CSCW (Bray et al., 2022; Erete et al., 2021; Harrington, Klassen, and Rankin, 2022; O'Leary et al., 2019). The rurban site offers CSCW rich opportunities to study the consequences of rapid diversification of rural demographics around race and ethnicity, which can have far reaching implications for aspiring towards equitable technology design and development.

In the Irish context, we see a responsibility to examine power hierarchies and challenge assumptions around who is "more Irish" and to change perceived limitations around where minority groups can show up in community life. As these assumptions often revolved around race, it would be useful to have as diverse a research team as possible. This relates to literature that discusses how researchers themselves play an active role in knowledge creation in the research process (Clarke et al., 2016; Bardzell, 2018; Le Dantec and Fox, 2015). Having a research team that is representational of multiple ethnicities would be a powerful and practical way to combat assumptions around who belongs where in community life. When working with teenagers and in the Irish school context, it is necessary to be aware that the teaching profession is still quite homogenous with teachers coming from dominant ethnic and social groups (Parker-Jenkins and Masterson, 2013). Having a diverse and representative research team is all the more crucial. In addition, participation in community events has been found to extend the boundaries of "Irishness" (O'Donnell et al., 2016) and meaningful social interaction is seen to counteract exclusion (Sherman, 2021). CSCW can leverage these insights to develop interventions to bring people together around shared events or experiences.

One of the most apparent characteristics of rurban life is its complexity, with multiple realities coexisting in a small community with intersectional identity markers impacting on experience. The community is also quite interdependent, which creates challenges for provocative design work as community members tend to seek collegiality rather than confrontation

(Robinson et al., 2021). While the community undergoes rapid demographic changes, the physical spaces may struggle to keep up. This requires researchers to be aware of the historical and social contexts of the various spaces and how might they support or inhibit the participation of various groups. In Northrock there are individuals with an immense depth of community knowledge, typically due to decades of involvement in a relatively small community. This level of concentrated expertise is a huge benefit to rurban participatory CSCW in understanding the contexts described above, and in gaining access to a wide participant base in the hope of investigating the various realities present in the community.

These are sociogeographical considerations specific to a community where identities are rapidly being made, and new and existing minority groups are in danger of marginalisation. This gives rise to an immediate need to build mutual understanding across groups. There are also immediate political needs around expanding infrastructures and building capacity to organise and negotiate the future of the community in the face of encroaching urban interests. CSCW can play a role in supporting these processes through participatory projects, where all participants are skilful and resourceful agents, drawing on their own specific knowledge and experience (Bardzell, 2018; Le Dantec and Fox, 2015; Wright and McCarthy, 2015). We need to be conscious of demands we put on participants, in terms of knowledge or interest required (Holmer et al., 2015), acceptance of unknown outcomes (Le Dantec and Fox, 2015), possible negative repercussions in the sharing of personal stories (Harrington, Erete, and Piper, 2019) and logistical demands and political implications in terms of where participation might take place (Bray et al., 2022; Wright and McCarthy, 2015).

In the next section we put forward some suggestions for research design based on the values, responsibilities and characteristics outlined here.

5.2.2 Research design for rurban CSCW

Participatory rurban CSCW needs to be political, dialogical and generative in nature. We are interested in pursuing pluralistic approaches that centre

participant values around empathy, provocation, agency and diversity, that engage with responsibilities around making various experiences, assumptions and hierarchies visible and are sensitive to characteristics around polyvocality, intersectionality and interdependence.

Participatory community-based CSCW points to the value in identifying project aims based on goals arising from community interests and concerns, rather than technological outcomes (Carroll and Rosson, 2013; Clarke et al., 2016; Harrington, Erete, and Piper, 2019; Le Dantec and Fox, 2015). In the rurban context, this involves using the values, responsibilities and characteristics outlined above as a starting point. At a practical level this would mean connecting with community interests and concerns around (for example) housing, amenities, more social spaces for young people, the visibility of minorities in prominent community roles and narrow perceptions of who is "more Irish". Ideally, researchers would understand as much as possible the values of participants to support multiple different, often conflicting voices. Centring diverse and contrasting experiences and perceptions in rurban CSCW would involve engaging as many different sections of the community as possible and in spaces and places that are open to interpretation and exploration of different community values and experiences. We draw on Carroll and Rosson (Carroll and Rosson, 2013) when they speak of the importance of referencing social structures, as well as cultural and symbolic markers of a place when doing community-based design. In the case of Northrock, these cultural and symbolic markers can be seen to include the Church, the sports facilities, the ethnic shops, the pubs and the various grassroots organisations (Murray, Pantidi, and McCarthy, 2023). Working with these cultural and symbolic institutions suggests possibilities around where work might take place, who might be involved and what media and activities could be most relevant and of use.

In the focus groups and workshops, modes of perception specific to one group or another act as a filter on diversity in the community, rendering some aspects and experiences invisible. This recalls McCarthy and Wright when they

say that "the modes of participation available to people are determined by the modes of perception available" (2015), and points to the need to widen the perceptions available if we are to have meaningful and effective participation. This requires bringing together diverse participants to focus on expanding perceptions of community life, particularly where minority groups belong, the promotion of narrow definitions of who is Irish, and the idea that community bonds are somehow weakened by the rapid changes, when in fact they have been strengthened in many cases. It also requires a range of activities and media in any participative process that would allow participants to express and understand ideas and experiences in a multitude of different ways. This resonates with Bray et. al (2022) when they discuss the importance of design tools to prompt conversations on race in design, and in the case of Northrock, race in community and national identity. Drawing on Harrington et. al (2019), outcomes would need to be designed and evaluated by participants according to their values and needs, and reflexivity is needed on behalf of the researchers to avoid imposing their own expectations or agendas.

To expand on the researchers' role, basing participatory work on factors specific to a community and engaging diverse populations in challenging and sometimes confrontational participatory processes requires careful facilitation and a longitudinal engagement with the community. The value and use of the work to the specific community and participants needs to be clear. This is reflected in concerns around colonialism and unequal power dynamics in computing (Bardzell, 2018, 2011; Dourish and Mainwaring, 2012; Harrington, Klassen, and Rankin, 2022) and engagement with the rurban community has the potential to counteract these concerns. This also necessitates a high level of reflexivity on the researchers' behalf. Using our research as an example, one of the most complex issues is that of who belongs where and the gatekeeping of who is more "Irish". How can our research team support conversations around race and difference? How can that be done with these teenagers? Our research team are all white. While one of us is a migrant, two of us were born, raised and continue to live in Ireland. We all have a large amount of privilege

due to our access to education and roles in the University. This points to the need for these processes to be directed by local people with direct experiences of these issues. In our context, we could involve adult participants from the Inclusion / Integration community group for example in work with teenage participants around these beliefs and attitudes towards who belongs where and why. Facilitation can support the examining of questions around historical contexts, community access, power, positionality and who is seen and heard, while being sensitive to any potential consequences for participants in relating their experiences and perspectives (Harrington, Erete, and Piper, 2019).

6 Conclusion and future work

This work puts forward the values, responsibilities and characteristics of rurban CSCW based on an understanding of lived teenage and adult experience in Northrock, an Irish rurban community. Rurban communities are places of possibility, with the potential to create more equitable, supportive and dynamic communities. The challenges are around supporting cooperative work across diverse parties to guide community expansion. This requires recognizing multiple, intersectional and often contradicting experiences while counteracting marginalisation. Participatory rurban CSCW needs to align with the values, responsibilities and characteristics of rurban communities to build mutual understanding and agency in determining the community's future. The rurban community has much to offer CSCW in advancing understanding of how to respond to place, participation, inclusion and marginalisation to design cooperative technology in support of developing communities. In future work, we are interested in exploring what these participatory processes might look like, specifically in Northrock but with a view to applying them to other pressurized rurban communities.

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Chapter 5: Conflict and belonging: Socially engaged art practice as a resource for resilience-building in rurban communities

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ABSTRACT

Rapidly expanding rural ("rurban") areas are generally discussed with regard to logistical and administrative challenges while the impact of expansion on community resilience remains relatively unexamined. This paper describes a preliminary study on rurban community resilience with a view to supporting these communities with digital socially engaged art interventions. A series of focus groups, conducted to better understand the strengths of and challenges faced by rurban communities, demonstrated nuanced notions of identity as well as identity tensions that paradoxically contribute to a sense of belonging and inclusion. We propose that engaging with this kind of "identity work" is a necessary first step for those who wish to deploy digital SEA interventions in communities undergoing rapid changes.

1 Introduction

In recent years, socio-economic impacts on employment and essential services have led to the rapid expansion of rural areas and their becoming ancillary communities to nearby cities. Such communities, described as "rurban', hold a set of unique characteristics that are different to both urban and rural areas (Gonçalves et al., 2017).

Existing literature tends to focus on the decline of rural communities, with resulting policies aimed at increasing vibrancy, combating depopulation, maintaining and enhancing quality of life and securing provision of services (Fischer and McKee, 2017), while the expansion of rural communities has been overlooked (Stephens, 2016; Argent, 2008). The rapid expansion of the rurban population raises concerns that demographic changes could undermine community resilience through challenges posed to identity, agency and empowerment (Skerratt, 2013; Fischer and McKee, 2017). Our research explores ways to address concerns around expansion and to support rurban communities through the use of digital socially engaged arts (SEA) interventions.

There is a growing body of HCI research investigating how SEA can support resilience in urban contexts (Kelkar and Spinelli, 2016; Seeburger, Foth, and Tjondronegoro, 2015; Thomas, Pate, and Ranson, 2015; Verschelden et al., 2012) and HCI researchers have successfully drawn on SEA interventions to develop multiple understandings of community, place, belonging and identity (Clarke et al., 2016; DiSalvo et al., 2009; Klaebe and Foth, 2007; Light et al., 2009; Pinder, 2005; Weibert et al., 2017). However, the rural context, and even more specifically the rapidly expanding rural context, has yet to be explored. Our research is driven by the belief that there is a role for digital SEA interventions in resilience building in communities undergoing rapid change. In this paper, we present the results of our first study investigating the strengths of and challenges faced by a rurban community, with a view to designing subsequent digital SEA interventions.

2 Background

SEA is an established participatory arts movement valuing conflict and dissent as dynamics believed to achieve transformative social change (Bishop, 2006; Petrescu, 2007; Sharp, Pollock, and Paddison, 2005). SEA has been used to encourage active citizenship and progress mutual understanding and inclusivity

(Diprose, 2015; Edwards, Collins, and Goto, 2016; Verschelden et al., 2012). SEA practices have long been a part of urban development and are considered a means of gaining cultural participation and community development (Verschelden et al., 2012).

In an HCI context, SEA, while still relatively underexamined (Clarke et al., 2014), has focused on areas related to sustainability (DiSalvo et al., 2009), inclusion (Light et al., 2009) and identity (Weibert et al., 2017; Clarke et al., 2013). SEA in HCI has been used to enable collective learning and democratic moments (Verschelden et al., 2012), and impacts on ideas of place, belonging & identity (Weibert et al., 2017; Grodach, Foster, and Murdoch, 2014; Oakley, 2015). In this respect, we are interested in the potential of digital SEA as a vehicle to explore community dynamics with the view to supporting resilience.

We are led by Liepins (2000a) in our conceptualisation of the community as "a social collective of great diversity" and "a signifier of both research scale and cultural meanings about social life and rurality". Communities are considered "resilient" when they respond to crises in ways that strengthen communal bonds, resources and the capacity to adapt, evolve and grow in the face of change (Skerratt, 2013; Roberts and Townsend, 2016; Beel et al., 2017). Crises faced by rural communities are often triggered by rapid urbanisation which leads to either expansion or decline of rural communities (Argent, 2008; Torre, 2015). Members of these communities are said to develop personal and collective capacity to respond to and influence change (Beel et al., 2017), placing human potential and empowerment at the centre of individual and community resilience (Fischer and McKee, 2017; Skerratt, 2013; Landry, 1996), a desire that resonates with the function of SEA. Our research aims to explore the potential of digital SEA in the context of rurban community resilience. In this paper, we present the results of our first study investigating the strengths of and challenges faced by a rurban community dealing with rapid expansion, with a view to designing subsequent digital SEA interventions.

3 The study

This research was conducted in "Northrock"[3], a rurban community in the south of Ireland. This formerly rural community was reported in the last census to have expanded at almost four times the national average. Almost one-third of the population were born outside of Ireland (Central Statistics Office, 2018) and residents report almost 40 languages and 6 religions present in the community. Reasons for this expansion include proximity to an urban centre, good transport connections and availability of housing. Local community organisations recently published a "strategic plan" in response to the expansion, aimed at promoting community resilience. Suggested actions include the development of a "digital village book" detailing life in the community. This community profile aligned well with our research aim of supporting rurban communities. The community's initiative in the strategic plan and interest in developing digital resources were also encouraging factors in deciding to posit our research work within this community.

The primary researcher conducted initial fieldwork; this took the form of attending community meetings and social events to build rapport with key individuals and organisations in the community. The primary researcher is originally from the area and so was well positioned to identify key stakeholders and design research with the community. The aim of the present study was to elicit the experiences of the population with a view to understanding the challenges they face as a result of expansion and the strengths inherent in the community to address these challenges. We conducted three focus groups with a total of 20 community residents (7 men, 13 women). Participants' age ranged from 25 to 80 years old, their time residing in the community from between two and over seventy years. Sessions were audio-recorded and transcribed by the lead researcher who facilitated the focus groups. The transcripts were analysed using thematic analysis (Braun and Clarke, 2012) which allowed for examining underlying ideas and assumptions in self-reporting by participants

[3] anonymised

and the discourses behind understandings of experience (Braun and Clarke, 2006). During this analysis four themes emerged: (1) Contested Identities, (2) Rural Culture, (3) Changing Social Structures, and (4) Mechanisms of Inclusion. Here we focus on Contested Identities and discuss its significance for digital SEA interventions with a view to supporting resilience in rurban communities.

4 Contested Identities

Across the focus groups, participants alluded implicitly or explicitly to divided identities with regard to new residents, as well as in-groups and out-groups in various contexts. This is indicative of the community cultivating an understanding of identity that is in part defined by the "other". While this could be construed as insular and suggest something counteractive to inclusivity, it can also be seen as giving rise to a sense of solidarity and belonging. As part of this theme of contested identities, three subthemes are presented: Old versus New, East versus West, and Internal versus External. All are illustrative of community divisions borne out of expansion at different times since Northrock's first settlement. These divisions contest and at the same time constitute the identity of the community. Further, these three themes all speak to the complex nature of identity processes in rurban communities. The divisions illustrate how identity evolves from conflict and dialogue to forge new connections and understandings. We present these in detail below.

4.1 Old versus new

Our first division draws on longevity of residence as a factor in defining individual and collective identity. During the focus groups, participants used various linguistic devices, such as the labels "Old Rock" and "New Rock", "blow ins" and "outsiders" to indicate longevity of community membership as part of positioning themselves in relation to others or talking about community events or personal history. The terms "Old" and "New" take on specific

connotations within the community context. For example, "New Rock" is defined by one participant as "people who have only moved in the last 15 years". (T:B, P:2, L:527-528) but is equally used to refer to people who have moved in more recently.

The terms "Old" and "New Rock" are used to describe the involvement of newer residents in community events: "It is the communion and the confirmations is very important because that's the New Northrock getting a feel for the old people and seeing who's around as well." (T:B, P:2, L:373-374), or to describe interactions between community members.

In the following extract, a community member uses the "New" and "Old" labels to outline the interaction he has with the "New Rock" population. This is useful in illustrating his point while positioning it in a positive way with regard to any perceived differences between residents:

> P2: I have dealings with more New Northrock than I have with Old Northrock on a daily basis for myself. [...] I'd be just walking down the street, and a lot of them are New Northrock, and nearly everyone now would say hello to me (T:B, P:2, L:346-357).

The expression is also used to illustrate the positive and revitalising aspects of new people joining the community:

> P2: There's 90 volunteers each St Patricks day parade, and there's well in excess of half of those are New Northrock" (T:B, P:2, L:525-529).

The label "new communities" is used in a similar way in the following extract to illustrate the connection key organisations have with the "New Rock" population:

> P1: We all have the same issues and I think maybe that's why we're open to the new communities coming in as well because we see people with the same problems and the same issues [...] and I think that's maybe why the resource centre is so open to new communities and I think that's been the success of it really. (T:A, P:1, L:278-283).

This practice of differentiating long-term residents and newcomers is also evident in terms such as "blow-ins" and "outsiders". The term "blow-in", which was used in previous generations and feels more derogatory no longer seems to hold the same currency as evidenced by the following exchange between two participants about 20 years apart in age:

> P5: And as well as that since I moved here and met people in the schools, I've friends that I know from the city who are down here as well, but I've also friends who were born and bred in Northrock, that get on great and they never kind of say "oh you're only a blow in" or anything like that.
> P1: The might say it in fun
> P6: They used to say I'm only a blow-in too (T:A, P:1,6,5, L:326 334)

The use of the "Old" and "New" labels and the terms "blow-ins" and "outsiders" suggests the desire to identify and divide groups with regard to their longevity in the community. However, participants observed that language used seems to have transitioned from harsher terms (e.g. "blow-in") to the more equitable language of "New" and "Old". This suggests an amount of softening in the process of inclusion, whereby differences are still acknowledged, but in a less hierarchical way, the terms "Old" and "New" not indicating any intrinsic value of one over the other.

4.2 East versus west

The division of East versus West is both geographical and class-based in nature. To provide some background, in the 1970s two estates were established in Northrock. One in the East end and one in the West end, which subsequently was followed by community tensions. These estates radically altered the social structure of the community as their establishment brought the first big influx of new residents. This event gave rise to social problems such as exclusion and anti-social behaviour, as reflected in the extracts below. The two estates were established at opposite ends of the village, one as social housing and the other private. This was in effect an act of segregation between

the two economic classes as evidenced by the following exchange during one of the focus groups:

> P7: As I quickly found out that there was a class structure in Northrock, there's no doubt about that.
> Researcher: Ok, and how does that break down?
> P7: Well it broke down that you had the West End and the East End, to put it very crudely, the two different ends of the village and I kind of got a sense that the people who lived up this end, although they may have originally come from the West End, didn't want to mix too much with the people from the West End.
> P2: I actually live in the West End and that was the case. (T:A, P:7,2, L:250-260)

At that time in history, in-group / out-group divisions resulted in an amount hostility, as seen in the following exchange between two women, in their 60s and both a part of "Old Rock".

> P2: Ryan and Aherne [estate] and am, Castle View [estate] we'll say, they'd go play matches and there could be a fight between them, between matches.
> P1: It was totally crazy. (T:A, P:2,1, L:300-303)
> P1: Now you'd kind of forget alright but there was a lot of aggro between the two sides, and because it was the only private estate in the village at the time, people had notions about themselves which was totally wrong (T:A, P:1, L:270-273)

This level of social tension is a dark chapter in the community history and indicative of how destructive insular divisions can be. In this case, geographical and social divisions led to entrenched group identities that resulted in violent behaviour. Interestingly, in our focus groups, these divisions were discussed not as part of current identity but as a thing of the past which has now been resolved, with "New Rock" participants expressing surprise that those divisions ever existed. Still, the divisions and the ensuing process of reconciliation was formative in the evolving identity of the community as some participants acknowledge that process as instrumental in creating a more inclusive and empathetic community, as reflected in the following quote:

P1: Well I suppose, maybe that was the first integration we had to do, [...] I know this is why we're conscious of it for the new communities as well,[...] the resource centre originally was about empowerment and it was around education and that broke down the barriers, and then it was probably easier when new people came in, there was some curiosity about them, and there was a welcoming I think. (T:A, P:1, L:408-421)

4.3 Internal versus external

Frictions between the community and outside legislative and social bodies constitute the third contested identity. This manifested in a number of different dialogues, both contemporary and historical. We describe two of those conflicts below, revolving around a historical connection with the IRA[4] and disputes with the city and county council. The participants reference historically being discriminated against due to IRA activity in the community:

P2: Again, I go back to my teens and my early 20s, the IRA would have been synonymous with Northrock right, and very strong, and that was a lot of why it was so hard to get jobs, because, I mean,
P5: You would have been suspected as being in the IRA.
P2: Yeah, you know, if you're from Rock, "oh right they're from Rock" you know what I mean. (T:B, P:1,2, L:708-711)

IRA activity is no longer associated with the community; however it is mentioned by several older participants and so still plays a part in the psyche of the community. This old discrimination may have played a part in the community becoming "close knit" (T:B, P:1, L:588) in the face of outside adversity.

Expansion itself led to a recent conflict between the community and the county and city council when an attempt to redefine the administrative boundary of the village led to the mobilisation of community groups in opposition to the proposed changes. This episode is discussed in the following

4 A republican paramilitary organization seeking the end of British rule in Northern Ireland

excerpt from a female participant in her 50s, a member of "New Rock" and a very active community member:

> P7: When the Cork city council mentioned the expansion of the boundaries [...] I wrote the letter on behalf of the business association [...] In the letter we just said that's completely unacceptable to us and we'll fight it. [...] before it was officially announced, we found out that we were going to be officially excluded [...]. It is going to grow, Northrock is definitely going to grow, but I believe that the strength of this community is so engrained, and I think that people are so [...] invested in making sure that Northrock remains as it is. [...] If you come and try to mess with our Northrock, you'd better beware! We're not going to tolerate it. (T:C, P:7, L:534- 570)

This shows a protective attitude to the community from members of both "New" and "Old Rock" and is indicative of the issue having helped to cultivate a sense of solidarity against perceived threats.

These three subthemes all speak to the complex nature of identity processes in rurban communities. All three divisions illustrate how identity evolves from conflict and dialogue and how over time new connections and understandings are forged.

5 Discussion and future work

The aim of this study was to investigate the strengths of and challenges faced by a rurban community, with a view to designing subsequent digital SEA interventions to support resilience. We conducted a series of focus groups in a rapidly expanding rural community in the south of Ireland. Limitations to the study include the small number of participants – although the overall sample was representative of various community sectors - and its specificity to the Irish context. The sample is also representative of enthusiastic community members – those who volunteered to participate - which may have biased the results towards a more positive outcome. For the purposes of this paper, we presented one overarching theme from our analysis: Contested Identities. During the focus groups, participants engaged in conversations that revealed

the multiple layers of identities within the community and the conflicts underpinning them: old versus new, east versus west and internal versus external. Our findings illustrate the relevance of uncovering the various identities present in any community and the significance of investigating the conflicts that may drive them. We suggest an approach whereby digital SEA work in a community undergoing significant change may focus on identity work and conflict in order to provide an opportunity for dialogue, difference and dissent between participants.

5.1 Conducting identity work

The theme Contested Identities, illustrates the multiple layers of identity present in the community, highlighting the complexity of rural communities consistently with existing research (Allen, 2003; Liepins, 2000a; MacKinnon and Derickson, 2013; Roberts and Townsend, 2016; Thomas, Pate, and Ranson, 2015). Existing literature positions ideas of place, belonging and identity at the heart of rural community life (Liepins, 2000a, 2000b). It is our belief that identity may also be at the heart of community resilience, where the sometimes confrontational nature of identity allows for diverse understandings to be articulated, forming collective identities and evolving over time to support a more inclusive community. In our context, this collective identity work of evolving understandings of community identity as articulated in the focus groups put systems in place that supported the inclusion of new people to the community today.

Based on these findings, we suggest practitioners and researchers in SEA and HCI place an investigation of collective identities at the centre of any work supporting community resilience in communities in a state of flux. Understanding the multiple collective identities inherent in a community and/or supporting the articulation of those may provide a way into these communities and a mechanism to open up critical, self-reflexive work around community dynamics. This work may generate insights to provoke further discourse and promote forms of capacity or community building, as suggested

in existing literature on SEA frameworks, which attribute value to the opening up of space for critical analysis (Edwards, Collins, and Goto, 2016).

5.2 Drawing on conflict

Our findings suggest conflict can be a positive dynamic whereby identities are developed and feelings of belonging and solidarity can arise. Conflict in SEA is seen as a valued part of social interaction, providing opportunities for dialogue and so leading to deeper mutual understandings (Clarke et al., 2014; Sharp, Pollock, and Paddison, 2005). The historic SEA concern with conflict and dissent should be translated into contemporary digital SEA practice in HCI, which is still relatively unexamined in terms of its capacity for social change (Clarke et al., 2014). We suggest that SEA and HCI researchers and practitioners engaging communities in participatory digital SEA interventions can benefit from uncovering, verbalising and engaging with conflict as it relates to community values, in our case in the area of identity development, in order to bring about greater understanding and transformative change.

These two elements of focusing on identity work and drawing on conflict constitute a conceptual framework which draws from perspectives from existing SEA in HCI research (DiSalvo et al., 2009) whereby the framework is not prescriptive, but can potentially act as an exploratory tool to generate topics that may be debated or engaged with in order to promote transformative social change. These elements may be integrated into digital SEA interventions via participatory design workshops whereby identity and conflict are central themes for exploration. The next part of our research aims to apply this framework into a set of digital SEA workshops exploring social, cultural and historical narratives as a means to promoting community resilience.

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Chapter 6: Agency, power and confrontation: The role for Socially Engaged Art in CSCW with rurban communities in support of inclusion

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ABSTRACT

Rapidly expanding rural communities (often termed "rurban") face complex social challenges around inclusion of newcomers, which can be unsettling for long-established community identity. Although participatory CSCW provides resources to support rurban social inclusion, complementary approaches may be needed to facilitate potentially uncomfortable creative and political responses to questions of agency, power, inclusion and confrontation. We suggest that socially engaged art (SEA) has the appropriate qualities and track record to complement better known CSCW approaches in these settings. SEA offers a specifically experiential and dialogical approach to community participation in design, where the kinds of interactions made available by SEA can provide a space for a more dissensual participation. As well as introducing SEA and explaining its potential contribution to participatory CSCW, the paper presents a focus group study undertaken in an Irish rurban community, and considers the implications of insights from that study in future SEA-informed CSCW with this community. The focus group analysis highlighted supportive organised community action, queried social encounters in public space, examined misperceptions and poor communication, and problematised

the role of powerful organisations in fostering inclusion. SEA-informed design considerations in support of social inclusion in this community include: supporting volunteerism; examining the evolution of community institutions; reimagining interactions in public place; and dispelling misconceptions through building mutual understanding. We propose that the dialogical aesthetic of SEA complements other CSCW approaches by drawing attention to tacit, visceral and emotional experiences; dialogue and conflict in collaborative processes; and increasing participant (including emerging community) agency in enacting alternative possibilities.

1 Introduction

The rapidly expanding rural community is a site marked by diversity and change due to an influx of new people. These communities have been called "rurban", "peri-urban", "new rurality" and "urban fringe" (Allen, 2003; Busck et al., 2008; Eliasson, Westlund, and Johansson, 2015; Torre, 2015; Prakash, 2018). We choose "rurban" because while some of these terms render the rural invisible, on a semantic level "rurban" represents both rural and urban characteristics of these places (Busck et al., 2008; Gražulevičiūtė-Vileniškė and Vitkuvienė, 2013) and in our work, we have found that preserving rural values is an important aim for these communities. Rurban communities are former rural communities that, as a result of rapid expansion, have characteristics that differ from both rural or urban communities (Allen, 2003; Busck et al., 2008). Typically, they are close to large urban areas and often become ancillary communities to the urban community (Torre, 2015). However, they retain a separate identity, rooted in their rural traditions, influenced by their new relationship with the urban (Allen, 2003; Gonçalves et al., 2017) and the rapid

increase in population. There are multiple reasons for such rapid increase. Most recently for example, the COVID-19 pandemic prompted a new wave of migration to rural areas (Guaralda et al., 2020; Malatzky et al., 2020).

The social challenges associated with a rapidly expanding rural community involve questions of visibility, power, agency and participation as majority demographics adjust their sense of community identity to reflect the new diversity, and as minority demographics begin to find a place for themselves and influence community life. Disciplines such as CSCW and Participatory Design (PD) have a long history of engaging with power and participation and are well positioned to work with rurban communities. However, while PD has emphasized agency, emancipation and empowerment (Björgvinsson, Ehn, and Hillgren, 2010; Kuutti and Bannon, 2014), it is seen to have strayed from these ideals (Bannon, Bardzell, and Bødker, 2018) and CSCW is said to have more of an emphasis on artifacts over agency and power (Kuutti and Bannon, 2014). With a call for more pluralistic approaches, and a need to renew the activist intentions of community-based participatory work (DiSalvo, Clement, and Pipek, 2012; Holmer et al., 2015; Harrington, Erete, and Piper, 2019), we are interested in the potential of integrating a Socially Engaged Art (SEA) approach when supporting rurban challenges around expansion in order to refresh this focus on agency and agonistic participation. In this paper, we describe empirical findings on the lived experience of people in an Irish rurban community, and we put forward suggestions (based on our analysis, and SEA theory and practice) for SEA-informed CSCW in support of social inclusion in that community.

SEA is a pluralistic, activist and critical art form that aims to tackle social justice issues through creative processes. It typically values process and dialogue over the final output, with an emphasis on developing agency and social bonds. Some very well-known examples would include the work of Suzanne Lacy, who has used SEA to interrogate ideas around visibility and agency of both teenage girls and older women in public life (Lacy, 1997, 2013).

At the heart of SEA is a critical, political and agonistic participation that looks to activate participants in interrogating their social reality. The challenges to participation in SEA are around exchanging dissensus for conviviality and substituting participation for a tokenistic consultation with communities that actually results in a neutralisation of participants (Beech, 2008; Bishop, 2012; Tiller, 2014; Beech, 2009). SEA has the potential to make available wider modes of exploration and expression in CSCW as participants are provided with multiple creative and critical entry points into sharing experience, as we will discuss.

SEA has provided support for issues such as social and economic inequity (Anwar McHenry, 2011; Diprose, 2015), reduced civic engagement (Balfour, W-P Fortunato, and Alter, 2018), stigmatized neighbourhoods (Cameron and Coaffee, 2005), decreased participation (Carey and Sutton, 2004; Verschelden et al., 2012) and fragmented community cohesion (Matarasso, 2007). Participating in SEA processes is said to increase collective problem solving on social issues (Edwards, Collins, and Goto, 2016), promote democratically inclusive practices (Edwards, Collins, and Goto, 2016; Sharp, Pollock, and Paddison, 2005) and support a reconceptualising of "community" to include more marginalised voices (Verschelden et al., 2012). These various aims connect with PD, CSCW and HCI that encourage adversarial and agonistic participation, such as work that looks to create spaces for multiple, conflicting social interests that challenge hegemonies (Björgvinsson, Ehn, and Hillgren, 2012; Hansson et al., 2018), examines how to amplify goals around democratization and empowerment (Frauenberger, Foth, and Fitzpatrick, 2018), explores design as provocation on social issues through revealing, questioning and challenging social norms (DiSalvo, 2012; Hansson et al., 2018).

The work presented here is situated in Northrock, a rapidly expanding rural community in Ireland. We present data from a series of focus groups. Namely, insights around the dynamics of inclusion in the community; where and how inclusion happens or not, as well as evidence of experiences that were difficult

to articulate and contrasting standpoints that people were reluctant to engage with. We then present an argument for including SEA approaches in CSCW recommendations for this community. This is based on our analysis coupled with theory and practice-based examples of SEA.

In the next sections, we describe inclusion in the specifically rurban context. We discuss existing approaches to working with issues of inclusion in CSCW and we outline how SEA is useful to CSCW for inclusion. We go on to present our findings on the dynamics of inclusion in Northrock. Drawing on our analysis and relevant SEA theory and practice, we put forward SEA-informed design considerations that look supporting inclusion in this community, and we discuss how these considerations are valuable to the CSCW community.

2 Background

Our work is interested in how SEA might inform CSCW with the Northrock rurban community as it addresses challenges around expansion. We outline these challenges in 2.1, and we find relevant connections with CSCW for diversity, migration and inclusion (2.2). We look at the practices and aesthetics of SEA and how these might be useful to CSCW in support of inclusion (2.3).

2.1 Inclusion in rapidly developing rural communities

The rapidly developing rural site is rich in potential for CSCW interventions in support of inclusion. Inclusion itself has been broadly defined as the ability of individuals to participate in community life (Le, Polonsky, and Arambewela, 2015) with the aim of tackling inequalities and social justice issues (Gaffikin and Morrissey, 2011).

Migration is seen to have shaped rurban communities (Alexandru, 2012) and literature around inclusion and migration in rural, peri-urban and rurban areas describes the various marginalisations and tensions that can occur as a result evolving symbolic boundaries between new and long-term residents (Sherman, 2006; Meagher, 2009; Lichter and Brown, 2011; Shucksmith, 2012;

Sherman, 2018, 2021; Walton, 2021). Long-term community members can experience marginalisation as they perceive their old ways of life being eroded and replaced with the new values, beliefs and social norms of new community members (Sherman, 2018, 2021; Sherman and Schafft, 2022). Equally, new community members can suffer from a gatekeeping of the community, particularly if they are of a disadvantaged economic status, or different cultural, racial or ethnic background relative to the established community (Meagher, 2009; Shucksmith et al., 2012; Patten, O'Meara, and Dickson-Swift, 2015; Walton, 2021). Patterns of in-migration also lead to complex identities within new community members – for example, in the US context, Mexican-American residents are caught between the social groups of Mexican migrants and the established, majority white, long-term residents (Lichter and Brown, 2011). These various evolving and conflicting identities can lead to fracturing rural values around friendliness and support. The antidote to this is seen to lie in the cultivation of opportunities for meaningful social interaction between the various identities in a community in order to develop a greater level of mutual understanding (Anwar McHenry, 2011; Le, Polonsky, and Arambewela, 2015; Patten, O'Meara, and Dickson-Swift, 2015; Roberts et al., 2017; Balfour, W-P Fortunato, and Alter, 2018; Sherman, 2021).

A high level of social interaction and participation is seen as a strong indicator of a healthy and vibrant rural community (Patten, O'Meara, and Dickson-Swift, 2015; Roberts et al., 2017). In urban contexts, public policy and grassroots activity have combined to promote the inclusion of new community members in political, social and cultural life (Stern and Seifert, 2010; Gaffikin and Morrissey, 2011). This focus also extends to rural cultural initiatives that emphasise increasing social participation in order to combat depopulation, enhance quality of life and secure service provision (Crawshaw and Gkartzios, 2016; A. Fischer and McKee, 2017).

Acceptance of difference is seen as an integral part of the process towards inclusivity, recognising that a "community" is not a homogenous or static concept, but preferably one which welcomes and supports divergent voices

(Sharp, Pollock, and Paddison, 2005) with the hope of cultivating a shared sense of belonging (Gaffikin and Morrissey, 2011). Given that rurban communities are typically characterised by rapid changes in demographic due to influxes of new populations that may or may not be familiar with the particular culture of the host community, the process of accepting difference, supporting contradictory voices and cultivating a shared sense of belonging is central to the enduring resilience and vibrancy of these communities. This diversity calls for a heterogenous approach founded in dialogue (DiSalvo et al., 2009), and a dialogical approach automatically raises questions of participation, in terms of who is included or excluded and who has the most powerful voice (Bishop, 2006).

Somewhat counter-intuitively, very well-integrated communities can particularly struggle with this new diversity as a strong sense of community identity can lead to exclusion for those different to the dominant community group (Thomas, Pate, and Ranson, 2015). This is particularly relevant to formerly rural, now rurban communities, which are smaller and often more culturally homogenous than urban communities. Typical themes of rural inclusion and exclusion look at interpersonal relationship, socio-cultural norms and the stance of organisations and institutions (Patten, O'Meara, and Dickson-Swift, 2015). This paper extends this body of work with insights on the workings of Irish rurban inclusion based on findings from the Northrock focus groups.

2.2 Inclusion in CSCW

This work is situated in the context of migration, diversity and inclusion in CSCW, HCI and PD, where boundaries and power hierarchies are mutable and complex (Chamberlain, Crabtree, and Davies, 2013). Le Dantec and Fox (2015) summarise this well when they say that there are a multitude of "us vs thems" in the community setting with "multiple and overlapping domains of influence and conflict". Their work articulates a range of nuanced challenges and opportunities, such as: situating our research contribution, building

rapport, and accounting for how we balance and discuss our own roles and subjectivities. This objective of building rapport connects with PD that looks at the importance of intermediaries and dialectics in community based work (Frauenberger, Foth, and Fitzpatrick, 2018; Teli et al., 2022). The various "us vs thems" are also recognized in PD that describes the need to provide space for multiple, often marginalised, conflicting identities and agendas (Björgvinsson, Ehn, and Hillgren, 2012). Chamberlain et. al (2013) also reference these various identities while discussing the challenges inherent in rural community engagement and how to design for meaningful collaboration. These notions of multiple "us vs thems" are central to our research in terms of making these various identities more visible and supporting inclusion in the rurban context.

There is a growing body of work in CSCW, HCI and PD that looks at designing for inclusivity (Light et al., 2009; Roberson and Nardi, 2010; Steinhardt et al., 2015; Dye et al., 2018; Giglitto et al., 2019; Mustafa et al., 2020). These include a consideration of how digital technologies might leverage cultural and heritage-related activities to support inclusion of at-risk communities (Giglitto et al., 2019), and aging populations (Light et al., 2009). Internet and social media usage have been examined for inclusivity, for example, in the research by Dimond et al. (2013) research on combatting street harassment, telling and sharing stories online provided a space where community members felt included and able to make sense of their experience, while also acting as a social movement that supported collective activism. Similarly, creative expression coupled with digital storytelling has been found to support migrant participants in increasing levels of digital inclusion and positioning themselves in the host society (Weibert et al., 2017), as well as supporting the social inclusion of older generations (Balestrini et al., 2014). Social bonds in both rural and urban communities have been supported through sharing information and increasing access to digital infrastructure (Fröhlich et al., 2009; Willis, 2019; Klaebe et al., 2007). The growing interest in social living labs, fab labs and maker labs all seek to cultivate community

bonds at a grassroots level through creative, communal and generative appropriation and use of technologies (Taylor, Hurley, and Connolly, 2016; Dezuanni, Foth, and Mallan, 2017; Taylor, Clarke, and Gorkovenko, 2017). Engaging with grassroots organisations is seen as useful in understanding complex community-based relations and in working towards addressing power imbalances (Teli et al., 2020, 2022). This research typically endeavours to fulfil individual and collective needs, interrogate existing social boundaries and power hierarchies, create stronger interpersonal connections and communities, and support social change through meaningful participation and collaboration (Chamberlain, Crabtree, and Davies, 2013; Holmer et al., 2015; Le Dantec and Fox, 2015; Pantidi et al., 2015). Recently, there has been an increase in interest in exploring what we mean by social justice and activism in CSCW, HCI and PD, and how we might use technology and design to advocate and work towards for better futures (Dombrowski, Harmon, and Fox, 2016; Harrington, Erete, and Piper, 2019; O'Leary et al., 2019; Strohmayer, 2021; Bellini et al., 2022; Bray et al., 2022).

These various research projects are all valuable in understanding how to work with a community on the complex social issues around inclusion. As we will outline, integrating SEA into such work supports emerging activist intentions and provides space for polyvocality, contradiction and dissent through processes of creative exploration and expression, supporting participants in imagining and communicating their own solutions.

2.3 The benefits and challenges of an SEA approach to CSCW for inclusion

SEA endeavours to support inclusion in local communities in terms of facilitating a dissensus-based, creative process to amplify marginalised voices, communicate differences and make visible those social experiences that are challenging to describe. SEA is political and collaborative, it typically aims to increase agency, democracy and social bonds as it works towards some social

change. Here we put forward some related literature and practice-based examples of SEA, as well as some of the challenges around doing this work.

Art-based events have contributed to an evolving sense of community identity through promoting the recognition of diverse experiences and perspectives (Le, Polonsky, and Arambewela, 2015; Roberts and Townsend, 2016) and creative spaces have been deployed to share experiences and build community cohesion (Matarasso, 2007; Taylor, Hurley, and Connolly, 2016). SEA processes have also supported shared experiential understandings of culture and identity (Carey and Sutton, 2004; Thomas, Pate, and Ranson, 2015; Edwards, Collins, and Goto, 2016). For example, Tania Bruguera's *School of Integration* focuses on highlighting the experiences of immigrants and critically questioning terms such as "migrant" and "integration" through informal, creative, learning spaces (Arte Útil, 2021). These SEA interactions are said to help build trust, bring differences into dialogue and contribute to a collective sense of place and community identity (Carey and Sutton, 2004; Cameron and Coaffee, 2005; Anwar McHenry, 2011; Kelkar and Spinelli, 2016; Balfour, W-P Fortunato, and Alter, 2018).

There are challenges to doing this work. Kester (2011) discusses the danger of superficial arts participation and puts forward the importance of engaging with existing conflicts in a bottom-up, rather than top-down way. Olsen (2019) warns of the danger of overly-simplifying complex power systems. The core of these various concerns are around how to facilitate an effective participatory process. One that provides real opportunity for dissent and confrontation, eschewing a reductive approach to complex social problems (Bishop, 2012). Beech discusses issues of neutralisation, tokenism, and a lack of critique in many forms of arts participation, particularly public art which can promote hegemonic forms of placemaking (Beech, 2008, 2009), and in the same work argues that a more activist, critical participation can help counteract this. Working to ensure the SEA aesthetics of dissent and agonism are at the heart of participatory work can support this.

These aspects of SEA resonate with CSCW, HCI and PD that is interested in pursuing an activist agenda and bringing multiple perspectives and identities into dialogue in order to identify and realise social goals. For example: supporting members of disadvantaged communities to create and share personal stories to promote empowerment around health (Grimes et al., 2008), building connections in the workplace for mutual benefit and shared creative ideals (Pace et al., 2013), and understanding community dynamics to achieve shared goals around reducing energy consumption (Dillahunt and Mankoff, 2014). The emphasis on creative exploration and expression makes SEA of value to CSCW, HCI and PD that is interested in taking creative approaches to community-based work (Hjorth et al., 2019; Sturdee et al., 2021; Rüller et al., 2022; Giaccardi et al., 2006). For example, integrating SEA approaches and standpoints might be useful to work exploring how traditional craft can support sharing of knowledge and collective action on issues (Aytekin and Rızvanoğlu, 2019; Strohmayer and Meissner, 2020; Strohmayer, 2021).

While the many aims of SEA are congruent with existing CSCW and HCI work in inclusion, there is little SEA in HCI currently to draw on. The work of Light et. al (2009) provides one strong example, where researchers and SEA artists designed a workshop inspired by performance art to include the voices of marginalised populations in the discussion of digital technologies. We also look towards the work of Clarke et. al (2013), where digital photography and photo-sharing practices helped to affirm new bonds and give a sense of agency and identity to the vulnerable participants. These examples show the value of bringing SEA to CSCW. The various modes of aesthetic expression in SEA can allow for non-prescriptive, spontaneous, generative and unexpected engagements with complex issues. SEA processes and outputs are inherently pluralistic and open to interpretation, creating opportunities for dialogue and allowing participants to mediate how much they want to share, as well as providing multiple avenues for how they might like to share it. Centring aesthetics of dissent and contradiction promote the facilitation of conflicting viewpoints, not necessarily with a view towards reconciliation but more towards

mutual understanding. The dialogue that happens around the process of making and sharing creative artefacts on experience often offers subtle and nuanced insights that are less accessible through traditional or design research methods.

We believe that exploring both the benefits and challenges of SEA is useful for CSCW that seeks to centre contradiction and dissent in order to query social norms and to refocus participatory work around agency, power and social change. This exploration can support interventional design that looks towards participation as a political and social endeavour towards more equitable societies (Frauenberger, Foth, and Fitzpatrick, 2018). SEA takes the uncovering and articulating of transgressive, agonistic issues and experiences as a central aesthetic, placing this confrontational dialogical process as the key concern over any specific tangible output. While there are challenges to this, prioritising this standpoint allows for increased modes of expression, confrontational dialogue and meaningful connection when engaging with complex social issues. An analysis of the various challenges that arise when doing this kind of participatory SEA is also of benefit to CSCW, HCI and PD that shares a similar change-making agenda.

As a first step towards designing SEA-informed CSCW with the Northrock rurban community in Ireland, a focus group study was conducted to learn more about the dynamics of social inclusion in Northrock. The next sections present background information on Northrock, researcher positionality and the specifics of that study design.

3 The Focus Groups

In the middle of the last century there was around 400 people in the farming community of Northrock. Today there is over 5000 people, around forty languages spoken and six churches in the community. Northrock expanded by 323% between 2001 and 2011 and in the last census of Ireland it was reported that the community expanded at about four times the national average. Further

expansion is planned over the coming years. The first author grew up in Northrock, and lived there until she was 22 years old. This proved useful as in the context of both CSCW and SEA, the relationship of the researcher to the community is central due to the required level of trust in community engagements, which is built deliberately over time (Chamberlain, Crabtree, and Davies, 2013; Le Dantec and Fox, 2015; Hardy et al., 2019). This also necessitates a greater need for reflexivity, where researchers need to constantly reflect on how their values, beliefs, experiences and preconceptions might impact data analysis (Braun and Clarke, 2019).

Through various meetings with community leaders and groups, and attendances at events, we identified and approached three community organisations for participation in our study. These were: i) a group set up to explore and promote inclusion in the community, ii) the historical society which has an interest in preserving and publicising aspects of community history, and iii) the Family Resource Centre (FRC), a prominent organisation providing support services to those in need. These three organisations were chosen because they represented a wide spread of community members and interests. The primary researcher approached leading members of these three organisations at an early stage in the project to seek support for recruiting focus group participants. An invite went out to the members of all three organisations describing the focus groups as a discussion on what it is like to live in a rapidly developing rural community. Prospective participants were told that the focus groups would be facilitated by a past community member (the primary researcher) as part of a broader research project and that data would be used to inform the design of future workshops in the community. Participants were also provided with an information sheet on ethics and consent procedures. Three focus groups, one per organization, took place, and in total, twenty participants took part in the focus groups: seven men (all cis gender) and thirteen women (one trans, twelve cis gender), six nationalities (Irish, Polish, Albanian, Ethiopian, Nigerian, English), aged from their twenties to their eighties. There were seven participants in the first focus group (inclusion

group), five in the second (historical society group) and eight in the third (FRC group). It is worth acknowledging that the participants were all involved in some sort of community volunteering, or receiving support from the FRC, and so are quite enthusiastic and active citizens. The inclusion group were all "New Rock"[5] residents. The historical society was all "Old Rock"[6] residents and the FRC group had a mix of both. In the following section, participants are denoted by transcript (e.g. T:1) and by number (e.g. P:1).

Each focus group was loosely structured around the themes of: life in Northrock, changes in Northrock over time, inclusion and village identity as perceived by the participants. Each session lasted between 60 and 90 minutes and was audio recorded. The recordings were transcribed by the lead researcher and analysed using a six-stage reflexive thematic analysis (Braun and Clarke, 2006; V. Clarke and Braun, 2013; Braun and Clarke, 2019). Thematic analysis was chosen for its flexible approach in analysing qualitative data in order to articulate themes, giving both a rich and complex account of the data (Braun and Clarke, 2006, 2021). The first stage of analysis involved in-depth readings of all data, creating a list of interesting ideas arising, continuous revisiting of the data and iterative note-taking, taking care to cultivate an active and reflexive process as described by Braun and Clarke (2019). The second stage generated 44 initial codes, where each code signified a single idea associated with segments of data (Braun and Clarke, 2006). Both the lead researcher and three members of the research team were involved in this initial coding which followed an iterative process of discussion and revisiting coding decisions. The third stage involved the grouping of these codes into potential themes, while collating the corresponding coded data extracts under each potential theme. Two members of the research team reviewed and refined these groupings and the corresponding data extracts. The team then continued with an iterative process of discussion, reviewing the data, and creating and reviewing thematic maps to work towards final themes. This resulted in

[5] Described by one participant as people who have moved to the community in the past fifteen years

[6] People who have resided in the community for over fifteen years

defining and naming the themes as; (1) Contested Identities, (2) Dynamics of Inclusion and (3) Rurban Experience.

All analysis stages involved revisiting and re-examining each previous stage in an iterative progression towards the final themes. Given that the lead researcher has grown up in this community, she has background knowledge which may lead to biases and assumptions. This was offset using reflexive notetaking and discussion of codes and themes among all authors. The final stage of the analysis involved the writing up of the themes. The first theme, "Contested Identities", was published as a short paper and outlined how the many different identities in the community are manifested and contested in various ways (Murray, Pantidi, and Hogan, 2019). In this paper, we present the second theme, "Dynamics of Inclusion", detailing aspects of community life that play a supportive or impeding role for social inclusion. The third theme, "Rurban Experience", brings together particular nuances of life in a rurban community and informs the shape and development of the project overall. Again, we draw on Braun and Clarke in presenting one theme at a time in order to provide "a more detailed and nuanced account of one particular theme, or group of themes [to] relate to a specific question or area of interest" (Braun and Clarke 2006 pg. 83). In this paper, that specific question is around how inclusion happens (or doesn't happen) in this rurban community.

4 Dynamics of inclusion in Northrock

Focus group participants regularly discussed inclusion practices, both historical and contemporary, that have manifested themselves in community life. These practices, which may hinder or support inclusion, entail an interplay of various interpersonal, intergroup and intercultural dynamics. Our findings look at: the role of a leading grassroots organisation (FRC), the evolution of dominant organisations (the Gaelic Athletic Association (GAA[7]) and the Catholic

[7] The GAA is the Irish national games association. It is very much connected with Irish culture and local communities.

Church), the configuration of social encounters in public places, and the range of perceptions and attitudes involved in developing relationships between old and new communities as seen through the migrant experience. We find inclusive and exclusive practices that impact on trust, collaboration and social cohesion and we work towards outlining how these elements may be supported through CSCW, drawing on SEA theory and practice.

4.1 The Family Resource Centre

In the Northrock context, we found that previous social problems fuelled the activity of grassroots organisations and community volunteering, notably in the form of the Family Resource Centre (FRC). The vigour of this organisation, its empowerment ethos and the subsequent volunteering tradition has contributed to a more collaborative, inclusive and empathetic community today. The reach of this organisation extends throughout this rurban community, centralising support responses and creating a dynamic hub of volunteerism and aid.

4.1.1 Historical support of inclusion

Previous social issues in the community mobilised community members to participate in the FRC programme, which facilitates the establishment of centres to provide family and community-based support in disadvantaged areas:

> P1: the reason we did have the resource centre was because of the anti-social behaviour in the village and it was felt we had to address it. (T:A, P:1)

The language used here, such as "it was felt we had to address it" is indicative of a grassroots DIY ethos. Referencing this period in time as "the first integration we had to do" (T:A, P:1) also points to feelings of responsibility among this particular group to tackle social issues. An approach of friendliness and mutual respect is suggested in the following statement by a lead FRC member:

> P1: that opened up great friendships [...], people who came back in the 1990s are still coming to us today, just to come in for the tea and the chats (T:A, P:1).

4.1.2 Current support of inclusion

These agentic and compassionate attitudes are evident in the operations of the FRC today and the centre is a strong source of inclusion in the community, promoting mutual understanding and social cohesion. Many testimonials from new residents reflect the transformative impact the centre has had on their lives and the resultant strong regard for the community, for example:

> P5: they see the potential and they want you to grow and they want you to do something for community as well. [...] They are welcoming, seeing the person potential, encouraging the person to be a part, appreciating. (T:C, P:5)

Much of the FRC activity seems to involve women, with statements such as "I suppose we deal mostly with women, and women are women, the world over" (T:A, P:1). Many of our female participants discussed the FRC as central to their inclusion into the community, often revolving around childcare, education and volunteering. This suggests that this is an inclusion avenue that men might find more difficult to access, although this was not outwardly stated by the participants.

4.1.3 The role of volunteering in inclusion

Volunteering practices in this community are of a reciprocal nature with an expectation that people will contribute back to the community:

> P5: They motivate people to do things, if you do one thing they say thank you and they will motivate you even more. [...] They want you to be involved, to be part of the community. (T:C, P:5)

This tradition of volunteering is seen to have spread throughout the community, manifesting itself in other contexts and has been noted to build relationships between existing and new residents, where new residents are seen to have embraced this tradition:

> P2: There's a huge sense of volunteerism there, and like that is actually continuing an awful lot. I use St Patricks day parade now as an example. There's ninety volunteers each St Patricks day parade, and there's well in excess of half of those are new Rock. (T:B, P:2)

The workings of the FRC indicate a relationship between volunteering, empowerment and inclusion. They also suggest that some pathways to inclusion can be mediated by gender and the implications of this aren't fully engaged with. Northrock is highly diverse while still being relatively small. The FRC, while being pivotal to the community, rests on the work of a few key individuals that hold an in-depth and personal knowledge of the workings of the larger community. These individuals provide opportunities to engage extensively with this small but mighty organisation and to develop a nuanced understanding of community needs. In our discussion, we outline how these insights might be leveraged by SEA in CSCW to promote volunteerism as a dynamic for inclusion.

4.2 The GAA and the Catholic Church

Much longer serving and more prominent organisations than the FRC are the Catholic Church and the Gaelic Athletic Association (GAA). These organisations have traditionally played a prominent role in rural Irish life. In our rurban Northrock context, participants frequently discussed the role of the Church and the GAA in inclusion, indicating that while the community is becoming more multicultural, the traditional rural Irish village structures still very much persist. While inclusive elements of these organisations were apparent, it became evident that they have also promoted exclusivity.

4.2.1 Inclusion and exclusion facilitated through sport

The GAA is discussed with regard to its ability to bring people together and to act as a gateway into the community. P3, P5 and P5's husband in the extracts below are all newcomers to the community:

P3: I've been getting along with a lot of people and my kids are, they love Northrock, presently my kids are members of the GAA so they interact with other kids. (T:C, P:3)

Playing, volunteering and attending sporting events were discussed as helping to transition into community life and promote common interests, as illustrated by the following quote:

P5: when I met my husband [...] he never saw a hurley, and my son plays for under 13s now and my husband is the trainer. (T:A, P5)

However, traditions around the GAA have also historically involved nepotistic and exclusionary practices. This is illustrated in the dialogue below between long-term community members:

P7: at one time there was the whole ban, you couldn't play foreign games and be in the GAA

P1: you know your father nearly had to be in the GAA for you to get a match, or else you stand on the sideline and that was a real issue as well, (T:A, P:7,1)

The impact of expansion has had a positive impact in terms of the establishment of new sports clubs that have provided further opportunities for volunteering:

P2: if you went over to the soccer club right, they have volunteers, coaches, I don't know how many different nationalities they have over there, and they'd have a lot of that completely new Northrock involved in that. (T:B, P: 2)

These excerpts indicate the positive impact of expansion in terms of widening community sporting life and providing more avenues for meeting, sharing interests and forming social bonds. While participants acknowledge the history of exclusive practices held by the GAA, this is not discussed in terms of any potential impact on the present day.

4.2.2 Inclusion and exclusion facilitated through religion

Participants commented on the opportunities religious events provide to engage new residents with the traditions and general way of life of more long-term residents. Religious events were discussed for their potential to introduce different sections of the community to each other:

> P2: It is the communion and the confirmations is very important because that's the new Northrock getting a feel for the old people and seeing who's around. (T:B, P:2)

However, a history of exclusion is also evident through participants' comments around the social profiling of community members in terms of where they would sit in the church, remnants of which persist to this day:

> P2: And a lot of people will still to this day, you would have the men's side and the women's side
> P:5: Families and married people would be in the centre, and the big farmers would be up the top. (T:B, P:2,5).

This exchange points to gender, marital and economic status divides facilitated by the church, imposing artificial restrictions and segregations on how people organise themselves and interact with each other. Again, these exchanges are focused on historical incidents of exclusion. If there are present-day exclusive practices, these are not discussed.

While we saw the expansion of the community resulted in the GAA becoming more "mellow", the arrival of new community members is seen to have invigorated a waning Church:

> P6: It will have a very serious impact because all you have going to mass now is the old people [...]. Tis a sad, sad situation.
> P1: we'd recognise quite a few of the new communities at mass, and they're the younger people in the church, which is interesting, your peer group, the Irish, aren't going to mass. (T:A, P:1)

While older community members such as P6 mourn the waning of what are important traditions to them, P1 recognises the vitality the new communities have brought to those traditions.

Participants' accounts show the importance of these institutions to the community and the positive effect expansion has had on them. Given that Northrock was a traditional rural Irish community in recent years, it is unsurprising that the GAA and the Catholic Church are still highly influential organisations. For those interested in GAA and Catholicism, they provide many opportunities to meet, collaborate and strengthen social bonds. This gives rise to questions around the marginalisation that can occur of those who don't fit the majority cultural demographic. It also provides opportunities for bringing old and new populations together. The discourse related here shows the inclusive and exclusive practices that can be present in these organisations, as well as gives some insight into the impact of transitioning from a rural to a rurban community on these stalwarts of rural Irish life. However, it falls short of directly critiquing any present-day practices, which would be useful in ensuring a healthy evolution of these institutions in response to the changes in the community. In our discussion, we put forward suggestions of how SEA might be useful in CSCW to support this critique.

4.3 Social encounters in public places

Here we present participants' accounts of everyday encounters in public places such as the school gates, communal play areas, ethnic shops and the pub. Given that the old village still looks much the same, and all of these amenities are clustered on one small main street, the opportunities for large cross-sections of the community to meet on a daily basis are great. These public places become hubs for building collective understandings and enacting community life.

4.3.1 School gates and communal play areas

Public spaces that support child-related activities are seen to support social encounters between newcomers and more long-term residents. The school gates provide opportunities for social encounters for those with children:

> P3: Well 'tis[8] a great way to meet new people coming in, it's actually a totally different thing to what we experienced growing up. Parents never met each other at the school gate. (T:B, P:5)

This example of social encounters supporting inclusion is one of a number of examples that revolve around the care of children. While these encounters work well for those with children, they also show that this mode of inclusion is inaccessible to those without children. The following statement echoes that sentiment:

> P3: when the new estates came, you just couldn't keep your hand on it, unless you had children going to school, that you could meet them in the schools or the sports, they'd be the only opportunities you could meet people. (T:B, P:3)

Besides these spaces centred around children, more adult-centred spaces were also discussed by our participants, as outlined below.

4.3.2 New ethnic shops

One of the more visible aspects of the recent population expansion is the arrival of ethnic food shops, providing new spaces for social encounters between residents. These shops diversify the dominant culture and create spaces and opportunities for connections that are specifically for new communities, while also welcoming the established community. This development was seen as positive by some of the long-term residents:

[8] Vernacular expression of 'it is'

> P2: The change that would be in village would be the Polish shops and the African shops, and Chinese and they give a real change to us instead of having just Franks[9] up the road, so we've a few ethnic shops now. (T:A, P:2)

These spaces provide opportunities for local residents to familiarise themselves and engage with new cultures, such as tasting Polish food in our example below:

> P2: we use the Polish shop over, and the girls in the preschools and the after schools would go to the Polish shop, sometimes before they go to Mace across the road, because they like the stuff over there.
> P5: The fresh bread is beautiful, and the tomatoes, are like tomatoes you'd get foreign, in Spain or someplace. (T:A, P:2,5)

The Polish shops are cited as hubs for the Polish community, thus providing a space for encounters that is comfortable and familiar to these new communities, helping forge connections between new residents:

> P4: I remember first day the shop was open, [...]all day it was full of Polish people and I knew everyone there [...] I'm talking with them when I meet them in the shop so it's a good thing actually. (T:A, P:4)

The ethnic shops play a role beyond the simple provision of groceries. They provide a space where the culture and traditions of new communities are central, connecting newcomers to the wider expatriate community. They also provide friendly and familiar opportunities for long-term residents to interact with the new communities and so supporting community cohesion.

4.3.3 The role of the pub

In addition to the ethnic shops, the pub is cited as a space to meet new and long-term residents:

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9 The traditional Irish takeaway in the community

> P2: I have dealings with more New Rock than I have with Old Rock on a daily basis for myself [...] if I go to the pub, half of the people... it could be 50/50. (T:B, P:2)

The function of the pub as a space for facilitating social encounters between the male population is also discussed by some participants as having changed in recent years:

> P1: in the old days it was quite acceptable like for the husband to head off down to the pub to have a few pints and the women stayed back [...] that has changed [...] of course the women go to the pubs too but by and large it would have been a male dominated thing, when you talk about meeting the newcomers it would have been the male newcomers maybe at that time, in the pub. (T:B, P:1)

The undercurrent of this excerpt, while not overtly stated, was a sense of loss of a male space for this older participant. This points to difficulties faced by older men in getting to know the new community as their previous spaces become less familiar. This is also evident in the following excerpt provided by the same older male participant:

> P1: how would we interact with new people, the opportunities are less than what they would have been. You talk about where you'd meet people long go like, not alone was going to mass a religious event, but it was a big social event on the day because you met people outside and you met new people. Everyone who got involved in sport, because there was only one sport really, the GAA, and even the pub has changed [...] that was a good place to meet [...] new people, anyone who was interested in going for a pint. (T:B, P:1)

The discourse here highlights the complexities and subtle social configurations of social encounters. While the relatively small size of the rurban community means that these spaces serve a large catchment of the population, we see that some sections of the community become marginalised from certain kinds of inclusion opportunities due their individual or group characteristics. While this is typical of all communities, understanding the nature of these various marginalisations suggests directions for interventions in

public place to have those difficult conversations and support a wider inclusion and social participation.

4.4 The migrant experience

Our focus groups included ten participants from Nigeria, Ethiopia, England, Poland and Albania. Each focus group was mixed between long-term local residents (many with generations of family in Northrock), new residents without a migration background, and new residents with a migration background. The inclusion group had all new residents and a majority of migrant participants; the historical society group was mostly long-term residents and the FRC group was evenly split between new and long-term residents, with the majority of new residents being migrants. Dialogue between our migrant participants sheds some light on the migrant experience of integrating into what was recently a small rural village. Friendliness and tenacity are seen as key in building relationships in the community. Participants discuss misconceptions born out of lack of knowledge as their biggest obstacle to inclusion and suggest ways to alleviate this. The various excerpts presented here are all from new residents with a migrant background and focus on their strategies for inclusion and the barriers they have experienced.

4.4.1 Friendliness

Migrant participants discuss the importance of taking the first step in initiating friendships. This approach is promoted for its potential to forge connections and build relationships. It is attributed with powerful results when it is sustained and genuine, as evidenced in the following dialogue, where a participant describes her commitment to initiating friendly exchanges with strangers. These exchanges have led to her getting to know key organisations and making friends in the community:

> P1: In fairness [P2] is very friendly person [everyone laughs] I didn't even know her before but every time she sees me outside, she always says hello [...]
>
> P2: Sometimes I say hello to people, they say do you know the person, I say no!

> P1: But the way she says hello to you is like she has a really good relationship you know? You feel it when someone says hello from the bottom of their heart. (T:C, P:2,1)

This exchange was in the context of meeting people on the main street, which is a relatively small stretch (approx. one kilometre) and is host to all the main amenities. Thus, the geographic configuration of this rurban community allows this sustained friendliness to have quite a big impact. We also see a commitment to this ethos in the following statement:

> P6: we try to make connection in community, we are very happy to meet people there, they are very friendly. If you live in a new community, I think Irish people have a right to know about us, or other peoples who live with them. (T:C, P:6)

4.4.2 Tenacity

Many of the new residents discussed the importance of perseverance in initiating relationships with other community residents:

> P1: I think making the first step matters, yes people are really nice, but no matter how nice they are, if you don't push the boundary a little bit, it's very hard, everyone would be waiting [..] and then you will never talk or you will have different perception, bad perception about each other. (T:C, P:1).

Persistence and consistency of approach are seen as useful tools against challenges to inclusion:

> P1: it has to do with how you interact with people in the community as well as an incomer, it's very difficult sometimes until you break the barrier of being different and coming from a different culture, it's very... it's very intimidating [...] because people have their own perception of who different people are, so you have to first break that wall down and then create the relationships. (T:C, P:1)

Being different, coming from a different culture and the perceptions people develop of new residents are all cited here as barriers to inclusion. The language used by this participant in terms of "push the boundary / it's very hard

/ bad perception / break down the barrier / it's very intimidating / break that wall down" is indicative of the struggle and tenacity involved in overcoming the various misperceptions and becoming included in the community. This value on self-initiative and tenacity is also reflected in the following statement:

> P5: if I wanted to integrate, I need to do it my first step, [....] I just decided it's really good to do something, so I search on internet and I found what organisation were here and where I can go with a three-year-old, so I found the toddler group and I came there. (T:C, P:5)

These statements show a level of determination and perseverance inherent in these participants, an attitude which has led to the building of valuable relationships:

> P5: That's how I start meeting the people and knowing the people and they became very close friends [...] I treat them now as a family they call me sister, and I call them sisters because we don't have, I don't have family here, so friends became the family here. (T:C, P:5).

4.4.3 Misperceptions

Many of the long-term residents mention a curiosity about new residents. This is supported by stories related by new residents where they detail encounters where they are probed or questioned:

> P4: they're curious to know about my culture, my country, and I love to talk about that you know, and sometimes with the Irish people that I speak with, we have some, commons together, like culture and tradition, [...] so it's nice to discuss. (T:C, P:4)

However, while new residents discuss the general curiosity shown towards them, they also outline the various assumptions they are sometimes faced with, ranging from language spoken, levels of poverty and marital status, and how these assumptions can be frustrating and upsetting:

> P1: sometimes it's upsetting as a different person, when you're asked for example, questions that sound really nosy. Like, for example, they automatically assume I'm married to an Irish person, "so Andy", "yeah", "is he Irish?" every time! Is it because I'm African, so I have to be married to Irish? (T:C, P:1)

This is an example of how the curiosity mentioned above can cross the line into offensive personal questioning when it is coupled with assumptions. New residents feel that while these assumptions are sometimes annoying and frustrating, they can be overcome through entering into dialogue:

> P3: some people do think that English is not your first language, when they listen to the way you speak, they say "your English is actually good, do you speak English in your country?" [...] I just explain to them. (T:C, P:3)

Curious and somewhat naive questioning is said to sometimes have an undertone of hostility, as evident in the following quote where one participant discusses an aggressive edge to some people's questioning:

> P1: you know how you are asked; most people ask you out of curiosity, but some people ask you out of anger. You pick up on that, and you just ignore it. (T:C, P:1)

New residents discussing problems with misperceptions and negative opinions identify portrayals in the media as often contributing to the problem and feel that through more accurate representation, these problems could be alleviated:

> P1: when you see people's opinions, the negative one, [...] It's not based on fact, so you can see that there is a knowledge gap that hasn't been captured. [...] even if it's captured it's the wrong way [...] so it's not portraying migrant in a positive way [...] there should be I think a media airtime that focuses specifically on migrants, you know the positive, the negative, the challenges [...] so that people will have the real experience of people. (T:C, P:1)

The same participant expands on these harmful assumptions, while also pointing out that it's difficult to speak about the challenges when asked directly:

> P1: when you're asked, [...] you always tend to give all of the positive things, and even when I ask Irish person how migrants are, they always give me the good stuff, but we don't want to bias the information as well so we have to say the challenges that are there. Not on a personal level maybe, but in general, that people expect you, they put you in one box, and then they have their assumption. (T:C, P:1)

The dialogue presented here gives some indication of the migrant experience in Northrock. It signposts attitudes and traits that can support inclusion, such as friendliness and tenacity. This tenacity can be heavily tested when newcomers continuously choose to give the benefit of the doubt and remain congenial when faced with frustrating and sometimes offensive misconceptions. More overtly hostile and demeaning attitudes also impede efforts towards inclusion, as can the tendency to gloss over issues and focus on the positives. It is felt by participants that the main culprit in these issues is a lack of communication between groups and that both interpersonal dialogue and meaningful media representation can work to overcome these issues. While participants spoke well of their experience overall, the difficulty in discussing negative experiences and the tendency to focus on the positives is seen as a barrier against mutual understanding. In the following section, will discuss how we might capitalise on positive dynamics such as tenacity and friendliness, and how we might alleviate some of the negative effects of assumptions and misconceptions through dialogue and meaningful representation. We will also discuss how an SEA focus in CSCW can provide the vehicle for difficult conversations that might otherwise go unsaid.

5 Directions for SEA-informed CSCW in rurban settings

Our analysis focused on inclusion processes in this rurban community and uncovered how these processes are supported or hindered through nuanced dynamics of community life. Our findings resonated to some extent with existing literature on inclusion and migration in rapidly expanding rural

experiences. For example, supporting Sherman's (2021) findings, we also found that long-term community members tended to mourn old ways of life and perceive a decrease in typical rural values around friendliness and support, while new community members found that Northrock still very much held these values. However, in our context, this seemed more related to whether or not long-term residents had opportunities to meet newcomers, while in Sherman's context, this was found to be related to divides in various forms of capital. Much existing literature seems to examine contexts where in-migrants had greater (Lichter and Brown, 2011; Shucksmith, 2012; Sherman, 2018; Sherman and Schafft, 2022) or less (Meagher, 2009; Walton, 2021) economic and social capital than the existing residents. In the Northrock context, the new residents were from vastly varying backgrounds. Many of them coming to Ireland as refugees for example, while some were attracted specifically by new industry and proximity to the city. The long-term residents themselves are also very mixed in terms of economic background, even though culturally and ethnically they often have much in common. Based on our analysis of the focus groups and the subsequent insights around the lived experience of our Northrock participants, we now put forward suggestions for SEA-informed CSCW in support of social inclusion in rurban settings, drawing on SEA theory and practice and relating it to CSCW.

We found tensions and exclusionary practices around powerful organisations, such as the Church and the GAA, and observed how gender, age and family status mediated social encounters, rendering some inclusion pathways less accessible. On the other hand, we saw how problematic assumptions could be overcome through more effective communication and everyday acts of tenacity and friendliness; and how volunteering empowered our participants and impacted positively on inclusion. Underlying the various insights gained from the focus group was a sense that more contentious issues were often left under the surface as they can be challenging to articulate and discuss. This was most evident in the comment from one of our "New Rock" participants around the tendency to always focus on the positive.

As we consider those analytic insights, we are interested in how SEA can be used in CSCW to engage with the above tensions, and both promote the positive elements that were found to support inclusion while enabling the articulation and communication of challenges to inclusion as experienced by both old and new residents. We propose that SEA as an approach in CSCW offers specific opportunities for research and action in this community. It has the potential to bring into light those nuances of experience that can be challenging or controversial to articulate, refreshing previous CSCW positions on interrogating power and participation with a focus on dissensus and contradiction through creative, arts-based exploration that engages with contested social realities and imagines alternative futures.

In this respect, we look at SEA such as the recent Uprise exhibition (Akoto, 2021), a nationwide UK augmented reality artwork by artist Baff Akoto that aimed to expose the pathology, history and underlying drivers of English civil unrest in the digital age. The exhibition brought together artists, community leaders and youth through digital installations, an online game and a community radio show, showcasing how such "digital networks can connect marginalised people and shape real-world mass dissent". Similarly, Tania Bruguera's extensive work (Tate, 2012; Bruguera, 2015; Kershaw, 2015; Bruguera, 2017) sits at the intersection of activism and performance art and devises new (usually utopian) models of authority to challenge power structures. This is of interest to us as it engages communities in reimagining systems of power to change them into more inclusive and democratic forms.

We propose that considering and incorporating SEA when designing CSCW interventions to support inclusion processes opens up new forms of engagement and dialogue both in the rurban context, but also more broadly in any community-based work. It provides extra modes of expression for difficult conversations around complex social issues and looks towards making complex experiences more accessible and understandable. It also firmly places focus on designing a process that looks to build participant agency and create

opportunities for debate and dissent in order to provoke standpoints and evolve community issues.

We provide a set of design considerations that bring together our findings and SEA approaches to inform CSCW in support of inclusion in a rurban context. These four design considerations are 1) using personal stories to promote volunteerism as a path to inclusion; 2) examining the evolution of institutions; 3) revealing and reimagining interactions in public space; and 4) dispelling misconceptions through encouraging mutual understanding.

5.1 Using personal stories to promote volunteerism as a path to inclusion

In Northrock, we saw how volunteering enriched the lives of our participants through helping them find their place in the community. We found that volunteering supported empowerment and inclusion, and that this relationship was disseminated through participants' sharing their personal experiences. We also saw how this path to inclusion was possibly less accessible to men in the community, even though this was not overtly stated. Our first suggestion for CSCW in support of inclusion with this community then, involves capturing and promoting personal stories that reveal this relationship between volunteering, empowerment and inclusion in order to further encourage that dynamic within the community. We are also interested in facilitating conversations around what barriers there might be towards volunteering and how these might be alleviated. This design consideration draws from and extends SEA that has been interested in fostering engagement among volunteers and facilitating grassroots activism. One example of such work can be found in Suzanne Lacy's 2013 *Silver Action* project. The project highlighted the work of women activists over 60 while cultivating intergenerational links through a conversation-based performance piece at The Tanks at Tate Modern. 400 activists engaged in live, unscripted conversational performances while their first experiences of activism were projected onto the walls of The Tanks (Lacy, 2013). Younger women activists were invited to witness the

conversations and live blog and tweet them as they happened, using the hashtag #silveraction. This powerful project highlighted the contribution of volunteers active from the 1950s to the 1980s using the age-old media of conversation and storytelling, while augmenting and disseminating the experience through video, social media and the engagement of the younger generation. What is further interesting in Lacy's work is that *Silver Action* was the culmination of a series of workshops led by Lacy involving smaller groups of women charting their experiences with volunteerism, activism and the wider social context they operate in. This brings the impact of volunteering to vivid life in a way that provides an emotive and tangible experience for viewers to connect with on a visceral level.

CSCW interventions designed with this consideration in mind could involve the capturing of multicultural and / or intergenerational stories to highlight difference and equally focus on the positive work and experiences of the volunteers in the FRC and how this strengthens the wider community. Such stories might also do the difficult work of querying any barriers to participating in volunteering, such as those around gender alluded to in the findings. It would be beneficial to ground any such intervention on an initial process of private, smaller group discussion and reflection on experiences before continuing with a more public and dialogical sharing of volunteering stories via social media or interactive installations, much in the vein of the Lacy example above. Moreover, integrating an SEA approach suggests that any interventions in this space would require active participation of, or engagement with, individuals whose personal stories are connected with this dynamic of volunteering and empowerment in order to develop authentic and relatable outcomes. Staying true to the empowering, grassroots activist ethos of SEA interventions such as Lacy (2013), which we also found echoed in the work of the FRC, makes it important to foreground that any techniques, media, ways of dissemination in such interventions need to be determined and owned by the participants.

There is much CSCW that has looked at how stories have the potential to cultivate empathy, positivity and inclusion within a community (Cao et al., 2010; Dimond et al., 2013; Starbird and Palen, 2013; Procyk and Neustaedter, 2014) and the potential of connecting with grassroots organisations to examine relationships in communities has been acknowledged (Teli et al., 2020, 2022). Bringing a SEA approach to this kind of work would mean engaging participants across multiple forms of media and dialogue, being open, generative and non-prescriptive with outcomes, encouraging critical thinking about how volunteering is enacted in key organisations, providing opportunities to debate contradictory experiences and connecting these conversations with the wider community to further encourage a dynamic and change-making volunteering tradition.

5.2 Examining the evolution of community institutions

Our second finding involved the inclusive and exclusive practices of the GAA and the Catholic Church. While both organisations provide opportunities for people to meet and find a place in the community, they also both have a history of exclusion. As these powerful organisations evolve with the community, it is worth examining how that power has historically impacted on the rural community and how this might extend into the current day rurban community. We found that in our focus groups, participants spoke openly of historical exclusive practices but did not extend that into a reflection on current-day practices. We are interested in how taking an SEA approach to CSCW with the community might provide the vehicle for such difficult and possibly controversial conversations.

Exploring powerful structures is a constant theme in SEA. It requires diverse social interaction and the representation of multiple points of view (Bishop, 2006; Kelkar and Spinelli, 2016). Jeanne Van Heeswijk's far-reaching 2017 project *Philadelphia Assembled* illustrates this necessity (Van Heeswijk, 2017). Van Heeswijk's work typically looks towards redistributing power and radical community building. To this end, *Philadelphia Assembled* looked at

rewriting personal and collective narratives and reimagining the future and the built environment through festivals, community kitchens, map-making, performance, video, blogging and digital soundscapes involving both online and on-street, site-specific actions throughout the city. This multi-pronged approach could translate to Northrock via cohesive and diverse community mobilization around relevant principles and various modes of dissemination, both digital and analogue. This has implications for materials, methods, participants and venues, as well as thematic explorations. For example, in terms of venue(s), it is particularly incumbent on the facilitators and / or designers to find spaces that are as inclusive as possible and to understand how those spaces may have been configured in the past to include or exclude community members. Following on from Van Heeswijk, it would be useful to incorporate multiple venues to reflect and "reimagine" multiple experiences. With regard to thematic exploration, a rigorous critique of exclusive practices and representation of marginalised voices via SEA in CSCW has the potential to help disassemble exclusionary dynamics through an enhancement of agency and a disruption of traditional perceptions of community. Given that community members look fondly on these organisations, this critique would require a sensitive facilitation and a recognition of their positive impact while also ensuring real opportunities for dialogue and dissent, both important aspects of any examination of power dynamics (Freire, 1967; Verschelden et al., 2012; Chamberlain, Crabtree, and Davies, 2013; Tiller, 2014; Le Dantec and Fox, 2015), and both central aesthetics in any SEA process. There is also an opportunity to make visible the positive impact the recent expansion has had on these organisations. For example, facilitators might bring together older community members who express regret at the changing of these organisations with new members who are revitalising them. This could be a positive expression of the benefits of expansion while building connections around shared values. The emphasis would be on examining these various community practices around both sport and religion with a view to developing mutual understanding, building trust and forming social bonds.

This exploration of power is also a recurring theme in CSCW. For example, the work of Fox et. Al (2015) reflects on how particular spaces can perpetuate inequities, but have the potential to become venues of empowerment when reappropriated and reconfigured. CSCW has also been concerned with interrogating structural barriers faced by participants and how these impact on how power is distributed (Fox, Ulgado, and Rosner, 2015; Steinhardt et al., 2015; Fox et al., 2017). Drawing on SEA interventions as described above is useful to CSCW that navigates complex issues around power, visibility and marginalisation. Providing opportunities for SEA-based exploration of topics that are difficult to articulate and communicate is an asset towards disassembling hegemonic practices and redistributing power across communities.

5.3 Revealing and reimagining interactions in public place

In our findings, we outlined how various public spaces are sites of very specifically mediated social encounters between different parts of the community. While these places and encounters are central to community life, they are mediated by factors such as gender, family status, age and religion, thus not always accessible to all. This is consistent with community arts and rural studies literature that describes how some people might find a public space inviting and safe, while others find it alienating or threatening, depending on who is implicitly welcome (Grodach, 2010; Shucksmith, 2012), as well as CSCW placemaking literature that describes how social and cultural understandings of place make available a prescribed and limited set of social interactions and behaviours (Harrison and Dourish, 1996; Dourish, 2006). Our third design consideration then, is connected to the nature of interactions in rurban public space and understanding how certain groups may be marginalised in these spaces. This involves making visible the various configurations of these spaces in order to re-imagine how they can become more inclusive and meaningful loci of social interaction.

The 2013 installation, *Yobosayo* (Lifethings, 2013), is relevant here as it aimed to reconfigure public interaction in playful and surprising ways in order to connect people in public space. It was installed to commemorate the opening of Seoul Citizens Hall in South Korea and it includes a large, ear-like sculpture that invites citizens to talk into it. These messages are recorded by the sculpture and played inside the Citizens Hall. The attention paid to each recorded message is measured by motion sensors in the building; if people stop and listen to any particular message, it is added to a playlist. Those messages that are ignored are transformed into music through the amplification and distortion of their specific auditory characteristics. This music is played in a sound gallery in the Citizens Hall. The principles of innovation, playfulness, unexpectedness and dialogue evident in this work may form a cornerstone of any public intervention hoping to engage with the Northrock community.

In addition to *Yobosayo*, we draw again on Suzanne Lacy, this time reviewing *The Turning Point* (Lacy, 1997), where Lacy worked with teenage girls, to develop an intervention that examined the visibility and agency of girls in public spaces that often position them for voyeurism. This examining and repositioning of roles of typically marginalised groups in public space is central to the concerns of this design consideration. While participants again rarely openly named barriers to their interactions in public place, these were alluded to across the focus groups. Typically, SEA can provide modes of expression that would allow for the articulation of experiences that are difficult to name. Much can be learned from Lacy's work in terms of how the social and cultural meanings of space and place, and the implications of who belongs there, can inform effective CSCW to create opportunities for inclusion in Northrock. Such CSCW interventions could integrate SEA aesthetics in order to examine who is included, how they are positioned and who is marginalised in public spaces and places, with the aim of reconfiguring existing, or creating alternative, public sites that welcome a wider range of people. Site-specific work that facilitates an interactive, public dialogue, as in *Yobosayo* and *The Turning Point*, would be encouraged in this context where participants might examine

the dynamics of public space with a more critical eye in order to identify who is welcome and why, and how this can be expanded upon.

SEA interventions in public space are relevant to CSCW, HCI and PD that engage in space, place and placemaking (Ciolfi, 2004; Paay and Kjeldskov, 2008, 2008; Sanusi and Palen, 2008; Crivellaro et al., 2016; Peacock, Anderson, and Crivellaro, 2018; Freeman et al., 2019; Gonsalves et al., 2021; Slingerland, Gonsalves, and Murray, 2022). As mentioned, the work of Harrison and Dourish (2006; 1996) centralises "place" as a cultural phenomenon and an impacting factor on human interaction, where the interactive affordances of places are based on shared understandings of what behaviours and actions are appropriate in any given place. This idea that the configuration of certain spaces supports certain kinds of behaviour and interactions held true in the Northrock context. Work such as *Yobosayo* and *The Turning Point* challenge these understandings and provide non-prescriptive and generative opportunities to redefine what might be expected in particular spaces and places. The creative and emotive nature of this kind of work can give rise to unexpected insights that move beyond those relevant to technology design and have the potential to reimagine public space to greater support inclusion and visibility of marginalised groups.

5.4 Dispelling misconceptions through encouraging mutual understanding

Our participants reported misconceptions and assumptions to be one of the biggest barriers to their inclusion and felt that these attitudes were borne out of a lack of knowledge. Participants also recognized the difficulty in communicating challenges faced around assumptions and harmful attitudes. With that in mind, our final design consideration focuses on how best to communicate and represent migrant experiences to the wider community with the view to encouraging mutual understanding.

These aims of addressing misconceptions and building solidarity are visible in the SEA of Harriet Purkis (2013) and Baff Akoto (2021). Purkis developed

The Local People Project, a digital storytelling project to foster cross-border relations between people of Derry and Donegal in Ireland (Purkis, 2013). The project comprised of both an exhibition of film, photography and personal possessions; and an online curation of digital stories aimed to generate stronger social ties and understanding between these communities. Akoto launched *Up:Rise* Exhibition in 2021 (Akoto, 2021) to engage with issues around marginalisation and media misrepresentation. This was a street exhibition using posters with QR codes that linked to archived footage and testimonials from participants in the nationwide UK riots of 2011. Akoto aimed to challenge narratives around the rioters and explore deeper themes of civil unrest resulting from the marginalisation of people. A series of community workshops across the UK accompanied the exhibition, generating dialogue on how digital media can connect marginalised people and be a platform for dissent. Both of these projects use readily available technologies to dispel misconceptions, where dialogue and confrontation is an essential part of this process.

These approaches can be carried forward into CSCW with the Northrock community to support minority groups in communicating their experiences. The centrality of dialogue in this process raises challenges again around participation and the role of the researcher in terms of careful facilitation of such interactions. When encouraging migrants to share stories, it is important to be conscious of the emotional labour of participants reporting experiences of fatigue, socio-cultural tensions and concerns about maintaining a sense of personal privacy (Lingel, Naaman, and Boyd, 2014). Again, the multi-modal and expressive nature of SEA provides support and opportunity for these difficult conversations (Clarke et al., 2013). The friendliness and tenacity reported by our migrant participants provides a focus for the design of interventions to make visible the work and determination undertaken in becoming part of the community. Of course, any such work hoping to address the misrepresentation of community groups would need to involve a diverse participant demographic, drawing on the various cultures, skills and interests

in the Northrock migrant community (Giglitto et al., 2019). Again, there are many challenges in supporting such heterogenous work (DiSalvo, Nourbakhsh, and Holstius, 2008; DiSalvo et al., 2009). Researchers and facilitators would need to be conscious of the vulnerability of a population that may have endured immense personal hardship to arrive in their new community and are constructing new lives and experiencing an amount of identity transition. As a result, participation needs to be particularly carefully designed and there needs to be space and support for various cultural interpretations of activities and eventual outputs.

CSCW and HCI have integrated concepts of intersectionality and solidarity from feminist scholarship to describe how the recognition of differences and similarities is beneficial to inclusion of minorities (Fox et al., 2017; Dye et al., 2018; Bray et al., 2022; Harrington, Klassen, and Rankin, 2022). The SEA interventions described here provide an example of how this recognition might be explored, articulated and communicated to increase visibility, mutual understanding and inclusion of new communities. Again, SEA's contribution to CSCW is in its critical and radical approach, encouraging dissenting voices and creating space for the recognition and articulation of different experiences and needs. Taking a SEA approach to trust-related concerns inherent in minorities sharing personal stories would integrate the long tradition in SEA of examining power dynamics while creating multiple avenues to explore and communicate complex trust-based issues inherent in working with vulnerable populations.

6 Conclusion

While the research presented here is situated in a specific rurban community in Ireland, the design considerations act as signposts for how to integrate SEA into CSCW to support inclusion more broadly in rapidly expanding rural communities. For example, researchers or facilitators may consider connecting with gate-keeping organisations, similar to the FRC, to investigate dynamics of

volunteering. Researchers or facilitators may also consider constructively critiquing exclusionary practices of powerful institutions. Public places are said to support community development and inclusion (Kelkar and Spinelli, 2016; Balfour, W-P Fortunato, and Alter, 2018), enhance social life (Fischer, Zöllner, and Hornecker, 2010; Fischer and Hornecker, 2012) and create intergenerational links (Balestrini et al., 2014). We propose that designing CSCW interventions from a SEA standpoint can amplify these aspects of rurban public places in support of inclusion (JR, 2008; Lifethings, 2013; Artichoke and Best, 2015; Caslin, 2017; Van Heeswijk, 2017) while examining and repositioning the roles of typically marginalised groups in those places. Within any community, there are multiple layers of identities present (Skerratt, 2013; Murray, Pantidi, and Hogan, 2019). We agree with Sherman (2021) when she highlights the need for avenues of meaningful social interaction in order to develop mutual understanding. We propose designing interventional work in Northrock to build an awareness and understanding of these multiple identities. Work that leverages SEA to centre marginalised and dissenting voices and to cultivate stronger social bonds through meaningful social interactions (Sharp, Pollock, and Paddison, 2005; Clarke et al., 2014). While articulating complex social issues can be a struggle, we believe SEA is rich in potential as a vehicle for expression of these difficult and contradictory conversations. The various aesthetics and practices of SEA have the potential to refresh the activist and disruptive persuasions already present in CSCW.

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Chapter 7: Designing for Dissensus: Socially Engaged Art to access experience and support participation

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ABSTRACT

For social justice-oriented design, pluralistic participatory practices are recognised as important. This paper explores Socially Engaged Art (SEA) as one such practice, which uses dialogical inquiry to address social justice issues. We describe a case study of SEA-informed digital storytelling workshops in a rurban community in Ireland. The workshops aimed to support diverse adolescent participants in identifying and critiquing place-based social issues with a view to imagining alternative and inclusive futures. SEA was instrumental in uncovering contradictory and hidden experiences of community life. We propose incorporating SEA into design processes to: i) challenge assumptions around identity and belonging; ii) recognise diverse experiences; and iii) breakdown social-engagement barriers. As we ask questions on what design is for, who should design, and why design matters, SEA can centre marginalised experiences, support polyvocal participation and help develop participant agency to work towards more equitable futures in rapidly changing environments.

1 Introduction

This paper explores a Socially Engaged Art (SEA) approach to participation in rapidly developing rural (rurban) communities. SEA is a participative political art form that interrogates social norms to imagine alternative futures. It facilitates dialogical, creative processes that enable collective learning and democratic moments (Olsen, 2019). SEA is used in activist, collaborative settings working towards social and political change through polyvocal dialogue and developing participant agency (Rasmussen, 2017). Contrary to many design approaches, SEA is explicitly activist as it seeks to develop critical thinking and political agency in participants. It also differs from participatory approaches in design in that it centres discomfort and conflict as catalysts for identifying social issues and working towards social change (Bishop, 2008). A rurban community is a rapidly expanding rural community with intersectional rural and urban characteristics (Björling and Rönnblom, 2023; Busck et al., 2008; Gražulevičiūtė-Vileniškė and Vitkuvienė, 2013; Torre, 2015). Hallmarks of rurban experience include a diversifying and expanding demographic, changes to traditional ways of life and evolving perceptions of place and community identity (Bell, 2007; Lysgård, 2016; Murray, Pantidi, and Hogan, 2019; Murray, Pantidi, and McCarthy, 2023; Jennifer Sherman, 2018). As a result, rurban areas experience challenges around place, identity and inclusion (Murray, Pantidi, and Hogan, 2019; Murray, Pantidi, and McCarthy, 2023; Slingerland, Gonsalves, and Murray, 2022). Rural studies have warned of social rupture due to not attending to these challenges (Lichter and Ziliak, 2017; Meagher, 2009; Jennifer Sherman, 2018), while also highlighting the potential of rurban communities to be fulfilling and progressive living places (Björling and Rönnblom, 2023). Design practices can play a role in realising this potential through approaches to participation that interrogate power dynamics and assumptions around identity and belonging. As the DIS community looks towards applications of transformative design, SEA offers aesthetics of dissent and confrontation (where "aesthetics" are the central characteristics by which the artform is recognised (Beech, 2010), supporting a

polyvocal and critical participation to access marginalised and hidden experiences and to imagine and work towards alternative futures (Freire, 1967; Bishop, 2012; Olsen, 2019; Fernández López, 2022). Achieving this, however, has challenges in supporting confrontational dialogue (Beech, 2008; Fróis and White, 2013), supporting a polyvocal critical participation to access hidden experiences and to imagine and work towards alternative futures. This is done through creative and generative problem-posing to evoke critical thinking (Freire, 1967) and constructive conflict (Bishop, 2012) in pursuit of challenging hegemonic power structures (Olsen, 2019). Achieving this, however, has challenges in supporting confrontational dialogue that can challenge and disassemble hegemonic norms and assumptions (Beech, 2008).

Design practices such as agonistic design (Björgvinsson, Ehn, and Hillgren, 2012), adversarial design (DiSalvo, 2012), speculative design (Harrington, Klassen, and Rankin, 2022) and design futuring (O'Leary et al., 2019), as well feminist (Bardzell, 2011), Afro-futurist (Bray et al., 2022) and post-colonial (Dourish and Mainwaring, 2012) methodological approaches, all speak to the desire to use design to redistribute power and develop agency at grassroots levels to work towards better futures. Participatory design, as a formative discipline in democratic design, has identified the need to revisit activist intentions and incorporate pluralistic approaches to participation (Bødker and Kyng, 2018; Bosley et al., 2022). SEA can be one such approach and has been used in design processes to incorporate sustainability (DiSalvo et al., 2009), reclaim identity (Clarke et al., 2013) and support inclusion (Light et al., 2009). However, SEA is still underused (Clarke et al., 2016), despite arts-based processes being recognised as useful to participation (Clarke et al., 2016; DiSalvo et al., 2009; Holmer et al., 2015; Light et al., 2009; McCarthy and Wright, 2015).

With that in mind, we present a case study of SEA-informed digital storytelling workshops to understand the nuanced and sometimes hidden experiences of teenagers in an Irish rurban community, and to bring those experiences into dialogue. The workshops did not work towards a

technological solution but aimed to uncover hidden experiences and support participants in critiquing these in the context of broader social justice issues. We contribute insights into how SEA might inform the design of interactive systems to explore complex and difficult human experiences, and to support participants in critical and radical thinking and acting in community life.

2 Socially Engaged Art for creative and critical participation

Design has engaged with social struggles through participative processes (Bray et al., 2022; R. Clarke et al., 2016; DiSalvo, Nourbakhsh, and Holstius, 2008; Harrington, Klassen, and Rankin, 2022; Le Dantec and Fox, 2015) and the HCI community has demonstrated an interest in cultivating activist intentions in research (Bardzell, Kaye, and Spiel, 2020; M. Lee et al., 2021; Saxena et al., 2020; Teli et al., 2021). These developments evoke questions around power, positionality and equality (Fox, Menking, et al., 2017; McCarthy and Wright, 2015). On an individual level, participating in work to interrogate personal and social issues can promote self-reflection, identity expression, transformative mutual learning and active citizenship (DiSalvo et al., 2009; McCarthy and Wright, 2015; Wright and McCarthy, 2015). These are ambitious goals, and the need to constantly revisit any change-making intentions in participation has been well established (Bannon, Bardzell, and Bødker, 2018; Bødker and Kyng, 2018; Harrington, Erete, and Piper, 2019; Holmer et al., 2015), with calls for pluralistic approaches to participation in community settings (DiSalvo, Clement, and Pipek, 2012).

Thinking of participation as an experience with the potential to be transformative, rather than a means to specific ends, opens up questions of aesthetics, in terms of how participants make sense of their experiences and what kinds of understandings and perceptions are available (Wright and McCarthy, 2015). In this capacity, participation becomes political in terms of what and where constraints come into these experiences. The need to examine the systems participation takes place in, who or what participation serves, as

well as participant positionality and equity is central in facilitating affirming and agentic participatory processes (Harrington, Erete, and Piper, 2019; Holmer et al., 2015; Wright and McCarthy, 2015). As interest increases in exploring the role of design in social change (Asad and Le Dantec, 2015; Bray et al., 2022; Ghoshal, Mendhekar, and Bruckman, 2020; Harrington, Erete, and Piper, 2019; O'Leary et al., 2019), and in reinvigorating the change-making potential of Participatory Design (PD) (Bannon, Bardzell, and Bødker, 2018; Bødker and Kyng, 2018; Iversen, Halskov, and Leong, 2010; Kuutti and Bannon, 2014), we propose an integration of Socially Engaged Art (SEA) as one such pluralistic approach. SEA is arts-based collaboration that aims to support participants in identifying and articulating their social issues to surface tensions and imagine and enact alternatives (Freire, 1967). One example is Suzanne Lacy's *Uncertain Futures* (Lacy, 2019), which addresses women's experiences of work and aging. The project highlights intersectional inequalities through interview, film, photography, theatre, installation, gatherings and workshops that extend out of the gallery and into the public sphere. As with much of Lacy's work (Lacy, 1997, 2013, 2018), confrontational dialogue and public engagement are central aesthetics intended to disrupt public assumptions. SEA has been used in design contexts to access nuanced and hidden experiences, often difficult or painful to verbalise (R. Clarke and Wright, 2012; Light et al., 2009). It has also provided directions for more sustainable HCI and participation (DiSalvo et al., 2009; Holmer et al., 2015). This paper further explores potential for the use of SEA in accessing complex and challenging experiences as the basis for the design of more equitable and sustainable interactive systems.

With regards to questions around what kinds of perceptions and experiences are available to participants, SEA draws on the concept of a social consensus that defines what can be conceived of and perceived, and ultimately polices the social order (Birrell, 2008; McCarthy and Wright, 2015). The antidote to this is seen as dissensus - disordering assumptions around fixed social roles and capacities in terms of what remains unsaid, unheard, unseen,

unquestioned and unknowable in public life (Rancière, 2011). Dissensus can develop new visions for community life, as making visible hidden experiences is said to disrupt and reimagine social and political power structures (Garrett, 2018). The disruptive qualities of dissensus are useful to design for social justice, particularly with marginalised groups, precisely because of the focus on platforming marginalised experiences to challenge the status quo and activate agency (Borasi and Zardini, 2013). A key element of this is the starting assumption of equality in difference supporting recognition of multiple experiences, ways of being and belonging. Also central to the idea of dissensus is the transformation from "spectator" to "actor" (Rancière, 2009). McCarthy and Wright (2015) propose that to do this, participation needs to support people in changing the roles they habitually perform. This concept of dissensus is often integrated into SEA through drawing attention to social issues, asserting equality and making visible aspects of experience that are outside of the accepted social structure. For example, Tania Bruguera's iconic *Immigrant Movement International* (Bruguera, 2011; Creative Time, 2011; Kershaw, 2015) combined community work and SEA to challenge perceptions about migrants in the US, while suggesting alternative visions based on recognition, solidarity and belonging. This kind of work is highly challenging to facilitate and in response to this challenge, SEA has had long running debates on positionality and participation (e.g. avoiding tokenism or placation and positioning all participants as equal) (Beech, 2008, 2009; Bishop, 2006), the transition of spectator to participant (e.g. facilitating a truly transformative and agentic participation) (Bishop, 2012; Kester, 2011) and the aesthetics e.g. qualities, characteristics and configurations) around what participants can experience and conceive of (Borasi and Zardini, 2013; Stewart Martin, 2007; McCarthy and Wright, 2015; Rancière, 2009).

This work seeks to understand how SEA (as a collaborative art practice that looks to create political change) and dissensus (as a concept often employed in SEA to access hidden experiences and challenge assumptions) can be of use to design practices looking to create transformative participatory experiences

in pursuit of social change. We describe a series of nine SEA-informed digital storytelling workshops in an Irish rurban secondary school with teenage participants. We found SEA was useful in accessing nuanced and often hidden experiences (i.e. uncovering consensus), but that the process didn't move to the next stage of critiquing those experiences (i.e. cultivating dissensus). We contribute perspectives on how to refine the process, as well as describing key potentialities of SEA in design with rurban communities to work towards more sustainable and equitable design of interactive systems.

3 Northrock – A rurban community

This research took place in an Irish rurban community, anonymised as "Northrock". In the 2016 census of Ireland, Northrock grew at four times the rate of any other town in Ireland and two thirds of Northrock's population categorised themselves as white Irish (SECAD, 2017). The population expanded from 1,232 in 1996, to 2,782 in 2006, 5,090 in 2016 and 8,181 in 2022 (Central Statistics Office, 2018, 2019, 2023) and local groups identified a need for to guide the community through predicted further expansion, particularly around community identity and inclusion (SECAD, 2017).

Irish rural communities have been examined for a "rural cosmopolitanism" based on rapid population diversification (Woods, 2022) and complex experiences around identity, inclusion and belonging have been articulated in this context (King-O'Riain, 2021; Shirley Martin et al., 2023; Montgomery, 2013; Parker-Jenkins and Masterson, 2013). Northrock has a large percentage of migrants, and the largest age group is 35 to 39 years (SECAD, 2017). Rural communities are typically highly interdependent with social networks often overlapping (Robinson et al., 2021; Hardy, Wyche, and Veinot, 2019). This "everyone knows everyone" belief is something that persists in this community. However, previous work with Northrock revealed challenges around inclusion and identity and highlighted the multiple perceptions of community life, with minority experiences less visible and struggles to recognise other perspectives

and needs in many contexts (Murray, Pantidi, and Hogan, 2019; Murray, Pantidi, and McCarthy, 2023). In response to this previous work, a dissensual SEA approach was deemed relevant in Northrock to bring contradictory experiences into light, to challenge consensus and identify alternatives.

4 Designing the workshops

The study aimed to increase our understanding of how SEA might contribute to design practices by uncovering consensus and evoking dissensus in pursuit of social change. Social justice-oriented design has highlighted the need to develop new strategies (Bosley et al., 2022; Dombrowski, Harmon, and Fox, 2016; Holmer et al., 2015) , move away from solution-oriented design (To et al., 2023), engage with hidden or marginalised experiences (Bosley et al., 2022; To et al., 2023), understand and prioritise local knowledge (Le Dantec and Fox, 2015), position all participants (including researchers) as equal and mutually responsible (Fox, Dimond, et al., 2017; Harrington, Erete, and Piper, 2019; Le Dantec and Fox, 2015), and challenge distributions of power (Asad and Le Dantec, 2015; Fox, Dimond, et al., 2017). SEA provides theoretical and practical examples of how to achieve these various aims in community-based contexts and this work draws on that tradition to design a dialogical, generative and creative participatory experience intended to uncover hidden experiences and challenge hegemonies. Designing the workshops from an SEA standpoint involved seeking to evoke examples of both social consensus, in terms of norms and assumptions, and dissensus, in terms of challenging dominant ideas about community life. The kinds of insights gained specific to the SEA approach revolve around nuanced, somewhat ephemeral and difficult to articulate phenomena around that which is visible and invisible, sayable and unsayable, knowable and unknowable in participants' lives (Birrell, 2008; McCarthy and Wright, 2015; Rancière, 2011). The study did not work towards a technological solution, the aim was to access participants' experience and

support them in critiquing this experience as a first step in working towards technological supports.

The study comprised of nine digital storytelling workshops with eighteen teenage girls in a local school. Participants engaged in collaborative SEA activities – often art and / or design activities facilitated with the intent to evoke personal and political dialogue and critique around social experiences. The workshops happened once a week and each was eighty minutes long. "Identity", "inclusion", "culture" and "community" were four focal points for the workshops; they were developed from an earlier focus group study with key Northrock community groups (not reported on here). Ethics approval was granted by the University's Ethics Committee.

4.1 Participants and data collection

The workshops were offered to transition year (TY) students, who are typically around sixteen years old. The workshops were described as an opportunity to develop storytelling and digital skills, and to examine their experiences of life in Northrock. The school was all-female,there was no other secondary school in the community at the time. While there were no specifications in terms of participant racial or ethnic background, and time spent in the community, it was inherent in the study design as it is a characteristic of the school. The table below (Table 1) details participant aliases and some background information.

Table 1: Workshop Participants

Participant Code & Alias	Background Information
P:1, Michelle	Irish born, Irish family background
P:2, Martha	Nigerian born, Nigerian family background
P:3, Charity	Nigerian born, Nigerian family background
P:4, Jess	Abu Dhabi born, Irish and New Zealand family background
P:5, Diana	Irish born, Nigerian family background
P:6, Deirdre	Irish born, Irish family background
P:7, Florence	Irish born, Nigerian family background
P:8, Becky	Irish born, Irish family background
P:9, Irena	Lithuanian born, Lithuanian and Belarussian family background
P:10, Nikola	Polish born, Polish family background
P:11, Susan	Irish born, Irish family background
P:12	Withdrew – took an alternative class
P:13, Steph	Irish born, Irish family background
P:14, Beth	Irish born, Biafran family background
P:15, Julie	Irish born, Irish family background
P:16, Abeni	Irish born, Nigerian family background
P:17, Hanna	Polish born, Polish family background
P:18, Saoirse	Irish born, Irish family background
P:19, Jane	Irish born, Irish family background

Participants were formed into four groups, each exploring one of the four focal points identified in the previous study. Data collection included pre and post questionnaires, researcher observation notes and reflections, video recordings of group presentations and discussions, audio recordings of group's conversations during each workshop, artefacts created during workshops and the final digital stories themselves.

4.2 Workshop activities

Workshop activities were designed from an SEA standpoint with the intent of creating opportunities for participants to identify social issues, question hegemonies and imagine alternatives. SEA does not have a prescriptive set of

activities. SEA workshops use many typical art and / or design activities with the intention of revealing and interrogating consensus to encourage critical thinking and ultimately dissensus (Garrido Castellano, 2022). While there are similarities between SEA and other participatory design activities in terms of collaboration and form, the differences are in way these activities are framed, the intentionality behind them, the kinds of questions and prompts used and the intended outcomes. These aspects are developed in both the initial design process, and in the live workshop as the researcher / facilitator adapts the workshop to pursue those moments that might lead to accessing experience, challenging assumptions and bringing viewpoints into dialogue. Often the most desired outcome being an increased criticality and agency in participants (Freire, 1967). With that in mind, the table below (table 2) gives a breakdown of the workshop plan.

Table 2: Workshop Breakdown

#	Objective	Activities
1	Introduce project, get to know each other, form project groups, set up expectation of "equality in knowledge" – an open and reciprocal facilitation style, discuss focal points. Begin world café exercise query focal points.	1:Icebreaker – giving ourselves nicknames to set an informal tone, 2:Post-it activity on key themes – write down three words you associate with the 4 focal points, 3:World café – use post-it prompts on themes, emphasis on individual experience and understanding
2	Collectively query world café results with the intention of identifying consensus/drawing out dissensus, re-examine issues that arose for examples of power structures, marginalisation, who is being represented, norms and assumptions.	1: Icebreaker – one question from person after last week, 2:Finalise world café – continue rotating tables, facilitator prompts based on data from previous section - focusing on conflict and hidden experiences, present world café results – 3:Presenting final results, facilitator develops discussion focusing on moments of conflict or surprise.

3	Begin storyboarding and scripting digital stories. Examine these for recurring issues as described above, critique case studies, creatively explore social issues to gain new perspectives through making, revisit and further interrogate previous discussions and activities.	1: ;Journalistic six ("who, what, when, where, why how") questioning key aspects of identity / inclusion / culture / community as identified through world café and subsequent discussion, 2:Developing critical skills through examining case studies – scaffolding by facilitator drawing out reflection on social and political issues portrayed, 3:Storyboarding and scripting to begin visualising and verbalising ideas.
4	Further refining idea through dialogue around process, opportunity for entire group to discuss all ideas, identify and critique shared experiences and connect these with wider social issues. Address practical components around logistics and technology, developing confidence and agency in terms of completing the work.	1: so far, either focusing on a character or experience, again facilitated to support querying assumptions and imagining alternatives, 2:Group presentations with a discussion around common experiences, contrasting experiences, connecting these to wider social / political issues , 3:Develop shooting schedule, choose technologies.
5	Support the group in giving critical feedback, interrogating assumptions around place and experience and putting forward alternatives, finalise each digital story idea and plan for execution (increasing a sense of individual and collective agency).	1: Re-cap process so far, highlighting moments of frustration / discontent / conflict, supporting participants in connecting personal experience with wider issues and imagining alternatives. 2:Story share and capture – each group presents their idea using questions provided, wider group takes notes on each idea as it is presented, these notes are grouped in terms of similarities to identify possible themes. 3:Finalise storyboard, shoot schedule and tech choices.
6	Develop agency, skills and confidence as digital storytellers, strengthen confidence and self-belief through sharing ideas with the wider community and develop a sense of their own ability to affect change on some level.	1: Review plans for shoot with each group. 2:Shooting video in the community and the school – participants fully self-direct here, they go into the community or the wider school environment with equipment and plan for shoot.

7	Further develop agency, skills and confidence as digital storytellers, express social issues creatively through making collaborative and critical aesthetic choices around editing and audio, revisit previous thoughts around social issues by further querying the focal points.	1: Why/how ladders – each group goes back to their initial starting point (identity / inclusion / culture / community) and re-interrogates from the perspectives of why these things happen vs how these things happen, 2:Editing video (technical support by facilitator), 3:Shooting extra video if needed.
8	Further develop skills and confidence as digital storytellers, further query idea via brainstorming promotional materials for the final piece.	1: Editing video, editing sound – students are again quite self-directed in this. 2:Those students not editing work on creating a storyboard for a video trailer or a poster advertising their video piece - prompted to revisit assumptions around place, experience and power.
9	Realise final digital story piece. Increase sense of individual and collective agency as they review their final work together. Build confidence in being able to identify and communicate social issues that are important to them through the creation and discussion of exploratory digital media.	1: :Finalising video and sound edit, 2:Rendering final digital stories –technical support offered by the facilitator, 3:Sharing these with the class, scaffolded by key prompts and questions aimed to evoke critical thinking and constructive conflicts, 4:Discuss dissemination options in terms of bringing the work into the wider school and Northrock community.

4.3 Workshop environment and researcher positionality

Designing the workshops from an SEA perspective had implications for the workshop environment. The workshops were held in a "TY space", an area in the school outside of the typical classroom setting, specifically for TY students to work on projects and socialize. Prior to each workshop, the lead researcher organized the desks into four "islands", supporting a more informal, collaborative atmosphere. The researcher moved between all four desks, promoting a sense of equality and familiarity. The researcher also went by her first name in the workshops, something that the teenagers do not experience with teachers in the school.

The role of the researcher in this case was also that of facilitator. A dynamic of equality between participants and facilitator is encouraged in SEA, where

knowledge is developed and transferred in both directions. It was important to ensure that researcher / facilitator support did not become directive or prescriptive and that participants maintained a sense of agency and autonomy (Birrell, 2008; Freire, 1967; Rancière, 2011).

The primary researcher grew up in Northrock and disclosed this information in the first workshop. Being closely positioned to the community is seen as a strength in much of the literature on participation (Wallerstein and Duran, 2008), SEA (Clarke et al., 2016) and rural HCI (Hardy, Wyche, and Veinot, 2019) as it supports ac trust-centred relationships (Unertl et al., 2016). This proximity also led to a greater need for reflexivity. Informed by guidelines on reflexivity in thematic analysis (Braun and Clarke, 2019, 2021b), SEA-informed HCI (R. Clarke et al., 2016) and feminist HCI (Bardzell, 2011) the researcher, with the support of the wider research team, continuously reflected on assumptions, biases, perspectives or values she might have brought to the study design, analysis and writing.

4.4 Equitable participation

Configuring equitable participation is a goal of SEA and central to this research. Drawing on literature that discusses the importance of designing a useful participatory experience for all those involved (Bardzell, 2018; Bray et al., 2022; Harrington, Erete, and Piper, 2019; McCarthy and Wright, 2015), we donated Mac desktop computers to the TY space prior to the workshops. The lead researcher donated these due to a lab upgrade in her university. We installed opensource media editing software on the machines and allocated workshop time to teaching the teenagers how to use these. Participants were trained in using DSLR cameras, as well as in a typical video production process. The educational aspect of the workshop design was as important as the data collection component. We agree with Harrington et. al (2019) on the need to design longitudinal research engagements with communities that prioritise community needs.

4.5 Data analysis

Qualitative thematic analysis allowed for the investigation of multiple co-existing realities in a relatively small number of participants (Braun and Clarke, 2006; Clarke and Braun, 2013). The lead researcher transcribed recorded data between workshops. This allowed us to adapt each workshop plan in response to the data. It also meant that the process of analysis began during the cycle of workshops. We followed a reflexive approach (Braun and Clarke, 2021a), cyclically going through six stages: familiarization; coding; generating initial themes; reviewing and developing themes; refining, defining and naming themes; and writing up. The dataset included transcripts, artefacts created in class, the digital stories, questionnaires and observation notes (OBS). First level coding generated 92 initial codes. Second level coding involved comparing and contrasting initial codes to amalgamate those with commonality. Six initial groupings of codes were further examined and consolidated into three themes. We then worked through final stages of reviewing, defining and renaming themes through an iterative analysis process that involved ongoing discussion and reflection across the research team.

5 Workshop findings

The SEA process evoked moments of discomfort and conflict where various contradicting teenage experiences were brought to light and into dialogue with each other. Findings illustrate how an SEA approach to participation can increase visibility and recognition of minority experiences to indicate directions for the design of interactive systems that are more equitable and inclusive. The following section describes these findings and highlights where the workshops succeeded and struggled in accessing and critiquing personal experience and wider community life.

5.1 Revealing consensus, but not reaching dissensus

While participants focused on Northrock's diversity and made statements about how accepting and inclusive the community is, dialogue around ideating and making the digital stories revealed complex and contradictory assumptions and experiences around recognition and belonging in the community. In this finding, we spotlight moments where participant dialogue evoked by SEA prompts and activities provided significant nuance to our understanding of these assumptions and experiences. However, the participants themselves generally did not move to critique these assumptions.

5.1.1 A gate-keeping of "Irishness"

Many of the prompts and activities spurred a negotiation in terms of who was "more Irish" and why, suggesting a complex social order that is broadly accepted by participants. This negotiation was often presented in ways that were self-deprecating to the majority (white Irish) group, satirizing what's seen as the typical Irish culture and flattering minority groups. While these exchanges may seem benign, they illustrate how minority Irish groups become marginalised.

The exchange below took place around the storyboarding activity in a group developing an idea based on interviewing as many different nationalities in the community as possible. Michelle is white Irish and from a nearby town. Diana is first generation Black Irish and from Northrock:

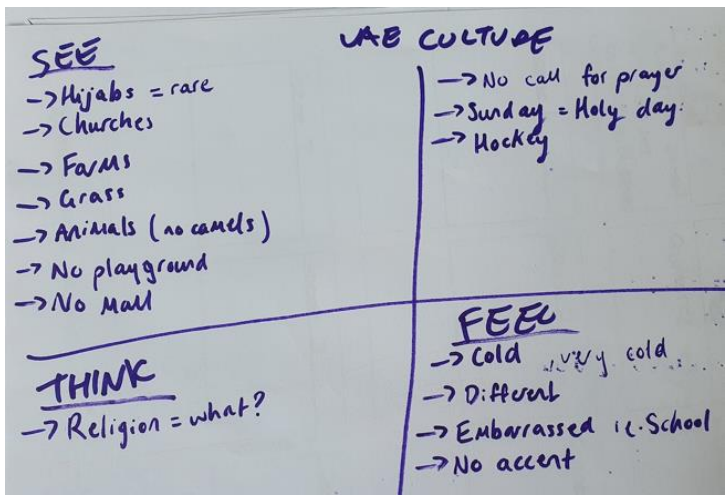
> Michelle: I'm very Irish like
> Diana: Alright girl [exaggerated local accent], I'm Irish too
> Michelle: But like my whole family is Irish
> Diana: Yeah, I get you.
> Michelle: You're not like, Irish Irish Irish
> Diana: I love potatoes [laughs]. Like I actually love potatoes
> Michelle: Yeah that doesn't make you Irish, Diana!

While this is a light-hearted exchange, it shows a conflict around understandings of "Irishness" and reveals different tiers of acceptance that

contradict the assumption of an inclusive community life. This illustrates the need to disassemble harmful norms and assumptions around who is "more Irish" in order to support visibility and recognition of the various Irish experiences and voices in the participant group and the wider community.

This gate-keeping of Irishness is seen again in the following excerpt. These participants created empathy maps under the headings "see, think, do, feel" to query the experiences of three composite characters for their digital story (figure 1). The three composite characters were from Ireland, Nigeria and the UAE and based on girls' own backgrounds, Conversation around creating these helped participants connect with each other's experiences, assumptions, and expectations.





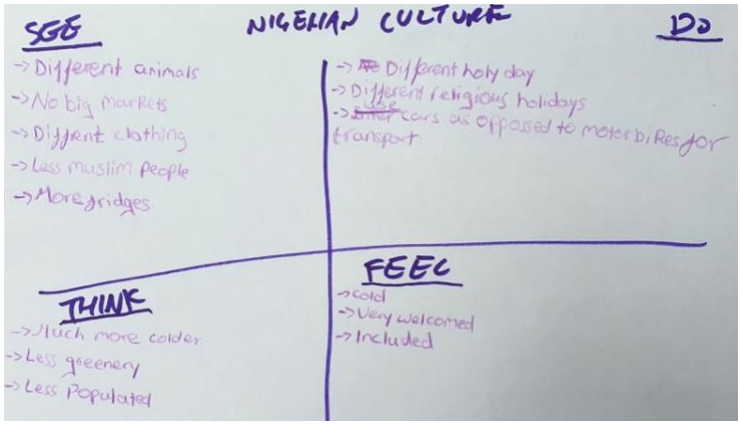


Figure 1: Empathy maps to develop three composite characters.

The following excerpt was around the development of the Irish character:

> Deirdre: for the Irish one we can do a girl with a rosary beads and a small bible [...]
> Jane: You see churches in every parish, the tiniest place, it won't have a shop it'll have a church [...]
> Jess: Pubs [...]
> Deirdre: Loads of cows, farms! [...] This is not to be mocking right but there is a couple of red heads [...] There's lots of underage alcohol [...] sports, camogie, [...]

This again shows the self-deprecating and jovial nature of putting forward "Irishness". However, these exchanges, intended to be good-natured, narrowly define Irishness in ways that don't do justice to the diversity of the participant group or the wider community and ultimately render many Irish experiences invisible. Ideally, participants would move to critique these preconceptions and develop strategies to make more experiences and voices knowable and audible in community life. These insights around how the participants understand and negotiate Irishness are rich in potential for the design of interactive systems that might widen perceptions of national identity and support more critical thinking around current tropes. We return to this in the discussion.

5.1.2 Struggling to name difference

How participants discussed cultural differences was at times quite fluent, but more often it seemed awkward and stilted. For example, throughout the

workshops, participants were often uncomfortable asking questions around religion and race. The following excerpt taken from observation notes on the World Café illustrates this discomfort:

> Some girls also mentioned how people are afraid to ask questions about other cultures - particularly in terms of race and religion. Participants discussed difficulties around negative portrayals in the media of different cultures, specifically Muslims and Black people. (OBS)

Another example was seen in the map making activity undertaken by one group when asked to discuss what the word "community" meant to them (figure 2).

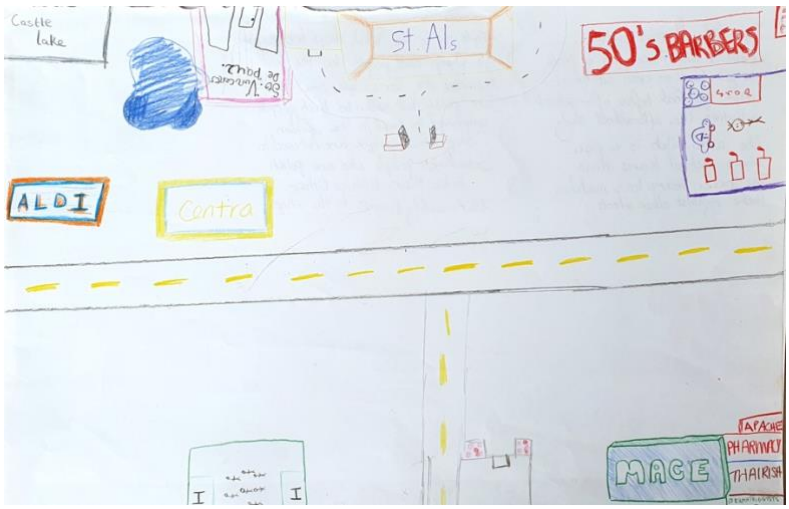


Figure 2: Drawn map of Northrock

The exchange below took place when drawing hair salons on the map. Even though these participants have been very familiar with each other throughout the workshops, Michelle is uncomfortable asking directly if the hair salons are African businesses:

> Michelle: There's two barbers is there?
>
> Diana: Two barbers, well the one down the road does barbering as well so three. There's two hair salons for hair
>
> Michelle: For.... am... Caucasian...? (trailing off awkwardly)
>
> Diana: For hair, just hair (brusquely)

Both Michelle and Diana show a reluctance to name the salon as specializing in Black hair. While Michelle seems to want to be specific about this, she falters and is indirect in her question. Diana then firmly rejects this attempt at labelling. It's unclear why Diana avoids naming this, but the discomfort around the question is apparent and indicates a broader discomfort in discussing racial experience.

This discomfort is again seen in the following discussion around the idea involving interviews with composite characters from three different cultures (relating to the empathy map in figure 1). The group hesitates when deciding where these characters will be from. Group participants had lived in Nigeria (Charity), Ireland (Susan and Deirdre) and the UAE (Jess). While Jess is happy to put herself forward as a representative of other cultures due to her having lived abroad, Charity is reluctant to volunteer herself and the other participants are reluctant to prompt her:

> Deirdre: Who do we have from a different culture?!
> Jess: Don't look at me like!
> Susan: What are you looking at me for?!
> Deirdre: I don't know what kind of culture you're in!
> [Researcher joins table]
> Jess: I could talk about places I've lived in you know, and that would be easy enough
> Deirdre: I can talk about the basic Irish life, I don't know what other culture we could do? [somewhat awkward silence...]
> Researcher: Charity, where are your family from?
> Charity: From Nigeria

Once the researcher prompted the inclusion of a Nigerian character, the group were enthusiastic about representing this. When these participants presented their digital story idea to the wider group, the mention of the Nigerian character raised a subtle cheer from other participants. The SEA activity, facilitation and scaffolded presentation brought forward insights again around the difficulties in recognising difference, and around how Nigerian

culture is not always so visible, despite a large number of the group having close Nigerian connections. Again, participants did not reflect on or critique this.

Across the workshops, participants struggled with naming and discussing difference outside of jovial exchanges based on stereotypes. This is not surprising given the age of the participants and the complexity of the subject. This indicates a role for interactive systems to support such discussion and to help young people in reflecting on the discomfort involved, the possible causes of it and how it might be alleviated to gain a fuller understanding of each other's experiences. Such a system could support dissensus in terms of providing opportunities and strategies to challenge harmful social norms around discussing race.

5.1.3 "Othering" minority groups

Findings illustrate how the teenagers' negotiation of the rapid diversification and expansion of their community involves not only developing a consensus around "Irishness" and struggling to name differences, but also conceptualizing who is seen as "other", as outside the dominant paradigm. Here we relay examples of when minority groups were essentially "othered".

This conversation took place around the storyboarding activity, where participants reflected on cultural experience from the point of view of Irish, Nigerian and Emirati fictional characters:

> Susan: Yeah it was the same in my primary school, there were people from Nigeria
> Deirdre: There was hardly any in mine [...]
> Jess: [name] was in my primary school and I think she was one of the only Black people there
> Susan: There was very little in my year but in the other years there was loads, like we had one in juniors his name was [name].
> Charity: I probably know him [...] Most of the Nigerians know each other
> Susan: I think it's so cool when people are from other countries, I wish I was interesting.

While participants widely discuss how diverse the community is, conversations like these indicate that minority groups are still very much

something to be commented on. There are opportunities for the co-design of interactive systems to cultivate an awareness of this and a safe-guarding to mitigate any possible harm. While the exchange is based on commenting on the presence of Nigerian students, which might make Charity feel like she is somewhat under a spotlight, Susan works towards flattering Charity through saying she thinks it's cool to be from somewhere else, and mentioning how she feels boring due to her being from Ireland. It was not possible for the researcher to ascertain how Charity felt about this, if it felt complimentary, or othering, or perhaps both.

The most extreme example of othering is from the excerpt below between Irena (Lithuanian born), Hanna (Polish born) and Abeni (Irish born to Nigerian parents). The conversation developed from a positive discussion around language into aggressive questioning about participants' "real" names. This was the most problematic of all the conversations across the workshops and lacks any sign of sensitivity towards Abeni:

> Irena: What's your full name?
> Hanna: I was saying it... (pronounces her full name in a strong Polish accent)
> Irena: Mine's (pronounces her full name in a strong Lithuanian accent). What's yours, Abeni?
> Hanna: Princess eh?
> Abeni: No!
> Hanna: Queen!
> Abeni: No! (in an annoyed voice, says her full name) [...]
> Hanna: That Diana is a princess, back in Africa (in a teasing voice)
> Abeni: (sounding annoyed and tired) Nigeria.

While previous excerpts had self-deprecating and flattering qualities, this exchange is more hostile. As discussed previously, rendering difference invisible can have the effect of silencing and excluding people. However, excerpts such as these show the bullying potential of an insensitive and unempathetic dialogue and the sharp necessity to develop systems that can support a more critical and respectful dialogue around difference.

Alternative design research methods are needed to support conversations around difference (Bray et al., 2022) and to consider intersectional identity markers such as race, class and gender in technology design (Harrington and Dillahunt, 2021). Findings presented here illustrate how an SEA approach that focuses on surfacing tensions through moments of discomfort and conflict around creative expression can provide insights into the interplay of various identity markers, and reveal harmful consensuses as a starting point for dissensus.

5.2 Diverse ideas, homogenous outcomes

The dialogue described above took place around the ideation and realisation of creative expression of participant viewpoints in the form of digital stories. This finding examines the works in terms of what they set out to do, and what they actually achieved, highlighting moments of idea development and resolution.

5.2.1 Idea development on "Identity"

The "identity" group (Beth, Martha, Steph, Julie) worked on a narrative following a fictional character who explores and adapts her identity in various ways to find her place. They discussed communicating their character's thoughts and experiences through careful use of graphics, acting and sound. This group had rich discussion triggered by the drawing of a mind-map on the theme (figure 3):

> They have interesting ideas about identity being fluid, that it changes depending on the situation. They were looking at this through the lenses of sexuality, family, personality, relationships, friends, school with innovative ideas around including drawn thought bubbles (OBS).

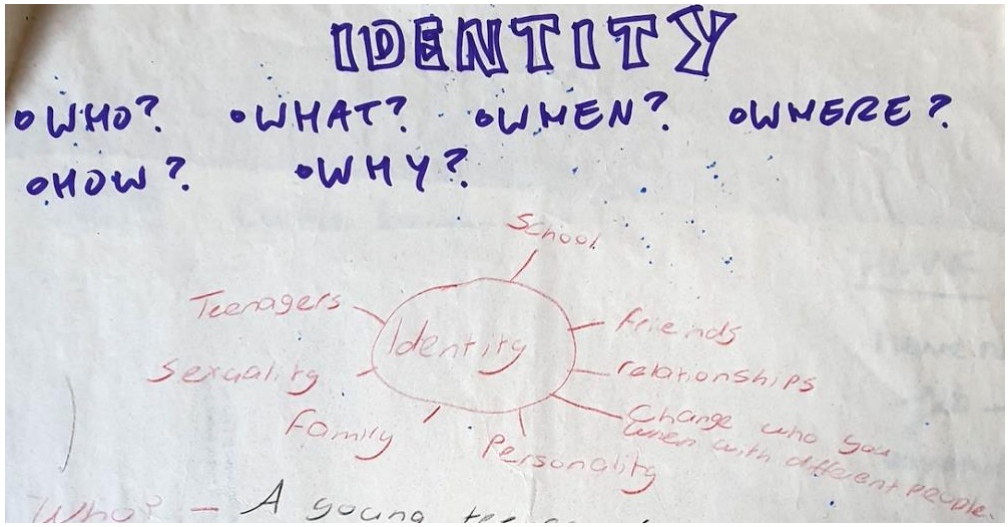


Figure 3: Mind-map created in response to Journalistic Six activity on "Identity".

However, while their initial exploration was probably the most provocative of all of the groups, their resolution was quite basic;

> When it came to the resolution, they jumped to very one-dimensional outcomes such as "they find themselves through sport". (OBS)

This might indicate an issue with facilitation and workshop design where the participants felt the need to have a resolution. If there was more of an emphasis on asking questions without trying to resolve experiences in some neat way, they might have stayed focused on exploring their initial complex thoughts.

5.2.2 Idea development on "Community"

The "community" group (Michelle, Diana, Florence, Nikola) wanted to platform the large number of languages spoken. They openly asked each other about languages they spoke and broke into various languages. The final idea involved interviewing a diverse participant group, each saying "Hi" in their native language and something they like about Northrock. They planned on working with various community groups to achieve this. The participants were initially very enthusiastic about this idea, as evidenced in the following excerpt:

> Diana: Oh my god! We could get the community of Northrock and all the nationalities from age groups, d'ya know what I mean and video them, what do you love about Northrock! That idea is the best! I don't care! [group cheers]

However, the group only filmed in one participant's home and in the school. This significantly watered down their initial idea, which included going into the various spaces in the village (explored via the map they drew – figure 2) and connecting with different demographics to represent a wide cross-section of the community.

5.2.3 Idea development on "Culture"

The culture group (Charity, Jess, Deirdre, Susan, Jane) developed a "mocumentary" idea, detailing the lives of three composite characters representative of three cultures – Arabic (UAE), Nigerian and Irish. As mentioned, empathy mapping (figure 1) worked particularly well here, in terms of brainstorming aspects of culture, in giving the research team an insight into difficulties in naming difference and perceptions of "Irishness". The why / how ladder also worked quite well for this group, when facilitated by the lead researcher (figure 4), supporting a nuanced exploration of the theme.

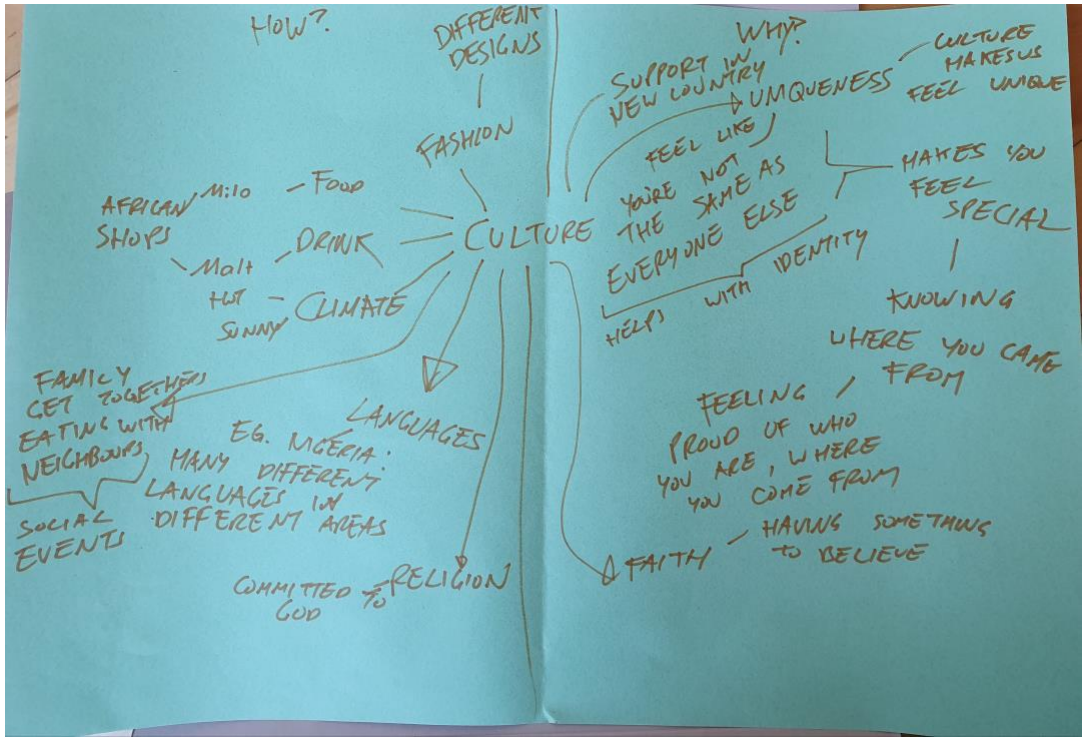


Figure 4: Why / How ladder exploring the theme of "Culture"

This group were possibly the most reflective and self-aware, discussing the need to be sensitive to other cultures, e.g. "I don't want to accidentally make a mockery of something" (Deirdre), and reflecting on the ideation process as having been beneficial in building their own empathy:

> The same group did say that they felt they have more of an appreciation for the various cultures in the community and that they felt they had more empathy. (OBS)

However, when it came to filming, the work done in developing their composite characters seemed to be forgotten and their final video revolved around three interviews in prominent community places: St Vincent de Paul, the Family Resource Centre and the local butcher.

5.2.4 Idea development on "Inclusion"

Finally, the "inclusion" group (Abeni, Hanna, Saoirse, Becky, Irena) developed an idea based on a VoxPop on St. Patricks day. St. Patricks day is used as an occasion to highlight the diversity in Northrock, and participants

planned to capitalize on this by interviewing spectators and participants at the parade, asking people what brought them to Northrock and why they stay there. However, in the event, they said they were too shy to carry out this idea. They then brainstormed new ideas, one around a new student coming to the school and one on sport being central to inclusion. Introducing the DSLR cameras seemed to be a turning point in motivating them to go back into the community and conduct interviews in local businesses:

> The participants were enthusiastic about the cameras and requested to film outside the school, in the community. The professional equipment seems to have excited them and they are much more enthusiastic about filming on these rather than on their phone. Perhaps some of the embarrassment they spoke about with regard to previous filming was tied to the fact that they were using phones, so it felt too informal? (OBS)

In our next sections, we describe the final videos and we outline where opportunities to develop the critical perspective of the work may have been lost.

5.2.5 Homogeneity of final digital stories

Initial ideas were rich and varied. However, the final videos were less ambitious and noticeably homogenous. Final digital stories didn't reflect the richness of dialogue and a reluctance to engage in critique had repercussions for final work.

The "culture" and "inclusion" groups both filmed in prominent public places in the community. They included shots of the playground, the farmers market and Irish flag. While participants emphasized the diversity of the community throughout the process, there were no people of colour interviewed outside of the school setting and the only nationalities represented were Irish and Polish. Participants asked questions such as "Do you think Northrock embraces different cultural backgrounds?" but didn't query interviewee answers.

The "community" group incorporated footage shot at Diana's home and shot the rest in school. They adapted their interview process based on test

footage, showing the value of creating early in the process. This group's piece was more diverse than others in terms of people represented, but still participant replies to questions were not further queried.

The "identity" group, who started with possibly the most nuanced idea, fell apart due to attendance issues and interpersonal dynamics. A level of tension in the group compromised discussion, where one voice seemed to dominate others. This recalls critical literature on the need to design and facilitate collaborative spaces where all voices are heard (Gumbonzvanda, Gumbonzvanda, and Burgess, 2021; hooks, 1994). When it came to filming, the group dissolved and the remaining participants joined other groups.

Possibly the biggest barriers to following through on initial ideas were around participant ability to engage in critique, in terms of reflecting on personal and collective experiences to challenge norms and assumptions about community life and imagining alternatives. There was enthusiasm around filming and editing, with participants enjoying adding sound and visual effects to their work:

> As the participants moved to the editing phase on the work, they became quite experimental with transitions and titles and spend some time looking for appropriate music and sound effects. [...] if there had been more edits and more videos made, more participants would have engaged in editing and so further developed their skills and modes of expression. In addition to this, an earlier engagement with making video might have transitioned into more critical discourse, refining and developing the work each time. (OBS)

In post-questionnaires, participants said that they would have liked to start filming at an earlier stage, that they found the ideation process too lengthy. This also indicates the benefit of participants producing media earlier. Spending time building confidence in interviewing would also be useful, as participants felt they lacked this.

At the core of the SEA process is adapting facilitation and activities (including presentation, discussion and critique) to work towards surfacing tensions through social interactions, homing in on moments of discomfort and

conflict to do this. The concepts of consensus and dissensus are useful in this, in terms of identifying and challenging norms and assumptions to imagine new possibilities. In this way, SEA informed design practice is always political and seeks to not only provide insights for innovative technology design, but also to develop participant critical awareness and agency. While this process shed light on consensus, a first step in moving towards dissensus, there needs to be more exploration and critique of experiences and assumptions seen in finding 5.1. There are practical adjustments to workshop design (such as introducing making earlier or moving outside of the school environment) and facilitation (such as having a smaller group or a second facilitator) that may support a greater level of dissensus in future work with this demographic. We will expand on ideas on how to refine the process in the discussion, as well as how designers might use SEA to work towards designing interactive systems that support dissensus to tackle these particular issues.

6 Adapting the process

This work describes how SEA can be of use to DIS in facilitating deep explorations of complex and difficult human experiences. While we did not set out to specifically understand experiences around race and ethnicity, much of our findings related to how the teenagers navigated these experiences. This indicates the value of SEA to designers looking to understand minority experiences and to support those demographics in imagining technologies to meet their needs (Erete et al., 2021; Harrington and Dillahunt, 2021; Harrington, Klassen, and Rankin, 2022; O'Leary et al., 2019; Seguin et al., 2022). While there is growing literature on the intersections of race and design and their implications in working towards more equitable futures (Bosley et al., 2022; Bray et al., 2022; Chen et al., 2023; Ogbonnaya-Ogburu et al., 2020; To et al., 2023), this is overwhelmingly in a USA context. In addition to contributing insights into how to use SEA to design for consensus and dissensus, this research also contributes knowledge on the experiences of race

and ethnicity in an Irish context, which has its own configurations around racial experience due to a history of colonialism and emigration, and recent rapid immigration (King-O'Riain, 2021). This knowledge can be used to work towards designing systems to support the ongoing diversification of Irish society. For example, the insights here are particularly relevant to schools, where development of digital curricula involving social and other interactive media to support the recognition of diverse identities is of importance.

SEA-informed facilitation and activities typically result in highly situated and nuanced knowledge. In our case, the study provoked rich dialogue around the teenagers' experiences of difference, belonging, diversity and placemaking, revealing various consensuses on Northrock community life. However, the process fell short of the participants moving into dissensus through actively querying their assumptions, either through dialogue around creating the work, or the final digital stories themselves. Our analysis identifies access points for exploring these assumptions, indicating the kinds of language, discussion and activities that could be incorporated to support dissensus, such as (for example) acknowledging the many ways of being of Irish and the evolving nature of Irish identity. As DIS looks to challenge dominant paradigms and develop systems to support inclusion of minorities and minority experiences (Nisi et al., 2023; Jihan Sherman, 2023), insights such as these could serve as focal points in developing such systems in similar contexts. It is central to create opportunities for minority demographics in rurban communities to put their experiences forward in ways that will be recognised and appreciated. Digital media and systems (such as social media, wikis, video platforms, social games) can play a role in this through providing ways to create and share stories and experiences. Dissensual design is important here, as attention is needed to bring forward minority experiences.

In this discussion, we contextualise our findings in the current Irish landscape, and in relevant design practices. We propose the potential for dissensus to be evoked through a three-step process. The first step being to identify and challenge norms and assumptions (6.1), the second to make visible

contradictory experiences (6.2), and the third, to work towards breaking down social barriers that arise as a result of disconnection (6.3). This process can be used in the design of interactive systems to challenge dominant paradigms, platform marginalised voices and ultimately work towards more inclusive, equitable and sustainable technologies.

6.1 Challenging norms and assumptions

Findings shed light on a collective and specific social order recognised by these rurban teenagers. Design practices to challenge social hegemonies for more equitable technology design (Dye et al., 2018; Giglitto et al., 2019; Harrington, Klassen, and Rankin, 2022) can utilize SEA to uncover and engage with the assumptions and norms that underpin such consensus on public life. For example, those looking to develop digital tools to promote the heritage of minority groups (Giglitto et al., 2019; Nisi et al., 2023) and to actively demarginalize participants (Dye et al., 2018; Harrington, Klassen, and Rankin, 2022) might draw on SEA approaches to specifically surface tensions and conflict, either verbally or through creative making exercises, that can feed into technology and digital media design to challenge dominant narratives.

In our Irish rurban context, stereotypical representations of "Irishness" were in line with literature that found that Irish adolescents tend to display their nationality as uninteresting and banal (Stevenson and Muldoon, 2010), and connects with research that points to marginalisation that happens in computing as a result of stereotyping masked as humour (Borsotti and Bjørn, 2022). This kind of stereotype, while appearing self-deprecating to the majority and flattering to the minority, undermines participants' claim to Irish identity by so narrow and rigidly defining it through well-known cultural tropes. The centring of whiteness in Irish identity has been recognised (O'Malley, 2022) and this is cohesive with our findings. The decentring of whiteness and a widening of perceptions of Irish national identity could be a focal point for interactive systems to support recognition and inclusion of minority groups. Shared public social events around St. Patricks day are said to extend the

boundaries of "Irishness" (O'Donnell et al., 2016), such design interventions around the festival could be useful to amplify this effect. However, intercultural initiatives that are perceived as tokenistic can reinforce othering of minority groups (Parker-Jenkins and Masterson, 2013). Drawing on SEA theory around equitable participation and positionality (Beech, 2008; Bishop, 2012; Freire, 1967; McCarthy and Wright, 2015) would be useful in the development of such interventions.

Design practices that look to challenge dominant paradigms can draw on SEA to design participatory processes that welcome dynamics of discomfort, frustration and conflict to reveal and challenge norms and assumptions hat contribute to marginalisation. SEA differs from many social justice-oriented design approaches as it is a political endeavour, seeking to develop critical thinking and agency in participants to do the essentially activist work of querying social structures. This is crucial as the design community recognises the need to work with peripheral communities and experiences in pursuit of more equitable technologies (Erete et al., 2021; Harrington, Klassen, and Rankin, 2022; O'Leary et al., 2019). There are many examples of SEA that facilitate an empathetic and dissensual dialogue with a view to challenging assumptions, such as the mobile artwork of Krzysztof Wodiczko in Lumiere Derry-Londonderry 2013, which projected testimonies of local people across political divides onto buildings in a city that has historically known much bitter division (Wodiczko, 2015; Public Projection, Lumiere Derry-Londonderry, 2013). Such interactive projections in public places are a powerful way to challenge dominant narratives due to their visibility. Designers can combine a dissensual participatory process to create digital media and systems that include a consideration of supporting conflict in similar ways.

6.2 Recognising diversity and equality of rurban experience

Having identified harmful norms and assumptions, the next focus for designers working with rurban communities is to uncover the multiplicity of experiences

and identities that contradict these assumptions. While this is true of all communities, this has its own specific nuances in the rurban community due to rapid diversification (Lichter and Ziliak, 2017; Murray, Pantidi, and Hogan, 2019), and assumptions of homogeneity, interdependence and social hierarchies based on the recent rural past (Bell, 2007; Murray, Pantidi, and McCarthy, 2023; Robinson et al., 2021). Drawing on the canon of SEA is useful as it relates to positioning of participants and researcher(s) / facilitator(s). While this is navigated in each individual setting, SEA theory and practice gives some pointers on how this might be achieved (Birrell, 2008; McCarthy and Wright, 2015). When designing more representative interactive systems, both context and people specific, engaging with multiple contrasting and often hidden experiences is necessary. The SEA process described here was designed with a focus on uncovering these various hidden experiences, we argue that more social justice-oriented design needs to hold this specific focus and design for this outcome.

Tendency to homogenise Irish life is well documented and said to connect to our colonial past (J. Lee, 1994). However, Irish demographics have diversified at an unprecedented rate in the last 20 years (Parker-Jenkins and Masterson, 2013) and recently, the recognition and celebration of cultural differences was recognised as crucial for integration in Irish schools (Nehring, 2020; O'Malley, 2022; Parker-Jenkins and Masterson, 2013). Our analysis with this community gives some indications of opportunities for where and how this diversity can be recognised. Teenagers were, for example, comfortable discussing difference in terms of language, food and fashion. These could provide focal points for design with these teenagers develop technologies that might help them ask questions around accessible topics before voicing discomfort to surface tensions and disrupt perceptions of homogeneity, thus supporting young people in social justice-oriented design to recognise and engage with multiple experiences.

Future design interventions with this community, and ones like them, can leverage insights from SEA to make visible different and contradicting

experiences and bring them into dialogue with each other. Examples such as Isabel Lima's work in *Gresham's Wooden Horse* (2015) can be drawn on for creative ways to represent various experiences of the same community. *Gresham's Wooden Horse* initiated an informal forum for old and new Gresham residents to exchange their experiences and establish a sense of ownership of their neighbourhood while recognising diverse needs. Such examples provide fresh ideas for unexpected approaches to participation to support diverse communities in understanding the various experiences present, working towards design of technologies and systems to both support this diversity and sustainable community development. Recognising diversity and equality of experience can be a central design focal point in the design of such systems.

Engaging diverse and contrasting perspectives is critical to design for more inclusive technologies and futures (Chen et al., 2023). Design for social change in community-based contexts can be augmented by taking a specifically open and generative SEA approach that looks at increasing visibility of experiences outside of the dominant paradigm through creative digital processes that actively seek to draw out those experiences and to support participants in critical thinking and acting in community life.

6.3 Disassembling social barriers

This point gives suggestions on how designers might work with participants to break down the various social barriers indicative in both social hegemonies and marginalisation via activist-leaning design approaches Our findings show that our teenage participants are aware on some level of various invisible barriers between sectors of the community. This burgeoning awareness supplies a further justification and focus for dissensus-based processes in design interventions with this demographic to disassemble these barriers through naming and exploring them. Focusing on social barriers, again through attention to discomfort, tensions and conflict, is useful to design that seeks to

support collaborative processes in support of more equitable communities (Dye et al., 2018; Le Dantec and Fox, 2015).

While various social barriers are references, none of these are critiqued or disassembled, either during the workshops or in the final video pieces themselves. Of course, disassembling these ideas is a big ask for a group of young people, but to further interrogate these ideas could lead to some transformative moments. This underlines the need for design methods to articulate these barriers (O'Leary et al., 2019) and again points to the use of further SEA-informed design interventions to fully surface these tensions. Disassembling social barriers is essentially activist work and not typical of design research. SEA as a discipline rooted in social and political change brings much theory, practice and debate to inform these intentions in design (Beech, 2008, 2010; Bishop, 2008). As it is, there is an underlying sense of disempowerment in the way contentious sentiments around barriers between sectors of the community are casually expressed and not critiqued. SEA can provide a framework and examples of politically engaged participant working towards dissensus to challenge hegemonies of power and configure equitable and agentic participatory experiences. Design interested in supporting this community in breaking down barriers might look towards the SEA aim of turning spectator into actor (Bishop, 2006), or in the words of McCarthy and Wright, enabling people to change roles (2015) through providing multiple tools and modes of expression. Such work could draw on SEA examples such as the *Who Are We?* 2017 event, which created and exchanged knowledge around the multiple crises of identity and belonging in Europe and the UK at that time (Who Are We?, 2017). Across a six-day cross-platform event, the initiative looked at bringing together people and communities often kept apart to name and work towards dismantling barriers they experience. Design practices looking to address these challenges through the creation of interactive systems might draw on the complexity and richness of such projects to connect with participants on deeply emotional levels with a view towards richer engagement and more meaningful outcomes.

Belonging and marginalisation are examples of two complex experiences the teenagers are navigating which are seen throughout Ireland today (King-O'Riain, 2021; Shirley Martin et al., 2023; O'Malley, 2022). The importance of centring joy and playfulness in design to interrogate oppressive topics is recognised (Bosley et al., 2022; To et al., 2023). This is seen as attainable through creative collaboration (hooks, 1995; To et al., 2023) and restorative participation (Bosley et al., 2022) that supports young people in describing their lived experiences (Shirley Martin et al., 2023). The act of making brings its own inherent joy (hooks, 1995) and this can be leveraged using non-prescriptive and pluralistic SEA processes that are political and critical in their intention to name and disassemble these social barriers. As the DIS community and HCI more broadly looks to develop progressive and transformative participatory processes to interrogate and redistribute power, develop agency and capacity and work towards social change, SEA is one approach to designing such processes.

7 Conclusion

As the design community asks questions around how to support communities in addressing social justice issues to work towards more equitable futures, new approaches are necessary to bring diverse populations together and explore marginalised experiences. In this work, we consider how SEA might evoke dissensual participation to challenge hegemonies and design for more inclusive technologies and futures. The study revealed consensus and provided directions to design for dissensus in future work with this community. We put forward three steps to consider in such design: i) revealing and challenging norms and assumptions; ii) recognising the diversity and equality of rurban experience; and iii) breaking down social barriers. While the work is situated in one rurban community, it is significant to pressurised communities more broadly, and to participatory HCI that seeks to become more political and transformative in engaging with situated knowledge to work towards social

change. Design researchers and practitioners engaging with deeply personal and political, often intangible and somewhat hidden phenomena, can benefit from taking a SEA approach to work with emotive, nuanced experiences and translate them into something communicable and actionable to support citizens enacting change in their lives and communities.

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Chapter 8: Socially Engaged Art approaches to CSCW with young people in rurban communities

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ABSTRACT

The rapidly expanding rural community (often called rurban) is a new place for CSCW with unique sociogeographic characteristics that give rise to the need for adapted participatory practices. Socially Engaged Art (SEA) offers pluralistic and critical approaches to participative rurban CSCW to meet this need. This paper provides a case study of SEA-informed CSCW in an Irish rurban community. An online digital art summer school was delivered to young residents of Northrock using freely available digital collaboration and creation tools. Young people in rurban communities are navigating personal, social and political issues in a complex and evolving environment. In this summer school, SEA was applied to explore these issues through the creation and sharing of digital art on participant experiences and hopes for the future. The summer school hoped to promote critical thinking, confrontational dialogue and greater mutual understanding. We found that rapid creation and critique of a range of digital art expressions of social issues accessed nuanced and contradictory experiences, bringing them into dialogue with each other while supporting mutual understanding and new perspectives on rurban place and identity as they evolve. We propose integrating SEA into CSCW with young people in

liminal and transitional communities such as the rurban to explore complex lived experiences in pursuit of more equitable futures and sustainable community expansion. We also draw attention to the usefulness of readily available digital and online tools in supporting CSCW in creative workshop situations.

1 Introduction

Rurban communities are rapidly expanding rural communities where rural and urban characteristics and cultures intersect (Stephens, 2019; Buciega, Pitarch, and Esparcia, 2009). They are liminal places, in a state of transition as demographics and ways of life rapidly diversify. Lived experience of rurban areas is found to be highly diverse, defined by different place and identity-based symbolic and descriptive constructs and comprising of complex opposing factors and processes of evolution (Buciega, Pitarch, and Esparcia, 2009). New community members bring contrasting perspectives, needs and cultures to formerly rural communities. As this liminality can persist for decades (Buciega, Pitarch, and Esparcia, 2009; Báez et al., 2020; Björling and Rönnblom, 2023), there are opportunities and challenges for bringing contradicting experiences into dialogue with each other to progress mutual understanding and to forge new, more inclusive, perceptions and future projections of place and community identity. Rurban places are in a state of becoming; developing from the rural into something as yet unknown. This transition, if attended to, offers opportunities to understand complex processes of place and participation, and to reimagine community life in inclusive and dynamic ways.

Challenges related to a rapidly expanding and diversifying demographic include issues of power, participation, inclusion and marginalisation (Sherman, 2018; Stephens, 2019; Björling and Rönnblom, 2023; Murray, Pantidi, and McCarthy, 2023). Previous work found a need to support mutual understanding, allow for conflict and increase participant agency in order to challenge dominant paradigms and make visible the new perspectives,

experiences and needs that expansion brings (Murray, Pantidi, and Hogan, 2019; Murray, Pantidi, and McCarthy, 2023). This has implications for participatory CSCW in rurban communities, requiring sensitive, generative, critical and creative approaches to access nuanced and hidden experiences and bring them into dialogue with each other, to advance understandings of place and projections for future community development.

Amid growing interest in pluralistic and disruptive approaches to participation, often with underserved communities (Dillahunt et al., 2017; Harrington, Erete, and Piper, 2019; Dombrowski, Harmon, and Fox, 2016; Bray et al., 2022; Hansson et al., 2018; Leal, Strohmayer, and Krüger, 2021), the rurban place and its challenges provide a site for CSCW to explore new approaches to participation that are political, critical and that attend to the sociogeographic requirements, contradictions and potentialities of rurban life. For participatory place-based CSCW that looks towards transformative social change in communities (Asad and Le Dantec, 2015; Holmer et al., 2015; Le Dantec and Fox, 2015; O'Leary et al., 2019; Ghoshal, Mendhekar, and Bruckman, 2020), Socially Engaged Art (SEA) is one such approach. SEA has the potential to explore marginalised experiences and to promote critical thinking, confrontational dialogue and greater mutual understanding.

Participation and social change are at the heart of SEA, which typically looks to creatively engage with a given public to connect personal experience to political and social issues with a view to taking action (Edwards, Collins, and Goto, 2016; Olsen, 2019). SEA provides creative, collaborative and generative ways to make visible, sayable and knowable those aspects of experience that are difficult to describe (Freire, 1967; Birrell, 2008). For example, Clarke et al's (2016, 2014; 2012) work using creative methods to support domestic abuse survivors to tell their stories and build supportive connections. Taking an SEA approach to rurban CSCW involves cultivating participation that creates space for conflict and poses questions about what kinds of social realities we are working towards (Freire, 1967; Verschelden et al., 2012; Bishop, 2004).

This paper describes an empirical case study, building on previous work (Murray, Pantidi, and Hogan, 2019; Murray, Pantidi, and McCarthy, 2023) which put forward the use of SEA to CSCW in rurban communities. The case study, an online digital art summer school in an Irish rurban community, aimed to investigate the use of SEA to support participants in collaboratively and creatively exploring contradicting lived experiences, developing mutual understanding and a more inclusive perspective on community place and identity while imagining new directions for community life. All communication, collaboration, and creative activities during the summer school were facilitated and mediated using both digital and online tools. This work makes two contributions to CSCW. Firstly, an understanding of how digital SEA can be of use to participatory CSCW to access complex experiences and bring them into dialogue with each other, supporting participants in connecting personal experience to wider social issues and encouraging them to take action. Secondly, how readily available digital tools can be leveraged to support collaboration and creativity in remote CSCW.

In the following sections, we describe the requirements of rurban communities that impact participatory approaches and signify them as a new "place" for CSCW. We also make the connections between SEA and CSCW more explicit.

2 Rurban as a "place" for CSCW

CSCW has a long running interest in how the configurations of place make available or constrain various interactions and behaviours (Harrison and Dourish, 1996; Dourish, 2006). As an emerging and liminal place, the rapidly developing rural community is understudied in CSCW where rural studies have tended to focus on deficit models (Su et al., 2021), and have looked towards issues around infrastructure and geography, rather than socio-cultural or symbolic factors (Hardy et al., 2019). There are several terms for expanding rural communities (e.g "rurban", "peri-urban", "new rurality", "urban fringe"

(Allen, 2003; Busck et al., 2008; Eliasson, Westlund, and Johansson, 2015; Torre, 2015; Prakash, 2018). We use "rurban" as it acknowledges both rural and urban characteristics (Busck et al., 2008; Gražulevičiūtė-Vileniškė and Vitkuvienė, 2013).

This transitional process can take decades (Buciega, Pitarch, and Esparcia, 2009; Báez et al., 2020; Björling and Rönnblom, 2023) and there is a recognised need to conceptualise the rurban as a "place" in itself (Björling and Rönnblom, 2023). There has been a move to develop critical and place-based pedagogies specifically to attend to the nuances of rurban experience (Stephens, 2019). This attention to the rurban is deemed necessary to resist harmful stereotyping and marginalisation of those experiences and ways of life outside the rural / urban dichotomy (Björling and Rönnblom, 2023; Stephens, 2019; Báez et al., 2020). Our own discipline's commitment to place as a defining sociotechnical factor requires engagement with the rurban and attention to the unique requirements of this place. Rurban communities as a distinct place for CSCW are inherently innovative and imaginative as they accommodate and adapt to rapidly changing circumstances. The rurban community as a design "space-between" has much to offer CSCW in terms of the development and appropriation of technologies to meet these circumstances, and beyond technology, in terms of understanding power structures and social, cultural and geographical interplays in intersectional and liminal places.

A sudden increase in diversity is a defining rurban sociogeographic characteristic and presents challenges to former rural communities, where a strong sense of community identity can lead to exclusion for those different to the established demographic (Meagher, 2009; Thomas, Pate, and Ranson, 2015; Sherman, 2018; Murray, Pantidi, and Hogan, 2019; Walton, 2021). New community members bring with them new ways of life that influence and change community identity, and long-term community members find the identity they are so familiar with being challenged and adapted (Murray, Pantidi, and McCarthy, 2023). Assumptions of a homogenous rural

demographic are disrupted, (Lacour and Puissant, 2007; Bell and Jayne, 2010; Torre, 2015), and in this disruption there are both challenges and opportunities for rurban placemaking to offer new ways of living that encompass positive aspects of both rural and urban life.

Realising this potential involves addressing the marginalisations and tensions that can arise as previously rural communities expand to accommodate new perspectives, approaches and agendas for rurban community life (Sherman, 2006; Meagher, 2009; Lichter and Brown, 2011; Shucksmith, 2012; Sherman, 2018, 2021; Walton, 2021). This requires polyvocal participatory processes that are attuned to issues of power and equality, recognise diverse identities, perspectives and experiences and give space for contradiction and dissent (Murray, Pantidi, and McCarthy, 2023; Stephens, 2019). In the rurban context, these processes need to be especially sensitive due to high levels of interdependence because of the recent rural past (Robinson et al., 2021). This interdependence, and the legacy of the "tightly knit" rural community (Liepins, 2000; Meagher, 2009; Thomas, Pate, and Ranson, 2015), makes participatory rurban CSCW more challenging as dominant social norms are confronted and uprooted.

These challenges also provide opportunities to CSCW interested in transformative participation (Carroll and Rosson, 2013; Asad and Le Dantec, 2015; Le Dantec and Fox, 2015; Harrington, Erete, and Piper, 2019). Such CSCW can leverage disruption to rurban social norms to devise ways to challenge dominant paradigms, support participant agency and influence change. This paper builds on previous work describing the potential benefit of Socially Engaged Art (SEA) to CSCW in support of these aims (Murray, Pantidi, and McCarthy, 2023) by providing a case study of a SEA approach to participation in an Irish rurban community. We describe how SEA can be of use to rurban CSCW in the next section.

3 Socially Engaged Art (SEA) and rurban CSCW

SEA is a creative participatory practice that brings conflicting perspectives into dialogue with each other with the intention of increasing social bonds and agency and a view to effecting some social change (Edwards, Collins, and Goto, 2016; Olsen, 2019). It can be of use to computer supported collaborative work that aims to explore nuanced and hard-to-reach experiences, understand perceptions of place and support more effective participatory processes that go on to inform the design of CSCW (Murray, Pantidi, and McCarthy, 2023).

A well-known example of SEA, Tania Bruguera's *Immigrant Movement International (IMI)* (Bruguera, 2011) involved a participatory art project and community space (2011-2019) to further the role of migrants in the wider society (Creative Time, 2011; Tate, 2012; Freize, 2016). Brugeura's work amplified marginalised voices and challenged stereotypes through grassroots organisation and public participatory art. Leveraging the sensibilities of IMI would encourage CSCW to blend practical action with exploratory and provocative artistic engagement to gain a richer understanding of marginalised experiences and how to design for them. The longevity of IMI and Brugeura's commitment to her participants are indicative of the time and ethical commitments that need to be made when working with vulnerable populations on complex issues.

In SEA, dissent and contradiction are seen as key in interrogating assumptions, identifying social problems and reimagining social realities (Bishop, 2006; Kester, 2011; Sharp, Pollock, and Paddison, 2005; Tiller, 2014). This connects with CSCW that works with marginalised groups to cultivate social change, encouraging self-reflection, identity expression, behaviour change and activism (Bardzell, 2011; Clarke et al., 2016; Harrington, Erete, and Piper, 2019; Fox, Menking, et al., 2017; DiSalvo et al., 2009), as well as CSCW interested in design processes that support conflict, participation and reflexivity for transformative outcomes (Dombrowski, Harmon, and Fox, 2016). In the rurban context, it is especially important to configure participation that highlights multiple conflicting experiences and perspectives

to reflect the characteristic diversity and fluidity of rurban community. Previous work (Murray, Pantidi, and McCarthy, 2023) has described the complexity of rurban power structures, with dynamics of both inclusion and exclusion and implications for the configuration of communal places and events. Rurban communities offer unique opportunities in working with grassroots organisations that typically have very in-depth knowledge of the community, drawing on insights of community leaders that may have been active for decades as the community evolved (Murray, Pantidi, and McCarthy, 2023). SEA responses that promote equality in difference (Birrell, 2008; Coombs, 2014) and agentic dialogue (Freire, 1967) can be leveraged to alleviate these challenges. As SEA centres aesthetics of contradiction and dissent to disrupt norms and assumptions (Bishop, 2006; Fernández López, 2022; Langlois, 2020), the successful application of SEA approaches in rurban CSCW can use technology and arts-based processes as means to access experience and support participant conflict and reflexivity to imagine other possibilities of social and political life and to work towards designing systems in support of these realisations (Coombs, 2014; Holmer et al., 2015; DiSalvo et al., 2009). More broadly, SEA has the potential to push CSCW in the direction of more critical and radical uses of technology in pursuit of social change as it positions the querying of personal experience as a political act that develops participant agency and action.

In the next section, we describe the design of the summer school study, which deployed SEA in a community-based CSCW design project in an Irish rurban community.

4 The study

The study presented here aimed to explore the value of SEA to CSCW in the rurban context in terms of recognising contradicting experiences, challenging dominant narratives and evolving future projections of rurban place and identity. It also puts forward the configuration of readily available online and

digital tools to support creative and collaborative work. The study is set in "Northrock", an Irish rurban community that has been anonymised in compliance with ethics approval.

4.1 The community

Northrock is a rapidly developing rural community whose population expanded from 1,232 in 1996, to 2,782 in 2006, 5,090 in 2016 and 8,181 in 2022 (Central Statistics Office, 2018, 2019, 2023). The increase in population between 2011 and 2016 was 11.6%, while the State average was 3.7% (SECAD, 2017). When this research took place, 76% of the Northrock population was born in Ireland with 67% of the population identifying as "white Irish" (Central Statistics Office, 2018).

Northrock is predicted to continue this trend of rapid expansion, and community groups identified stress points as: biodiversity, economic opportunities, new populations, integration, the idea of the "ideal village", and individual and community well-being (SECAD, 2017), giving an indication of the challenges perceived by local people. Our study connects with concerns around new populations, integration, the "ideal village", and well-being.

Previous work has identified various dynamics and challenges around identity (Murray, Pantidi, and Hogan, 2019) and inclusion (Murray, Pantidi, and McCarthy, 2023). Long-term community members can feel alienated by rapid changes in community culture and identity (Sherman, 2018, 2021; Sherman and Schafft, 2022), and new community members, particularly those of a different cultural, racial or ethnic background, can be denied full participation in community life (Meagher, 2009; Shucksmith, 2012; Patten, O'Meara, and Dickson-Swift, 2015; Balfour, W-P Fortunato, and Alter, 2018; Walton, 2021). Although much research exists on the experience of migrant children navigating changing personal, familial and community identities and circumstances (Mistry and Wu, 2010; Rutland et al., 2012; Compton-Lilly et al., 2017), we found a lack of information on the experience of young people

in rurban communities. The research presented here provides an insight into the concerns of Northrock young people.

The first author grew up in Northrock and retains strong ties to the community, visiting often and witnessing the rate of change over the past twenty years. These links to the community have been useful in making connections with community groups, as well as building and maintaining trust (Wallerstein and Duran, 2008; Unertl et al., 2016; Hardy, Wyche, and Veinot, 2019). They also require greater levels of reflexivity, which were built into the analysis stage as described in 4.5.

4.2 Participant recruitment

Participant recruitment happened from May to July 2020. Posters were pinned up in central areas of the community. Digital fliers were distributed on various social media channels (figure 1). Youth organisations and schools were contacted directly. All participation was voluntary, and participants could withdraw at any time.

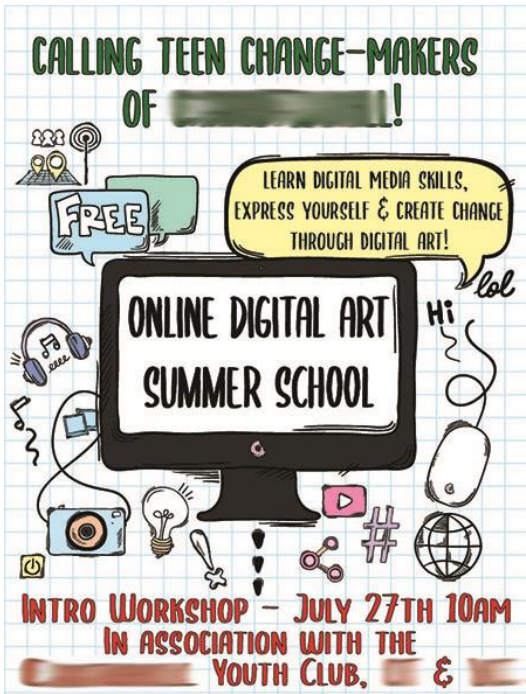


Figure 1: Digital fliers distributed on various social media channels for recruitment

The summer school was positioned as a form of art-activism where participants would work collaboratively towards creating change through digital expression (figure 1). Recruitment media used easily understood language, the terms "SEA" or "socially engaged art" were not mentioned on recruitment materials.

Participants were aged from 11 to 17. Six were female and five were male (table 1). All names were anonymized.

Table 1

Participant	Age
Aaliya (F)	17
Dawn (F)	16
Liam (M)	15
Brian (M)	13
Deirdre (F)	12
Patrick (M)	15
Teresa (F)	14
Lucas (M)	13
Beth (F)	11
Arthur (M)	15
Molly (F)	14

4.3 Designing the summer school

The summer school was designed to be delivered fully online with digital communication, collaboration, and creation tools, providing an example of technologically mediated SEA to explore rurban place and experience. It took place across six online Zoom workshops over two weeks, with each workshop lasting between 60 and 90 minutes. There was communication over WhatsApp and participants completed activities between workshops. Within the Zoom workshops, we used digital tools such as; obamapostermaker,com, miro.com, canva.com, fodey.com, color.adobe.com, imgflip.com and breakyourownnews.com (figures 2 and 3) to collectively create, share and

discuss work. For example, fodey.com, allowing the participants to design a newspaper clipping, was selected to encourage participants to imagine their ideas as newsworthy and impactful. The obamapostermaker.com was introduced to allow participants to rapidly share their rough idea in a visual and recognisably political manner. The online workshops focused on participants collaboratively creating, sharing and critiquing SEA on experiences and issues affecting them. Centring SEA principles, such as interrogating norms and assumptions to provoke debate and even conflict (Bishop, 2012, 2004; Beech, 2008; Coombs, 2014), each workshop was designed to facilitate dissensual and dialogical participation to help in articulating experience, recognising alternative perspectives and connecting personal experiences to wider social issues. While SEA does not prescribe a specific methodology (Garrido Castellano, 2022), a commitment to SEA principles meant continuously evaluating and adapting activities and facilitation approaches to support these dynamics of criticality and debate to open up new understandings of experience and new directions for community life. A breakdown of each workshop can be seen in Table 2. The findings and discussion describe where the workshop design was effective in supporting these dynamics and how it could be improved, as well as the efficacy of the various digital tools used to support SEA dynamics such as relationship building, dialogue and creativity.

Participants were introduced to the term "socially engaged art" in the first workshop and were encouraged to explore whatever aspect of community life they were most interested in. It was described as "art with a mission" and "art for some kind of change". Participants were shown examples of SEA, such as digital storytelling websites, art from the Black Lives Matter movement and *Design for the Just City* graphics (https://www.designforthejustcity.org). There were group critiques of these under the prompts "what message does this piece communicate?", "how does it communicate the message?" and "Is it effective? Why / why not?". This exercise was a first step in encouraging participants to collectively analyse activist messages in artwork with a view to building their own capacity in creating activist art.

Collaborative tasks happened in breakout rooms, where participants could chat more privately. Miro activities supported spontaneous interaction outside of the verbal – for example, commenting and drawing responses to what was happening in the workshops. Each participant had a personal Miro board, which they used to work on their idea. All Miro boards contained a canvas with questions and other prompts to help participants develop ideas. For instance, the "homework" Miro board following workshop 4 (see Table 2) included a canvas for participants to design a social media post. Regarding inequities around internet, hardware and software, we only demonstrated software that was free to download, and used lightweight online tools in class.

We had one face-to-face session in the community. As a group, we decided where to distribute the physical artwork and pinned the work in prominent locations in the centre of Northrock. We also had three face-to-face focus groups and distributed a final questionnaire to collect feedback.

Table 2

#	Objectives	Activities
1	Introduce the project. Get to know each other. Outline roles (ours and participants). Promote agency through giving ownership to participants in terms of setting schedule and agenda. Introduce SEA. Introduce digital tools, begin developing critique skills).	Icebreaker. Overview of questionnaire results, Examples of SEA, software demos, initial brainstorming around "making different experiences visible", framework for critique, introduce "homework" activity.
2	Discover what messages participants are interested in communicating and how. Begin ideation process. Develop critique and aesthetic analysis skills. Support participants in identifying a social justice issue important to them.	Icebreaker, presenting homework (chosen example of SEA), analysing SEA pieces, individual brainstorm, creating initial poster (obamapostermaker.com), introduce "homework" activity, digital tools demo, mapping exercise.

#	Objectives	Activities
3	Extend the process of critique / dialogue around ideas. Begin thinking about SEA as conversation pieces, explore experiences of place. Provide opportunities for creative expression through visualising ideas – sketch / storyboard / script, depending on what media / art form they are interested in.	Icebreaker, make newspaper clipping on idea (fodey.com), introduce idea as conversation piece, discuss what spaces this conversation might happen in. Explore physical places using Google Maps. Discuss ways of visualizing ideas. Digital media app suggestions. Individual tutorials, introducing "homework" activity.
4	Further develop critique skills and individual ideas. Present and critique ideas focusing on stereotypes, different perspectives, identity and visibility. Develop aesthetic analysis skills. Further consider how to share this work with the community looking to affect social change.	Icebreaker, individual tutorials around aesthetic elements of work and where the final piece would be shared. Meme creation on chosen topic (imgflip.com), guidelines for final presentation of work.
5	Continue developing social bonds across the group. Further develop critiquing skills. Further query idea through extra creation around idea. Develop presentation skills. Decide on dissemination activities.	Icebreaker, individual tutorials around aesthetic elements of work and where the final piece would be shared. Meme creation on chosen topic (imgflip.com), guidelines for final presentation of work.
6	Further develop agency in participants in terms of effective presentation and critique skills. Decide where to share all final work to create conversation around changes that need to happen. Thank all participants.	Icebreaker, guidelines for final presentations, guidelines for providing constructive criticism, further discussion around where to share the final work.

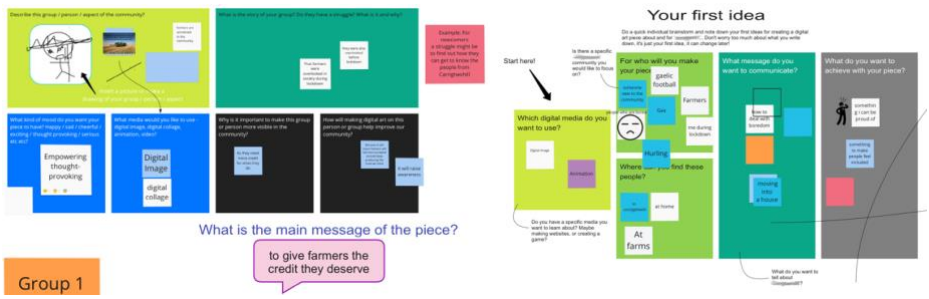


Figure 2: Examples of Miro Board acitvities



Figure 3: Examples of digital tools used in the Zoom workshops; obamapostermaker.com and miro.com, canva.com, fodey.com, color.adobe.com, breakyourownnews.com and imgflip.com

4.4 Data collection

Before, during, and after the summer school, data was collected on participant background and motivations, what the participants were doing, saying, and making in the workshops, and how they experienced the workshops. Prior to the summer school, participants completed a questionnaire querying their motivation, connection to Northrock, perceptions and experiences of the community, and knowledge of digital arts. Following the summer school, participants completed a questionnaire querying how they experienced the summer school, impressions of activities and tools, and participant ideas they found most intriguing. The focus groups gathered data on participant experience of the summer school, how it may have changed their perspective, and if ideas shared by participants were discussed beyond the summer school. We reflected with the participants on their design process, for instance, digital tools used, idea development, and design choices made.

The summer school was audio recorded and transcribed verbatim, as were the focus groups. All material made by participants on Miro boards, through digital tools and the final posters were collected for the data analysis. Each researcher / facilitator complied reflexive notes after each workshop, and these were also analysed as part of the data set.

4.5 Data analysis

Data was analysed by the first and second authors using reflexive qualitative thematic analysis (Braun and Clarke 2006; 2019; 2021a; 2021b). As

mentioned, the first author is from Northrock, requiring a higher level of reflexivity to examine possible biases or assumptions. It was also useful in contextualising statements about, for example, local history or local businesses (Braun and Clarke, 2021a). This extra reflexivity was supported by a high level of dialogue between the first and second authors throughout the analysis stage. An initial codebook was jointly created based on research questions around digital and online SEA approaches to CSCW might support rurban young people in navigating the evolving experiences and perceptions of their community. Researchers independently coded the entire dataset with initial and arising codes, resulting in two sets of first-level codes. Codes on this list were, for example, "equitable participation" (researcher 1) and "hesitant to share idea in group" (researcher 2). The researchers met online to analyse both sets of codes. They discussed each code, comparing and collating overlapping codes and examining language used to ensure it accurately reflected both researchers understanding of the associated dynamics. For example, the earlier mentioned codes were combined (with other codes) to "designing for equitable participation". This resulted in a final set of 24 codes. The two facilitator / researchers then went through the entire dataset again using closed coding with this final list of codes. Another online meeting was held to again articulate the ideas behind each code and to identify and name themes. This process of discussion and re-articulation of ideas behind the codes proved very meaningful in distilling the data and furthering shared understanding of it.

5 Findings

In investigating the use of SEA to rurban CSCW, we relate findings around when and how dissensual and political moments happened or didn't happen in the summer school. We follow a Freirean approach (Freire, 1967) in structuring our findings around (5.1) participants articulating their personal experiences, and (5.2), participants recognising other perspectives and connecting these to wider social issues. We also present (5.3) on the digital

tools used to support facilitation, dialogue and creating and sharing digital artwork. This analysis focuses on where and how SEA-informed CSCW supported collaboratively articulating experience and encouraging critique to imagine alternatives, developing the critical potential of CSCW and connecting with CSCW interests in participation for social change (Carroll and Rosson, 2013; Asad and Le Dantec, 2015; Le Dantec and Fox, 2015). It also relates these findings to the rurban experience, expanding the CSCW interest in alternative places for technology design (Chamberlain, Crabtree, and Davies, 2013).

5.1 Articulating personal experience

In this section, we describe how SEA exploratory activities (5.1.1) and the final SEA works themselves (5.1.2) supported articulating and critiquing diverse experiences. We analyse the artwork to identify how the visual medium amplified participant messages and the communicative value of the posters (5.1.3).

5.1.1 SEA exploratory activities

Digital and collaborative ideation activities acted as supports for exploring rurban experience. For example, in figure 4 (top left), as Aaliyah discusses the audience for her work, she describes her experience while wearing her hijab in what is still a relatively small community. Aaliyah is still somewhat of an outlier in this rurban place. Lucas and Molly use the activities to highlight the need for more social spaces for young people (figure 4, top right), and to promote the rural aspects of the community (figure 4, bottom). The rate of community expansion has not been matched by development of services. Also, the recent rural past is celebrated by some rurban young people.



Figure 4: Examples of participants exploring their experiences during ideation activities.

There was an emphasis on participants collectively making, critiquing and re-making digital expressions of their idea, with a view to developing greater reflexivity and ability to describe the nuances of experiences as workshops progressed. To this end, rapid digital SEA exploratory activities helped further query ideas. The most successful of these in terms of participant articulation of experience was that of a newspaper clipping generator. Figure 5 illustrates two examples, one around Dawn's motivation to create a space for teenagers (top), and one on Aaliya's experience with wearing the hijab in the community (bottom).

Rapid digital making exercises allowed participants to articulate, visualize and share their experiences. They were a source of fun and satisfaction for the participants (as evident in the post-questionnaires and focus groups), which helped to engage and motivate them in developing their ideas.



Figure *5* Examples of clippings from the newspaper generator.

The process of making and collectively presenting and critiquing these artefacts provided opportunities for participants to develop their own thinking. By the final presentations, many participants were fluent and persuasive in describing their experiences and motivations for their work. This was reflected in both participants articulation of their ideas, and the focus group and post-questionnaire data where participants reflected on how much they had learned about other perspectives. The experiences and issues participants chose to explore were indicative of rurban stresses and contribute to an understanding of the rurban experience from the perspectives of young people, while also meeting rurban needs around developing mutual understanding.

5.1.2 SEA outputs

The final outputs were successful in terms of communicating and reflecting on private and sometimes painful participant experiences. For example, Aaliya's artwork (figure 6 top left) illustrates her desire for more acceptance of the hijab, Beth's artwork (figure 6 bottom) references her experience of not being accepted as an autistic person, and Dawn's artwork (figure 6 top right) emphasises her frustration with the lack of spaces for teenagers and her belief in the ability of young people to shape the community.



Figure 6 Participants' outputs communicating their experiences and calling for social change.

Dawn's frustration at the closure of the youth café was echoed in Lucas' motivation for his work:

> Lucas: So my poster is [...] about saving the youth cafe [...] I really like the youth cafe and I was sad that it was shut down [...] it was like a really nice place for everyone to just get together and kind of hang out. there are loads of things to do, but we weren't really asked to do anything.

This sharing of experience was instrumental in raising awareness of the importance of the café in the wider participant group, many of whom expressed surprise and even resistance to the need for spaces beyond sporting facilities for young people. This indicates that previous to the summer school, some participants were unaware of the growing diversity of needs as the community expands and that the collaborative activities of the summer school supported them in addressing this.

Discussing aesthetic choices around each artwork also supported participants in communicating their experiences. For example, Aaliyah, in describing her aesthetic choices says:

> Aaliyah: The tone of voice is to stop and think, that's what I wanted to convey [...] that the hijab is calm and it's no threat whatsoever.

Aaliyah and Beth's posters explored particularly personal and painful experiences. Using aesthetic decisions as a way-in to describe these experiences may have helped these participants in sharing with the group. For example, Beth describes her aesthetic decisions as follows:

> Beth: It's because like they are holding hands as in that they are friends and we are all the same, [...] the reason why it's all black it's because the sun is shining for everyone, but [...] you are just looking at the back. [...] My tone of voice was to be a bit calm and also comforting at the same time and the reason why I think it relates to the image, is because we're all human beings, no matter what.

There is a rawness to this description that taps into Beth's experience. Through relating her aesthetic decisions, she gives some insight into how excluded she sometimes feels. In the following excerpt, where she describes her motivation for creating the work, she further drives home this point:

> Beth: Well the reason why I did this poster and the reason behind it because people with autism sometimes are not accepted, for who they are. And I wanted to say we are all friends no matter what, how different we are. Be more accepting.

5.1.3 The artworks

Describing the artworks themselves gives some indication into how arranging the visual components of the work supported participants in communicating their experiences and ideas for change. Below (table 3), we present three of eleven artworks created with analysis of how the visual language chosen furthers the communicative value of the work.

Participants used often intuitive aesthetic decisions around colour, placement, font, composition and image style to add extra layers of meaning to their messages. Regarding how posters were made, participants choose whatever digital media or app was most accessible to them in terms of availability and ease of use.

Table 3

Final artwork	Description and analysis
 Molly's final poster	The participant created a digital painting with the caption "NATURE". Molly kept the message of the poster simple, her impetus being to promote the natural aspects of Northrock. The perspective of the path invites the viewer into the image, which relies on colours strongly associated with nature and soft blurring and gradient effects to create a peaceful and calm atmosphere, further promoting the value of spending time in nature to the viewer (Molly's chosen message).
 Aaliyah's final poster	The participant created a digital self-portrait with the caption "I'm only human". Aaliya took two self-portraits to represent herself with and without her hijab. She chose to position the portraits back-to-back to each other, communicating the juxtaposition of her experiences in the community based on whether she wears her hijab. She overlaid the portraits onto a photograph of the community hall, a building that strongly represents Northrock public community life and is widely recognizable in the community. The chosen text, "I'm only human", is plaintive in its bid for her humanity to be recognized. The script choice of digital font reinforces the human voice behind the message.



Lucas' final poster

The participant created a digital collage with found images and the caption "We need you to save the youth café". Lucas reappropriated a famous conscription poster and adapted the well-known existing slogan to suit his message. He included found text illustrations of 'youth café', two of which draw from graffiti culture which sets a youthful and slightly subversive tone to the poster. The use of orange was described by Lucas as "striking" and "inviting people to stop and look". The angles of the found images and photographs also lend a sense of energy to the piece. The various photographs represent well known places in the community, connecting the message with Northrock public community life.

To summarise, having a range of collaborative digital SEA making and critiquing exercises supported the young people in articulating personal experiences that were often complex and sometimes painful. A praxis-based approach of action-reflection-(re)action was followed (Freire, 1967), or in our case making-reflection-(re)making to support participants in this development. This was done to encourage critical thinking and identifying connections. In each workshop, participants produced artwork on their chosen theme, presented it to the group explaining their motivation and having received group feedback, went on to reproduce work on the same theme. Creating new visual representations of their ideas in each workshop allowed for highlighting different aspects of their experience and gave them something tangible to discuss and build on. Using aesthetics as a device to share personal and painful experiences worked well in this context, as participants found ways to collectively discuss these though the description of their work. Researcher analysis of the work brings forward how aesthetic decisions reinforce participant messages and heighten the communicative value of the works. Growing up in a liminal community presents specific challenges around place,

belonging and identity. Exploring these challenges through computer supported SEA is useful to CSCW in terms of understanding these experiences, but also of use to participants in terms of providing ways-in to understanding and communicating complex and sometimes painful experiences.

5.2 Recognising other experiences and relating to wider social issues

Through the collaborative activities of the summer school, participants gained a greater awareness and appreciation for each other's experiences. They were also brought face-to-face with conflicting perspectives. This was key to meeting the aims of widening perceptions of community place and identity, creating dissensus, identifying social justice issues and imagining alternatives. This is crucial in the liminal rurban context as norms need to be challenged and sometimes replaced. These functions also support CSCW in more critical and transformative work. We pursued a conscientization-based approach in creating opportunities for the person to critically reflect on their own experience, recognise other realities and connect these to social justice issues (Freire, 1967). In this section, we describe how the digitally mediated collaborative process supported participants learning about each other, the broader community and reflecting on wider social issues.

5.2.1 Highlighting marginalised experiences

Participants created and shared work on a range of themes drawn from personal experiences of place, identity and belonging. The various themes gave participants an insight into rurban diversity and highlighted unexpected differences around needs and perspectives. For example, Aaliyah's work on how she feels conspicuous when wearing her hijab gave many participants a new appreciation for the struggle of being a minority in the community. While the community is more multi-cultural than its recent past, minorities still experience a lack of acceptance.

> Lucas: Both of [Aaliyah's] was really good. [...] Like one simple, probably meaningless thing can change completely what people think about you when they see you. [...] I thought it should maybe be a little bit better than this.
>
> Patrick: I learned about Aaliyah and it was a bit difficult to be a Muslim in the society, cause the percentage is very low. Cause she was feeling insecure when she was wearing the hijab.
>
> Katie: I just thought it was very [...] thought provoking, kind of like it made me think about like what it would be like in that situation.

These excerpts illustrate an increased empathy and a desire to bring community responses to cultural differences up to speed with the growing diversity. Beth's artwork also evoked empathy for the experiences of minorities:

> Honestly I liked all the ones that told us we are all the same/human. I felt like it was a really important message. (anonymous feedback on the post-questionnaire).

Participants also learned about contrasting social needs, with one cohort expressing surprise at the popularity of GAA, while others were taken aback that the GAA facilities did not meet the needs of all young people in the community. The most dissensual moments happened around these realisations, as we will relate in 5.2.3.

Supporting a dissensual processs was essential in facilitating insightful exchanges around personal experiences. Critique is central to this, and while participants often struggled with critique as described below in 5.2.2, critiquing pre-existing artwork helped illustrate diverse perspectives within the group in very literal ways. Describing aesthetics was again a useful way-in to recognizing these differences. For example, when critiquing found images, participants reacted in very different ways to the same images, with some reporting them as "striking" while others reported them as "bland". Many participants said that they were surprised at the level of diversity in responses. At the same time, participants recognise the community as diverse. This suggests that while

participants have an awareness of the diversity of the community, they don't necessarily have direct experience of perspectives other than their own. The collaborative activities of the summer school worked well to bring them face-to-face with these contrasting perspectives.

5.2.2 Evolving understanding of community

As the rurban community rapidly expands, layers of community identity evolve in response. The community these young people are growing up in is markedly different to that of older community members. The summer school provided opportunities for young people to learn from each other's experiences to develop fresh understandings of the community. Central to this was effective critique. Facilitators provided language to describe art and design choices, as well as frameworks to structure feedback in order to support participants in this.

The posters dealt with personal themes that connected with wider community-based issues, giving participants a sense of the complexity of community life. For example, Aaliyah's work around her experiences. Dialogue around Brian's poster was also popular for highlighting the struggles of farmers in the community, something many participants said they weren't previously aware of.

Deirdre's work raised awareness of the need to support girls in sports. In a community where the prominent role of sport is evolving (Murray, Pantidi, and McCarthy, 2023), participants acknowledged that girls' sport needs to be elevated to the level of boys'. Critique of Deirdre's chosen image (figure 7) provided a gateway into a greater understanding of the issue by other participants:

> Patrick (on figure 7): The red letters [...] bring a destructive mood, [...] showing that she can't do it [...] she's not tall enough to see it over the fence. [...] So it's showing how [...] it's quite destructive to their [...] childhood [...] because if they can't see it, they can't actually be it.



Figure 7: Deirdre's chosen image

The gap between experiences of old and young community members also became more apparent. For example, Lucas in the following excerpt discusses why he feels Aaliyah has had negative encounters while wearing her hijab:

> Lucas: First I was thinking, I thought it should maybe be a little bit better than this, but then I realized that maybe it's because like their childhood was before our time.

Central to this work is the idea of dissent and contradiction, which is needed in rurban contexts to bring contrasting experiences into dialogue with each other. While it is positive that participants learned more about each other's experiences, it would be useful to bring these perspectives into further dialogue. As mentioned in 5.2.1, the development of critique skills is crucial to promoting this dissensus. While there was some effective critique of their own work and work from outside of the participant group, participants reported struggling with critiquing each other's work as it felt uncomfortable and overly critical:

> Molly: I hate to say things I don't like. Like that you need a bit more of this..
> Lucas: You feel like a little like a bully almost.

The summer school supported a widening awareness of contrasting experiences, both in the participant group and in the wider community. CSCW

involving the creation and sharing of SEA gave participants a greater understanding of other perspectives, even if they disagreed with them. This is essential to sustainable and equitable community life (Liepins, 2000).

5.2.3 Relating experiences to broader social issues

One of the objectives of the summer school was to critique own and other experiences, and to relate them to broader social issues to imagine directions for the community as it develops. As seen above, this began to happen around experiences in the participant group and the wider community. There were also however missed opportunities to further push this dynamic.

The focus groups highlighted where participants connected personal experiences to wider social issues. This was most obvious around Aaliyah's poster, where many participants expressed their new understanding of how difficult life could be for minorities in the recently rural community. In the face-to-face group session, Molly related her own experience in Qatar and Lucas expressed interest in hearing Molly and Aaliyah explore this further:

> Molly: See where I lived in Qatar, the people with the hijab would look at me. [...]
> Facilitator: maybe you and Aaliya would have ended up talking about that. [...]
> Lucas: That would have been a really interesting conversation.

Some of the most dissensual moments happened in the final presentations, where participants gave anonymous feedback on each artwork using Miro. For example, multiple participants expressed hostility to the idea that an alternative space to the GAA club was needed, as evidence in the following excerpts:

> Waste of space, the GAA pitch is where everybody goes. (anonymous feedback).

> Already have the GAA pitch and most people have a use for the pitch so why would we invest money into stuff the majority of people won't use. (anonymous feedback).

This dissensus is useful to connect participants with broader issues – in this case, the need for diverse public spaces for teenagers to support inclusive community expansion.

Discussion in break-out rooms highlighted opportunities to further connect personal experiences to wider social issues. For example, when one facilitator asked Deirdre "what is holding girls back from joining Gaelic football?", Deirdre replied "well, nothing really, but some girls aren't that interested in it, as in, it's more of a boys sport". While Deirdre recognised the need to promote sports to girls, she doesn't critique why girls might not be interested. However, in the final presentations, Deirdre's feedback indicated that the wider group was critical and aware of a discrepancy in the way girls and boys were received in sport in the community:

> To highlight how girls sport should be as important as boys in society. (anonymous feedback).

> It will bring equality into sporting activities in [Northrock]. (anonymous feedback).

While there were moments of dissensus and connecting personal experiences with broader social issues, there were also missed opportunities to engage further in critique and debate. We will explore how this might be further supported in the discussion.

To summarise, participants expressed surprise at the diversity of ideas, the summer school brought them into dialogue with various perspectives unknown and contrasting with their own. Participants showed a new appreciation for other experiences, particularly difficulties faced by minorities in the community. Dissensual moments happened around conflicting opinions on the necessity of the youth café, and while these weren't resolved, participants acknowledged conflicting needs of other participants in the post-questionnaire. Perceptions of community life evolved. All of this is particularly useful in the rurban context due to a heightened need to recognise contrasting needs and perspectives and to develop community identity. In addition, it is relevant to

CSCW that looks to explore marginalised experiences through creative digital collaborative work.

5.3 Digital supports for SEA-informed collaborative work

This finding relates to the use digital tools to support the SEA-informed computer-supported cooperative work at the heart of this project.

5.3.1 Developing social bonds

We endeavoured to support relationship building using meme-style icebreakers at the start of every workshop (figure 8 top) and the integration of WhatsApp to share images and personal stories (figure 8 bottom).

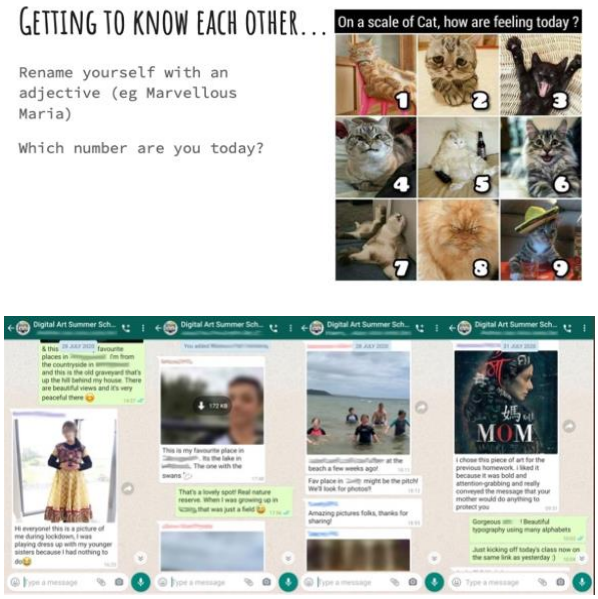


Figure 8: Relationship building through the use of icebreakers and use of WhatsApp to share stories

The provision of WhatsApp was met with mixed responses, with some participants reporting it as useful and others feeling it was too public a forum to share personal information given that they had not actually met. The icebreakers were less controversial, with many participants reporting them as being one of their favourite activities. Both facilitators shared personal stories and images via WhatsApp and, when it was appropriate, during the workshops,

as well as participating in icebreaker activities. This kind of reciprocal exchange is encouraged in much participatory work around sensitive issues (Clarke and Wright, 2012; Bray et al., 2022). Despite the various efforts made to support relationship building, participants acknowledged in the post-workshop focus groups that they would struggle to recognise each other and that they found the online setting on the whole to be detrimental to building convivial relationships.

5.3.2 Facilitating dialogue

Miro was the primary digital collaboration tool used and it facilitated much playful, spontaneous interaction and alternate modes of communication in the form of doodles, virtual post-it notes, comments and collecting of imagery and ideas. For example, when participants used Miro for the first time, they immediately started to make doodles and interact with their peers on the board. They created drawings and added emoticons to respond to other participants. These playful interactions and inputs prompted conversation around ideas. However, it sometimes crossed the line into "trolling" and while participants reported enjoying using Miro overall, they were frustrated when doodles and drawings seemed to take a more disruptive turn.

The participants reported difficulties in engaging in effective dialogue in the main Zoom workshops. In the excerpt below, Molly discusses holding back from discussion on Zoom as she feared interrupting someone, whereas in the face-to-face situation, that fear isn't an issue for her:

> Molly: Online... we couldn't really talk [...] without interrupting someone else, the only time we were able to do that was in the breakout rooms. [...]. So yeah being all together, you could actually talk to each other like separately without interrupting.

Patrick picks up on this point, indicating the lack of facial and body cues as inhibitors to conversation:

> Patrick: You can't exactly point to something or.. you can't see facial expressions [...] nobody can see your hand gestures or your facial expressions.

Despite these various challenges, the final artworks were quite provocative and the discussion during the final focus groups revealed that participants had reflected on their own experiences and had a greater understanding and appreciation of others' experiences. This indicates that the alternative modes of interaction provided by Zoom, Miro and WhatsApp did foster a level of effective dialogue around the social issues important to these participants.

5.3.3 Supporting creative digital responses

There were interesting comments in the focus groups around the particularities of developing creative responses both digitally and remotely:

> Dawn: I think it was easier for us to work on our own ideas at home [...] you kind of have to think of what you are gonna do all by yourself.

This indicates that creative ideation might be supported by participants conceptualising and realising the work at a distance from each other. Conversely, apps crashing and failing to save work led to participants remaking work multiple times, which helped in refining the final piece:

> Lucas: the most annoying definitely was... I had like a finished poster like three times [...] I had to re-do it like three times. I guess that might have also been the best thing, because every time I did it, I did like a little better, but differently.

Participants reported being easily distracted when working online and felt they would have been more focused in the face-to-face setting. While there was some benefit to creating work individually, it was felt that having more opportunities to chat to each other would have had the potential to help them develop their ideas. Overall, participants spoke in favour of a blended experience. For example, they would have liked to present in person, but they also enjoyed using the Miro boards as they could zoom in on artwork, "touch" artwork and write comments without feeling like they were interrupting the presenter. Bringing these insights into future workshops involve integrating

digital collaboration tools into the face-to-face setting. Thus, retaining multiple digital modes of creating and communicating while in the face-to-face setting.

To summarise our findings overall, we found that participants created work that was both empathetic and provocative, while gaining new perspectives on rurban place and identity. Participants ability to articulate their ideas developed through multiple collaborative making, presenting and critiquing exercises. Creating digital SEA on experiences augmented these articulations by providing a visual vocabulary to communicate experience. Participants gained insights on each other's experiences and there were moments of dissensus around conflicting perspectives. The diversity of the community was also made more tangible, as participants recognised the many different experiences available. However, there were also missed opportunities for dissensus. We found using technology in playful and non-prescriptive ways helped in supporting dialogue. Digital and online tools influenced the experience of SEA principles such as developing social bonds, facilitating dialogue and creative responses. Participants were in favour of a blended approach for future summer schools. Overall, participating in the summer school was supportive to these participants' experiences of growing up in a rurban community. It provided new insights and empathies for marginalised experiences and an understanding of the growing diversity and the resultant range of needs and perspectives. It revealed the various place and identity-based interpretations of the community held by participants. These insights can be brought into future CSCW workshops in similar settings.

6 Discussion

Having outlined the rurban as a "place" for CSCW and proposed SEA as a participatory approach to meet rurban requirements, this study provides an application of SEA to participatory rurban CSCW. We were particularly interested in using SEA informed CSCW to explore and articulate personal experience and bring contradictory experiences into dialogue to help recognise

multiple perspectives, challenge dominant paradigms and support participant agency in imagining and communicating alternatives. Based on our findings, we see SEA as a useful contribution to rurban participatory CSCW as a means for highlighting diverse lived experiences in support of more inclusive perceptions of place and community identity. This connects with CSCW concerns related to understanding social norms (Dillahunt and Mankoff, 2014), supporting inclusion (Roberson and Nardi, 2010; Dye et al., 2018; Hsiao, 2019) and cultivating social change (Dimond et al., 2013; Fox, Ulgado, and Rosner, 2015; Fox, Dimond, et al., 2017; Asad and Le Dantec, 2015). We also contribute insights on how readily available digital tools can be leveraged to support collaboration and creativity in online CSCW.

6.1 Digital creative expression to communicate personal experience

In this section, we provide recommendations for using SEA in rurban CSCW to build participant agency in terms of articulating their experiences and imagining and advocating for progressive and inclusive rurban futures. This is useful to CSCW that seeks to access difficult-to-reach experiences (Dillahunt et al., 2017) and support individuals and communities in directing their futures (Ghoshal, Mendhekar, and Bruckman, 2020).

Central to the design of the summer school was supporting participants in making, critiquing and re-making digital artwork on personal experience connected to broader social themes. This emphasis on rapid making, critiquing and re-making on generative themes was informed by SEA theory that interrogates marginalised or invisible experiences with a view to imagining alternatives (Freire, 1967). The design of rurban CSCW can benefit from the above use of SEA to discover and articulate issues in an open-ended and generative way through integrating a range of digital making and critiquing activities that scaffold the querying of ideas and experience to develop participant reflexivity and insight on rurban community dynamics. As participants filter their ideas through each activity and group discussion, and as

the affordances of digital communication tools allow for multiple modalities of engagement, participants can become more articulate in expressing personal experiences, relating them to other experiences, connecting them to broader social issues and envisioning alternatives. This can make visible the various place and identity-based symbolic and descriptive constructs involved in perceptions of the rurban community.

Expanding on our point around the value of fun and playfulness, and drawing on critical literature on how creating images can simultaneously allow people to construct and communicate their own identities and experiences, while disrupting misrepresentation and commonly assumed narratives (hooks, 1995), we draw attention to the level of access, immediacy and fun involved in creating SEA with digital media. Combining political statements around resistance and disruption of assumptions with the pleasure and spontaneity of creating fun and engaging media on the topic can give participants a sense of ownership and motivation to create and share their work. Integrating joy into participatory processes has the potential to make those processes more equitable and even restorative for participants, particular when exploring painful experiences (Bosley et al., 2022). With this in mind, we recommend using available digital tools with an emphasis on playfulness and heterogeneity in the creation of multiple digital expressions of ideas.

Digital SEA encourages the use of sensory language (in the case of the summer school, visual) to communicate experiences, values and needs with the aim of furthering social justice concerns. The summer school illustrated the value of integrating an exploration of aesthetic decisions into the process, as describing aesthetics provides a way into describing and analysing experience. This focus on aesthetics to understand experience is useful for CSCW interested in using artistic methods to develop technological solutions (Devendorf et al., 2020; Soden et al., 2020; Strohmayer, 2021; Sturdee et al., 2021).

In terms of evaluating SEA-informed rurban CSCW, we recommend focusing on whether or not the work provoked debate or reflection on

individual or collective experience, and measuring success in terms of the creation of new perspectives and a challenging of social norms that is of use in that particular context (DiSalvo et al., 2009; Freire, 1967; Yahalom and Hamilton, 2023). We also acknowledge Clarke et. al's (2016) observation on the limitations of brief SEA projects and recognise that work of a longer duration would have greater potential in testing and expanding on the various recommendations put forward here.

Overall, the collaborative summer school process supported creative digital expression of personal experience. The objective to leverage SEA in rurban CSCW to build agency connects with existing CSCW that looks at how exploring experience can develop advocacy and work towards social change (Dimond et al., 2013). We see SEA as supporting such work through processes of rapid digital making and critiquing of creative expressions of experience, emphasising playfulness and diversity, as well as dynamics of dissent and critique, and creating new perspectives and challenging social norms. Using SEA to facilitate collective explorations of experience in rurban CSCW allows for a nuanced and personal understanding evolving and liminal social and political place-based contexts. This connects with CSCW that relies on such understanding to design social and collaborative technologies (Paay and Kjeldskov, 2008; Peer and DiSalvo, 2019; Soden et al., 2021). SEA workshops as interventional methods of inquiry are also a useful addition to CSCW that looks at workshops as research practice (Rosner et al., 2016) as they engender particularly rich and nuanced insights on participants' social and political realities.

6.2 Scaffolding a critique of own and other experience

SEA can also contribute to design of rurban CSCW in terms of facilitating different voices and even dissent to recognise other perspectives and question assumptions, progressing experiential place-based understandings of community. SEA can provide opportunities to critique and debate nuanced and intersectional experiences using the process and resulting artworks as

catalysts and focal points for reflexivity and confrontation. This contribution is relevant to CSCW design that looks towards involving communities in critical reflection and civic engagement to bring about social change (DiSalvo, Nourbakhsh, and Holstius, 2008; Bardzell, 2011; Clarke et al., 2016; Harrington, Erete, and Piper, 2019), and that centralises experience of place in developing technology (Dourish, 2006).

SEA explores empathetic and provocative themes with the aim of influencing values, behaviours and the wider society. This complements the idea of design as a "rhetoric" to promote the various perspectives and agendas of participants (DiSalvo, Nourbakhsh, and Holstius, 2008). Connecting back to the importance of facilitating dissenting voices in the rurban context, it is important to draw this rhetoric into debate to work towards a recognition of other experiences and a stronger mutual understanding. For example, while multiple participants discussed why a youth café in the community was important to them, this was met with a level of incredulity and even disdain from those participants with strong sporting allegiances, and who didn't recognise or value the need for alternative community places. While participants might not have ultimately agreed with needing more diverse social places, the SEA process was the catalyst for them even realising this need existed. In future rurban CSCW, we recommend leveraging SEA principles to cultivate an environment where contentious conversations can be had in respectful and open ways to work towards an acknowledgement and acceptance of the diversity of needs in the rurban community. This resonates with CSCW that looks to explore marginalised experiences to build stronger social bonds (Dillahunt et al., 2017; Hsiao, 2019; Lingel, Naaman, and Boyd, 2014; Fox, Ulgado, and Rosner, 2015).

Central to this objective, and the objective of sustainable future expansion, is facilitating critique. In SEA, critique of artworks (both work-in-progress, pre-existing artworks and those created by participants) and other personally meaningful, potentially socially relevant projects (such as the community work of IMI for example) provides lead-ins to critique of ideas and experiences and

ultimately social and political dynamics. This can be difficult to cultivate. For example, summer school participants reported being shy of openly critiquing each other's work, even though critical remarks were made anonymously in the presentations and post-questionnaires. An attention to developing trust and relationship building through digital making and ice-breaking activities would be useful in counteracting these feelings. Clarke et. al (2018) have put forward ideas on how to build trust that revolve around material resources, moving focus somewhat from interpersonal relationships. Central to this is the idea that trust can be established through creative co-production. As well as being useful to cultivating the polyvocality needed for rurban places, it is also helpful to CSCW that looks towards building community in online spaces (Dourish, 2006; Rohde et al., 2004; Sanusi and Palen, 2008). Built into this, description of aesthetics can again be used as ways-in to further understand experience.

SEA is useful to rurban CSCW in creating opportunities to collaboratively explore and critique multiple viewpoints and bring them into confrontation with each other to advance understandings of place and community identity. This also supports CSCW in pursuing equitable participation (Harrington, Erete, and Piper, 2019) as it promotes the platforming of marginalised voices, working to highlight conflicting experiences and actively avoiding a homogenisation of participant experiences (Beech, 2009). CSCW that focuses on drawing perspectives into debate can look towards SEA approaches in centring collaborative acts of making and analysis to develop trust, relationship building and mutual understanding.

6.3 Digital tools to support dialogical process

Relationship building and effective dialogue are central to articulating contradictory rurban experiences and to resist stereotyping and marginalisation of those outside of the dominant paradigm. In this section, we expand on how readily available digital tools can support this and where and how these functions are of use to rurban CSCW.

While verbal communication was often low, a rich dialogical process was evident through non-verbal exchanges, artefacts made and focus-group reflections. This resonates with literature that conceptualizes dialogical processes as a form of exploration, centring characteristics of openness, inquiry, collaboration, curiosity, multiple ways of knowing, co-creation of meaning, improvisation and variation (Ødegaard, 2020). These various characteristics can be cultivated through offering multiple and diverse dialogical tools to participants (Slingerland et al., 2022). For example, in the summer school, the chat function in Zoom, the Miro board and the digital making activities (e.g., newspaper clipping or breaking news) supported this multi-modal dialogical process. Again, this is supportive of polyvocal rurban CSCW and CSCW that looks towards understanding the affordances of online spaces to build community (Dourish, 2006; Rohde et al., 2004; Sanusi and Palen, 2008).

SEA complements CSCW that aims to bring contrasting perspectives into dialogue with each other (DiSalvo et al., 2009) and looks towards creating dissent and conflict around those perspectives to challenge assumptions and further develop standpoints (Clarke et al., 2014; Dombrowski, Harmon, and Fox, 2016). DiSalvo et. al (2009) outline three "vital points" intrinsic to dialogic art-based processes in HCI: that they are interdisciplinary and heterogenous, that resulting artwork can mean different things in different contexts, and that the artwork is open to interpretation. Digital technology allows participants to make media at a rapid rate and a wide range of media production tools provide multiple methods of visualising ideas, with each method allowing for a variation in terms of how an idea is visually configured and communicated, supporting both the refinement of the idea for the maker, and the communication of the idea to the wider group of participants. The remaining two points around multiple contextual meanings and interpretations of artwork were more challenged in the summer school. The work created by participants was quite literal, and while they facilitated a greater understanding of individual issues, the debate around these issues in terms of transferring them to different

contexts and opening them to interpretation was lacking. The focus group data indicated that participants had begun to think of these issues in more critical ways (e.g. Molly discussing her experience in Qatar as a minority who did not wear a hijab, and Brian challenging the idea that the youth café was really that necessary). However, we did not fully engage with this dynamic of reinterpretation and recontextualization to engender a critical dialogue in the workshops themselves. This may be as a result of the fully online format (Slingerland et al., 2022) and if so, future rurban CSCW in online spaces might centre exploration in terms of play, learning and participation to cultivate the various characteristics of a dialogical process (as listed above) (Ødegaard, 2020).

Drawing on points raised in the focus groups, a blended approach where participants create work remotely and then bring the work together in the face-to-face context to debate it (using a mix of face-to-face and digital means of interaction) might support more of this particular dialogue. Delivering this work face-to-face would also allow for more time spent together as a group, which would also be of significant benefit in drawing out these finer and more challenging dialogical points. This connects back with our points around building trust to support critique in 6.2.

Besides observations on the challenges to dialogic processes, we draw out points on relationship building, and creating and sharing digital artwork online. Our main supports to relationship building are playful and personal interactions. Including activities that are generally seen as frivolous – such as creating memes – is useful in cultivating this atmosphere of playfulness. While the topics the participants chose to engage with were often quite serious, allowing for light-hearted methods of exploration was welcomed. Technology offers extra affordances in terms of being able to "touch" and interact with artworks in engaging and unexpected ways.

We put forward SEA as a means to support participatory approaches in rurban CSCW. SEA can facilitate dissensual dialogue between participants with conflicting experiences and perspectives, supporting polyocality and

evolving understandings of place and identity. These are all central to effective rurban CSCW in support of sustainable rurban expansion. CSCW that aims to be provocative and polyvocal (Le Dantec and Fox, 2015; Fox, Ulgado, and Rosner, 2015; Fox, Dimond, et al., 2017; Dillahunt et al., 2017) can leverage SEA to provide space and opportunities to explore and articulate complex social experiences with a view to imagining alternatives. This expands CSCW into more radical and transformative spaces, drawing on understandings of experience and place to tackle social issues. We also highlight the value of readily available technologies to support complex participatory dynamics and explorations of experience.

7 Conclusion

The study reported on here set out to use digital and online SEA as an approach to CSCW with rurban young people, supporting them in creating provocative digital artworks to understand, share and critique their own and other experiences. We attend to the rurban as a unique "place" for CSCW through the facilitation of effective dialogue and dissent to critically engage with multiple perspectives, recognise marginalised experiences and imagine alternative social realities. In a broader sense, we see SEA as having the potential to examine power structures and social, cultural and geographical interplays in liminal and intersectional places such as the rurban. SEA offers a creative, questioning practice, sensitive to polyvocality and diversity. This can be of help to the designing of computer-supported cooperative systems in support of community-based integration. For CSCW practitioners interested in incorporating SEA, we recommend centring considerations around participation, dialogue, dissent, agency and transformation, while allowing for an open, playful and generative process. Readily available digital tools can be configured to support this. In terms of designing an effective dialogical process around creative digital work, the challenges are in building relationships and holding space for conversations that recontextualise and interrogate

perspectives. Integrating SEA into participatory rurban CSCW allows for new approaches to understanding and querying experience in the design of future CSCW systems and projects for social change.

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Chapter 9: Design probes in a pandemic: two tales of hybrid radical placemaking from Ireland and Australia

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ABSTRACT

Design probes, an essential research tool during the COVID-19 pandemic, are ancillary "personal" data gathering tools that enable researchers to enter the private world of research participants. This paper compares two case studies of design probes used during the pandemic for radical placemaking in hybrid digital-physical environments: Digital Art Summer School in Northrock, Ireland, with eleven participants, and Chatty Bench Project in Brisbane, Australia, with sixteen participants. The paper further expands on the design methodology of the probes and their deployment during the online radical placemaking projects. From the participant responses to the probes' activities and interviews, both studies demonstrated that the probes fostered placemaking in digital environments during the pandemic. The paper concludes with three lessons on the potential of probes as a critical research instrument to enable creativity, build social capital and create bonds between people and places during uncertain and turbulent times.

1 Introduction

The physical environment plays a key role in human well-being as it holds meaning in the memories and experiences of humans. The meaning-making of places, i.e. placemaking, is often used as an approach by institutions and

communities to enhance citizens' relationship with their living environment (Gonsalves et al., 2021; Madden, 2011). Conventional placemaking practices involve a physical intervention in place, such as the design of parks or a street festival (What Is Placemaking?, 2007). With an emphasis on local and / or marginalised communities engaging in the social production of place (Klaebe et al., 2009; Lefebvre, 1992), radical placemaking is offered as a new paradigm of placemaking (Chapman, 2015). For those without access to physical interventions, particularly the marginalised, radical placemaking evolves into an extension of digital placemaking, i.e. the use of digital infrastructure (Marcus Foth, 2017), where social-justice narratives are embedded into creative digital experiences (Gonsalves, Foth, and Amayo Caldwell, 2021). The core value of radical placemaking is that it is the local community that creates the place-based intervention with the support of facilitators (Gonsalves et al., 2021). It adopts a democratic and participatory ethos to ensure that participants are co-creators in the design process to impact their sense of "right to the city", their creative agency and experience of belonging in a community (Harvey, 2015; Lepofsky and Fraser, 2003).

In order to build trust and connection within communities, participatory design and placemaking methods and activities typically rely on face-to-face workshop settings. However, the COVID-19 pandemic has spurred the research community to conduct such inquiries online. Current studies (e.g. (Gumm, Janneck, and Finck, 2006; Öberg, Gumm, and Naghsh, 2009) have just started to understand the dynamics of doing participatory placemaking online and what kind of design materials best suit such settings (Obendorf, Janneck, and Finck, 2009). Particularly during the pandemic, researchers used digital and analogue tools such as Zoom (teleconferencing platform), Google Classroom (online learning platform), and design probes. Little is known about the use of design probes for placemaking, particularly when public places became inaccessible, as seen during the pandemic and placemaking activities moved into digital places of online discussion forums and chat rooms.

In response to this gap and the OzCHI 2022's theme Connected Creativity, this paper reports on using probes in two radical placemaking projects that took place in hybrid digital-physical settings during COVID-19 restrictions. It specifically considers the inter-dependencies and interactions between probes, places, and people in supporting participation, creativity and social connection in hybrid digital-physical placemaking settings in a crisis, as demonstrated during the pandemic. The paper poses the research question: How can design probes assist the radical placemaking process during a global crisis such as the COVID-19 pandemic? Through a comparative case study (Yin, 2003), this paper identifies the role of probes in supporting radical placemaking, describes the participatory design ethos of the probes, evaluates participants' experiences, motivations and responses to the design probes, and expands the discourse on the use of design probes in distributed settings, particularly during times of crisis.

This article starts with a review of the literature on design probes, (radical) placemaking in hybrid settings and the significance of people's participation in placemaking. This is followed by an analysis of the two placemaking case studies presented in Section 3. The first case study is a digital socially engaged art summer school in Ireland (Northrock)[10], in which teenagers designed digital artworks during six design workshops exploring their lived experiences of their local community with a view toward imagining alternative futures. The second case is the Chatty Bench project in Australia (Brisbane), where community members joined design workshops to create geolocative digital stories. The paper ends with three lessons learnt for designing probes in crisis.

2 Literature review

This section reviews the three key components: probes, places, and people. The Probes section expands on the tangible and digital materials that have

[10] Northrock is a fictive name, used for the purpose of anonymity, of an Irish community.

been used by researchers in research activities during the COVID-19 pandemic. The Places section provides the context for designing and using the probes for radical placemaking activities. The People component relates to the intention of the design probes to have an impact beyond placemaking.

2.1 Probes in design

Probes are key instruments that enable non-designers to participate in design research processes (Dalsgaard, 2012; Simonsen and Robertson, 2013). They are used as self-reporting documentation tools to capture the research participants' everyday lives, needs and dreams. They take the form of tangible artefacts such as diaries, cameras, worksheets and supporting materials such as pens and are typically deployed for private settings of the research participant and in contexts where participant observations are not possible (Loi, 2007). This allows for the richness of data where the probe can draw out a wide variety of information and expression of the participants utilising and experiencing the probe with little intrusion from the researcher (Mattelmäki, 2008). Further, probes are known to benefit research participants in terms of mutual learning and reflection (Robertson et al., 2014).

2.1.1 Using probes in design

The purpose of the probes has changed with various design paradigms. The first known documentation of probes, called cultural probes, was utilised to collect ambiguous and open-ended responses to inspire the design or research team in a particular problem (Gaver et al., 2004). In the user-centred design paradigm, now termed as "design probes", they are used to include the user as a researcher in conceptual and design development stages (Mattelmäki, 2006). In empathetic design, probes are used to gather experiential data in order for research teams to develop design empathy: to "walk in the shoes" of the users in terms of the use and experience of design artefacts (Mattelmäki and Battarbee, 2002). Both user-centred design and empathy design limit the user's role in design as well as the ability of the designer / researcher to completely

understand the user's experiences (Bennett and Rosner, 2019; B.-N.Sanders, 2002). Participatory design shifts from designing for users to designing with "participants" through sharing design control and expertise towards technological change (Foth and Axup, 2006). Thus, probes can gain insights into their daily lives and enable equitable participation in the design process. In the case of radical placemaking, the application of probes shifts from being a means to support researchers in (co)designing solutions, to supporting participants in creating their own expressions of their specific issues.

2.1.2 Probes during other crises and now, COVID-19

Probes present opportunities to capture the user's tacit knowledge and expertise while augmenting other data sources emerging from research activities (Jarke and Gerhard, 2018; B.-N.Sanders, 2002). They have also been used to connect those separated by distance, such as children and grandparents, in play and connection (Vetere et al., 2009). However, COVID-19 brought new challenges to conducting research in a worldwide crisis: it spurred researchers to use a number of digital tools and cultural probes to support research and design at a distance (Foth, Caldwell, and Fredericks, 2021; Nind, Coverdale, and Meckin, 2021). Probes became a key research tool during the pandemic as they can be used in a distributed context and provide participants with the flexibility to engage in research in their own time (Lupton, 2020). Researchers, thus, utilised probes in novel ways: they combined distributed, online, and in-person settings to suit their research needs. They also served as a counter to Zoom fatigue, a result of overuse of Zoom or online teleconferencing calls during the pandemic for work, entertainment, and social connection (Williams, 2021). While the usefulness of probes for research was keenly felt during the pandemic, little is known about their design and use for online, distributed, or hybrid circumstances. Thus, this paper explores how design probes can be configured in hybrid contexts for placemaking in crisis.

2.2 Places and placemaking

The cases in this paper use probes in and during design and digital art workshops in the context of hybrid placemaking. Placemaking is about how people connect to places using their different senses to create memories or experiences that evolve into meaning for the space (Cilliers and Timmermans, 2014; Strydom, Puren, and Drewes, 2018). Harrison and Tatar (2008) theorise the construction of place to aid designers to create technologies that support placemaking: placemaking is constructed through value, attached meanings, viewpoints, and human activity (Cilliers and Timmermans, 2014; Harrison and Tatar, 2008; Paay et al., 2008). Hence, places result of a complex process of multiple actors and practices (Crivellaro et al., 2016).

2.2.1 Physical and virtual spaces in hybrid placemaking

Public spaces, as third places of connection away from places of home and work, are natural environments for placemaking to happen (Oldenburg and Brissett, 1982). While traditional placemaking approaches often focus on the physical space, technology enables new opportunities in the placemaking of third places online (Steinkuehler and Williams, 2006), and new ways for people to appropriate the world around them (Harrison and Tatar, 2008). When people meet and connect online in virtual environments, the digital spaces of online discussion forums provide an opportunity for engagement, connection and meaning, turning these spaces into hybrid spaces (Harrison and Dourish, 1996). The importance of engaging residents in placemaking has only grown since digital technology entered the placemaking arena. Digital placemaking utilises digital technology and infrastructure, such as social media and public WiFi, to create hybrid places (Caldwell, 2014; Foth, 2017). Examples include the pervasive game Pokémon Go (Vella et al., 2019) which augments physical space with virtual elements via a smartphone, Discussions in Space (Schroeter and Foth, 2009) where public displays engage communities on civic issues, and Matsuda's everything everytime (Matsuda, 2017) artwork which takes city data and converts it into poetry for split dot

displays. The COVID-19 pandemic realised the criticality of digital environments as places for people to engage in when access to physical spaces is limited. Thus, it called for new ways of imagining placemaking processes considering questions around how people connect in these novel environments, where the power and agency lie in these connections, who has access to the digital, and who may be excluded in digital spaces (Najafi et al., 2022; Hespanhol et al., 2018).

2.2.2 Moving towards radical placemaking

The term "radical" emerges from Freire's critical pedagogy (Freire, 1970), which focuses on empowering communities to identify and articulate their own social justice issues to effect social change. This involves the repositioning of researchers and participants as equal partners in HCI design and research processes. This paper offers two ways to conceptualise radical placemaking: a) local communities co-design socially-conscious placemaking interventions in collaboration with experts in democratic processes (Chapman, 2015) and with a focus on developing local agency and capacity in determining the future of a community, and b) where those who are marginalised with little access to physical interventions utilise digital technologies to creatively appropriate public place as an act of social justice activism (Gonsalves, Foth, and Caldwell, 2021). Intersectional marginalisation (Crenshaw, 1991), which is the confluence of discriminatory factors of age, gender, race, ability and sex, is considered a lens to understand the positionality of the community. Both pathways offer the radical placemaking participants the possibilities of immersing in Freirian critical consciousness through critical reflection and action on local social issues (Freire, 1970). Further, it is a radical departure from conventional placemaking processes as the non-expert leads the place-based intervention. Thus, radical placemaking interventions must consider tools and technologies that enable the non-expert and (often marginalised) communities to engage in equitable and transformative ways. In the two radical placemaking cases of the paper, digital and tangible design probes were used

as a facilitating tool to support inclusive and community-driven placemaking, which is expanded in the next section.

2.3 Impacting people's lives through placemaking

The design of the Indian post-colonial city Chandigarh by renowned architect Corbusier presents a dichotomy: a) a city envisioned in concrete with its institutional buildings making coffee book tables even today, and b) a city where roads designed for cars are left wide and empty when in reality most of India's middle class are on foot and bicycles. While Corbusier's accomplishments of Chandigarh are not to be ignored, his city design had little regard for local Chandigarh's culture or context (Malik, 2003). If a city is not built for its people, who are the city's imaginings and futures for then? The 1970s began to answer this question by shifting away from the notorious "designer as the expert" paradigm seen in urban design, architecture and other design fields. It moved towards the participatory mindset where those impacted by the eventual design would have a say in it (Sanders, 2008).

2.3.1 Relation between placemaking and participation.

From the 1990's, the definition of placemaking started to include human-scale (Gehl, 2004), bottom-up initiatives (Cilliers and Timmermans, 2014), community participation (Beza and Hernández-Garcia, 2018; Friedmann, 2010), and the value of democracy (Strydom, Puren, and Drewes, 2018). Designers realised that in order for places to have meaning for communities, the resident must be included in defining the placemaking brief (Kalandides, 2018). Research recognises that through participation, citizens establish a sense of place (Cilliers and Timmermans, 2014; Corcoran, Marshall, and Walsh, 2018) and thus, there is a growing interest in participatory planning and placemaking approaches (Beza and Hernández-Garcia, 2018; Cilliers and Timmermans, 2014; Klaebe et al., 2009). The underlying assumption of placemaking is now that resident communities have the right and capacity to participate in placemaking (Beza and Hernández-Garcia, 2018; Kalandides,

2018). However, resident participation is often neglected in placemaking (Cilliers and Timmermans, 2014), its significance is debated (Kalandides, 2018) and contested by the increased use of technology in participation (Alabanza Akers, 2022). Set within this context, digital and paper probes are considered in placemaking efforts to enable residents to create alternative urban imaginations of cities (Estrada-Grajales, Foth, and Mitchell, 2018) in turbulent times.

2.3.2 Redefining the expert in design.

The user as the expert, i.e. resident communities in this paper, in the design process is known to bring rewards such as tacit knowledge to the process, user ownership of the process and outcome, participant increase in self-confidence, self-reliance and development of social networks (Cherry and Macredie, 1999; Lumsden, Hakobyan, and O'Sullivan, 2015; Henry, 2011; Shilton, Ramanathan, and Reddy, 2008; Spinuzzi, 2005). Further, participation in placemaking contributes to well-being through an increased sense of agency, belonging, and connection to community, and an ability to imagine and advocate for creative urban futures (Fang et al., 2016; Ricketts, 2008). A sense of belonging enables citizens to address their needs through democratic participation, collaboration and increased respect for diverse views (Wiseman and Brasher, 2008). In the two case studies of the paper, design probes were used as participatory research tools to enable bottom-up participation in placemaking during the pandemic. The next section dives deeper into the methodology of the case studies and how they were analysed to acquire insights into the probes, places, and people in the placemaking studies.

3 Methodology

The aim of this paper is to expand on how design probes assisted radical placemaking processes and their impact on participants' creativity and well-being during the pandemic. A comparative case study (Yin, 2003) is used to fulfil this aim to derive learnings on how design probes can be adopted in times

of crisis. This method involves the analysis of similarities, differences and patterns of two or more cases that share commonalities or goals (Goodrick, 2020). Two radical placemaking case studies are selected based on their application of tangible and digital probes in design and digital art workshops during the COVID-19 pandemic (see Table 1): the Northrock digital probe of the Digital Arts Summer School (Ireland), and the Brisbane paper probe of Chatty Bench Project (Australia). Table 1 was created to support comparison between the cases: they differ in terms of the number of workshops, participant ages, and type of probes and software used throughout the workshops. What they share is the radical placemaking perspective: a) communities who are often excluded in placemaking processes (teenagers in Northrock and transient ethnoracial residents in Brisbane), and 2) the use of digital technologies to support local people in articulating their lived experiences with a view to critiquing social justice issues and imagining alternatives. The cases were first analysed separately, focusing on how the concepts of people, place, and probe worked together to engage in radical placemaking (or not). These results are then compared to identify further findings on using probes to support hybrid placemaking during a crisis. The next section provides a detailed description of the case studies, the design probes in each case, and data collection and analysis.

Table 1: Summarised overview of the two case studies

Characteristics	Northrock probe	Brisbane probe
Project name	Digital arts summer school	Chatty bench project
Location	Northrock, Europe	Upsidedown Town (KGUV), Brisbane, Australia
Kinds of probes	Online digital whiteboard (Miro) and digital making websites	Five sheets of A3 size paper
Radical placemaking approach	Local communities are engaged in social-justice driven placemaking activities	Marginalised communities engage in creative digital placemaking
No. of participants	11 participants: aged 11-17	16 participants: all over 18 years of age.
Time-frame	Two weeks in July-August 2020	June-October 2020
Global event/Social Issue	Local urbanisation issues, e.g. diversity and inclusiveness; and COVID-19 Pandemic	Social isolation, COVID-19 pandemic, physical distancing restrictions
Purpose of workshops	To develop a digital artwork based on the experience of living in Northrock	To develop low-tech place-based situated digital stories of KGUV
No. of workshops	6 workshops	10 workshops
Relationship between workshops and probes	The digital summer school was conducted online via Zoom and digital probes were both used synchronously in workshops and asynchronously in homework exercises	The workshops were conducted online using the online conferencing platform Zoom and the probes were hard copy paper which was asynchronous to the workshops
Deployment of probes	The URL link of the Miro board and digital making websites to be used synchronously was shared during the Zoom calls with the participants. For asynchronous probes, participants received a personal URL to their Miro board	The paper probes with instructions, stationary and a sketchbook were sent to the participants via the postal system. The five sheets were planned for the first five weeks of the project. Paticipants opened one sheet per week in the stated order

Characteristics	Northrock probe	Brisbane probe
Goal of Probes	The probes were designed to help participants articulate and critique their experiences of living in the Northrock community with a view to developing digital art to express the issues, concerns and stories of their community and imagine alternative futures.	The probes were developed to supplement the 10-week workshops on developing place-based digital stories on situated alternative urban imaginations. It contained exercises to aid the development of the digital stories, reflect on places of meaning to them and space to journal on their experiences of the pandemic.

3.1 Northrock probe

The Northrock study took the form of a two-week digital art summer school in which teenagers created digital artworks to express issues, concerns, and stories of their community. The summer school was originally intended to be delivered in a community resource centre, however, due to the COVID-19 pandemic, it was executed in a completely distributed fashion. Eleven teenagers participated from home and used a mobile phone, tablet, or computer to log into Zoom and take part in the online workshop sessions. Within two weeks, six workshops of 60-90 minute length were delivered where the teenagers learned about creating socially engaged digital art, worked on their individual artwork and discussed their ideas with peers and the summer school facilitators. The probes (see Fig 1) were used in the summer school to help participants articulate their experiences of the Northrock community, and translate these experiences into a digital artwork that communicates a particular message.

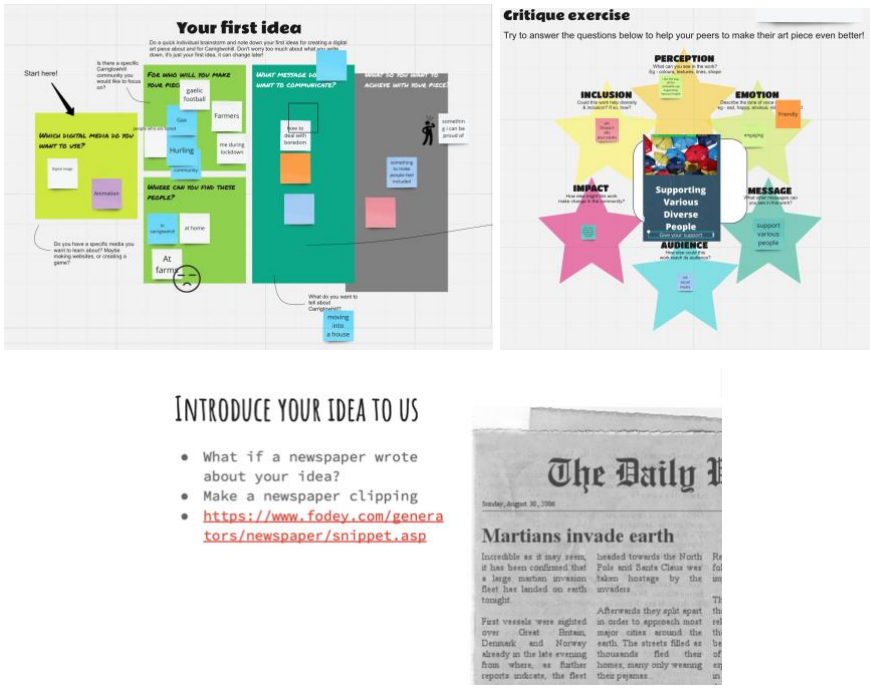


Fig. 1. Examples of probes supporting the three kinds of activities in the Northrock summer school (Slingerland and Murray 2020) L-R: a, b, c

3.1.1 Northrock community and participants

Northrock is a rapidly expanding rural community in the South of Ireland. Such communities are often called "rurban" (Murray, Pantidi, and Hogan, 2019). The 2016 census of Ireland reported that the community expanded from 2,782 people in 2006 to 5,090 people in 2016 (Central Statistics Office, 2019). Residents expressed their experience of the quick urban transition by recalling a time when there were around 400 people in the community. In terms of deprivation indices, there is a high level of affluence in the newer suburban locations around the village, with more marginal and disadvantaged locations in the core of the village (SECAD, 2017). 31% of the community have attained an education standard of an Ordinary Bachelor Degree / National Diploma or above (SECAD, 2017). Local area studies show the community has a large percentage of migrants (23%) and the dominant ethnic or cultural group is white Irish at 67.7% (SECAD, 2017) with about 40 languages being spoken in the area.

Community working groups identified a need for extra resources for teenagers and sustained efforts towards the inclusion of new community demographics, and thus, this study focused on teenagers living in Northrock. Fifteen teenagers initially signed up for the Summer School, eleven showed up during the first workshop and completed the full study. They were recruited by disseminating posters and flyers at key locations in the community and communicating with schools and youth organisations. Participants were aged between 11-17 years; five identified as female and as six as male. Seven of the eleven summer school participants were from the dominant white Irish demographic. There were 13 respondents to the anonymised pre-workshop questionnaire which sought to understand topics of social inclusion and identity. Two respondents reported that nothing made them feel included in the community while the remaining respondents relied on sports, the youth club, school and their friends to feel included. Six respondents felt they identified with Irish culture, while the remaining respondents connected with Russian, Chinese, a mix of undisclosed cultures or no culture. All teenagers and their adult guardians provided informed consent for participation in the summer school and data collection. The study has approval from the University Ethics Committee (file number 0206202006).

3.1.2 Approach

The summer school aimed to support Northrock teenagers in exploring and articulating the issues that come with fast growth and rapidly changing demographics. The Northrock probes were used to support placemaking by discussing issues and sharing stories about the local community. This was done with a view toward building participant agency in terms of imagining and communicating alternative futures through the creation and presentation of digital artworks. As the summer school took place under a strict lockdown situation in Ireland[11], the workshops delivered moments of social contact and

[11] During the summer school, lockdown measures required the teenagers to stay at home, all social and sporting events were cancelled , and citizens were not allowed to travel beyond a 20km radius of their homes.

shared experiences that were limited at that time. Due to the distributed nature of the summer school, all probes were completely digital. A detailed explanation of the summer school setup, as well as a reflection on its distributed format, is provided in Slingerland et al. (2022).

3.1.3 Design of probes

The probes, designed by authors 1 and 3, were tailored towards teenagers with an interest in creating digital arts on local community issues. The probes aimed to help participants think critically, creatively, and explore and communicate different ideas. As such, sketchy, energetic designs and fonts were used, as well as a multitude of colours. The probes also contained a number of empty sticky notes, to stimulate participants in thinking beyond one idea to explore multiple options. Most probes were digitally created in Miro, the online collaborative whiteboard[12], and were either used during the design workshops with teenagers or suggested as a homework activity in between workshops. The supplementary materials contain an overview of the content of all probes. The probes supported three kinds of activities:

- *Articulating experiences:* The starting point for participant artworks was their experiences in the Northrock community. The research team designed probes to help participants articulate and share these experiences in the group. Participants were invited to use a probe in breakout sessions in a smaller group. The Miro-based design probe included prompts to support sharing, reflecting, and articulating community experiences and important places in the community. Miro, further, allowed participants to collaborate on probes while not being in the same room and made probes accessible for the researchers. Some of the probes were used in a group setting, for example, to give feedback on each other's ideas (see Fig 1a).
- *Digital making:* To help participants translate their experience to the making of the digital artwork, the research team designed probes

12 see www.Miro.com

that included digital-making exercises. For example, teenagers were invited to create a simple artefact (such as a newspaper headline, see Fig 1b) that represents the message they want to convey. These activities supported teenagers to further articulate their message, and to think about visual ways to represent their idea. While the Miro exercises mainly required textual input, the digital probes were focused on visualising the teenagers' experiences of Northrock.

- *Reflection:* Following exercises to support articulation and visualisation of the teenagers' experiences, homework activities were designed for reflection. The research team designed individual Miro-based design probes to support teenagers to continue working on their idea in-between workshops. Each individual board had homework exercises that would help teenagers further shape their ideas in the making of the digital artwork (see an example (Fig 1c). Only the research team and the individual participant had access to these individual boards. It was optional for the participants to use these individual boards.

3.1.4 Radical character of the probes

The Northrock probes were specifically tailored towards teenagers. Young people in the rapidly expanding rural community face a unique set of challenges around identity and inclusion as their built and social environment is evolving at a heightened pace. Previous work with this demographic indicated personal and political issues unique to this experience, often focusing on experiences of belonging and the configuration of public space. Teenagers do not typically have access to discussions or decision-making around the community's public spaces. For this reason, the design workshops and probes focused on the demographic of young people. The radical nature of the probes, as well as the design workshops, emphasises the voice of teenagers to articulate their lived experiences and personal local issues in the Northrock community with the intention of influencing social change. The probes also encouraged the teenagers to share their final digital artwork with the wider

community-both in the virtual and public space. The next section now describes the Brisbane probe.

3.2 Brisbane probe

The Brisbane probe, also known as the Chatty Bench Project probe, was developed for the participants of the Chatty Bench Project. Chatty Bench Project involved community members creating geolocative digital stories using Twine, the web-based textual game development tool, in Kelvin Grove Urban Village (KGUV), Brisbane, Australia as a radical placemaking tactic (Gonsalves et al., 2021). It was envisioned as a workshop to be done in the university computer labs. However, due to the COVID-19 pandemic, the project ran completely online from July-October 2020, with sixteen participants of diverse backgrounds using an online conferencing calls tool (Zoom), a virtual environment (Mozilla Hubs), a digital education tool (Google Classroom), and a digital collaboration tool (Slack) (Gonsalves, Foth, and Caldwell, 2021). As it was not possible for the project's lead researcher to guide and observe the participants in the project during pandemic restrictions, the exercises in the A3 paper probes included concept mapping for Twine and selecting digital media for their stories, creative writing, and personal reflections. To support the use of the probes, tutorial videos were created where the lead researcher filled the probe as an example.

3.2.1 KGUV community and participants

KGUV, Brisbane, Australia, is a relatively new mixed-use development that includes residential, commercial, educational, and recreational uses built on an infill brownfield site in the early 2000s (Wardner and Hefferan, 2015). KGUV is a fairly ethnically diverse community, with approximately 50% of its residents being from overseas. Only 54.6% of KGUV residents spoke English at home, with other predominant languages being Mandarin, Arabic, and Cantonese. The median age of Kelvin Grove is 26 years: indicative of the student population residing there due to its proximity to the university (Australian

Bureau of Statistics, 2020). Additionally, KGUV has affordable housing targeted at specific vulnerable groups such as people with disabilities, mental health issues and single parents. It makes for a transient and dynamic population experiencing education, social, and financial challenges. The local community organisation identified social isolation as a key problem in 2019 prior to the pandemic. As a response, Chatty Bench Project was formulated as a way for participants to build low-tech AR digital artefacts, learn new skills and build social capital to counter the growing isolation in the village. Participants learned low-tech immersive storytelling in this digital placemaking project where KGUV benches were nodes of the smartphone-based digital stories (Gonsalves, Foth, and Amayo Caldwell, 2021). By 2020, social isolation became a part of contemporary vocabulary thanks to the pandemic and social distancing measures which further stressed the need for projects such as Chatty Bench Project. Twenty-eight persons expressed interest in the project via recruitment calls on social media and posters placed in key KGUV locations (Gonsalves, Foth, and Caldwell, 2021). Participants in this study are called experience-designers as they engaged in creating a digital experience, and a detailed explanation of the study can be found in Gonsalves et al. (Gonsalves, Foth, and Caldwell, 2021). Sixteen experience-designers joined the hybrid places of the project, used the probes and completed the project. They were over the age of 18 when the project was conducted. Four live in KGUV, six study there, and others have lived, studied, or visited KGUV. 62.5% of experience-designers are people of colour or non-white identities, while the rest have white Australian, European and North American descent or other white identities. 75% of experience-designers identified as female, 18.8% male and 6.3% non-binary. All participants provided informed consent for participation and data collection in Chatty Bench Project. The study was approved by the University Ethics Committee (file number 2000000374).

3.2.2 Approach

Chatty Bench Project is a case study of radical placemaking which involves participatory design approaches with the participants towards digital

placemaking (Gonsalves et al., 2021). The probes (see Fig 2 and supplementary materials for a complete overview) were designed to support the wider goals of building the place-based digital stories of KGUV, as well as social isolation during COVID-19 pandemic restrictions and lockdown[13]. The project was planned for six weeks and then extended for another four weeks to accommodate participants creating the digital stories. The probes took the form of five A3 sheets to be filled for the first five weeks of the project. The participants received a package via postage with the A3 sheets in sealed envelopes with stationary, post-its and index cards. Weekly reminders to fill the sheets were sent via email, and video tutorials on filling the sheets were shared on Google Classroom with the participants.



Fig. 2. Examples of probes supporting the three kinds of activities in the Chatty Bench Project (Gonsalves 2020). L-R: a, b, c

3.2.3 Design of probes

The probes' design focused on being approachable, fun and youthful in the choice of handwritten fonts and design of the probe. The probes were designed by the researcher (author 2) to cater to participants' different skills and interests where they could choose to engage with the probe through writing, drawing, mapping, sketching, and even collaging. The design of the probe had to cater to three aspects of the project:

- *Articulating Experiences:* As the project took place during a time of physical distancing as a requisite to deal with the pandemic, the project

13 During the project, Brisbane's COVID-19 pandemic restriction measures varied. For example, going to essential facilities (such as grocery shops) and non-essential activities (such as concerts and gyms) was permitted with a social distancing of 1.5 metres [68] with recommendations of wearing a surgical mask [71]. Lockdown measures involved that persons could not leave their house of residence except for essential needs such as work, food, medical and exercises and with varying outdoor gatherings restrictions [67]

team wanted to provide a space for people to acknowledge how they were feeling during this time. In addition to this, it was a practice exercise to get participants comfortable with talking about themselves and their daily experiences with the intent of creating their geolocated digital Twine stories.

- *Reflection:* The project involved the participants developing stories of their memories of KGUV. To enable this, the exercises in this section had three intents: a) to have participants reflect and write on their life experiences and socio-cultural connections to KGUV (see Fig 2b), b) to explore the visual representation of those experiences in exercises such as Week 2. "Draw your route from home to other places you go to most, for example, work, uni, a park etc," and c) explore the potential of their reflections in the digital stories they were building through narrative exercises such as "Creating a map of your story" which is based on re-authoring narrative practice (Munro, 2020).
- *Digital making:* The final goal of the probe was to familiarise the participants with the act of journaling and the place-based activities towards building their place-based digital stories of KGUV in Twine. This included thinking about Twine's "choose your adventure" structure and considering the digtial media to be geolocated in KGUV.

3.2.4 Radical character of probes

The probes were used in Chatty Bench Project, tailored towards sixteen KGUV participants with intersections of identities: 62% of participants were affiliated with a university as an academic or student, 68% were of migrant backgrounds and 81% identified as female or non-binary gender. The participants represented an ethnically diverse and transient group with low social capital as they were predominantly new migrants and / or international students (Gonsalves, Foth, and Caldwell, 2021). The pandemic impacted them through loss of jobs, inability to access financial support as international students did not qualify for government support, and loss of face-to-face

community activities, which are entry points into the community. Thus, the participants were at risk of heightened social isolation with limited access to the local community. In times of the pandemic, radical placemaking demanded of the researcher that they consider how best to engage those who are not only marginalised but also now facing social isolation. Paper probes were considered a "radical" tool for the study as it enabled them to consider the making of their digital stories about the place of KGUV, sparked reflection on social issues that affected them and encouraged thinking about their life experiences in the pandemic. In a time of restricted movement and personal loss, the probes provided the participants with "acceptance" to discuss the good and the bad of KGUV in their lives through digital stories.

3.3 Data collection

Both studies collected data throughout the workshops to capture participants' experience using the probes and their engagement in radical placemaking.

3.3.1 Northrock probe

Collected data included field notes of the summer school facilitators, audio recordings of summer school workshops, a pre-workshop and post-workshop questionnaire, and audio recordings of the three focus groups that took place after the summer school. Further, the Miro boards and all other digital artefacts that participants produced were collected, documented, and used for analysis.

3.3.2 Brisbane Probe.

Chatty Bench Project had three phases: Phase A was the problem identification, Phase B was the Digital Workshops, and Phase C was the post-evaluation. The project collected a range of audiovisual data, including video recordings of interviews, focus groups, digital artefacts and probes (Gonsalves et al., 2021). For the purposes of this study, the worksheets (probes) from Phase B and audio from the recorded interview with the seven experience-designers in Phase C were analysed. Data from the other activities provides context for the study.

3.4 Data analysis

Both Northrock and Brisbane probes contained a mix of textual and visual (drawings, sketches etc.) data. Audio from the recordings of both the summer school workshops and focus groups of the Northrock case study and the Brisbane case study were transcribed. In both studies, the probes underwent visual content analysis; themes in the combination of visual and textual data were identified (Bell, 2001). Textual data from the transcribed audio recordings underwent thematic analysis; patterns or themes were identified in the data (Braun and Clarke, 2006). Two researchers were involved in this Northrock process (authors 1 and 3) and one in the Brisbane process (author 2). The thematic analysis focused on the interdependencies and interactions between probes, places and people towards radical placemaking. As a result, the following three main themes were identified:

(1) *Probes as dynamic criticality activators:* This theme describes how participants in both cases experienced using the probes during the pandemic. It considers how the probes supported participants to articulate their experiences in the form of digital artwork or artefacts to disseminate within the wider community towards social change.

(2) *Probes as reflective memory provocateurs:* This theme covers the extent to which the probes achieved placemaking, although the participants were mostly confined to their homes. The digital character of the probes is particularly considered in terms of supporting placemaking.

(3) *Probes as latent social amplifiers:* This theme talks about the way the probe contributed to participants' well-being during the pandemic, for instance by fostering social connections during times of social distancing.

These themes are further elaborated on in the next section. Findings are presented in each theme across the two cases with patterns observed in the probe design and eventual use.

4 Findings

The findings present the insights that were gathered through using the probes in the two case studies: Northrock Probe and Brisbane Probe. Findings on the probes are presented for each case study separately and provide the basis for comparison. Learnings are then derived from the comparison, which is presented in Section 5 Discussion.

4.1 Probes as criticality activators

In both studies, the probes allowed flexibility for participants to use them when, where and how they wanted to. They also helped participants to design their artefacts and think about ways to activate change in the community, which was central in both studies, and to connect with places in the local community.

4.1.1 Northrock probe

The Digital Art Summer School involved six scheduled workshops where the probes were used. During the focus groups that were held after the Summer School and in the post-workshop questionnaire, several participants reflected on how the probes helped them to articulate their idea and create the digital artwork:

> I think it was pretty good and the questions that you gave us really helped me think about it more. (Molly[14], in a focus group).

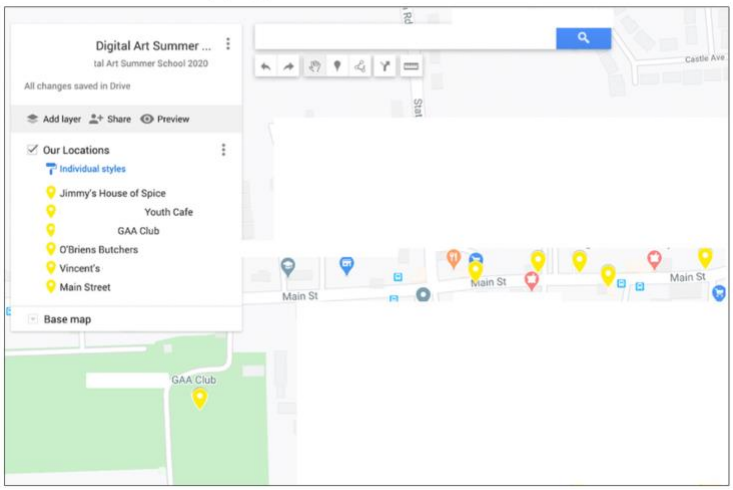
Participants talked about how the Miro boards helped them develop their ideas and contributed positively to the summer school experience in the focus groups and the post-workshop questionnaire. The digital art workshops supported teenagers in thinking about local issues they care about or changes they would like to make in the community. The examples used during workshops and in the probes were always of an activist nature to stimulate teenagers to take a "radical" approach. For example, in one exercise, teenagers

[14] Names of participants are fictive.

analysed existing artworks, including one on the Black Lives Matter movement. Teenagers further created "radical" artworks based on critical thinking about current social events: they conducted an analysis of how the event applied to them and used the analysis to create new knowledge and work. Participants choose their own topic for their artwork to acknowledge their autonomy and encourage ownership of the process and resulting artworks. For example, Arthur and Brian's artworks in Figure 4 addressed key issues arising during the COVID-19 pandemic, such as the importance of social distancing to prevent the spread of the COVID-19 virus and that farmers are also essential workers. Seven of the eleven participants created artworks that aimed to achieve change in the community, following the "radical" paradigm. For example, Patrick's artwork aimed to increase volunteer work for a local charity (see Figure 1a).

Outside of allotted workshops, participants scheduled their own time in terms of when to work on their artwork, using the probes in the homework activities. The remote setting enabled teenagers to independently work on their artwork and take their own approach to design it. The digital probes allowed for more flexible use, and teenagers were less influenced by each other in how they applied the probes, which ones they use and which ones they do not use. To connect with the physical environment in some way (as going out together was not possible due to COVID-19 restrictions), Google Maps (see Fig 3), as well as photos taken by teenagers before the pandemic of locations important to them, enabled participants to share and talk about places important to them during the summer school.

Northrock Probe: Mapping exercise



Brisbane Probe: ED 16

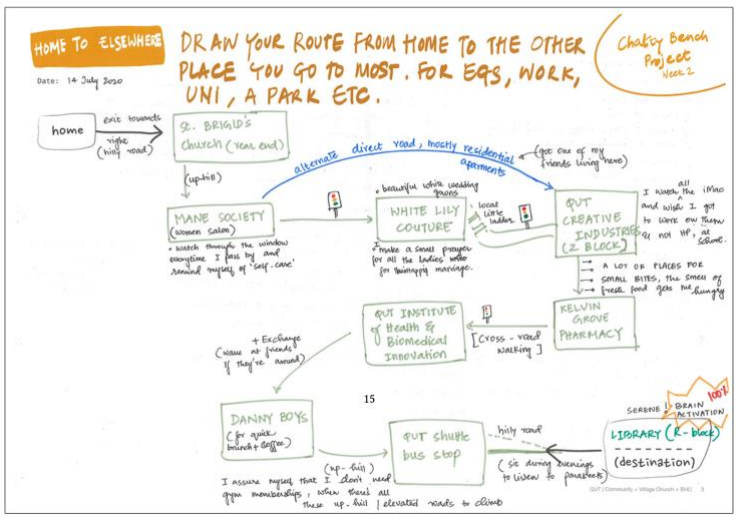


Fig 3. Northrock Probe: Participants pinned their favourite locations in Northrock on the map (Slingerland and Murray 2020); Brisbane probe: ED16 mapping their experience from home to university library (Gonsalves 2020)



Fig. 4. Digital arts created by Arthur (left) and Brian (right) (Slingerland and Murray 2020)

4.1.2 Brisbane probe

Chatty Bench Project ran 10 workshops with the probes being designed for the first five weeks of workshops. These were five A3 sheets of paper with activities on both sides of each sheet. The worksheets had journaling exercises, tasks for working on the digital tool Twine and activities to reflect on places of meaning. Part of the exercises was particularly focused on connecting place with social issues and experiences. The following quote of participant ED15 indicates the importance of the Week 1 "Injustice in your neighbourhood" probe activity in articulating their thoughts on a difficult situation they witnessed:

> Oh, so this, this actually happened...I was working on the assignment. and I was actually at the Kelvin Grove Bus Station Hill. The one opposite the Turkish shop...These two guys...and I was [there]...And following the arrows [in the worksheet] and even the action and everything, I could write better and what I thought about it.

While placemaking exercises and feeding that knowledge into the making of the digital artefact was the main goal, having the mix of exercises from drawing to reflective exercises such as "Injustice in your neighbourhood" to journaling were essential to participants thinking critically about their life

situations in the creation of their artefact. Further, the probe design being simple, approachable and fun was key to motivating participants, while a time period of a week enabled flexibility in filling up their worksheet. Participants were drawn to different activities based on their interests, available time, and skill sets. For example, if participants felt they did not draw well, they did not enjoy the freestyle exercise of "Imagine living on the moon. What would that look like?". All interviewees found the journaling exercises vital as they felt they had no one to talk to during this time, especially those who had recently moved to Brisbane before March 2020's COVID-19 lockdown. Thus, the project achieved the aim of radical placemaking as it ensured "distributed" care to the participants during the pandemic through its various exercises and enabled them to critically think about events that they were witnessing in their daily lives. While the tangible paper probes were one tool in this project, they were seen as a necessary aid for the project by all the project participants interviewed in supporting the making of their digital artefact, thinking of places of meaning, and connecting their lives to local and global events (Gonsalves, Foth, and Caldwell, 2021).

4.2 Probes as reflective memory provocateurs

Placemaking was an outcome of both Northrock and Brisbane probes, and the probes were tailored to enhance participants' connection with the spaces around them. The findings reflect that the probes provoked memories of places, learning about new places in the community, and building networks and memory with each other.

4.2.1 Northrock probe

Through using the probes to share their experiences and unique perspectives on Northrock, the teenagers engaged in this dynamic of provoking memory, learning about new places and building connections with each other. For example, Molly shared her affinity with the natural spaces in the community and was motivated to encourage others to develop the same love for these

spaces. Molly's love for the natural spaces of the community is highly evident here and the probes helped her to share this with the other participants. In addition to the natural spaces of the community, participants also communicated their experiences of the built environment through the use of the probes. The local youth café and the sports pitch, which had to close down due to the pandemic, were locations that were often discussed as important places to some teenagers. Lucas shared his memory of the youth café:

> I think it was kind of nice, cause you know there was tons of things to do. There were like board games, there were snacks, you can make your own tea, a guy brought in a video game and that was allowed. Ehm, cause they had a console for it. And it wasn't really boring, cause there was always something to do, but you weren't really told to do anything. (during summer school workshop).

As the summer school was completely virtual and teenagers participated from home, placemaking through the physical environment was challenged. Place-based connections were made by pinning favourite locations on Google Maps, see Figure 3. This exercise specifically supported participants in thinking about their connections and experiences to the places in the community.

4.2.2 Brisbane Probe.

As the Brisbane participants engaged in digital storytelling activities on Twine (a digital tool) and in the online workshops about KGUV places, the hardcopy probe became an opportunity to reflect on what places meant to them individually while quarantined in their homes. ED16 expands on how Week 2 exercise "Draw your route from home to other places you go to most" enabled reflection, see Figure 3:

> So the route to the place you go to the most. See, this is something that the worksheet -the worksheet, wants to know what I do. Nobody asked me where I go. The worksheet wanted to know that there was...I love doing this, -you know... I was walking on the road, trying to observe small things. I am observant by nature. But I wanted to put this on the paper—I normally write, but drawing these, doing the roadmap was- this is one of my favourites.

In the Brisbane project, radical placemaking emphasises the ephemeral nature of technology to hold stories in place (Gonsalves et al., 2021). The sixteen digital stories created through Chatty Bench Project were place-based i.e. you had to be in a specific place to experience different parts of the story with a smartphone (Wiesner, Foth, and Bilandzic, 2009). The project and its artefacts are inspired by Pokémon Go, where you "catch" the stories of the sixteen storytellers in the KGUV. This required participants to identify places, construct narratives around the places and guide the potential reader through the neighbourhood. The probe contained specific exercises that geared the participants towards thinking about their experiences of their home and neighbourhood and how they could transfer that back into the digital artefact they were constructing. The placemaking exercises in the probes encouraged them to engage in ephemeral memory-remembering and memory making; either through remembering specific routes in their lives or going on a journey, while physical distancing due to the COVID-19 pandemic restrictions, to decide what locations fit their eventual digital story. Participants also noted that the probe encouraged them to consider media that would be relevant to their specific locations which were crucial in the making of their digital artefacts, such as the images of the park or the sound of birds in the park. Key to the radical placemaking process was that the probes were designed as a place to source, write and draw their stories of place, draw connections between their personal stories of social injustice to the KGUV and eventually function as a conceptualising and referencing tool for the making of their place-based digital stories - the radical artefact. The probe provided them with a way to think and reflect about places of meaning to them: some even visited the places adhering to physical restrictions to the place, while others made use of digital online maps such as Google Maps to "digitally" visit places as part of their making process.

4.3 Probes as latent social amplifiers

As both studies took place during the pandemic, the probes also supported participants in reflecting on their lives in lockdown and created moments of social connection, which contributed to participants' creativity and well-being.

4.3.1 Northrock probe

The summer school was a good distraction for the teenagers, who expressed boredom during the pandemic (as reflected in the pre-questionnaire). The probes contributed to the well-being of participants during lockdown because they had something to do and were talking to other people. The pandemic was discussed in some of the artworks of teenagers. For example, Deirdre reflects on Arthur's family restaurant which had to close down:

> Well you probably heard that with the coronavirus the family restaurant had to shut down and they start back again. (During focus group).

Arthur designed his artwork to encourage the uptake of COVID-19 regulations because his parents own a restaurant and want to serve their customers in a safe way, as shown in Figure 4 (left). Brian aimed to highlight the contribution of farmers to the pandemic effort, stating that they are also frontline workers who are often overlooked as illustrated in Figure 4 (right). Other artworks did not focus on the pandemic specifically, and no deep reflection on the pandemic as such was observed. The artworks mainly engaged with the general challenges faced by the community, such as inclusion and urbanisation. Teenagers appreciated the diversity in the creative artworks and ideas:

> Well I have been thinking about it like everybody else's ideas and like ehm.. how everybody's ideas were different and they are all like really good. And they all like had some sort of meaning behind it. (Teresa in the post-workshop questionnaire).

Several participants stated that the summer school helped them deal with boredom during the lockdown and that they appreciated the organised social

interactions. Participants also reported a deepening understanding of each others' experiences as they were shared via the probes:

> Ehm, because like it's kind of true what she was saying and.. I just thought it was very.. well.. very, I don't know the word.. thought-provoking kind of like it made me think about like what it would be like in that situation. (Teresa, in a focus group).

4.3.2 Brisbane probe

Chatty Bench Project took place during COVID-19 pandemic restrictions when people were confined to their homes. The tangible probes presented a moment for participants to not just reflect on what places meant to them but also on their life situations. Participants worked creatively on these probes as they brainstormed and mapped ideas on the worksheet: having something to look forward to via the project contributed to their well-being. The worksheets in tandem with the workshop exercise held during the online calls assured the participants that every Kelvin Grove story of theirs was important and essential. Participant ED14 spoke on using the sheets for reflection and journaling:

> Yeah. I really believe in journaling, and like letting things out. And so I felt like the worksheets was sort of like a prompted journal entry. And even if it didn't directly help, it did help. Because it was getting my ideas out. But it was like, not asking us to be creative. It was just being like, "what's been happening for you lately? Huh?" Yeah, I think it was very helpful.

Feeling what they had to say was valuable contributed to the quality of the place-based digital artefacts created in the project, which involved stories of domestic violence, seeking asylum, anxiety, grief and love.

Instructional videos were made for the participants to illustrate the possibilities of the probes: the options to sketch, draw and even collage offered the participants creative freedom to explore on the sheets. One participant filled her sheet with the help of her little child which was evident from the scribbles and children's stickers on them: thus, this became a shared activity with their family members (See Figure 5).

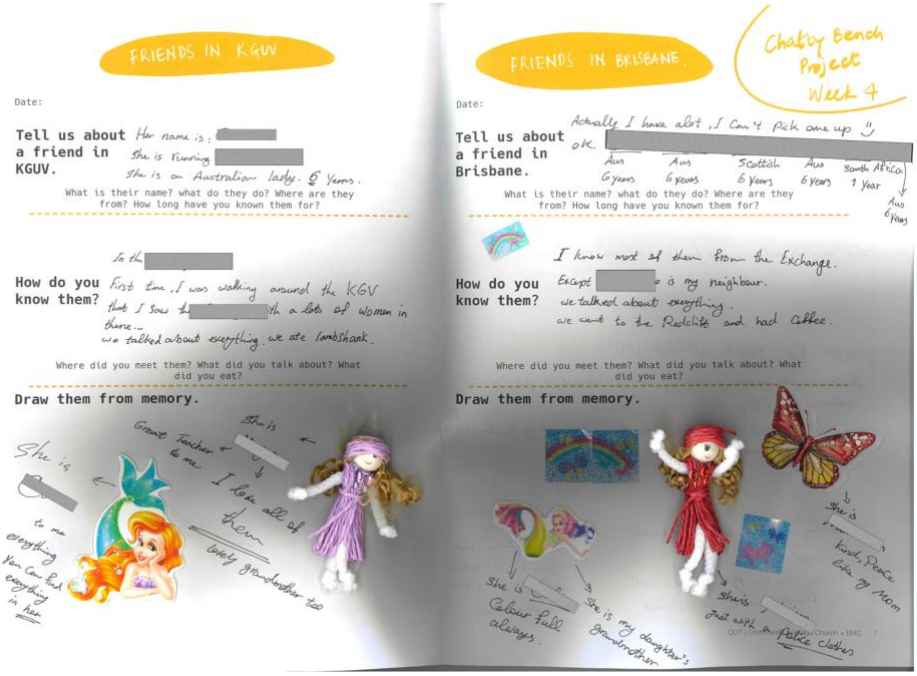


Fig. 5. Brisbane probe indicating how a parent and child engaged with the probe: there were stickers and physical 3D objects such as small dolls stuck to the probe sheet (Gonsalves 2022)

As the probes supplemented the online workshops, it enabled them to build self-confidence in developing stories and connections, even if temporal, with other participants. Thus, the probes helped to build connections with themselves through reflections and creativity, and with others through probe activities and storytelling.

5 Discussion

The purpose of this paper is to understand the potential of design probes to enable (radical) placemaking during global crises. This study presented findings from two cases, in Northrock (Ireland) and Brisbane (Australia), that took place during the COVID-19 pandemic and used digital and tactile probes to foster placemaking. Below the findings of both case studies are discussed to identify which concepts of the design probes contributed to placemaking.

5.1 Probes as a voice in uncertain times

The COVID-19 pandemic pushed both the research projects of the Northrock summer school and the Chatty Bench Project online. As previously outlined, the use of probes in online research is relatively unexplored (Ali, Morris, and Wobbrock, 2021). In the two respective studies, probes became vehicles for participants' personal expression in the very uncertain context of the pandemic. While the Northrock study was completely remote and used only digital probes, Chatty Bench Project utilised tactile probes in a digital setting. In both studies, the probes were designed for participants to reflect on their personal experiences in their local community to create a digital artwork (Northrock) or to create a place-based digital story (Brisbane). The probes not only provided an avenue for participant expression but also provided the researchers with rich insights into how participants experienced place, before and during the pandemic (Mattelmäki, 2008).

Participants were not directly observable during the pandemic. In the event, the probes provided the researchers with alternative access to participants, helping to meet that research requirement. This type of probing is another type of ethnography, providing unique and particular insights that are otherwise not available (Pink, 2008). To enable effective design and use of probes, the participant demographic, and the context in which they are working in, need to be understood. The Northrock and Brisbane probes both catered to teenagers, young and older adults. As a result, they were designed to be aesthetically pleasing to those demographics as well as being easy to use, utilising media familiar to the specific age group (Loi, 2007). Both the Northrock digital and the Brisbane tactile probes allowed participants to revisit and access them on their own schedules. The findings indicate that probe design was successful in enabling and encouraging participant use of them; whether in a digital or tangible format. Since the COVID-19 pandemic, the mutating nature of the virus and the prospects of emerging pandemics have normalised lockdowns and physical distancing restrictions as part of daily living. Further, other persistent global problems such as wars, climate change,

natural disasters and regional conflicts indicate that research in uncertain and precarious times is here to stay. The pandemic pushed researchers and practitioners to conduct research online (Ali, Morris, and Wobbrock, 2021) which provided a taster of the critical role of design probes as self-reporting tools in research under siege. It also illustrated the stresses that participants of radical or any placemaking projects will be operating under. The presented research confirmed the required flexibility of probes, for participants to fill them out on their terms, and the need for user-friendliness in terms of appropriate aesthetics and media, as researchers have less opportunity to help participants with the probes, and participants are working under added pressures of uncertain times. With digital probes, the digital literacy and access challenges of participants need to be taken into account and this brings an extra layer of complexity to designing appropriate probes (Crang, Crosbie, and Graham, 2006).

Takeaway: Since the probes are applied in a hybrid setting, they require adaptive and flexible configuration to cater to specific participants, contexts and changing circumstances. Increased participant autonomy through design probes empowers them to move toward social change, specific to radical placemaking. The probes need to be flexible for users in terms of their available time to be involved in the research, must consider what kind of activities will engage them towards the research objectives based on the understanding of participant's abilities, and provide different kinds of activity to tap their interest and engagement beyond the research objectives in the probe. This requires creativity in how research is designed and consideration in aspects of research such as methodological challenges for data analysis. Researchers must also consider the extent of independence the participants have to contribute comfortably and meaningfully in times of crisis. For example, a daily audio recording may be more suitable than a written probe for a participant group of varying literacy levels. To aid their autonomy in contributing to the probe, the digital audio recording may have an online tutorial which can be referred to when the participant requires it.

5.2 Placemaking redefined during a global crisis

The COVID-19 pandemic pushed people away from public spaces into their homes and the virtual space. Both case studies adapted their activities to these hybrid places. Both studies partially occurred in the virtual, using Zoom or Google classroom. The results indicate that digital probes could circumvent the physical proximity required for placemaking to an extent (Lentini and Decortis, 2010). Particularly in the case of the digital probes, the findings supported the idea that place is not just created in the physical environment but also the digital. Both cases are examples of radical placemaking as both involved populations facing particular social issues at the time and digital technologies were utilised to create personal digital artwork or artefacts to articulate and communicate these social issues with the hope of affecting social change. To enable and support these activities in a participatory ethos (Cilliers and Timmermans, 2014; Foth, 2017), probes were used as an act of radical placemaking in terms of both data-collection and, beyond this, enabling participants to rely on memory, recall and mental imagery to create digital artefacts that could either be experienced in the digital spaces or in-situ.

Placemaking happened through the probes when participants recalled memories of places and developed personal connections around new places (Cilliers and Timmermans, 2014; Friedmann, 2010). The generative activities of the digital and tangible probes allowed participants to switch from physical spaces to digital spaces to hybrid physical-digital modes in order to reflect on how they connect to places (B.-N.Sanders and Stappers, 2012; Visser et al., 2005). Placemaking is generally assumed to be just the physical space with memories to hold them (Strydom, Puren, and Drewes, 2018) but this study during the pandemic indicates that place transcends the physical into the digital, and is also held in the bodies, memories and interactions of people. The added value and meaning to move from spaces to places (Cilliers and Timmermans, 2014; Harrison and Tatar, 2008; Paay et al., 2008) is what grounds placemaking and is usually identified with physical spaces, but the

pandemic has shown that it is also through digital interactions and digital sharing of experiences about a place.

Takeaway: Radical placemaking is placemaking by those who experience personal and political issues (such as those around identity, belonging and marginalisation) to affect social change and probes were designed for this placemaking paradigm. However, the placemaking aspects of the probes' design have implications for wider placemaking approaches that take place in the virtual, physical space, and hybrid settings. When designing placemaking probes, researchers and designers must consider the participants' context: what kind of crisis the participant is facing, how can they engage in placemaking during this time, their ability to access public spaces, and any limitations. Clear instructions must be provided to participants on the activities without posing any bodily or emotional risks. Depending on the placemaking goals and context, probes need tasks that engage participants in exploring places in their personal memories or reality. If a digital artefact is one of the goals of the research study, then the probes must include activities that assist the making of the artefact while bearing in mind that in crisis, participants have limited resources and time.

5.3 Connection and community in the digital

All participants shared the common experience of the pandemic, which served as a point of connection between participants (Foth, 2003). The shared project, goals and probes additionally created connections between the participants and hence, fostered a sense of community (Carroll and Rosson, 2013) which was essential to their well-being. It also allowed participants to reflect on their personal situations during the COVID-19 pandemic. The findings indicate that boredom was a great motivator for participants to engage with the probes. Further, they noted that as they did not get enough time for reflection before the lockdown, they appreciated that the probes allowed these moments of reflection in their lives. The design decisions on styling the probes in a fun and playful manner (akin to kindergarten notebooks), using simple and minimal

instructions to meet varying language requirements of the participants, and ensuring diversity in activities paid off: they attracted the participants to engage with the probes in an authentic and transformative way. Further, in engaging with the probe as and when they pleased, they were given an outlet for their creativity or boredom that led to creative, exploratory and socially engaged work. Boredom can play an important role in providing room for reflection on moving toward new personal goals and can be a key ingredient towards creativity (Bench and Lench, 2013). The authors note that both projects took place in early COVID-19 lockdown periods (2020) and under varying physical distancing restrictions. At the time, the uncertainty, lack of employment, excess of free time, and the project brief enabled the attraction and retention of participants. However, in 2021 and 2022, with COVID-19 lockdowns and restrictions being a "normal" state, the constant boredom with no end in sight was stated as one of the reasons for quarantine fatigue where people engaged in non-COVID-safe behaviours (Haladyn, 2021; Harrison, 2021). While the findings indicate a need or a desire for reflective thinking and creative exercises in design probes, the paper also acknowledges the limitations of probes in staving off boredom: these cannot be the only tool that researchers rely on for keeping research participants interested in the study.

Takeaway: A crisis has the potential to bring participants together as they have a shared experience of that crisis. Probes can be used to tap into both the shared and individual experience of a crisis through activities such as storytelling and journaling. Various exercises are essential to keeping participants engaged, which may be a welcomed activity during sustained periods of crisis. Probes must cater to both these individual and shared experiences of the crisis to enable personal reflections and sense-making of a difficult situation and build networks and relationships between participants. Probes must consider tasks that enable the individual participant's interest in working with a probe, must provide space for transitioning from individual to wider project goals, and utilise shared creativity and storytelling to foster connection with the wider community as an incentive and motivation beyond

the probe. Shared openness, creativity, and vulnerability have the potential for cultivating meaningful networks, relationships, and eventual collective organising leading to change-making (Chow and Chan, 2008).

6 Conclusion

This paper presented two radical placemaking projects, Digital Arts Summer School (Northrock, Ireland) and Chatty Bench Project (Brisbane, Australia), that took place during the COVID-19 pandemic. Both project communities were at the crux of social issues: the Northrock community was confronted with local urbanisation issues of diversity and inclusivity and the Brisbane community with its new migrants and transient residents were faced with low social capital resulting in social isolation. Both places experienced increased social isolation due to COVID-19 pandemic. The projects involved community members utilising digital tools to engage in creative placemaking. The Northrock digital probe and the Brisbane tactile probe played a key role in establishing the values of the radical placemaking projects that were conducted in hybrid digital places.

The guiding research question in this paper was: How can design probes assist the radical placemaking process during a global crisis such as COVID-19 pandemic, and as such the specific interactions between probes, places, and people in the two case studies were considered and analysed. From this analysis, three take-aways were identified as an answer to the research question. For probes to assist radical placemaking during global crisis, they need to 1) be designed in a way that they support autonomy and empowerment of participants, 2) be a combination of digital and tactile, to support the hybrid elements (digital and physical) of placemaking, and 3) support flexibility and variety in use, allow for multi-users of the probe (such as family members within a household), to foster community connections towards social change. Furthermore, the probes presented in this paper are a showcase and example of how these take-aways can be leveraged in probe design.

Personal and community well-being were unintentional consequences of the design probes and contributed to the broader goals of the Northrock and Brisbane research activities of building a creative and activist community during a time of social isolation. Thus, the insights of this paper draw up new and existing questions; such as which type of design activities could be best supported with tactile or digital probes for participant well-being, or what kind of data these two different probes collect without compromising researcher-participant duty of care. Moreover, remote and virtual design workshops bring methodological challenges that need further study. The authors look forward to continuing the debate on the design and deployment of probes in radical placemaking, as the pandemic has spurred the research into this exciting, yet relatively unexplored context of design. Another open question is around how probes can further support participants to take action, based on the reflections and stories they shared. The insights of the presented study, complemented with future work of others and ourselves, will guide fellow design practitioners of various disciplines in creating appropriate and engaging tangible and digital probes to be used in the hybrid digital-physical settings of radical placemaking. Probes can be more than just a data collection tool: its purpose can be expanded to care, self-expression, reflection, sense-making and connection during and post-crisis.

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Chapter 10: Discussion

1 Introduction

This research was originally motivated by two main aims, to describe the rapidly developing rural community as a distinct "place" for CSCW, and to put forward SEA as an approach to participation in rurban communities. Beyond these two contributions, the course of the research also brought forward questions in terms of who and where CSCW is for, and what "counts" as CSCW, expanding ideas around the dominant concepts and methods of CSCW.

This chapter discusses the findings in the context of those three contributions. The initial stages of the research argued for and charted the rurban as a distinct place for CSCW with unique participatory requirements. The SEA-informed studies raised questions around how to actualise the aims of SEA in a rurban CSCW context. The various ambitions for SEA are difficult to achieve, such as uncovering consensus, evoking dissensus, supporting conflict and promoting equality in participation. As discussed in chapters 7 and 8, these aims succeeded to varying degrees. This chapter provides a critique of these processes and suggestions for sharpening the efficacy of SEA in CSCW going forward.

Beyond the immediate aims and questions at the outset of this research, and in a climate where CSCW increasingly looks towards making a positive impact on the various challenges of our time (Schlesinger, Edwards, and Grinter, 2017), this research raised questions around what can be considered CSCW, and how and why this might be expanded. This chapter considers the development of CSCW, the typical contexts it operates in and the methods it employs today and provides an argument for widening perceptions of what approaches and contexts are appropriate for CSCW.

This discussion chapter brings forward some of the higher-level findings across all chapters and evaluates these in the broader context of the entire

research project. The following sections discuss the findings in relation to the original research aims and the tripartite focus of rurban as a new place, SEA for CSCW, and where all of this fits in the CSCW landscape.

2 The rurban place

One of the aims from the outset of the research was to understand the rurban as a new "place" for CSCW. My thinking on place was very much opened up by Dourish and colleagues (1996; 2006b), who discuss how configurations of place make available or constrain behaviours, interactions and experiences. With that in mind, this section starts by outlining what the rurban place makes available and contributes an understanding of the dynamics of the rurban community and how these can be supported by CSCW.

2.1 Behaviours, interactions and experiences afforded and mediated by rurban places

If we think about public place as both making possible and constraining action, and in that process including some while excluding others (Hansson et al., 2018), it becomes a contested site of social and political possibility that, in the rurban context, needs to be understood to best support the community in expansion.

The rurban site is in a state of becoming and as described in chapter 6, the configuration of the various places in the Northrock community is rapidly changing. The value of conflict as a community dynamic was seen in chapter 5 as the basis of new connections and understandings around challenges to community life, the multitude of experiences present and how these can be reconciled through place-based interventions. For example, when discussing the Family Resource Centre in the East vs West conflict (chapter 5), leaders in that organisation said that it was important to locate the centre in the more affluent area of the village to bridge the invisible but very tangible divide through bringing people from the more disadvantaged West end of the village to the East end. This strategic positioning was credited with playing a role in

the two demographics meeting each other and developing friendships. This points to the value of understanding social, cultural and economic associations with place and leveraging these strategically, through technology development or participatory processes, to advance community goals.

A focus on intersectional identity markers and how they relate to place can illustrate how social systems impact the experience of technology (Schlesinger, Edwards, and Grinter, 2017). In the Northrock context, just as various encounters and conflicts between people are enacted in and mediated by public places, each persons' experience of public place is mediated by their own intersectional identities. This is cohesive with CSCW that describes how both spatial and social contexts influence the kinds of interactions that can happen in public places (Paay and Kjeldskov, 2008). It was very apparent that participants had vastly differing experiences of place, mediated by identity markers such as age, gender, religion, family status, ethnicity, race, socio-economic status and length of time in the community. Understanding the interplay of intersectional identities can give rise to nuanced and diverse insights on community life and can contribute to a more sensitive positioning of participants and researchers in design processes. In a rurban community, length of time living there impacts on access to and participation in community life (Lichter, 2012). In some rural studies research, the longer term residents are seen to be left behind when in-migration is from affluent demographics (Sherman, 2021, 2018). This was not the case in Northrock, where the long-term residents are still very much the community leaders and new community members are from highly diverse backgrounds. Overcoming a binary approach based on "new" and "old" residents would be powerful in recognising the many identity markers and experiences people have in common. CSCW and SEA might work towards providing opportunities for recognition and expression of commonalities through creative digital means.

This research learned most about the various behaviours, interactions and experiences allowed by rurban places from the SEA-informed digital storytelling workshops and summer school. Around a process of creative

exploration, participants revealed various consensuses on barriers and constraints in rurban places, where dominant identities and experiences marginalised or rendered others invisible. In CSCW, identify-focused research lags behind on ethnicity and race (Schlesinger, Edwards, and Grinter, 2017), and in the Irish context, there are struggles in responding to diversity (Parker-Jenkins and Masterson, 2013; Martin et al., 2023; O'Malley, 2022). However, ethnicity and race are defining factors in how these teenagers understand the affordances and allowances of rurban places, with constraints around where people are expected to be and who can represent Irish culture. Based on these findings, and given that rural studies indicate the social ruptures that can happen in rapidly developing rural communities (Lichter, 2012; Meagher, 2009), this research highlights the need for CSCW to further explore experiences around race and ethnicity and work towards both mitigating and challenging harmful assumptions and norms through further participatory work and creative use of collaborative technology.

This section has drawn out the various ways interpretations of public place and intersectional identities impact on rurban experience. The next section looks at the social and political concerns rurban place gives rise to.

2.2 Social and political concerns of rurban places

Practical concerns identified by participants across all studies were those around services to support the growing population. There is a need for political action to advocate for new infrastructure and amenities and while Northrock is already well organised and active in this area (for example, the community mobilised around the redesignation of Northrock to a suburb of the nearby city, as this would impact on the agency of local government), extra support around capacity building and development of advocacy skills would be useful. This also extends to the teenage population. One of their big issues was that of the youth club closing. Mechanisms for young people to come together and develop awareness campaigns in the community around their issues are needed. The role of local actors in becoming involved in and directing the

future of the rurban community is seen as pivotal (Buciega, Pitarch, and Esparcia, 2009) and CSCW can play a part in supporting this cooperative work, as I outline in section 2.3 below.

One of the strongest social concerns of Northrock was around how to develop an inclusive community. For example, in chapter 8, Aaliyah[15] related her experience of being stared at when she wore her hijab in the community, saying that she felt "like an alien". Equally, in chapter 6, Aisha discussed how she can sometimes sense a hostility in questions relating to her background. These examples indicate that supports are needed to promote mutual understanding and alleviate tensions. Older community members also need support around inclusion, as many participants felt alienated by the changes and mourn the passing of familiar ways of life. There is a level of disconnect between the experiences of different demographics, with some participants finding the community to be exceptionally welcoming and supporting, and others believing that those values have faded with expansion. These different perspectives and experiences need to be brought into dialogue to illustrate how those values currently manifest in the community. Again, recognising intersectional identity markers could help in this. For example, there were New Rock participants who arrived in the community as homeless refugees with little knowledge of English, and there were New Rock participants who arrived because they were educated, affluent and attracted by the growing pharmaceutical industry. Equally, many Old Rock participants are from very diverse social and economic backgrounds, as seen in chapter 5. Bringing participants across community life together in dialogue is a way to recognise the many shared struggles, needs and experiences between those who might outwardly seem different to each other and a way to counteract a process of "othering" that can develop in the rurban community (Stephens, 2019; Woods, 2022). This social interaction is also found to be an important support to community agency in rural communities (Brennan and Luloff, 2007), and so

[15] All names of participants are anonymised in compliance with ethics approval

contributing to rurban community ability to negotiate and affect their expansion.

The assumptions on who belongs where in the community and stereotypes around "Irishness" are social and political concerns. There is a need for collective identity work to understand how multi-faceted current Irish identities are and to push for inclusion of people from minority groups at all levels of community life. Design practices that centre marginalised racial and ethnic experiences are seen to support more inclusive, diverse and equitable futures (Harrington, Klassen, and Rankin, 2022) and rurban CSCW holds rich potential in which to develop these.

These various issues raise questions around how to design social technologies that are inclusive, representational and promote mutual recognition and understanding. There are also methodological considerations, such as a heightened need for broad and accurate representation of the various demographics and the acknowledgement of the intersectionality of identities present to bring various perceptions and experiences together. There is a challenge to CSCW to design participatory processes and technologies to serve the multiple realities present in rurban places. In the next section, I put forward opportunities for CSCW in rurban places to address the issues outlined here.

2.3 CSCW interventions in rurban places

There are opportunities for CSCW in support of the various logistical and administrative challenges experienced by rurban communities, and at a more fundamental level, a role for participative practice to identify and articulate social issues and build agency, recognition and mutual understanding. Connecting with previous points on place and social and political concerns, this section draws out some implications of these for sociotechnical interventions in rurban places.

Current design approaches often do not gain a full understanding of the human experience of place when designing technologies for public spaces (Ciolfi, 2004). As discussed, the identities of community members impact on

their experiences of place as much as the configurations of the places themselves. CSCW interested in the design and use of technologies, both for physical spaces and those constituting digital spaces, can work with the rurban place to access a relatively small, but highly diverse site in a rapid rate of change to understand the values, memories, behaviours and activities that constitute the perceptions of place, as well as how places evolve and how intersectionality impacts on experience of place.

Expansion brings opportunities to create new associations and meanings of place. The main street of the village is still the main thoroughfare and much of community life is enacted here. It has however noticeably diversified with ethnic businesses now as prominent as traditional Irish businesses, many of them functioning to both support interaction and understanding across demographics, but also as places for minority groups to hold the majority and to offer support and recognition to each other. These important functions and this inherent duality could be supported through technologies to cultivate networking both within minority groups and extending out towards the wider community. The dynamic of friendliness that is still recognised in prominent community places (e.g. Chapter 6 relates how Mary (P:2 T:C) says hello to everyone she sees, and Eryka (P:5 T:C) discusses how the children of the community mix together freely in their public places) can be leveraged in the design of playful technologies to encourage dialogue in public space, such as the Yobosayo project described in chapter 6. Appropriating and designing technology to increase opportunities for social connection in both physical and digital spaces has the potential to turn them into places that can support wider participation and inclusion in community life.

In addition, CSCW can engage with building local advocacy systems, making diversity of experience more apparent, supporting cultural exchanges and relationship building and imagining a better community. Social technology can be used to platform disparate experiences and perspectives in support of mutual recognition. Online communities also have the potential to magnify marginalisation and the spreading of misinformation (Lingel, Naaman, and

Boyd, 2014; Rohde et al., 2004; Shahid, Mare, and Vashistha, 2022), and so it is important for social technology in the rurban community to be transparent and accountable (Giglitto et al., 2019; Hsiao, 2019). Connecting social technologies to specific common goals, social structures and cultural and symbolic markers can be leveraged in bringing people together in the digital world to support relationship building and mobilization around shared concerns and interests. Dialogical and interactive digital media can also be used to good effect both in relationship building and in developing agency within the community, as evidenced in chapters 8 and 9, where a variety of dialogues were supported via both digital and analogue tools. Participatory work around creating and sharing media with the intention of building understanding between residents would be of use, to highlight the positive influence of new communities, provide avenues of online interaction between groups and to ease the sense of isolation and disillusion felt by some long-term residents.

Avoiding being overly prescriptive, this section outlines out some key areas for sociotechnical interventions in relation to place and belonging. Any sociotechnical interventions would need to be scoped out on a case-by-case basis and respond to the local requirements and values of any specific place. To effectively partner with local expertise in order to create situated and relevant technological responses to rurban needs, researchers need to design sensitive and equitable participatory processes. The following section puts forward requirements for such processes.

2.4 Requirements for effective participatory rurban CSCW

Over the course of research design and analysis, I kept returning to McCarthy and Wright's point that "the modes of participation available to people are determined by the modes of perception available" (McCarthy and Wright, 2015). This points to more than a disinclination to participate in various enactments of community life, but rather an inability to participate due to restrictions on modes of perception, or modes of recognition of other experiences. This was strikingly evident across all studies, where experiences

that were common to one group were invisible or inaccessible to another. When thinking about how to bring these different experiences into dialogue with each other, this idea of widening modes of perception seemed central. How do you make visible some aspect of experience that has until now been invisible to a particular person or demographic? Following research in community heritage, inviting multiple perspectives on common experiences is useful (Purkis, 2013; Taylor, 2014). Rurban participation needs to consciously counteract homogenous or hegemonic perceptions, to forefront minority experiences and to create dialogical participation that actively encourages contradictory experiences in coming to light. The intersectionality of identities has implications for social boundaries and how people might choose to present in different situations (Lingel, Naaman, and Boyd, 2014). This provides challenges but also directions for designing rurban participation.

To open up possibilities of place, participatory CSCW needs to make visible their many different readings and affordances, mediated by both intersectional identity markers and traditional and evolving place-based practices. This involves disrupting consensus around what can happen in public places (Coombs, 2014). The environment has been found to be one of the biggest indicators of widespread participation (Taylor, 2014), and HCI discusses the need to engage with the social, cultural and symbolic markers of a community (Carroll and Rosson, 2013). In the case of Northrock, these are typically the Church, sports facilities, ethnic shops, pubs, youth café, community hall and various grassroots organisations. Locating participatory research activities in these places is a way to directly engage with these markers. Carrying out participatory research in places where minority demographics hold sway (e.g. the ethnic businesses) as well as the more traditional community places (e.g. the community hall) would also be useful in terms of widening modes of perception to support broader participation. As discussed in chapter 9, digital tools that support communication and collaboration can facilitate placemaking as people come together to develop social bonds, explore and query public place, and to imagine alternatives. Looking at placemaking in both

physical and digital places also supports the widening of modes of perception as described above as participants are provided with more avenues to understand and communicate their connection with place.

Participatory rurban CSCW needs to be inclusive (to bring diverse voices together and to cultivate belonging), dialogical (to build mutual understanding and stronger social bonds), confrontational (to voice opposing viewpoints and to challenge assumptions), generative (to evolve viewpoints and to develop trajectories for sustainable and equitable community development) and political (to develop agency and address social justice issues). Exploring intersectional identities and past and present conflicts can give rise to generative themes (Freire, 1967; Walker, Osbahr, and Cardey, 2021) to identify present struggles that can be incorporated into any experience based design with rurban communities. Minority experiences need to be made visible and projections of homogeneity need to be disassembled. In this research, these ranged from (for example) around what kinds of social places teenagers need in the community, to who belongs in leadership community roles, to what kinds of religious practices could be publicly practiced in comfort.

This section has described the rurban "place" for CSCW. Seminal CSCW on space and place (Dourish, 2006b; Harrison and Dourish, 1996), as well as work on rural computing (Su et al., 2021; Hardy, Wyche, and Veinot, 2019) informed the structuring and framing of the findings in a CSCW context and with the intention of illustrating the rich potential the rurban holds for CSCW as an emerging place for cooperative technology design in pursuit of a dynamic multiculturalism and supportive community life.

3 SEA in CSCW

I went into this project with an interest in how SEA might be used in CSCW in Northrock to support expansion. I read much community-based and social justice-oriented design with similar aims to SEA, but not leveraging insights from SEA to help achieve those aims. The little SEA I found in HCI was

powerful and immediately resonated with me as having potential in the Northrock context (Clarke et al., 2016; Light et al., 2009; Clarke and Wright, 2012; Clarke et al., 2014; DiSalvo et al., 2009). This thesis illustrates the potential of SEA in CSCW to understand the intersectional identities and experiences at play in Northrock, bring them into dialogue with each other and develop awareness of marginalised experiences through collaborative work. This section is structured around key elements of SEA, how these were handled across this research, what challenges were encountered and how the process might be refined in future CSCW.

3.1 Making as a vehicle for change

Central to SEA is the idea that creative and collective making in response to social injustice can support agency and change. The approach to making in this research was strongly influenced by Freire's critical pedagogy (Freire, 1967), a corner stone of SEA theory and practice. This pedagogy is political and transformative in that it aims to turn "objects" into "subjects", or "spectators" into "actors" to increase individual agency and democratise power so that individuals and communities can reimagine and direct their own futures according to their own needs. Freire's pedagogy also suggests ways to expand both modes of perception and participation. This approach develops individual ability to critically reflect on personal experience and connect it to wider political social justice issues to effect social change through some considered action and reflection. This was most evident in the summer school study (chapters 8 and 9), where participants stated that they had more understanding of other experiences, and engaged in dialogue exploring how things could improve.

One of the central aspects of turning "objects" into "subjects" through SEA is around developing critical thinking to challenge hegemonic narratives and imagine alternative social realities. Creating art is seen as a path to recognition of minority experiences and developing critical thinking and agency (hooks, 1995) and as discussed in chapter 6, critiquing exclusion and representing

marginalised experiences can disrupt norms and question realities. While both the digital storytelling workshops and the summer school aimed to cultivate critical thinking to imagine alternatives, the summer school was more successful as outlined in chapter 8. I think that central to this was an adapted creative process that emphasised a dynamic of making – reflection – (re)making, based on Freire's description of praxis. The rapid re-making of artefacts around personal experiences and social issues provided more opportunities for debate, disagreement and ultimately evolving understanding of the complexity and diversity of experiences present and an imagining of alternative community life. The making and sharing of artworks provided focal points for reflexivity and critique, as well as multiple modes of perception and participation. This speaks to the central value of collaborative digital making in SEA-informed CSCW to support the social and material elements of effective cooperative work towards progressive change. The critique of artefacts leads to critiquing experiences which can form the basis of a more sensitive dissensual dialogue to challenge hegemonic ideas and recognise less visible social and political issues in the community as a basis for change, such as in the case of Northrock, a widening of perceptions of "Irishness" and a recognition of minority experiences. Embedding playfulness and creativity into rapid digital making and critiquing was also useful in cultivating a less formal atmosphere that supported a participation where participants were free to be exploratory, take risks and ultimately debate and disagree with each other around their ideas of what the community needs. The approach taken in the summer school provides CSCW with insights into how young people can appropriate technologies to support collaboration and constructive conflict when needed. This dynamic can be centred in future SEA-informed CSCW that looks to develop critical thinking and action on shared issues.

As previously mentioned, the workshops needed to widen the "modes of perception" and modes of dialogue available to participants. This requirement also influenced the design of making activities in the research, which incorporated multiple technologies and media for communication,

collaboration and creation to explore experience in tangible ways. Technology used was freely available and off-the-shelf with a short learning curve, particularly in the summer school. This supported multiple modes of perception and participation in very literal ways. Participants benefitted from the range of digital tools available, as indicated by Molly when she discussed enjoying being able to "touch" the artwork via Miro (chapter 8). CSCW focuses on understanding how collaborative processes evolve naturally as people appropriate available technology to meet their requirements (Koch, Schwabe, and Briggs, 2015). The appropriation of existing communication, collaboration and making technologies seen here can be utilised in future SEA in CSCW, incorporating a non-prescriptive, adaptable and off-the-shelf approach to technology in these projects. This is typical of SEA, where each different context gives rise to specific requirements around communication, facilitation and approaches to making (hooks, 1994). It also speaks to the CSCW concern in understanding situated practice and the context-specific nature of how technology is used (Ciolfi, Lewkowicz, and Schmidt, 2023), with the empirical work here indicating which technologies were central to perception and participation in this context. The various modalities of creation, dialogue and critique provided alternative avenues into difficult topics and experiences, making these more accessible and understandable. While the focus groups gave indications as to possible tensions that needed attention in the community, the SEA exploration in the digital storytelling workshops and summer school was more successful in providing multiple modes of perception and proved to be the background to dialogue around who belonged where in the community, who was most "Irish", the struggle to publicly practice religion, a sense of loss at losing a social place and an opening of awareness of other needs.

3.2 Equality in difference

A central tenet of SEA-informed participation is that of supporting equality in difference. There are specific challenges in multicultural groups with different levels of social capital. These require the researcher / facilitator to recognise

any cultural configurations around whose voice is heard, and to recognise and accept different ways of knowing and experiential knowledge to avoid essentialising participants (hooks, 1994; Harrington, Erete, and Piper, 2019; Schlesinger, Edwards, and Grinter, 2017). This was very much evident in this research. For example, in chapter 7, Charity was reluctant to put forward her experience as outside of the dominant paradigm. The circumstances of her eventual sharing of her experience underline the importance of sensitive facilitation and the crucial role of researcher / facilitator. Throughout the research, I needed to be very specific and vocal about inviting the experiences of those outside of the dominant paradigm. This included emphasising the value of those experiences and perceptions that were negative, that went against the image of Northrock as an inclusive and welcoming place. This is not with the intention of undermining those positive aspects of Northrock that were felt across the studies, but with recognition that it can be difficult to put forward the unpopular opinion or experience and that there are extra stresses for minority groups to do this (hooks, 1994). With this in mind, it is necessary to acknowledge that not all voices speak from the same position, and this requires researchers to articulate their own positionality (Garrido Castellano, 2022; hooks, 1994) and ensure that that position does not dominate the participatory experience (Harrington, Erete, and Piper, 2019; Dillahunt et al., 2017; hooks, 1995). Being from the dominant culture in Northrock (white, Irish and with a long history in the community) and coming in as a researcher from a well-respected university all placed me in a position of power, a position where highlighting difference and drawing attention to negative experiences had very little risk for me. However, not being strongly connected with minority experiences also meant that I needed to take extra care and sensitivity in drawing attention to difference, to do so in such a way that felt inclusive, supportive and respectful.

In addition, all participants need to be positioned as active agents whose knowledge and experience are all equally valid (Bardzell, 2018; Le Dantec and Fox, 2015; Wright and McCarthy, 2015). Connecting with the methodology as

outlined in chapter 3, this includes positioning the researcher as a participant in a non-hierarchical process promoting an equal exchange of knowledge. Drawing on my positioning as described above, while I had insights to offer based on my own background, I don't have experience as a migrant, in needing to learn a new language, in adapting to a new culture. Clarifying both my interest in these experiences, and lack of knowledge around them, was important in highlighting where I needed to learn and in positioning participants as experts with important contributions to make. This dynamic supported a mutual recognition and sharing of experience between researcher / facilitator and participants in order to hear individual voices (hooks, 1994; Clarke et al., 2016; Freire, 1967; Le Dantec and Fox, 2015).

Critical decolonial literature points to the importance of configuring space outside of the usual expectations to change power dynamics around who gets to speak and be heard (Gumbonzvanda, Gumbonzvanda, and Burgess, 2021). Dealing with a physical space in the digital storytelling workshops study (chapters 4 and 7) more easily leant itself to this reconfiguration, though it could be argued that working in a purely online space inherently positions people at more equal levels to some degree. Preparing participants, carefully considering and making clear the kinds of demands that may be placed on them, understanding associations with location and any related sites or events are all important when looking to support equality in difference (Holmer et al., 2015; Bray et al., 2022; Wright and McCarthy, 2015). In this research, that involved configuring the TY space so that it broke the mould of typical classroom spaces, moving workshops into more neutral venues, providing freely available and light-weight digital tools, and supplying participants about information around what would be expected of them in the workshops in terms of exploration, collaboration and making (chapters 4 and 7). As mentioned, this work found that participants struggled most when discussing race and ethnicity. This is cohesive with research in both Irish (Montgomery, 2013; O'Malley, 2022; Martin et al., 2023) and computing contexts (Compton-Lilly et al., 2017). This difficulty illustrates a takeaway for CSCW in similar contexts,

that conversations around race, ethnicity and difference need to be had to promote equal standing amongst participants and ideally the research team would be diverse enough in their own racial and ethnic background to support this. It is useful again here to highlight the intersectional and fluid nature of identity, and to draw out comparisons as well as differences across participants.

This section has offered practical considerations and examples for promoting a dynamic of equality and difference in participation. However, this is a somewhat intangible and ephemeral thing that needs to be constantly (re)considered and (re)communicated throughout a participatory process. When working in the rurban context, there is a heightened need to avoid essentialist or hegemonic standpoints relating to the legacy of the community that ultimately silence other experiences. In any context, very careful facilitation is needed to ensure every voice is heard, to challenge dominant narratives and manage potential conflict while being mindful of the potential consequences of participation.

3.3 Conflict and dissensus

Conflict is a valuable part of SEA, required to challenge norms and assumptions, communicate experiences around difficult topics and ultimately contribute to dissensus to challenge the accepted social order of things. While participants in the digital storytelling workshops certainly had some critical and reflexive dialogue (e.g. the surprise at there being no Black teachers in the school), the summer school was more successful in supporting this dynamic of conflict. This can be attributed to a number of factors: an increased emphasis on encouraging this dynamic on the part of the facilitators, increased modes of communication and collaboration, increased opportunities to make digital artefacts to explore and communicate issues, and finally an increased focus on reflection and critique throughout the sessions. These various factors arose due to the analysis of the digital storytelling workshops can be brought into CSCW that seeks to constructively engage with conflict to support more effective cooperative work in similar settings.

The need to support conflict was very evident in chapter 5, where conflict was found to have been a positive dynamic in support of developing identity, belonging and solidarity. Analysing past and present conflicts provided insights into the various ways identities were made and re-made in the community, as well as into shared community experiences and values. The question of facilitating conflict in a constructive way however is challenging (Light and Akama, 2012). Chapter 4 discussed the importance of centring values of both empathy and provocation in rurban participation. This has the potential to support conflict and contradiction in ways that are constructive and rooted in respect. This constructive conflict is necessary in rurban CSCW to recognise those various needs and agendas that are invisible to certain parts of the community (Brennan and Luloff, 2007; Bishop, 2004; Langlois, 2020) and critical theory has stated the need for inclusion processes to be disruptive if they are to be equitable (hooks, 1995). Participants seemed more comfortable in discussing historical conflicts, for example East vs West in chapter 5 and former exclusionary practices of the GAA in chapter 6. Using place as a starting point to explore historical conflicts may be a more accessible gateway into discussing current conflicts in constructive and critical ways. The mapping exercise in the digital storytelling workshops provided a gateway into discussing difficult topics and opening the digital art summer school by asking participants to post a photo of them in their favourite community place did some initial groundwork in communicating the importance of both the Youth Café and GAA pitches to participants. In addition, the discussion on supporting critique in chapter 8 can be drawn on when thinking about how to facilitate conflict, as participants were reluctant to engage in critique as they saw it as a kind of conflict. There are the same requirements for trust and mutual respect when supporting constructive conflict in CSCW. Again, based on findings from chapter 8, co-creation of digital artefacts around serious topics, undertaken in spirit of curiosity and playfulness, can support this trust building. Drawing on key work in Afrofuturist Design (Bray et al., 2022; Bosley et al., 2022), centring joy when exploring serious topics is necessary to maintain motivation, and this

approach might also be used to good effect when supporting conflict to disrupt norms and evolve standpoints. Also, based on chapter 8, giving participants multiple modes of expression, dialogue and specifically feedback to each other (sometimes anonymous) might help in bringing issues to light in a way that can support conflict if needed, while again supporting multiple modes of perception and participation.

Conflict is seen as central in examining power dynamics (Freire, 1967; Verschelden et al., 2012; Tiller, 2014). Supporting conflict then is crucial to cultivating dissensual dialogue to challenge norms and assumptions. How to actually cultivate dissensus as described in chapter 2 was a focus of this work. Chapter 7 discusses how while consensuses on community life were revealed in the digital storytelling workshops study, and some critical dialogue happened, participation never fully evoked dissensus as hoped. Chapters 8 and 9 describe a process that was somewhat more successful in this regard, but still spoke to the challenges of this ambition. If measuring SEA in terms of what extent it has opened an issue to be explored (Coombs, 2014), the level of dissensual dialogue where social norms and understandings of public place are perturbed is an important indicator. This involves providing participants with the tools and opportunities to query and challenge dominant social and political paradigms and to take action on things that could be improved. Going forward, CSCW looking towards participation for social change would need to integrate strategies to further facilitate dissensual dialogue. This involves building trust and mutual respect between participants, on the foundation of equality in difference, to allow for people to challenge each other's ideas and assumptions. Chapter 7 illustrates how SEA-informed participation can help identify access points to explore assumptions, norms and consensus. That chapter again pointed to the importance of facilitation in such processes – the ratio of participants to researcher / facilitators needs to be such that the researcher can catch those moments of dialogue that point to the opportunity of opening dissensus, and work to further query those ideas with participants. In chapter 8, a similar observation was made but with the focus being on the

time spent with participants - researchers / facilitators need enough time and space to latch onto those moments and unpack them sensitively with participants. This central role connects with work that points to the centrality of the researcher in enacting participatory work (Light and Akama, 2012). In addition, cultivating dissensual dialogue also supports CSCW core concepts of situated action, coordination and articulation (Blomberg and Karasti, 2013).

Ultimately, SEA-informed CSCW means centralising a critical and agentic approach to participation that encourages dissenting voices and the recognition of invisible experiences. It involves supporting participants in appropriating multiple technologies for communication, collaboration and creation in order to advance collective recognition and understanding. It means addressing issues around power, visibility and marginalisation through nuanced and provocative exploration of complex personal experiences and how these are connected to political issues. The intentions of SEA are difficult to achieve, and questions throughout the research were raised around how to recognise equality in difference, configure making activities, encourage dissensual dialogue and support conflict in constructive and generative ways. For CSCW that looks to make change in complex community settings, these various challenges need to be centred to evoke transformative participation and access marginalised experiences.

SEA provides a framework for politically, ideologically and critically engaged CSCW, bringing a new energy and renewing activist intentions in pursuit of social change. The very definite focus on social change as an outcome gives rise to questions around where and why this research is situated in CSCW, and what are the implications of this kind of research for CSCW. The next section explores those questions.

4 CSCW as a site for this research

I am very conscious that the previous section on SEA in CSCW very rarely mentioned any implications for technology. The centrality of such implications

as a metric in computing research has been questioned (Dourish, 2006a), and there is value in discussing participation in its own right. However, as technology design or development was not a central focus of this research, the question was often asked by me, the research team and a host of reviewers: "how is this CSCW?" This section discusses how my thinking developed on this question, asking instead "what is CSCW?" What is it for, where is it appropriate and how is it done? This thesis contributes a reflection on these various core questions as CSCW expands to address complex social, political and cultural challenges in community-based settings.

4.1 CSCW contexts and concerns

CSCW has evolved to forge connections with social computing and direct attention to collaboration outside of the workplace. (Koch, Schwabe, and Briggs, 2015; Koch and Gross, 2016). The unifying thread of the very diverse tradition of CSCW is a concern with developing modes of collaboration via computing that supports individual and collective agency in meeting unexpected challenges or emergencies (Ciolfi, Lewkowicz, and Schmidt, 2023). While the SEA-informed workshop studies in this thesis do not take place in a typical workplace environment, and don't work towards designing technologies to support collaboration, they very much look towards supporting collaboration and developing agency to meet the challenges of rapid community expansion. This thesis illustrates the value of including in CSCW the kinds of work people must do together to direct the future of their communities, much of which is without any pre-determined or prescriptive way of forging forward. This gives rise to the need for approaches that are flexible, critical, generative and creative to adapt to and support whatever challenge community members might be experiencing. Widening focus allows CSCW to have more scope and impact, bringing a long tradition of expertise in collaboration and cooperation to bear on some of the most pressing problems of our times.

Some key concerns of CSCW are co-existence, awareness, communication and collaboration (Koch, Schwabe, and Briggs, 2015; Koch and Gross, 2016; Ciolfi, Lewkowicz, and Schmidt, 2023; Blomberg and Karasti, 2013). The SEA approach to communication and collaboration is very much grounded in developing an awareness, appreciation and criticality towards own and other experiences. This standpoint towards communication and collaboration in the Northrock context was of use in navigating a rapidly changing landscape. For wider CSCW, it points to the benefit of considering what alternative approaches might be useful in developing relevant standpoints as situations call for them. A core CSCW concept is that of situated action, the idea that action always unfolds in the moment, in response to the situation at hand, rather than according to any prior plan to achieve a goal (Blomberg and Karasti, 2013). Taking this need to account for spontaneous and often unanticipated action also indicates the practicality of approaches, such as SEA, that are contextually adaptive and responsive, and are led by participants to achieve their shared goals. Additional key concepts include coordination (how people work together to get things done), situated awareness, (the overt and subtle ways people coordinate), articulation (responding to contingencies) invisible work (implicit articulation), material resources (artifacts that facilitate coordination) and common information spaces (spaces in which information is shared) (Blomberg and Karasti, 2013). The social and material aspects of "work" as indicated by these concepts, as well as the nuance, intangibility, and fluidity inherent across them, further suggests the benefits of thinking about the cooperative work that happens in SEA and how disciplines such as SEA can be useful in facilitating these various factors.

While CSCW has drawn on many mixed methods (such as workshops, scenario based design, cultural probes etc.) and there is no one approach (Ciolfi, Lewkowicz, and Schmidt, 2023), it's main methodological focus has been that of ethnography (Koch, Schwabe, and Briggs, 2015; Blomberg and Karasti, 2013). Central principles include studying phenomena in the setting in which they occur, taking a holistic view, going into detail in understanding the

phenomena and looking at experiences from a participant perspective (Blomberg and Karasti, 2013). This thesis argues that the CSCW community can benefit from being open to more exploratory, pluralistic and even political methods, specifically taking SEA as an approach to fieldwork to understand experience, collaboration and action. While ethnography in CSCW does not typically focus on political or social change, SEA undertakes a nuanced and broad exploration of participant experience, from the perspective of the participant in their own context and with the aim of uncovering issues and supporting participants in addressing them. Doing CSCW from an SEA standpoint allows researchers to be more political, critical and radical in their approach, to focus more intentionally on systems of power, domination and marginalisation, and to support participants in identifying and challenging these dynamics.

While some CSCW centres a requirement to bring insights back to the organisational setting, and tends to focus on either the consumer section or the workplace (Koch, Schwabe, and Briggs, 2015), these seems like unnecessary limitations to both the development of the field itself, and the contribution the field can make to the world. The urge for CSCW to delineate itself is understandable. However, broadening this scope and instead characterising CSCW not by specific contexts or methods, but by the need for actors to cooperate in order to reach their aims (Ciolfi, Lewkowicz, and Schmidt, 2023) seems a more timely and useful way of recognising CSCW in order to reap the benefits of applying it to the widest range of problems. As CSCW has begun to centre issues relating to politics, social justice and equity, the field has experimented with approaches from traditions that have historically engaged with these issues (Ciolfi, Lewkowicz, and Schmidt, 2023; Fox et al., 2017; Chancellor et al., 2019). It has made links with disciplines such as Participatory Design in terms of striving for equitable participation, centring participant voices and needs and recognising the expertise of participants (Ciolfi, Lewkowicz, and Schmidt, 2023). This thesis very much builds on these developments, looking towards SEA as a discipline that can inform the tackling

of political, social justice and equity issues while centring participant requirements and expertise.

4.2 Place, participation and social justice

Conceptualising "cooperative work" outside of the workplace means recognising the ongoing and inherently cooperative work involved in community building, in terms of evolving inclusive and sustainable understandings of personal, political, social, and cultural phenomena such as place, identity and belonging. This thesis deals with both place and participation in the wider context of social justice regarding systems of power, inclusion, belonging and marginalisation in the rurban community. This section connects these contributions with CSCW research concerns.

As interest grows on how to design based on social context (Bjørn et al., 2016; Ciolfi, Lewkowicz, and Schmidt, 2023), this work puts forward an example of how to gain a nuanced understanding of the social configurations of a rurban community. Place is a central theme in CSCW and has been considered in terms of contextualising design for peripheral places, such as the rural (Chamberlain, Crabtree, and Davies, 2013), how it can perpetuate inequities (Fox, Ulgado, and Rosner, 2015) and in terms of how spaces become places, and how places support CSCW through facilitating and framing interactive behaviours (Dourish, 2006b; Harrison and Dourish, 1996; Sanusi and Palen, 2008; Ciolfi, Fitzpatrick, and Bannon, 2008). As mentioned, space and place CSCW was instrumental in my conceptualising the rurban as a "place" for CSCW, with an emphasis on finding out what kinds of interactions various places could and would support, as well as how this is considered in designing rurban participation and meeting community needs around place, identity and belonging. Chapter 6 contributes to thinking on place by outlining these particular configurations with regard to the rurban place. The same chapter also contributes to CSCW that looks at innovative means of coordinating encounters in public places (Balestrini et al., 2016; Procyk and Neustaedter, 2014) with the aim of supporting opportunities for interactions

between diverse sectors of the community, bearing in mind that this is identified in the Irish context as key to integration of new communities (O'Malley, 2022). That discussion went on to draw attention to the influence of intersectional identities on experience of place (section 2.1). This intersectionality resonates with much research in CSCW and HCI that is concerned with understanding the intersectional nature of both "participants" and "users" in research (Bardzell, 2011; Fox, Ulgado, and Rosner, 2015; Dye et al., 2018; McCarthy and Wright, 2015), and that draws attention to the harm of an un-critical and overly-simplified understanding of the term "user" (Dourish and Mainwaring, 2012; Schlesinger, Edwards, and Grinter, 2017). The research presented here further illustrates the many different place-based intersectional identity markers that participants (and users) may have and underlines the necessity to understand the particular configurations of identity, agency and power present in any participant or user group.

CSCW is concerned with how to configure participation in complex community settings (Bannon, Bardzell, and Bødker, 2018). One of the main aims of this thesis was to investigate an SEA informed approach to participatory CSCW in the rurban place. I found SEA approaches and CSCW such as (Le Dantec and Fox, 2015; Harrington, Erete, and Piper, 2019) to be very much interrelated, with a focus on building relationships, benefitting the community, the positionality of the researcher and participants and examining power dynamics. SEA brings a long tradition of theory, practice and debate to inform these focal points in CSCW (Beech, 2008, 2009; Tiller, 2014; Olsen, 2019; Bishop, 2004, 2006; Kester, 2011). SEA can provide a framework for politically engaged participation to challenge hegemonies of power and configure equitable and agentic participatory experiences. This connects with feminist approaches to computing that advocate for analysing power structures to work towards individual and social change (Bardzell, 2011; Steinhardt et al., 2015; Fox, Ulgado, and Rosner, 2015; Fox et al., 2017). Chapters 7 and 8 related SEA-informed CSCW that, while not particularly radical, still evoked both consensus and dissensus in the young participants. Feminist HCI and

CSCW has also worked to centralise experience as the basis of knowledge (Bardzell, 2011), expand conceptions around the types of "work" relevant to CSCW (Steinhardt et al., 2015) and analyse structural barriers to participation (Fox, Ulgado, and Rosner, 2015). This thesis illustrates the benefits of SEA to CSCW around those concerns. Aligning CSCW and SEA is of benefit to both disciplines in terms of interrogating often monolithic social consensus to support more transformative participation and to progress change. Section 2.3 of this discussion further draws out the implications of this work for the needs of rurban participation, while section 3 in its entirety relates to how SEA can support critical and agentic participation.

These two central themes of place and participation are situated in the context of social-justice oriented CSCW. Central to this branch of CSCW is the investigation of how people become marginalised through oppressive systems that purport to serve them (Fox et al., 2017). This involves an analysis of structures of dominance, which very much resonates with SEA practice. The use of SEA in the digital storytelling workshops study (reported on in chapters 4 and 7) most clearly illustrated how SEA informed CSCW can uncover complex social processes by which people can become marginalised. The insights this thesis provides around gaining a nuanced understanding of marginalising processes is important for social justice oriented CSCW, particularly work exploring the intersections of race and technology (Harrington, Klassen, and Rankin, 2022; O'Leary et al., 2019; Ogbonnaya-Ogburu et al., 2020; Hankerson et al., 2016) and how this impacts on equitable, inclusive and sustainable practices. Much of this branch of CSCW is situated in the context of the USA. The findings in chapters 4, 6 and 7 provide an insight into participant experiences and understandings of race in an Irish rurban context in terms of the complexity of marginalisations present and the types of intersectionalities impacting on experience. This expands the CSCW knowledge base on power, equity and inclusion (Dye et al., 2018; Fox, Ulgado, and Rosner, 2015; Fox et al., 2017; Chancellor et al., 2019; Devito et al., 2019; Borsotti and Bjørn, 2022).

This section has given an overview of CSCW concerns around place, participation and social justice and their connections to this thesis. The next section develops this orientation towards social justice and proposes a specifically activist agenda for CSCW.

4.3 Activism in CSCW

Emerging design practices such as speculative design (Harrington, Klassen, and Rankin, 2022), Afrofuturist design (Bray et al., 2022), design futuring (O'Leary et al., 2019), agonistic design (Björgvinsson, Ehn, and Hillgren, 2012) and adversarial design (DiSalvo, 2012a) focus on progressive and transformative participatory processes to interrogate and redistribute power, develop agency and capacity and work towards social change. This research contributes to these developing practices with insights on how SEA can be integrated into CSCW to develop participatory processes that support activist intentions, centralising conflict and confrontation while raising questions and challenges around research in this context.

CSCW has researched activist communities in terms of understanding how they use technology to achieve their aims (Asad and Le Dantec, 2015; Saeed, Rohde, and Wulf, 2011; Menendez-Blanco and Bjørn, 2022). It has also endeavoured to understand how ICTs can and do support activism (Michie et al., 2018; LeFevre et al., 2023; Le Compte and Klug, 2021; Alshehri and Su, 2023; Liang et al., 2021; Dimond et al., 2013; Skill, Passero, and Francisco, 2021). In promoting activism in CSCW, this thesis proposes widening the focus from how technology is appropriated or developed to meet the needs of activists, towards how CSCW can embrace activist principles in terms of effecting social and political change in the world directly through research undertaken. There is a growing number of workshops and panels at CSCW and HCI conferences to explore what it means to do activist research (Teli et al., 2021; Saxena et al., 2020; Becker et al., 2020; Bardzell, Kaye, and Spiel, 2020; Lee et al., 2021; Chancellor et al., 2019; Asad et al., 2019), indicating the current appetite the community has for exploring this relatively new paradigm.

There is already CSCW and wider computing literature exploring this potential (LeFevre et al., 2023; Menendez-Blanco, Bjorn, and De Angeli, 2017; Leal, Strohmayer, and Krüger, 2021; Fox et al., 2017), with (Leal, Strohmayer, and Krüger, 2021) defining activist research as that which is explicitly political and outside of established political institutions. This essentially challenges the objectivity of research, connecting with feminist theory to argue that research is never value-neutral and that to pretend otherwise enforces dominant narratives and hegemonic power structures (Clarke et al., 2016; Bardzell, 2011; Le Dantec and Fox, 2015). Throughout the chapters in this thesis, the aim to uncover these narratives and power structures in the Northrock context was often stated, with the intention of bringing marginalised experiences to the fore. While the focus group study hinted at dominant narratives in community life, the SEA-informed processes of the digital storytelling workshops and the summer school were designed and facilitated to uncover norms and assumptions in the participants' lives and were successful in doing so. In this context, I was not neutral in that I designed the studies with the aim of uncovering consensus and with a view towards creating dissensus. Central to an activist CSCW is a reconsideration of traditional understandings of researcher standpoints (Leal, Strohmayer, and Krüger, 2021) and a recognition that our experiences, values and beliefs shape our research (Brulé and Spiel, 2019). My connection to the community was part of my motivation to undertake this research and to work towards a more sustainable and equitable expansion. Personal motivations of the researcher would ideally be (re)considered and (re)stated throughout the research process. In activist research, there is a recognised risk of co-option of participants and positioning them to suit the research agenda (Lee et al., 2021; Leal, Strohmayer, and Krüger, 2021). Reflexivity and sensitivity on the part of the researcher is again important here to recognise and promote the expertise, needs and impact of intersectional identity markers of participants. Participation in SEA should allow participants to explore roles outside of their usual, providing opportunities for transformation (McCarthy and Wright,

2015; Bishop, 2006). The research presented here supported participants in moving from objects to subjects in their experience of the community as described by Freire and hooks (Freire, 1967; hooks, 1994).

In addition to how the positions of the researchers and participants are negotiated throughout the work, the intention and configuration of the design activities themselves is also central in pursuing an activist research agenda that looks towards understanding and interrogating power structures to imagine better futures. There are calls for specific design activities to foster activism in CSCW (Menendez-Blanco, Bjorn, and De Angeli, 2017). Based on the findings here, there is a role for SEA in this endeavour as it looks to create spaces of dialogue and possibility in order to challenge norms and assumptions; and provide opportunities to imagine and enact alternative futures. As discussed, the design of both the digital storytelling workshops and summer school leaned heavily of Freire's ideas of praxis and conscientisation (Freire, 1967). While the work created by participants is not particularly radical, the process around creating the work shed light on marginalised experiences and, particularly in the summer school, challenged dominant assumptions and narratives around community life. As researcher / facilitator, I endeavoured to open participation to multiple perspectives and supported participants in developing their own trajectories of work. For example, I was very interested in teenage participant experiences of race following the digital storytelling workshops (chapters 4 and 7) but did not explicitly bring that to the summer school study, instead encouraging participants to explore whatever issue is most relevant to them and focusing on creating conditions for dissensus.

Eschewing the danger of subscribing to an idealistic or romanticised idea of a dramatic "radical change" (DiSalvo, 2012b), this work speaks instead to the change that happens slowly and at a grassroots level as people query their social realities and begin to develop new ideas for community life. This is the crux of what I mean when I discuss "social change" in the context of this project. The world is always in a process of being made (McCarthy and Wright, 2004) and

cultivating critical thinking, mutual recognition and agency via SEA is one way to continually and subtlety influence that making. I have felt this as both facilitator and participant in SEA, the joy of creation and collaboration, often on seemingly unsurmountable challenges, can evoke feelings of unity, power and agency to address these challenges. Lucas' simple statement in the summer school: "I thought it should maybe be a little bit better than this" captured for me what I hoped the process would stir in the young people, a questioning of the social order and an imagining of something different. This is in line with the Freirean approach to conscientization (Freire, 1967), whereby people develop a critical lens on their social reality through the process of action – reflection – (re)action, or in this case, making – reflection - (re)making done in a communal and dialogical space. In the context of CSCW, the view of "work" as a sociocultural and sociotechnical process (Ciolfi, Lewkowicz, and Schmidt, 2023) leaves space for the development of such criticality and agency and opens up ways of thinking about how technology might be a vehicle for mutual recognition and incremental individual and collective power shifts towards social change. Specifically, in Northrock, a social justice-oriented approach to SEA-informed CSCW with this community would involve an increased focus on this aspect of mutual recognition, with regard to acknowledging other experiences and needs and seeking to disrupt dominant narratives of community life. This dynamic was mostly clearly visible again in the summer school, where participants acknowledged alternative needs for social spaces, even if they didn't fully understand them. Again, this example is not "radical" in the spirit of much literature on social change, but speaks to the subtle realisations that can lead towards more inclusive and just societies.

Combining activist agendas with those of research has inherent challenges, contradictions and opportunities. It places multiple demanding and often conflicting roles on researchers. As discussed in chapter 3 (methodology), I went into this work as a digital media designer, maker, SEA practitioner and budding researcher. I found challenges in navigating these various roles, and in articulating the resultant distinct approach to CSCW that they engendered.

While CSCW has a greater concern with the social processes and interactions around technology than many other domains of computing research (Koch and Gross, 2016), the process of publishing often garnered questions around the implications of my work for technology design. My focus as a digital maker and a socially engaged artist was never on technology design per se, but more on the potential of digital media creation to be a vehicle for perception, exploration and articulation of complex social experiences in order to develop perspectives and provide opportunities for critique. Initially this felt like a struggle or tension between the roles of SEA practitioner and CSCW researcher. As the research progressed however, it became apparent that the exploratory and non-prescriptive approach typical of SEA is coherent with that area of CSCW which is concerned with understanding and designing social systems in pursuit of common goals, and needs to be clearly articulated as such. The issues with prioritising a focus on technological outputs have been flagged as far back as 1989, when Bannon and Schmidt (1989) said that "a technology-driven approach to CSCW will inevitably dilute the field". Having a background in SEA facilitation was useful in keeping a focus on the social-oriented (over the technology-oriented) aspects of CSCW. Combining this with the role of CSCW researcher sharpened the focus on the sociotechnical systems in which these various interactions were taking place. SEA can support CSCW researchers in engaging with the social, cultural and political issues inherent in work as a social experience and can help design technological, creative interventions to understand and alleviate these issues in pursuit of more equitable and sustainable communities and technologies. This requires prioritising open-ended, non-prescriptive and generative outcomes of CSCW research and clearly articulating these in the context of the social orientation of CSCW.

The challenges of engaging in community work in the context of academic research are well documented in CSCW and beyond (Chamberlain, Crabtree, and Davies, 2013; Harrington, Erete, and Piper, 2019; Cornish, 2020). Reflecting on my experience of doing this work from various perspectives (e.g.

SEA practitioner and academic researcher) brought its own nuances to those challenges. I have found SEA projects to advance at a sometimes frustratingly quick pace. One of my issues as a SEA practitioner is the lack of time, due to funding and community demands, to reflect on processes and refine them. The PhD certainly gave me ample time for reflection, but it brought with it another challenge. The length of time between studies was frustrating. It meant upsetting the momentum of the work and a lack of continuity from the participant point of view. This was partially due to being a solo researcher on this project, but the main issue was the time needed for good analysis, writing and publications. Embedding SEA into community-based CSCW requires considering how to address the tension between keeping momentum going and taking the time to think deeply about what is happening, analyse, write and publish. While time to reflect and refine the process is crucial, as is publication to disseminate the work, there needs to be a consistent community engagement which requires both a larger research team and stronger ties between research bodies and community groups.

Activist sites constitute a field of work (Menendez-Blanco, Bjorn, and De Angeli, 2017). Going back to the CSCW concerns of co-existence and awareness, communication and collaboration, these various dynamics can be examined in the context of the activist work site and CSCW design practices and processes developed to support them. SEA has the potential to act as a non-prescriptive, pluralistic process to address questions of objectivity, subjectivity and positionality and to strive to uncover consensus and to support dissensus. Power, oppression and design for social justice are integral to CSCW (Fox et al., 2017), this work expands that mandate and resonates with (Ciolfi, Lewkowicz, and Schmidt, 2023) when they discuss the error in too tightly defining CSCW and point instead to the transformative potential of the discipline in multiple contexts.

5 Conclusion

This thesis constitutes an exploration into SEA-informed CSCW. The lessons to be learned are both within this particular exploration and in what this makes available for designing future CSCW systems and projects in support of communities. While the work is situated in Northrock, it is significant to pressurised communities more broadly, and to participatory CSCW that seeks to uncover consensus and work towards social change.

Mapping the rurban community as a new place for CSCW creates opportunities for more research engagement in these peripheral and liminal places. There are certainly similar communities to Northrock in an Irish context, many of them facing challenges around inclusion and cultivating mutual recognition and understanding. There is a role for CSCW in supporting these processes, as well as opportunities to more deeply understand the evolution of place and belonging.

Integrating SEA into an activist and political participatory CSCW for social change has the potential to widen understandings and reach of CSCW to address complex and nuanced social experiences in community settings. SEA supports a conceptual and political richness as a digitally mediated, collaborative technology practice. This work demonstrates the strength of SEA in designing participation to access difficult to reach experiences and bring them into dialogue with each other. There are challenges around facilitating conflict, dissensus and equitable participation. These challenges will exist in any SEA-informed CSCW and need to be constantly considered and negotiated as projects and relationships evolve and this negotiation provides researchers with important insights on configuring equitable and transformative participation.

As CSCW moves into more critical, activist, community-based contexts (rurban and beyond), SEA is one approach to participation that provides an opportunity to surface tensions and provoke conflict as well as cooperation. SEA can be of use to researchers working in pressurised community contexts to access complex, intangible and ephemeral experiences to design

sociotechnical interventions in support of under-represented or marginalised populations, working towards more inclusive, equitable and sustainable technologies and futures.

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Appendices

1 Focus groups

1.1 Example of focus group transcript

The following transcript is taken from the focus group with the Family Resource Centre in Northrock.

P1: "Old Rock" woman, lifelong Northrock resident
P2: "Old Rock" woman, lifelong Northrock resident
P3: Polish woman, resident in Northrock 7 years
P4: Polish woman, resident in Northrock 9 years
P5: Ballyvolane woman, resident in Northrock 8 years
P6: "Old Rock" man, arrived in 1963 as a Garda
P7 : "Old Rock" man, arrived in late 1980s
P8: Nigerian woman resident in Northrock 15 years

26.04.18 Family Resource Centre, Northrock. (Note: ***This*** indicates a 1st level code)

Researcher: I'll start going around & if everyone would like to introduce themselves and say what brought them to áNorthrock and how long they've been here, and I can start. So i'm Maria Murray and I am from Northrock and I lived here, I went to school here primary school & secondary school, I lived here until I was 22 and now I live in the city.

P1: I'm [ ] one of the ***natives, my family goes back since before the famine***, so yeah, pretty well local.

P2: I'm [ ], I am all my life in [Rock]. I went to school over, I went to secondary school in Cobh, so I was actually reared in Cobh but I came up here to go to school.

P3: My name is [ ], i'm living in Northrock about 7 years. *My son goes to school here.* When I came to Ireland I first lived in Watergrasshill.

P4: My name is [ ], I live in Northrock from 2009. *My both kids go to school in Northrock*. I finish actually in Northrock as well courses, *English courses in the community centre*. I was living before when I came to Ireland in Little Island.

P5: My name is [ ], and to be honest I didn't know anything about Northrock when *me and my husband were buying a house we just wanted to move out of the city* and be somewhere near the country and we choose Northrock and we *wouldn't move out of here for diamonds,* and *my two children are Northrock*. (laughs).

P6: My name is [ ], I came here in 1963 as a member of the Garda Siochana and i'm here since. I was told i'd be here for 12 months but i'm still here, so that's a long time ago. I've been involved in a lot of things in Northrock, St Vincent De Paul and community council and things like that as well as my work as a garda and I have been involved in a bit of history in Northrock, gathering a bit of history here and there. I could go back a lot further than 15 years if you wanted to, you know like that's about the size of it.

Researcher: Thanks very much, so I guess there's a few people who have moved here who had been living in other places, and what was your experience when you moved here? How did ye meet new people, or was there any particular way that you became involved in the community here?

P3: Northrock is *the family village* and like *I met my friends in the preschool* when [name] was going first to the preschool, *I would meet the other mothers and when you go to the other kids for the birthday party*, them things. I think so.

Researcher: And would ye have similar experiences as mothers?

P5: Yeah, [*name] went to this pre-school here and she loved it and I got to meet a load of people through it* but my son, he went to pre-school in Cork because I was looking after my mum I was up and down, so I didn't really know anybody in the village as such because he was going to pre-school, so when we were back, I was doing dinner & stuff, but *when he went to the boys school is when I started to meet a lot of people* before I had my daughter, and *he made his confirmation the other day and from the time he made his first holy communion you can see in the community what goes on*. The day of the communion & confirmation, *the way people get together, rally round, put on big spreads.* It's amazing. I've nieces and nephews that are in their 20s, nearly 30s and i've never seen any confirmations or communions like they are in Northrock.

Researcher: And where would the nieces and nephews have been?

P5: I was originally from Ballyvolane, and my brothers all have houses up the Northside, so Farranree, Ballyvolane, Dublin Hill. My husband is from the North of Ireland and he's never seen anything like it either to be honest.

Researcher: Another question I have would be major changes you've seen in the past 15 years, I know that's a hard question because it's a big question, but I was wondering about observations on things that have changed in the community, personal stories about changes that have affected your life, any challenges that you've seen?

P1: I suppose that's a question for the 3 of us.

P6: I suppose I was involved in the St Vincent de Paul for about 40 years, and at that time, Vincent De Paul was going well and we would meet in the boys school once a week. But *now, we have 3 very big buildings and we need those 3 buildings now to keep abreast of what's happening*, whereas in those days, we didn't need those buildings and we were able to keep going.

[P7 enters]

P1: I suppose the population is the... *the type of population we have, we have a lot from Eastern Europe, we have a lot from African countries and we have a lot as well from the city*. I think that came around because we were supposed to get that big factory, and *on the strength of that there was a load of houses built and then the factory didn't come and there was a load of vacant houses*, so *it was reasonable for people to buy houses, it was reasonable for people to rent houses, so we got a lot of new communities*, and then you've got this, to be fair, *we have a good public transport between the train and the bus service you know*, and now obviously *we're at full capacity and housing is very expensive here and renting is outrageous really, so those are the major changes I would see around population*.

P5: For me as well, when we came here first time Kyle was in the boys school, I was always nervous that he was going to be going to Midleton for school or Glanmire *and now there's the new school, so that's brilliant.*

Researcher: That's a benefit yeah, that was never there before that's true. I have 3 brothers and... I was here for all of my education which was really nice, to be in the one community. So [P7], I was just asking a question there, you know a bit about the background of the research that i'm doing, and my

question was about major changes that you've seen personally in the village in the last 15 years, so, there was the point about the St Vincent de Paul, that that's massively expanded now, there's a lot more buildings... which I was going to go back to, because I guess the St Vincent de Paul was always a really important organisation in the community, so would ye say it's responded well to the changes?

P2: I work in the after school here in this building, and when the after school was open first my own kids went here and in the old building, the small old building in the corner of the village, and i've seen my grandkids come in here to the after school and the preschool, i've one grandchild in the preschool here now as well, we were here when this building was built, *we got 2 pre-schools, we've after schools, we've breakfast club and we have everything else going on, this building is open from 8 o clock in the morning until half 10 at night some nights, every night of the week there's something on*. I find in the after schools *we'd be stopped out on the street and people say I want to put my child into the after schools*, just out of the blue, so I find that for the St Vincent de Paul here, and as for our buildings, I find that people find us as a local centre for information and how *we distribute that information is word of mouth mainly because they'd stop us on the street* and say I want to put my child into after schools, how will I put my child, they knock on the door and ask us if there's a creche here, that's one thing we don't have is a creche but we do have parent & toddlers and we have baby yoga and loads of summer camps, we've two going this year.

Researcher: *So these facilities have managed to adapt really well it sounds like to the challenges, and what supported that?*

P2: Lot of volunteers

P1: A lot of volunteers yeah, and then you know, we have public funding to a certain extent so that's very positive, I keep saying this is vocational, it really is, you couldn't do it otherwise, that's my opinion anyway.

P2: [P1] always has a project on the go anyway.

P6: And good vision, good vision by the people, people involved in St Vincent de Paul. *Good vision to build it up the way it was built, and good vision to keep abreast of the situation, what's happening, what's coming up the line*. And *keeping in touch with local schools* so you know what's coming.

P1: That's vital.

P6: But good vision is the big thing all the time.

Researcher: And for ye, the newer people, ye're still here for quite a long time. Would ye have seen a lot of changes in the times since ye've arrived?

P5: *The train anyway, that wasn't when we came first, and the schools* as I said.

P6: We've a very good bus service here as well, buses up and down the street all the time.

P5: The traffic hasn't really changed, there's still traffic on the main street.

P1: Yeah, and *I suppose the old village itself hasn't changed much either*, if you do look at the shops, we have an abundance of hairdressers and barbers, so we don't have a commercial centre to the village so it hasn't changed in that sense, a lot of derelict buildings which are a bit unfortunate as well.

P2: *The change that would be in village would be the Polish shops and the African shops, and Chinese and they give a real change to us instead of having just Franks up the road, so we've a few ethnic shops now*.

Researcher: And ye're both from Poland originally isn't it? Is the Polish shop, is it a place where you link with other Polish people?

P4: Yeah it's kind of like, you know all of these people from that shop here, you can meet them every day actually, even on the streets, so it's always like for me, *when I want to buy something I meet someone and i'm talking and talking*.

Researcher: would ye find that other Polish people are your main social group, or do you find that that's not the case?

P3: *There is some people who want to help you, and there is some people who... they are not really nice to you like*. That's everywhere, and you go to the shop just to buy somethings, that's my opinion, I don't talk so much.

P4: Not only from the shop, when the shop was open, I knew the person who was the manager there, then I remember first day the shop was open, and *it was my friends all knew maybe 3 months before because the information was on the street everywhere, so my friends just waited for that day, actually when I came to the shop it was open all day, and all day it was full of Polish people* and I knew everyone there, cos most of them were my friends, not only because of the shop, so that's why i'm talking with them when I meet them in the shop so it's a good thing actually, this shop is bigger than the other one, but they're both busy.

P5: We got a lovely big new charity shop as well, to be honest, you'd nearly walk past the other one because it was too much of a hassle with the buggy, but

this one, now i've no buggy, there's so much space in it you can go in and have a look.

Researcher: Yeah that is a nice change, when I was here, there wasn't a shop like that, there was Centra, grocery shops, but no clothes shop.

P2: But I find now, that *we use the Polish shop over, and the girls in the preschools and the after schools would go to the Polish shop, sometimes before they go to Mace* across the road, because they like the stuff over there.

P5: *The fresh bread is beautiful, and the tomatoes, are like tomatoes you'd get foreign,* in Spain or someplace.

Researcher: So that's a really nice benefit, to have extra things available in the village. So my next question was going to be, what strengths do ye see in the village to help to adapt to these changes? It could include organisations, or events or individuals, or anything to do with the social structure, that was a really interesting point about the communion & the confirmation that you noticed here, it's a big community event.

P5: *It only grows on people who get involved really, the year my son made his communion, the following year I went down to help, because those parents were after helping the year before, so it just rolls over*. Everybody who had it last year, would help out with the following year. My mother & father-in-law were down from the North the other day and they couldn't believe the way the set up was and people giving out teas & coffees & beautiful cakes & sweets for the children. It's fabulous really.

Researcher: & then for people who've been here longer, that's just always been the case? Why do you think that's there?

P2: It was the nuns

P1: They'd bring you into the convent for a boiled egg

P2: *We'd go into the convent after the communion & they'd give us cakes & orange & they would do that, whereas now the schools have taken over that role*. But they have included the confirmation now, whereas it wasn't before, you get your confirmation & go home & that was it, whereas now, the last couple of years they have include confirmation to give them that celebration then as well.

P5: It's a nice reception because you're in the church for the 2 hours & you're not going to be talking to friends or anything, they're there for that reason, because they're being confirmed, so when you come out it's nice for everybody to gather and have the little chats before everybody disperses to go about their day.

P2: It's nice to have that cup of tea as well, when you're inside in that church you could be down there from say 12 or 10 o clock and you're in there and you're gasping and the child is starving, and all this like.

P1: And would ye have that in Poland?

P3: Aam, I don't think so. My husband's brother, his daughter has the communion last year and the mother of my love was here and she say the church was beautiful, she never see that, even if she doesn't understand the language, but she was saying that it was beautiful and we have some different because the kids have to go every Sunday to the church and different reason, but similar, we have just different dress suits and dresses.

[P8 enters]

Researcher: I might ask the two new people that joined us, we went around the table at the start and everyone introduced themselves and said how long they've been in Northrock and what brought them here, so, would [P8] and [P7] mind doing that?

P8: My name is [P8], I came from Nigeria, I live in Cork since 2001, I live in Northrock since 2003 and my children are attending the after school here, they always come for summer camp.

P7: I came here from London but i'm not a Londoner i'm from Leitrim and the reason I came here is because my wife is from here and I got work here in the late 1980s At that time the country as a whole was going through a major recession and part of my work remit was to try and create jobs believe it or not in Northrock and through a community group we did get a little factory going next door to the Gaelic Bar. It did take off but it didn't last. At that time as I said there was the little factory up there and over the road there you had Fergusons, or the Granary where they stored grain. There was a chap called Tommy Jeffers who's now dead and he used to work there. One thing I found when I came here is that Northrock, you know, it took a while to get it know it, to get to know the place, as ***I quickly found out that there was a class structure in Northrock, there's no doubt about that***.

Researcher: Ok, and how does that break down?

P7: Well it broke down that ***you had the West End and the East End, to put it very crudely, the two different ends of the village and I kind of got a sense that the people who lived up this end, although they may have originally come from the West End, didn't want to mix too much with the people from the West End***.

P2: *I actually live in the West End and that was the case.*

P7: And then I think you had, which is something that is not uncommon in Ireland, *you had farmers, rich maybe wealthy farmers, because the land around here is good, even if it's limited, it's good land, so we had wealthy farmers*. As I said earlier, we came from the West of Ireland and we would never have seen fields as big or houses as big.

P1: Following on from what [P7] was saying there, *when we did decide to build the resource centre in 1989 / 1990 we bought the little cottage, and it was at this end of the village and it brought the people down from the other end of the village* to be honest with you, through Sr. Anne and I think when we actually were thinking about doing the resource centre we were very conscious of it. *Now you'd kind of forget alright but there was a lot of aggro between the two sides, and because it was the only private estate in the village at the time, people had notions about themselves which was totally wrong*, but there was a lot of anti-social behaviour to be honest about it, and I think *the reason we did have the resource centre was because of the anti-social behaviour in the village and it was felt we had to address it,* and this we said was through the parents and through development classes and all that kind of stuff and that was really the push to do it, and then *it was located at this end of the village so it brought people down and then it started to break down barriers* and *a lot of the stuff we always did initially was to mix the people you know, everybody's the same, we all have the same issues* and I think *maybe that's why we're open to the new communities coming in as well because we see people with the same problems* and the same issues and I suppose *we deal mostly with women and women are women, the world over, we have children, we have husbands and we have issues and they're all common to us* and I think that's maybe why the resource centre is so open to new communities and I think that's been the success of it really.

P1: it started to break down, but it was victimisation, [P2; It was yeah] *and it came from the schools and it came from everybody and it was really wrong, it was really wrong, you would have seen it as well.*

Researcher: I would have to be honest, I would have sensed that growing up and for the new people, *newer people, would ye notice that now?*

P3, P4, P5, P8: No

P1: No, it's not there

Researcher: Wow, that's really great

P1: *But it was there yeah, we were all very aware of it like, we won't mention the certain nun, please now! [people laugh]*

P2: [name] and am, [name] we'll see, they'd go play matches and there could be a fight between them, between matches.

P1: It was totally crazy

Researcher: and that's gone now?

P2: Totally gone. Although they want to bring it back now, there was a thing on Facebook that they want the terrace vs terrace again,

P1: Oh but that's to play games, that's football matches, but there's no fighting

P2: Between all the terraces like because they said it was great fun, even though there was some fighting

Researcher: I guess if you could do it without ...

P2: the aggro

P5: Well the maturity is there now so

P1: It is, *there isn't issues between the estates anymore because there's just so many new ones*. And *the social mixing is good these days too*, you have to have a certain percentage of social housing and like *we never want to go back to the stage where you have all social housing all private housing, you have to have them mixed.*

P5: And as well as that since I moved here and met people in the schools, *I've friends that I know from the city who are down here as well, but I've also friends who were born and bred in Northrock, that get on great and they never kind of say "oh you're only a blow in" or anything like that.*

P1: The might say it in fun

P6: They used to say i'm only a blow-in too

P5: i'll never win so [P6]!

P6: Ah no no! You see *Northrock was traditionally a very republican village and there was an old saying that you can walk through Ireland and run through Northrock, like and that goes, but all them things are gone*. One thing that lady brought up and i'd love to address it in this way, *we have people here in this country from every nationality, or from a lot of nationalities, and if there could be nights, or days, where they could mix, the local people here like myself and [P1] and [P7], we'd love to meet and mix and know who you are, and know about you, but you know, we haven't the opportunity*, but if there

was an opportunity by somebody to organise, tonight is Polish night, i'm quite sure there would be people from Northrock who would go down and would love to meet you, and know about you, and know about Auschwitz and places like that in Poland, you know, or anything else, or anything you wanted to know around here, we'd love to tell you, we'd love to give you any information you wanted to know about Northrock, we'd love to give it to you, the vast... *I know there are people, feck it, we have some people who would be otherwise you know like, but the vast majority of people here would love to tell you and love to, you know like, mix and mingle with you and find out about you and you find out about us, you know like*, i'm involved in the community council as well, for my sins, and there's an election going at the moment, and everybody in the Parish, *everybody got election papers, there's not one foreign, there's not one person from Poland or anywhere else, or Japan, would be interested in joining it. You know like, and if they did, they would find out, in their own way here about it, the community council, I can guarantee you would love to see you.*

P8: Like my own...

P6: Pardon

P8: Continue...

P6: I can tell you now they would love to see you going there.

P8: That is the reason I want to say, *like my own experience, when I was homeless then, they really tried for me, the community here, because my house is for sale, so I need to go to the hotel, [P1] and their colleagues, they really helped me*, I was in the hotel for just two months, and they give me my own council house and they furnish everything

Researcher: *How did you know about this service?*

P8: Oh my god, I live in Northrock since 2003, so...

P2: She knew us

P8: *all the things they do for people, they do computer, everything one year course I do with them as well, that's the reason why*

Researcher: So you contacted the resource centre here when you were having trouble with the housing

P8: Yeah I called them, i'm going to be homeless, so anything they can do for me and my four children, and like here as well my children are going to secondary school and primary school, since 8 years they are helping me here, my children are coming down to after school, *I do not give them anything, they are helping me, my children come down for breakfast, so many things*,

P1: *Plenty homelessness. Well again that is another issue, the housing is, the rents are very high now*, they're up to 1400 a month in Northrock, and then, people are wanting to sell on their houses because they are getting money back again and then there's not enough houses, so we've had real issues with homelessness, [P8] is lucky she got a house in Midleton, we had another lady, she got a house in Cloyne, she might as well be homeless as to have a house in Cloyne, because it's no transport out of there so that's really tough, but yeah we've done a lot with that.

Researcher; And how do ye manage that? Do ye talk to politicians?

P1: Well *we get in touch with the homeless unit, we source hotels and all kinds of stuff yeah, we'd have a depth of knowledge, we wouldn't be shy, and to be*

fair we have a very good local councillor, he's very good to be fair to him, not sure he wants his name mentioned, but we'd have a lot of knowledge about how to go about things, talk to the local auctioneers see what's happening and keep our ear to the ground.

Researcher: So is there anything else ye'd see as strengths in this village? And that's for people who are here awhile and the newer people, is there anything about this community that you would notice different to other communities that would be helpful in dealing with changes, maybe the history with this, the East End, West End thing, that there was a campaign to integrate that, maybe that helps with integrating in general.

P1: Well I suppose, *maybe that was the first integration we had to do, and that opened up great friendships to be honest about it, people who came back in the 1990s are still coming to us today, just to come in for the tea and the chats*, and you also saw the difference, we had Sr Anne here at the time as well, *we had the early forms of after schools and education was a huge thing then and again you'd say, and I know this is why we're conscious of it for the new communities as well, there's nothing worse than going into school and not having your homework done and that was putting children at a disadvantage and there was good reasons... there was literacy problems at home,* there were people who couldn't help their kids if they weren't able to do it themselves and then their kids dropped back and then *the homework classes were absolutely invaluable, and the shared reading program was very good*, it gave kids a love of reading, it was open to everyone you know, and the trips to the pantomime which were very important, *the whole thing about the resource centre originally was about empowerment and it was around education and that broke down the barriers, and then it was probably easier when new people came in, there was some curiosity about them, and there was a welcoming I think.* And that was it, English classes were essential, *we still have people coming in with little*

or no English, most of our work comes from the pre-school to be fair because half of our kids that we take in here don't have English as their first language.

P5: It's amazing to see children come in who have no English whatsoever and they learn through play and songs, Children sing the songs and that's how they're learning the words, and I know when they go home they probably speak Polish to their own families but when they come in they get into the routine, they have to go and wash their hands and they say it, "wash hands" d'ya know. They know clean up time, and they're cleaning up and they're singing it, it's amazing to see how they're learning the language at 3 years of age when they've never spoken any English whatsover.

P2: As well, getting involved in the community, *this project we had going back, this Pride of Rock, that was a big thing, everybody got involved in it, that brought the community together then, people put their own little bits of projects*... and it opened up more then for people to know who we are, and for us to know who they are, and all that Pride of Place helped a lot.

Researcher: And were ye all aware of the pride of place as well?

Everyone: Yeah

P1: *We had a beautiful cake here, and it was Alex from Poland made it for us for Pride of Place, and that won it for us*, [everyone laughs] we gave them a Polish tea party that day, all the food they got was Polish, that was really nice.

P7: Looking back on things, like a lot of Irish towns and villages *you had a couple of major organisations that provided leadership, the GAA would be one, and it was only GAA because any other sports were not supported, and you have the church*, through the schools and through the parish priest or whoever it was, and particularly through the clergy, *you'd have the guards, and*

then you'd have the schools, like the school teachers would have a profile in the community, all of that has changed, that's changed, for lots and lots of different reasons, our culture is changing as well, but *I don't think that any of these institutions were really prepared, or our country was prepared for the demographic changes or the level of immigration,* the infrastructure wasn't there to cope with that, *abuses did arise, where you would have had people, say from Poland, or what's known as Eastern Europe, who came here for work but were really shabbily treated, but I think people have gotten to grips with that now you know.*

Researcher: And when you're saying that GAA, the church, the guards the schools, they all were these really strong organisations, and you see their strength wavering a bit now, is there something else that's there, or is that... what are the implications of that?

P7: *Well the church for one, the churches power & influence has definitely been diluted and it's an ongoing crisis*, it wasn't helped in the last 25 years when certain members of the clergy and senior members of the clergy were found to be misbehaving, they had mistresses or they had... whatever, and like, one of the big shocks from that was that the church was always all about things of a sexual nature, and here were their own leaders doing what they were saying to us not to be doing, you know, so it's lost, *it's slipped, it's grip has slipped, the young people aren't practicing and are not coming forward*.

P1: *That's a big thing, and even when you go to mass on Sunday, you know, you'd see, we'd recognise quite a few of the new communities at mass, and they're the younger people in the church, which is interesting, your peer group, Irish, aren't going to mass.*

P4: Yeah I heard that

Researcher: And would ye see that as.... Like what kind of an impact does that have then on the community?

P1: It will in time.

P6: *It will have a very serious impact because all you have going to mass now is the old people, like myself and older and that era*. Even the teachers, they only get involved in first communion, confirmation. Tis a sad, sad situation.

P1: *Yes that's a big change really, a big cultural change for us, the slippage in mass-going.*

Researcher: But then I guess you were saying the schools now are doing the communion and confirmation events... so...

P1: That's the party

P2: That's really because of the parent's association in the school, and the parents of the children that are gone forwards, they're organising it,

P5: But when my son made his first holy communion, you had to go to mass, not you had to, they wanted all the children and their parents to be at one mass once a month and I remember going and half the church, there used be half the boys there and half wouldn't, not that we used to get up on a Sunday morning and go to mass, but we would make an effort before because my mother in law who was here the other day, she was Eucharistic minister when they made their confirmation, from the North! Fr. [name] had asked anybody know anybody who would be at the mass who could do it, so my son said "my granny does" so, she did it, but, this time around, when it was the confirmation, there was no letter sent out saying "ye need to be at a certain mass", for the confirmation boys to prepare, it was just, I think there was one mass for a

candle and light service, throughout the whole year, maybe at the start in September, when they went into 6th class, there was a mass for them for 6th class, but it is definitely after dwindling away.

P1: *Ah tis yeah, and we always spoke at one stage, you had the teacher, you had the guard and you had the doctor wasn't it, and that's definitely gone*.

Researcher: That these are the three main professions?

P7: *Organisations particularly like the GAA over the past 25, 30 years, they have mellowed their stance on certain things*, at one time there was the whole ban, you couldn't play foreign games and be in the GAA and all that kind of stuff, but with communications and everything else, they're particularly in urban areas challenged now by soccer, and what I think was a problem for them was that soccer, mainly an English game, was now carrying the tri-colour on a world stage, because the team was involved in the European Cup and the World Cup, & people were watching this you see and they were saying "well you know, there's my country, there's my flag" whereas, up to that time, it would have immediately been the Gaelic games that would.... And I think they were challenged by that and other sports as well and I think, you know the bigotry and the prejudice...

P1: That wasn't in the soccer then you know, *whereas you know your father nearly had to be in the GAA for you to get a match, or else you stand on the sideline and that was a real issue as well*, whereas the soccer, it was about ability, and *there's also a lot of clubs that have come up as well in the parish, like the gymnastics people and tak won do that's a big thing*. Actually I remember we had a badminton club years ago in Rock and it started to flag a little bit and there was a protestant church in the old graveyard, so the Catholic - that's not right! - *the badminton club in the community centre was starting to lose members so we went down to meet them one night and asked if they'd consider*

letting us join the protestant one, and they came back and they called us to a meeting and said that they wanted to preserve their ethos and therefore, we couldn't join the badminton club. And that's a fact! And now, their club is now gone and some of their members play in the community centre now, *that's bigotry and that wasn't that long ago you know, 25 or 30 years ago. So those kind of changes have been subtle again you know and it's because we got so many new people into the community*.

P5: And, i'm from Ballyvolane but i'm, my mother & father's house is directly in front of the Glen Rovers, so when I met my husband, he used to be watching the matches over, he never saw a hurley, and my son plays for under 13s now and my husband is the trainer, he got his certificate.

Researcher: So I guess for some of the newer people, what kind of organisations, or events, or places have helped ye feel more part of the community?

P4: This place is actually like.... We can say all of the people here... *it's like a second home, it's actually like that, all of the people here are like second family.*

P5: And *we have the opportunity now to do our training as well*, we can do a level 5 in childcare and Midelton aren't doing it anymore, but Northrock in the resource centre, they're doing level 5 and level 6.

Researcher: We're nearly finished but I have another question about the identity of Northrock, what do ye see as central to Northrock's identity? And these could be things that could be shared with other places, or specific to here, I guess we've mentioned a few things already but is there anything that you see as "Northrock"

P7: I think there's one aspect of Northrock, I often wondered is it worthwhile, is it worth exploring, and that is, the big house really here was [name], and it was there last year, the time of the celebrations for 1916 that I was talking to a prominent man locally and I said, you know I thought it was strange that Northrock was always so Republican but there was no parade, and he says, that's probably the influence of [big house] in days gone by, they wouldn't have been seen as.... You know the landlord, and a lot of them were burned out and torched or whatever, but they were seen as not as threatening, and they employed a lot of people.

P2; It was owned by the English, they were English people that lived in that house, so all [big house], the estate is English owned, half of [name] was English owned as well as far as I can remember, as far as i've been told. When we were over there, we had Mrs Bell, we had Mr. Bell...

P1: Major Bell

P2: Major Bell, I couldn't think of his name, we had Villers (?), all of them, they're all, they came from England into this estate, Barry's estate it was called, they had the orchard behind there, they had the whole farm,

P1: They supplied all our purple flowers (?) vegetables and massive employment.

P2: They did, they had very big employment and there was... the orchard was employing... you had the farmyard, the cows, the gardens. When we were living there, we had 2 drills of potatoes for to feed our family, the length of the field could be from here to the end of the village, so that was to feed our family, we could have a row of turnips, a row of cabbage, that's the way the father work, my mother and father came from Limerick, that was my father's job, when he moved to Northrock.

Researcher: and how long was that going for?

P1: I'd say it must have been going for...

P2: It was going forever

P1: Before the time 1916 even

P6: It was

P1: It had to be because it would have been burned out otherwise

P2: There's actually a book, [name]'s dad has a book on it, because the houses at present in Belvelly, on that bend in the road where the green gate is, most of them were employed by Northrock and that green gate, you used to go up to the farmyard, and that's how they got to work. Most of them were rehoused in [name of social housing estate involved in East / West conflict]

Researcher: Up until when was that farm in operation?

P2: In 1970, i'll never forget it.

P1: UCC bought it,

P2: UCC bought it in 1979

P1: And it's a huge employer now, it's got the wildlife, the golf club, the hotel,

P2: it's actually gone from a hard-working farm to an entertainment place, between the hotel, the golf club, and [name],

Researcher: And just before we finish up, I might just ask the newer people, what is it... like why did ye decide to stay here? Ye all lived in other places before here, what is it that made ye say "alright i'm going to stay, this is going to be my place"?

P8: For me own, before I lived in [name] City, ***I moved down to Northrock, you know when you are somewhere you see love and caring, you won't leave there***, because of the love that has been shown me and my family, I live in [name] but for all things I go to Northrock, actually for my children are in the school, they always come in there, they come to after school, for that one alone, so, it's my home, it's my place, even my children, one day I ask them "are you going to Africa?" they said "no!" they don't want to go, they want to stay in Ireland and want Northrock, it's their home, it's my home, which is because of the love I see, so it's the best place.

Researcher: And what about you, [P3]?

P3: I think ***the children grow up and they have the friends, you don't want to move because they love each other***, and I don't know like, I was living in the [name], and ***maybe that way because it's more Polish people here and you have the friends as well, am yeah,***

Researcher: So it's half 8 now, so unless anyone has something they would like to add onto it i'll leave it there. Thanks everyone for coming and sharing your ideas. Thanks I really appreciate it.

[while recorder is off, one participant mentions having a storytelling night with another telling stories, researcher asks if she can turn back on the recorder and captures the following:]

P1: Even modern history [P6], your own personal history and your own adventures [P6], makes some telling!

Researcher: Northrock is an interesting place to be a guard!

P1: It was very Republican,

P6: You know what we mean by Republican, we mean the IRA, the IRA was a violent kind of an organisation at one stage, and they didn't like the guards, or the police, and the police didn't like them I suppose, twas tit for tat, and that's the way it was and I was on one side and they were on the other side, but am, you know like there is a lot of history past that in Northrock as well.

P1: You should come to that night [P5].

P5: I'd love that, my husband Tim would love that

P2: He'd be rolling around the floor laughing i'd say.

P1: It would be really nice, we'll get the ladies to bring us cakes!

P6: They wouldn't speak to us going up and down the street, but that was Northrock, i'm talking about going back 30 years ago, 40 years ago, twas if you like a violent place that time.

P1: Oh it was yes

Researcher: and could I ask, of course you would have heard of the IRA and everything, but for ye from Poland and Nigeria would ye be aware of that Republican history in Northrock, that IRA thing in Northrock, did that ever

come up? That was something I was aware as a child as well even. Maybe that's gone now too

P6: That's gone thanks be to God

P1: Oh it is, even though one time we were going to Leitrim one Christmas, was it one of the kidnapping things that happened, tidy towns, and we were going up from here, and we were stopped when we got into Leitrim wherever it was - "Where did ye come from ' - "Northrock" [laughs] and up to Ballinamore, there are more IRA up there, they checked us out and said we were ok but am, I mean we have stories....

P6: *The fact that you would just say you were from Northrock would do it you know, it would go through these people, but that's the way it was that time, but them days are all gone now*, thanks be to god, they're all gone now, tis a different world now.

P5: Even my husband from the North, when I met him first....

P6: What part?

P5: Belfast, and I remember thinking oh my god i'll never go up there anyway, because of what I saw on television you know, I was always very afraid of it, then he told me stories of them, of tanks coming down the streets and, there was a 500lb bomb a couple of doors away from where he lived, unbelievable.

P1: Actually, when the troubles started in 1972 or thereabouts, they were asking people from the various estates in the North to come down to the South for a break from the Troubles and the rest of it it, and *there was a group of them came here to the convent in Northrock and they wreaked havoc!* The poor nuns didn't know what to do! And the people had a bit of freedom, they were

in the pub, they were everywhere, and the nuns! The nuns were ultra conservative, bedlum!

P7: I would have been no stranger to the North of Ireland, because there is part of my family which is North of Ireland, and anyway, you came up, [P1], the kids and crossed the border into Fermanagh, and we were travelling along lovely and you can see the Republican blood beginning to boil when you look into a field and you see a huge Union Jack in there

P5: Well I was up there a few weeks ago and there's still some parts of it that are very...

P6: Oh there is, there's parts of the North all the time that are very...

P7: My father when he went up years ago, and I always thought that he was a quiet man, well I didn't know what his politics were, if he was Republican, but there's this emotion that gets you in the gut when you walk into a village and it's "there's no pope here" red, white and blue and all that.

P8: I want to share something, I went to Dublin, I travel to Dublin with my kids they all.... *Northrock is a peaceful place, you can walk at any time you want, everybody love each other*. When I travel to Dublin last week with my kids, my kids, they see all the children who are there, they are like hooligans! My children they say "mum please go, lock the car, lets go", you know like, they are panicking, small children like, they look like a terrorist.

P2: That explains why Prince said, I asked him "are ye going back to Dublin?" and "no, we're never again going back"

P8: They will never go there again! They are panicking because all those places you know, like [name] if you go to [name] you will run, because of that I stay

here. Even in [name], there is some place in [name], *I have a friend over there, every night she's in council, every night they will throw the stone, "come out! Leave your place", they come over every night, in the daytime, come back home, you see! This does not happen in Northrock, nothing like that. So it's a peaceful place.*

P2: I find that the children now actually, growing up in our day, we only had one little boy, and he was Irish actually, and, but he was a different colour to all of us, but he was the only, and [name]was the only, they were the only two and the other boy, [name], he was the only other boy who was Black in our place, now, with all the different cultures, *the kids growing up today don't see no difference, there's no difference in any one of them, even like, they play with one another, they invite them to their parties, they go to one another's houses, there's no difference or no colour difference, nationality, nothing*.

P6: And that little fella, he was born in England by the daughter, the daughter sent him over to the mother, *the mother kept him inside all the time and never showed up to anyone because he was Black*, arra he wasn't Black, he was and he wasn't, he had a good tan more than anything else, he was an outstanding young fella though, *he went into the Cork sports, he worked his way up to Cork sports and he won medals all over the place up in Cork, he was a fantastic fella, and every woman in the place was mad after him*.

P1: But you see, *it actually enriches our society and that's the nice thing about it, because it's different attitudes, and especially for our own Irish people who have travelled a bit, it's enriching*.

P6: That's why I said what I said earlier on you know, *if people integrated more, if we say the Polish and all the different people, have a kind of an integration night or integration day you know like, the vast majority of people would want nothing more than that*.

P1: But to be fair to the schools they do integration days which is really positive.

P6: I know that.

1.2 Focus group data analysis

I analysed the transcripts using an inductive thematic analysis, where I analysed data with any expected outcomes and stayed open to ideas as they arose in the data. Thematic analysis was considered appropriate in our context due to its flexibility and openness, allowing me to take the same approach with analysis as I did with data collection - to structure the work around initial themes but then to let the process itself ultimately determine the direction and outcomes of the work.

Transcribing the focus groups gave me a good level of familiarity with the data to begin with. As I transcribed them, I kept notes on unexpected or reoccurring insights in the dialogue. This was all done in Google documents. Once the various audio files were transcribed, I re-read them to identify recurring topics of interest and these helped to generate a list of ideas on possible themes. First level coding involved bringing all of the data into Nvivo, and there labelling excerpts from the data with initial codes relating to the research question, the literature review and also to unexpected ideas and meanings in the data. This resulted in 44 initial codes. In second level coding, I compared and contrasted these initial codes to identify redundancy, to delete unnecessary codes and to amalgamate codes with commonality under a larger theme. This stage resulted in five broader themes. Here I found creating thematic maps with Adobe Illustrator to be useful in refining the themes (figure 1).

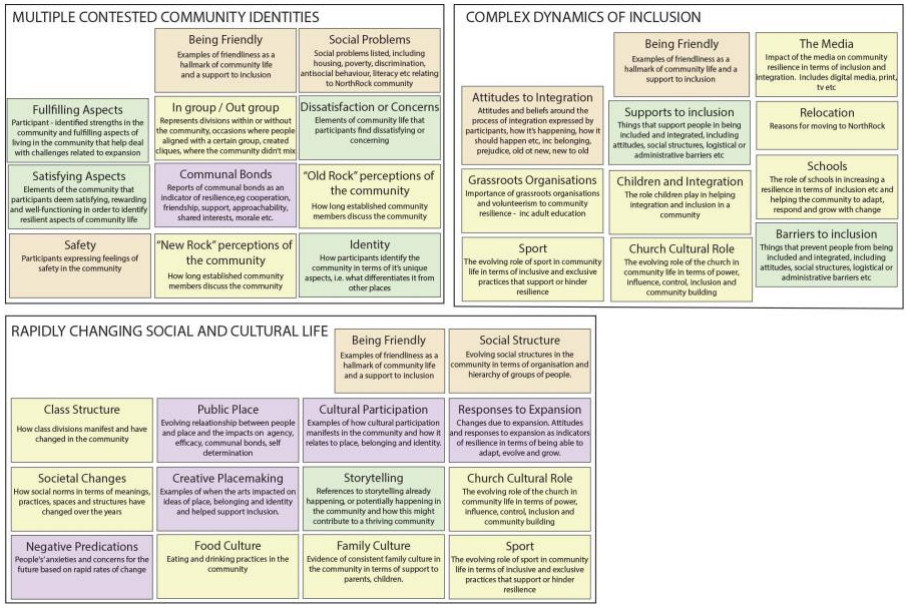


Figure 1: Thematic map from focus group analysis

I created an object for each code in Illustrator, then spent time grouping, ungrouping and regrouping these codes until I eventually refined the initial suggested themes into three main themes. Those were (1) Contested Identities, (2) Dynamics of Inclusion, and (3) Rurban Experience. Contested Identities was published as "Conflict and Belonging. Socially engaged art practice as a resource for resilience-building in rurban communities." in the proceedings of the Communities and Technologies conference of 2019. Dynamics of Inclusion was accepted for publication as "Agency, power and confrontation: The role for Socially Engaged Art in CSCW with rurban communities in support of inclusion." in the CSCW journal in 2023. Rurban Experience was written up with a similar theme from the digital storytelling workshops as "Teenage and adult experiences of rurban place and implications for (place-based) CSCW" and is currently under review at the CSCW conference.

2 Digital storytelling workshops

2.1 Example of workshop transcript

The following is an excerpt of the World Café discussion, focusing on exploring the meaning of "community".

05.03.19, TY area - Community World Cafe discussion (Note: ***This*** indicates a 1st level code)

P17: ***What are the most popular important places in Northrock to our ages?*** Well the school, everyone comes here in our age.

[chat about where people walk from to go to school]

P17: Yeah so a lot of people live a walking distance to school, ***some people go to Centra for their breakfast in the morning, they get a croissant or some .... You know hot sausage rolls or whatever they're called. So Centra Aldi and Mace***....

P11: Thai Irish

P17: No i'm talking about shops and places where you can buy food. And you can sit down as well.

P11: And Thai Irish you can buy food in Thai Irish

P17: But that's more dinner like

P11: No you can get just chips to take away

P17: Cos you do that before school? *Anyways, so what is enjoyable about these places. You know centra and mace, food, every teenager.... Food is just a way to relax*

P11: Food is a daily part in everyone's daily lives.

P17: *And the pitch, the pitch is an important place because am, the school teams as well, you know, they're part of the community, they trained there*. They play matches against other schools there so like.

[random chat]

P7: Julia broke it!

P17: Ok, so, ... *people go to the Polish shop because it's cheap, and you know when you're a teenager you don't really have that much money*.

P11: Sorry i'm earning money, i'm babysitting

P17: Well some people don't have time to babysit

P11: I don't! I'm fitting it into my daily life

P17: It's cheap, and some people like the food. *One person brings in food and then everyone tries someone and they're like "oh my god I need to get that the next time!"*

P11: Not tries some! Takes some!

P17: But then, *when it comes to African shops and Africa they don't know the food so they might be kind of iffy on buying stuff they don't know*.

Sometimes people just bring their friends, like if a Polish person brought their friend to the Irish.....

P7: *A definition of community is different people, from different people and different nationalities*

P11: Yeah *different nationalities coming together to do group activities*

P17: School's a good example. Expand on my point please...

P11: It's from the Junior Cert, explain you made a point! Quote it and explain it yourself!

P17: *School is an example of community because there's people from everywhere.* Every background, every country, but *that's good, because you get to hear stories from around the world*. Would you say there is a strong community in [Northrock]?

P11: *What's a strong community?*

[interruption for school trip to Italy]

2.2 Example of workshop reflective notes

Workshop part 5. Reflection (Note: ***This*** indicates a 1st level code)

Date, time, location

26th March, St Als, 80 mins,

Objectives

Analyse own and each other's stories - have participants try some coding. Begin work on digital media outputs.

Activity 1 (50 mins) - Story share & capture

This activity was designed in 3 parts - group preparation for a presentation on their idea based around a number of given questions. The presentations themselves and a "story share and capture" activity what happened during the presentations where listening participants took note of key points on the post-its. The questions worked ok, *I think they were a good idea as the teenagers seem to enjoy having specific tasks, I think this is down to the school environment where independent thinking isn't massively encouraged!* However, t*he various groups really struggled with defining' their theme. I suppose this is to be expected, as they are very difficult to define!* I could rephrase this questions a statement, something like "Culture is.....", *I should have thought more deeply on those questions / probes to come up with something more evocative*. This was also thought-provoking in that *I felt as facilitator, I could have supported and guided the students more on their various definitions I know they could have come up with more insightful work based on their previous discussions*, but *I felt as a researcher I should remain more impartial and not guide things too much*, this seems like a *conflict between being actively engaged in the process and holding back for fear of any bias* creeping in. Ultimately though *I felt this was de-motivating as I came across somewhat lukewarm*, telling them it's fine when I know they could do better with some guidance, and also *it works against the aim of trying to support them in becoming more critical and active in terms of changes that could be made*. This is definitely something I need to continue observing and thinking about. Interestingly *the "community" group found the map activity the most useful, I didn't request that they do that activity* they just very organically started drawing it as soon as they were put into a group and asked to work on "community" as a theme. *While the questions were good to provide a focal point, they also led to participants answering them in very quick and glib way, without really thinking about it* and providing the first answer that came to mind. *Eg the culture group's answer to how they might define culture – "The shops, the people, as in the Polish shop that's a different culture, things like that. No.2 Describe how your idea developed?" This wasn't contested or questioned by*

anyone in the group, it would have been good to build in some sort of debate - maybe the "5 whys" would work well here. *The culture group also named the world cafe, journalistic 6 and empathy maps as the most useful activities. Interestingly though they didn't pull any of the insights from those into their definitions*! If I had them review their previous work, pull out the most interesting things that came up and put those into their definition / descriptions then that might have worked better. *The same group did say that they felt they have more of an appreciation for the various cultures in the community and that they felt they had more empathy*. *I think if there was more than one facilitator, or more time I could have had time to sit down with each group and explore a little more*. When the culture group began discussing their idea, one of the participants (P4) made the observation that there are no Black teachers in the school, she sounded shocked by this - 'P4: Oh my god, we don't have any black teachers do we? /

P3: We don't even have any dark teachers / P19: No there aren't any, I don't really know any school.... Like my brother's school had like 1. / P4: We don't have any Black teachers!'. *This was a really interesting moment as it was a moment of realisation, of something seeming strange / unexpected about their world that they had until now taken for granted*. P3, whose family are from Nigeria, interjects to say; "But like they take like the piss out of them like, they never take them seriously like it's kind of funny, but I, like it would be odd, like not odd but you'd be like "eh?!" like even with like an Indian teacher... I don't know" this shows that while the community might seem inclusive, it has a long way to go. *This, and the comments about African names, are the two moments across the workshops so far where underlying tensions do become apparent.* The conversation went on then to discuss the various numbers of Black students in schools in the city compared to Northrock; 'P19: You know St Angelas in town? I was meant to go to that school and they have one Black person in their whole school, and I was like... / P3: That's cos, is that school in town? / P19: Yeah / P3: I know like [name], my friend is there and there's only like 4 Black people in that school, like our school now would be like one

of the schools with probably like the most Black people in it. I think it is the most Black people in Cork in this school / P19: I didn't even like.... there was just one girl in my year, one girl that was in my primary school, / P4: Yeah, in my primary school.../ P19: One girl in my primary school class she was like "oh yeah we only have like one", I was like "so strange!" / P3: [school name] would be the most.... It is the most like.... We have the most Black people / P4: Yeah we have like over 30 in our year / P19: I don't notice a thing. We had like 30 different nationalities in our primary school, that's probably why I don't notice" *This was probably the most open conversation about race dynamics that we've had. There was one girl of Nigerian descent and the others were all of Irish descent. It was very calm and matter of fact, and didn't appear awkward, unlike some of the other conversations around race.* The identity group really struggled. Only 2 of them were present and 1 was P14 who had been moved from her original group due to a request from a parent. This really alienated her from the work. *She expressed her dissatisfaction at having been moved, that she wished she was in the other group, this was also demotivating for her partner in the Identity group*. *The Inclusion group had some video with them to review, they spoke about how cringey it was to film it - indicative of how self-conscious they are*. Their definition of inclusion was "We think inclusion means people not being discriminated against, people not being scared to be themselves in front of others". Very much defining it in terms of what it's not, and *the teenage emphasis on belonging and being yourself is also evident here*. They also stated however that they had moved from focusing on the negative (exclusion) to focusing on the positive - eg asking people how they feel included. This didn't quite come through in the definition, but in terms of the questions asked for the video, it was more apparent. *There was some rivalry between the Polish and Lithuanian participants over which country produces the best amber, and over whether or not Poland used to "own" Lithuania*. Overall these participants seem to *identify strongly with their central European heritage*. They were both born in Poland and Lithuania and they both speak their native language.

The presentations themselves then were very mixed, some groups of students are obviously much stronger than others. Unfortunately, some of the groups have a lot of attendance issues while 2 of the groups have full attendance generally - 1 group of 2, 1 of 3 & 2 of 5. There was an interesting moment in the "culture" presentation, where they discussed interviewing a Nigerian girl, a Saudi Arabian girl and an Irish girl. *The Nigerian girls in the class audibly cheered and visibly perked up when they mentioned representing a Nigerian girl. This would indicate to me that they don't generally feel very visible or represented.*

Activity 2 (20 mins) - Tutorial / work on stories

They loved working with the cameras! Didn't get as far as editing footage because none of them brought it in. *Most students became more focused when working with cameras, also a lot more shy! I need to be watchful & encourage the girls who are falling back*, one girl v disruptive, need to put her with students who are less easily put off track, might need to re-do groups. *The students seemed to work best in groups of 3*, there was *a request to allow them to film outside in the community with the cameras, they're much more excited about those than filming on the phones*. I showed them how to focus & how to adjust the ISO - that was enough for one class I felt. Ideally *it would be great if we had more time and I could go into the camera work in more detail as they seem interested in it and it's a value-add for them*. They went into new groups as there was so many missing, *they seemed to take ownership quite well when they were given free rein and in smaller groups*. One of the groups however didn't shoot any footage, just played on their phones & fought for the session. There was a bad atmosphere in that room when I went in. However, when one of the most disruptive participants was asked to go in front of the camera, she was immediately shy and looked pleased to be involved. Some of the things they said about the community were interesting, P14 said that the community is very small, everyone knows everyone, everyone says hi to everyone. *When*

asked where she is from she says 'i'm Irish but my parents are from Biafra'. I think this gives an indication of the duality of identity, she feels Irish, it's all she has known, but she seems to feel like she also needs to acknowledge where are parents are from, she needs a caveat. On the same note, I notice the interviewer (P17) asks the first interviewee where she is from (P3). P3 answers [name], a nearby town, P17 falters a bit then and gets a bit awkward about probing further - eg 'Are you? That means you're not from the community? Am. When.. have you... am... come to ... Northrock?' Each following interviewee was asked "what nationality are you?" which I think was more productive in finding the information they were looking for. Participants all discuss how friendly and supportive the community feels. *While they were in their groups, much of the same participants discussed how boring the community is, but when on camera they emphasise how it feels diverse, supportive and friendly. I guess these characteristics might also seem boring to teenagers!* They also emphasise how small the community is. I think this is because cosmetically the village hasn't changed that much, the public spaces are all clustered around a t-junction. Even though there are almost 6000 people living there now, it doesn't seem that way from the main street. One participant did make the point that it's growing and expanding, there are more and more people here, and that it is still very welcoming and inclusive. *I find it very interesting that this contrasts with the experience of the "'old Rock" participants in the focus groups who feel like that community feeling is gone, the "new Rock" participants seem to still very much feel it.*

2.3 Workshop data analysis

I analysed the study again using inductive thematic analysis (Braun and Clarke, 2006, 2019, 2021a). I followed the reflexive approach recommended by Braun and Clarke (Braun and Clarke, 2006, 2019), which involved an iterative process, cyclically going through the six stages of: familiarization; coding; generating initial themes; reviewing and developing themes; refining, defining and naming themes; and writing up. I transcribed the audio recordings and

familiarized myself with this dataset. I re-read the transcripts and observation notes and generated notes on areas of interest. I elaborated on my observation notes based on the transcribed recordings, the outputs of the workshop activities and the final digital story pieces themselves. I reviewed the various ideation artefacts and the final student digital stories and took initial notes on these. I drew on the research question, the literature review and the outcomes of the previous focus group study when taking these initial notes and when creating the first code book. I also noted unexpected ideas in the data in the initial code book. I created the initial code book in google drive. When moving into the next levels of coding, I created an NVivo file which was useful in comparing and grouping codes within and across the various levels. I generated 92 initial codes in the first level codes. In second level coding, I compared and contrasted these initial codes in order to amalgamate codes with commonality into potential themes. For example: I felt the data in the "appearance" code spoke more to identity and belonging, and so was folded into this code, "impact of professional tools" was combined with "impact of materials" and "impact of school environment" was broadened to "impact of environment" and included "informal atmosphere". An initial thematic map was developed around these codes, organising them into six groups (figure 2).

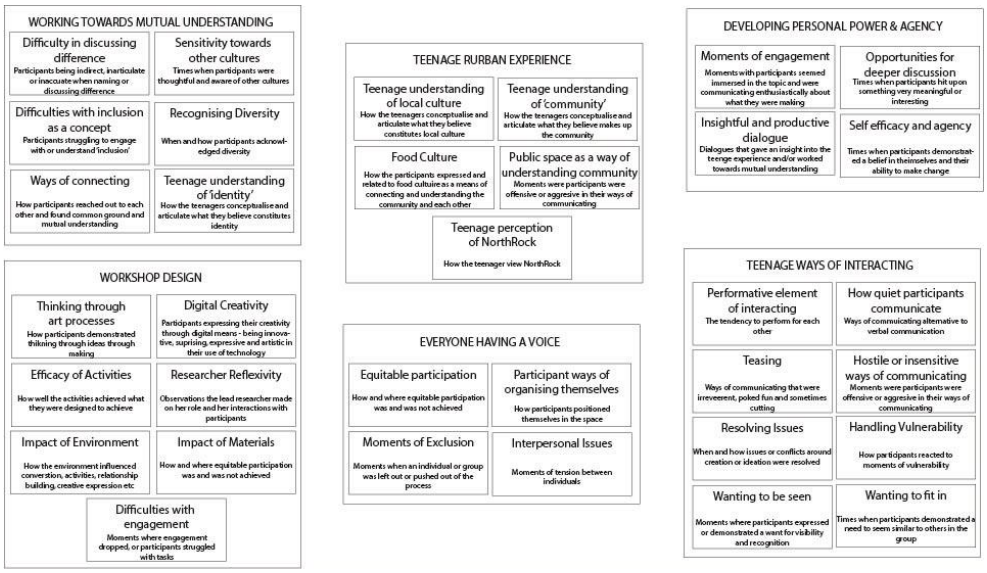


Figure 2: Thematic map as part of digital storytelling workshops analysis

I further examined these groupings for what seemed to be the most useful, accurate and insightful themes. I then consolidated these into three themes in another iteration of the thematic map (figure 3).

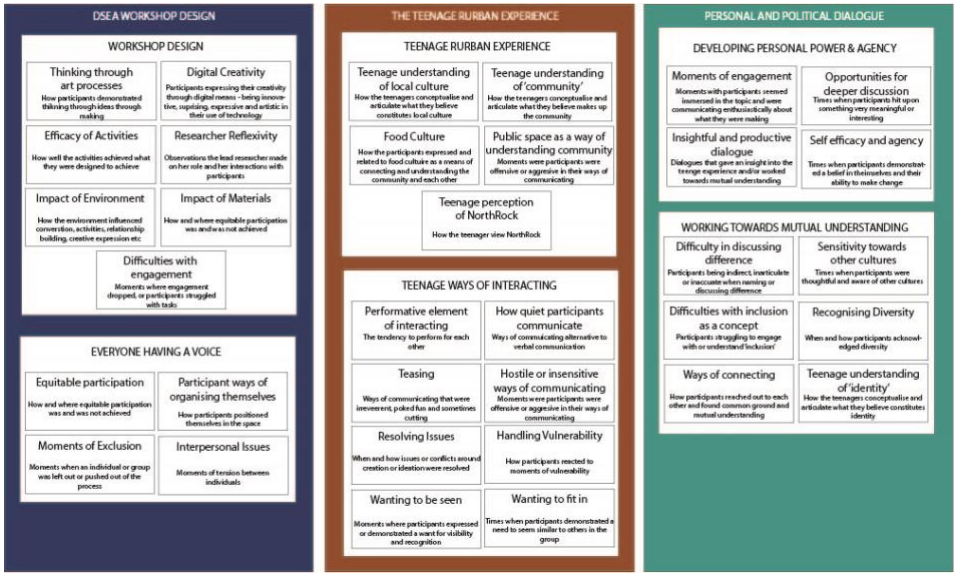


Figure 3 Thematic map as part of digital storytelling workshops analysis

Once I identified these initial themes, I worked through the final stages of reviewing, defining and renaming themes through an iterative analysis process that involved ongoing discussion with my supervisors. Two final themes were solidified. These were understanding the teenage rurban experience and designing for dissensus. Understanding the teenage rurban experience was written up as "Teenage and adult experiences of rurban place and implications for (place-based) CSCW" and is under review at the CSCW conference. Designing for Dissensus was written up as "Designing for Dissensus: Socially Engaged Art to access experience and support participation." and is currently under review at the DIS conference.

3 Digital art summer school

3.1 Example of summer school transcript

The following transcript is an excerpt taken from zoom session 6 of the digital art summer school, where participants were presenting their final ideas. I facilitated the presentations while Dr. Slingerland timed them. The transcript includes me reading aloud the various responses participants gave to the artwork via the Miro board. (Note: ***This*** indicates a 1st level code)

Teresa: Eh I chose this idea because ***I thought it would be important to highlight the importance of feeling welcome***. The tone is happy and welcoming, because it is a positive thing and it relates to inclusion because I think feeling included, you should also feel welcome and ***the main message is how welcoming Northrock is and it could improve the community by people being even more welcoming, now that they are aware***. The obstacles to achieve this would be people becoming more aware. I am most happy about it because I like how it spreads positivity and.. it's an important message because everyone should feel welcome and included.

Maria: Yeah. Could I ask you to tell a little bit about the graphic? So why did you choose that graphic in particular for welcoming?

Teresa: Because I ***thought like everyone is welcome like even when they have a disability or like they're a different race or anything and you can see that in the picture, that everyone is there and feeling included***.

Maria: Great, brilliant. Thank you very much. [...] so there's another two and a half minutes, so if people could maybe write [...]the thing you liked the most about her piece. A tip, something you could suggest to improve it and then a little bit about why this message is important and how might it improve. ***Just a few minutes to do that. Oh there's loads of tops and less tips. It's always***

easier. So this is part of the critique thing we've been talking about, the critical eye stuff. [...] So yeah it's often easier to give the things, the top stuff, is easier sometimes than giving the tips, but the tips is definitely just as useful for the person making the piece and for everyone else. So this is also part of the.. like you critiquing someone else can help you critique your own work as well, if that makes sense. So I guess that's that, 5 minutes up. Well I hate interrupting while everyone is still giving their ideas, but maybe we should move to the next person just so we don't run out of time.

Deirdre: I chose this, because *I love Gaelic Football and I thought it was important to try and get more girls to join it*. And *the tone of voice I picked was happy and enthusiastic as there's lots of bright colours in my poster*. I think *it has inclusion as it is giving all girls an opportunity to join sports*. The message is to encourage girls to join Gaelic Football and *this improves the community by having an equal amount of girls and boys in sports*. An obstacle that there might be, people might not notice it and I am most happy how all of it turned out in the end.

Maria: Brilliant. Thanks very much Deirdre. I think your composition it's really interesting, like you chose to go diagonal with the text. It's a bit different and it's kind of more eye catching. So very nice work and I like your aim of having an equal amount of girls and boys in sports. Because it's still, even though they have a strong girl teams, it's still kind of seen as more of the boys thing a little bit. So I am gonna stop talking and give ye the chance to write the feedback there. I also really like your hashtag by the way and the stripes.

Geertje: It's really great everyone's giving good feedback. I think it's a very nice gesture to everyone, so let's try to keep that up for the other presentations as well. Because it's just nice, also for the person who made the piece to see what other people like about it and maybe get some extra ideas to make it even better and also why they think that this piece is important or the message is

important, so yeah I am really.. Maybe I should change my name to Grateful Geertje again. Haha. No I am really enjoying it. It's very nice to see you are so engaged with also the pieces of others, so, nice job.

Maria: Having girls feeling more included. Maybe yeah.. definitely. Less intimidating maybe, because (lost connection).. How does this piece improve the community, so it helps more people join the team, which is great. But then you can think about how does that help the community then*. So if you push the idea one more little bit, why is more people joining the team, why is that good for the wider community?* And I know we mentioned inclusion a few times, but in the context of that, how does more people joining the GAA club, how does that help everyone's.. You know how does that help a more inclusive community?

[...]

Beth: The reason why I chose this idea was because, *that people who are different kind of like need to be more accepted a little bit.* Some people, *some, like think that we're different, not like the same at all. And I just wanna, I wanted to like make a message to say that we're all friends, no matter what*. *My tone of voice was to be a bit calm and also comforting at the same time and the reason why I think it relates to the image, is because we're all human beings, no matter what*. And the reason why I chose the design choices was because I thought the colours would fit well and it's overall a calming colour. The main message is *to accept everyone no matter how different they are. I think it will improve the community so people can be more accepting of others*. My theme to achieve the message is to everyone to be nice to each other no matter how different they are. What I am most happy about.. I like the friends and the fonts as well.

Maria: It's really really nice and I think the message is really important [...] And I love that the tone of voice it's calm but confident, I think that's really nice. So thanks very much. So we just have a couple of minutes for people to give their feedback there, [...]

Maria: [...] *A lot of you noticing I suppose the importance of colours, we mentioned that a little bit in the last thing*, so I am trying to see.. so the next person may be.. So if we go up to Lucas..

Lucas: Yeah. Okay, so *I chose this idea, because I had lots of good memories of the youth cafe*. And the tone of voice I would say, would be kind of engaging and maybe like to catch people's eye. And my design choice of colour, image and typeface. I didn't have much typing, while I like to have images of Northrock, because it's a nice place and the colour *I wanted to be orange, like a striking colour. Like when people are walking past, they look at it*. And the main message is to save the youth cafe, you know, bring it back. *The piece could improve the community by, well, it's a really.. I don't think it will improve it much, but it's a nice place for kind of 12-13 year olds to hang out on some evenings*. The obstacles for achieving my message would be that n*ot many people attended the youth cafe, so not many people will be too interested and that's why I chose orange, to get people interested*. The thing that I am most happy about with my piece is probably the big meme in the middle.

Maria: Great, thanks very much Lucas.. So the thing that people like the most, any sort of advice you give Lucas going forward if he's doing more posters and why is the message important, [...] *So a lot of people enjoy the meme. Yeah it's mad how powerful memes are,* like it's coming up in all the boxes, people would laugh at it. They are very simple, but they are very powerful when people laugh so, that's always good. *Yeah it would be nice if we had more time to have a conversation about memes and why are they so powerful* And if you

think of your first answer, so for example how would the piece improve [Northrock]. People will laugh at the meme, so then you have a first answer, *when it comes to critique you have a first response and then you have to ask yourself, why is that good. So why is it good that people are laughing? And you just keep querying, keep questioning your responses, but why?* If this helps your critique. So that's that. Haha, somebody put a nice little robot graphic on it. So I guess it's time to move on.

Aaliya: So why I chose this idea was because *the media has potrayed the wrong message of women wearing the hijab. They sort of showing the negative side of it*, *I just want it to show that's not that. I want people to look at the person.* The tone of voice is to stop and think, that's what I wanted to convey for both of them really and that *the hijab is calm and it's no threat whatsoever.* But for the one *with typography I wanted to also have a bold presence, you know, just to catch the eye*, I suppose my main message of it as it is, is that *I want everyone to be included and there to be no discrimination and towards the hijab and that can sort of relate to everyone*. Anybody who stands out, or anything along those lines. Why I liked this and *why I liked working with this type of media was because I got to try something new*, I have never worked with double exposure before. And *I love the way technology can change something from imperfection to perfection* and yeah.. that's it.

Maria: That's excellent Aaliya, you really achieved. Like you had some really interesting ideas that (lost connection) love the image of a woman with a hijab and the hijab is all text and you were interested in doing something like that, so I think you really got it and first you were saying you wanted it to be eye catching, it really is, [...] So if we could get a bit of feedback on that. [...] Oh yeah so *someone's past or clothes doesn't define them, very nice*.

Brian: Okay so I chose this idea as *I think farmers need to be more valued in our community*. [...] The main message of my piece is that we need to

support our local farmers. Eh what was the next one? Oh how could this message improve the community? *It can improve the community because farmers can be like more respected and feel more welcome*. The main obstacles in achieving my message are *that there are some vegans that don't like some farmers, so that's a bit of a problem* and then *the part of my piece that I am most happy about is my slogan as I think it makes people really think about it*.

Maria: Great, thanks very much Brian. I think the poster looks great, really nice composition. When I say composition I mean the way things are laid out, [...] So for feedback there's people starting to type away there already. *Tip, discriminates vegans.* But the thing is vegans do actually.. you know farmers grow vegetables, so.. vegans also need farmers. *Top, great. Discrimination against vegans. Farmers will rise up. Lovely class and (?). Lovely tractor yeah*.

Arthur So my one was originally to help restaurants, but it might affect business negatively, so I changed it. So my one's (lost connection) there still is a pandamic going on, so you have to keep social distancing and you have to like regularly wash your hands and use hand sanitizer and wear a mask when in public places, such as restaurants, cafes and shops. And then *I tried to use bubble writing, seem less informal at the start. I don't think I wanted it to be too formal. And then for the other writing is a different font, that is more formal. So that way it would seem more informative.* And *for the word community I used different colours, because there's a lot of different people in the community*. And then I just did little drawings for some of the information. I am most happy about how the bubble writing turned out.

Maria: Great stuff. I really like your mix of digital and hand drawn, [...] what do you see are the obstacles in this? As in like, so trying to get people to do their part for the community by following the guidelines. What do you think stops people from doing that? Or do you have any thoughts on that?

Arthur: A lot of people don't think that they will get covid-19 and that like prevents them from following the guidelines, because they think it's not something that is going to happen to me.

Maria: Yeah. So maybe there is not enough of a feeling of like caring for other people [...] we've been over two minutes for people to adding the top thing they liked the most about it, their tip for if you were doing this kind of poster going forward and then why is this message important and how does it improve the community? *So the (?), use of colour, likes the different drawn images. I think the drawn images are really eye catching, very cool colour, very nice bubble writing*. You would say then *a tip (lost connection) more colour in the black and white image*. Oh yeah, which is more colour to the right side maybe. So these are things to think about and it can be, I guess *yeah you want to encourage everyone when developing this critique thing it can be really difficult to make suggestions and then as well, it can sometimes be difficult to take the suggestions, so it's more like for people thinking next time I am making something.. maybe I can consider this or that.* And you can also decide, no actually (?). *The message is important to support the restaurant. To stop the spread of covid. Supporting local businesses*. And then how does that improve [Northrock], so if we think about how does supporting local businesses improve the community. What would you say? Okay so that's that timer, so we might move up.

Liam: Yeah. Ehm, so *I chose this idea as I think teamwork is very important*. My tone of voice is an enthusiastic tone of voice and the main colours are blue and green and I think the inclusion part of my piece is working as a team includes people. *I think the main message of the piece is how important teamwork is and I think my piece could help inspire people to work as a team, but people may not see my piece*. And I am most happy about my poster.

Maria: I think it's excellent. [...] So for the top, *teamwork dreamwork, very good.* [...] And then I need tips, things that could improve. Why is it important? So why is the message of teamwork important? And then how does people kind of believing in teamwork, how does that improve Northrock? [...]. *Wow there's something crazy happening in the Miro board. For me anyway it's going all purple.* What's going on? Okay it's kind of back again, I don't know if that was just me. *So concentration span is starting to get a little bit more down I think, haha. If people are getting tired, I know giving feedback is tiring as well.* So if people are getting tired, maybe just if we could move on even if we have like one or two things in each box that are (?). *I like the images and the drawings, but I don't know if it's that helpful. Lovely colours, there's a me in team, that's kind of against the message, or it could be part of the message that each person is part of a team maybe*. So then if we think of one reason why teamwork improves [Northrock], can anyone write anything? And then we might move on to the next one, because people are getting tired.

Patrick: Okay so. Why I chose this idea, *I chose this idea because St Vincent de Paul I feel doesn't get enough recognition for their support it brings the families.* And *it is also very central part in the community, because you know it's in main street and a lot of people kind of avoid it or neglect it and I feel it should get more recognition* and it should get more support for what it actually does and yeah. So what is my tone of voice. *The tone of voice I am trying to create is kind of the blue is for loyalty more or less, to show loyalty and how trustworthy the organisation is as the charity and I have different umbrellas as well to show that.. like all the umbrellas are different colours, so that kind of shows how everyone is diverse and links back into the whole inclusion aspect of St Vincent de Paul in the community and I feel the umbrellas also emphasize how they provide shelter for those who really need it in the community and the red letters really draw you to the SVDP kind of, which highlights the main message, that they support various diverse people*.

Which is very important. Which also links into how you know*, the community we're all diverse and everyone is different and how Saint Vincent de Paul links into that*. And I would have also like to have put red letters in the supporting various diverse people, but I didn't have the time and yeah.. so yeah that's the tone of voice. It's more thought provoking, you know, *the red kind of alarms people and draws people into that SVDP to emphasize how much support they give and you know how they are very much promoting inclusion and diversity into the community*. [...] Yeah so.. the next.. The main message of this piece is kind of just to you know give them more support and they need more recognition and, you know, as in to support them so they can give support and do anything you can to help them protect the, or help them support those families in need*, cause often people neglect charities and think they can't give, but you know, even anything, any little thing they can give, whether it's time or a bit of clothes, can help*. The obstacles of achieving my message are that [...]*people can ignore them often, you know, because in today's society we are very busy people.. and the obstacle is really people ignoring them.* And the thing I am most happy about is how the image really.. because the image really catches it all. It shows how everyone is diverse and (?) down on how they protect everyone with shelter and I thought that was a really good image.

Maria: Excellent, thanks very much Cian. Really detailed presentation there and I really agree with your message and what you are saying.. [...] Why is this message important? So this message that we need to support various diverse people through donating clothes and volunteering and then if people do that how does it improve the community? *Supports SVP. Cause it's helping a cause. Makes people more aware of SDVP.* Absolutely. And then it improves Northrock from helping SVP and it will improve the (lost connection). Makes people more aware. Absolutely. Okay*, improve the lives of other people.* Excellent. That's a really important one. So then we are on to the final one, well done guys, I know it is tiring giving presentations and listen to presentations and giving feedback is all tiring. So people have actually started already giving

feedback to Molly, but Molly would you like to give a presentation on your piece please?

Molly: Yes. So *I chose this idea because I think people don't pay enough attention to the surrounding nature.* In terms of tone of voice, *I kind of wanted it to sound calming and with my design in colour I tried to make it a bit more cartooney than realistic and some calming colours in the back, like the sunsets*. *It could improve the community by maybe getting people to go outside more, getting them to notice more, just maybe look around a bit more*. I think *the obstacles in achieving this message would just be getting it around like.. for people to see it more*. And then I think what I am most happy about in my piece is the way it came out, the way the came out.. I guess the trees.

Maria: Thanks Molly, really nice. I think the trees are lovely as well and you have lovely shading on them I think, which is great. [...] A tip *the message could be more clear.* So nature.. *well maybe there could be an extra thing about like, so for example in [Northrock] maybe we need more green spaces*. We have the.. *someone's going wild and drawing all over the board.. we have like the pitch obviously and we have the lake with the swans, which is really nice, but maybe we need more parks or something like that*. So if there was gonna be a message for the community, maybe something like that could be added in. *More green spaces in Northrock,* maybe this could be something. So why is the message important? Someone is typing there. *Nature is.. Oh yeah is often neglected and we should appreciate it more, absolutely.* [...] And then if we think of how it could improve [Northrock]. Then we're nearly there. So I just say while we are doing this as well. [...] *So yeah we should protect the nature, we have support vegans eating nature, vegans need things to eat, seeing green spaces it's good for people's mental health, that's a really important one actually.* Absolutely. *And having peaceful places and stuff like that.* I guess *in Northrock lots of people have gardens, but it still would be lovely to have an actual little park, because there are places where people can meet and walk around and*

stuff like that, with like flowers (lost connection). Absolutely. That's a really important one actually, [...]. So if I zoom out on everyone now, we have a really vibrant miro board with tons of feedback, really nice pieces. I didn't really get as far as talking about Dawn's and we are kind of out of time now, but it's a really nice one, so I might actually send it in the Whatsapp so people can see it and it's about the youth cafe as well. And of course if people, the board is available to ye [...] People are actually typing, so let ye type away, because I am sure she would love the feedback. *Youth of Northrock have a lot to contribute to the community, we have lots of ideas for the future of the community, but at present we have nowhere to share them, our youth cafe is closed. We need your help to make a new space where all teens can go to feel welcome and to share new ideas. Can you help us? Excellent*. [...] So people are giving feedback, so that's excellent, *[...]. So the way the text and the images are structured is lovely.* Yeah (lost connection). And the message is really clear. And o*ne of the tips is that we already the GAA pitch, I guess she's thinking of like a space that's maybe more multi use, cause the GAA is supposed to be just for sports*. And *of course the community hall as well, but that's also a space that loads of people use*. So to have a place that is just for the youth club would be really nice for people. [...] So *it supports young people in their Canadian Goose jackets (lost connection), is that an in-joke or should I know what it is?* Maybe it's okay if I don't know. *Helps people feel included. Already have the GAA pit and have people use it, so why it's needed to invest money in stuff that people won't use?* [...] *Base of operations we're all entrepreneurs.* Yeah that could be for that kind of stuff. Organising little festivals and stuff.

Geertje: Seems like most people are kind of done with their feedback, *so I think we should try to close the session now and people who still want to continue give more feedback and just do it afterwards. But I think otherwise it might take a bit too long for everyone.*

3.2 Example of summer school reflective notes

The following is my reflective notes on the session represented in the transcript above. (Note: *This* indicates a 1st level code)

Very little chat as usual but they started adding pieces to the miro board pretty much immediately. The *miro board activity went well, dialogue was fairly rich with lots of images, jokes, and teasing amid some really useful and insightful comments.* Again *I was trying to walk a line between prompting deeper thinking and critique without actually leading comments*. I narrated the miro board feedback as best as I could bearing this tension in mind. *I am a bit concerned that I might have been talking too much, hwoever. There was controversy around the youth cafe! Something we could have explored a bit more in person. Many participants felt it was not necessary because of the GAA pitch I will try to explore this more in the follow-up interviews. There was very little feedback for Aaliya's idea, which was probably the most impactful / somewhat controversial / topical. I'm not sure they really knew how to engage with it, so that's something that could be explored again in the follow up sessions.* Their ideas and feedback were all good, but *they have trouble pushing beyond the obvious*, that's a skill that takes a lot of developing. Definitely *by the end patience and attention was running low, again I think the online aspect is part of this*. *I am definitely grateful for the Miro board as I think if we were relying on people talking, we would not get very far*. *The "vegan" comment kind of threw things off as everyone started joking about vegans, but this needs to be allowed I think to have a fun atmosphere and not have it feel too much strict*.

With regard to design decisions -

Teresa - tone is happy & welcoming, *didn't say anything else in terms of design decisions, didn't mention colour or typeface*. She thinks it spreads positivity which is her favourite thing about it. Has diversity in the graphic to

show that everyone is welcome – *understands diversity in terms of sexuality, disabilities & different races.*

Deirdre - tone of voice is happy & enthusiastic *- lots of bright colours, no other mentions. Other participants are mentioning different fonts as a strength.*

Beth - some people need to be more accepting of people who are different*. Tone of voice - calm & confident to say we're all friends no matter what*. She choose those colours because they were calming & thought they would fit well. She really likes the "friends" colour & typography. *Beth is really vulnerable and brave in making and describing this piece.*

Lucas - tone of voice is engaging & eye catching. *Used images of Northrock as "it's a nice place" - no real consideration of the type of image*. Used orange as it's a striking colour & it grabs attention. *He's afraid not many people went to the Youth Cafe so not that many people would be interested, so he's using orange to try & get people interested.*

Aaliya - wants to change the message portrayed by the media about the hijab. Tone of voice - to stop and think, calm & unthreatening. However trying to be bold with the typography to catch the eye. *This was another very personal work that she handled very bravely and openly I think.*

Brian - tone of voice - eye-catching, bright but not too bright. *Brian chose to have the cow in the background of his zoom - is that just for this project?* He jokes a lot but is definitely very passionate about this issue.

Arthur - Tone of voice - bubble writing cos it's more informal. *Using the contrasting font to seem more informative - contrast with the informal bubble writing – shows a nice amount of reflection on the aesthetic value and*

communicative meaning of what he is doing. Used different colours in "community" to show diversity. Most happy with the bubble writing

Liam - Tone of voice - enthusiastic. Has main colours blue & green - doesn't say why he has gone with them. Questions re typography, why did he go with these? Why did he put the image down the side? *Seems to struggle in really explaining his ideas and motivation, maybe he just didn't connect with this project? Something to explore in the follow-up session.*

Patrick - Tone of voice - loyal, trustworthy - this is why he choose blue. Umbrellas are different colours which shows that they deal with diverse people & emphasises how they provide shelter. The red letters draw you to the "SVDP", He emphasises the diversity through his slogan as well and sees SVP as linking into that. Going for a thought-provoking tone of voice. The red alarms people and draws people into it. He wants to shine a light on how much support they give. He's very pleased with the image - diversity & protection. *He is very passionate about the organisaion, which is really nice to see and connects back with points in the focus groups about the importance of volunteering in the community.*

Molly - Tone of voice - calming. Design & colour - cartoony rather than realistic, went with calming colours in the back eg sunsets. *Overall, Molly was one of the quieter participants but she has definitely thought deeply on her image and is very connected to the message behind it.*

3.3 Summer school data analysis

Dr. Slingerland and I analysed the data together over a series of online zoom sessions and individual sessions. We both used NVivo and found it useful to compare coding and analysis decisions. Again, we used a reflexive qualitative thematic analysis.

We created an initial codebook based on our research questions and the previous studies. I was particularly looking for how the process (adapted from the digital storytelling workshops) supported participant articulation and critique of own and other experiences with a view towards imagining alternatives. I wanted to see where the moments of dissensus happened, and where they were missed, with a view towards designing for them in future. Once we had finalised the initial codebook, we separately coded the entire dataset, adding extra codes as we saw them in the data. This process took a number of weeks as the dataset was quite big. We met weekly to discuss our progress through the dataset and to share our experiences and reflections on the process as it developed.

Once we had finalised our two sets of first level codes, we met again online to talk through what we done. We both presented our own first level codes and then discussed them all, bringing overlapping codes together and making sure we had the same understanding of the dynamics or phenomena represented by each code. Section 3.1.4 below gives an example of how this process was visualised. This resulted in a set of 24 codes.

We then went through the entre dataset again, re-examining all data against the list of second level codes. We then met again online to discuss naming themes based on this second pass at coding the data. I really enjoyed the experience of deep discussion on each theme, the naming, meaning and implications of it, with a second researcher who was as closely familiar with the entire dataset as I was. The final themes were: articulating personal experience, recognising other experiences, doing SEA online.

The study resulted in three papers. One of which is a chapter in this thesis: "Socially Engaged Art inspired approaches to community-based design with rurban young people" and is accepted for publication in the CSCW journal. "Design Probes in a Pandemic: Two Tales of Hybrid Radical Placemaking from Ireland and Australia" won best student paper and was published in the proceedings of OzCHI 2022 and "Participatory Design going digital: Design

principles for an online Summer School for place-making" was published in the CSCW journal in 2021.

3.4 Example of comparing summer school codes

The following is an example of a table used by Dr Slingerland and me to compare and contrast our separate sets of first level codes.

Maria	Geertje
Designing for Equitable Participation ~~Taking ownership of the process~~ + Equitable Participation + Decolonising HCI moments + Feminist HCI moments + Barriers to sharing experience + Handling vulnerability + Playfulness + trolling?	Influence and decision-making + spontaneity + Self-sustaining + Tune way of working + Flexibility of workshop + Unexpected use + Chat function + Struggle to explain message + Hesitant to share idea in group + playfulness
Facilitation ~~(design theme)~~ + Facilitation issues + How to facilitate the sharing and critiquing of ideas online + Facilitating the exchange and critique of personal ideas & perspectives	Talking too long + Introducing materials, platforms, tasks + Supporting conversation + Supporting discussion
Constraints and benefits to working remotely on creative ideas + Missed opportunities for dissensus	Influence of online setting + Technical challenges + Limited knowledge of media types + Scattered instructions + Miro is easy to use + Variety of platforms

Constraints and benefits to creating artwork using digital tools	Limitations of digital platforms + demo tools + Experience with digital art tools
Supporting individual reflection and refinement of idea + Impact of SEA activities on understanding of inclusion development of idea + Impact of presenting and critiquing work on their understanding of inclusion development of idea	Adjust message + Co-creation with facilitators
Relationship Building through the SEA Process + Building trust through engaging with the SEA process + Interaction dynamics between researcher & participant	Connection + Miro boards support conversations between participants
Efficacy of SEA process + Impact of materials + The efficacy of ideation activities to create and critique ideas? + Workshop evaluation + Thinking through SEA processes	Appropriateness of used materials + Disengagement with materials + Supporting materials + Miro boards support message development + Fall back on workshop process
Articulating experience + Identity (understanding of the theme) ? + Resilience (understanding of the theme)?	Articulate message + Articulate perception + Influence of group setting + Participants background
Difficulty to refine ideas Low level engagement with idea + Difficulty with abstract thinking + Misinterpretations + Very literal interpretation of design	Stuck on superficial level + Mix up message effectiveness and visual attractiveness + Difficult to pinpoint obstacles
SEA creating opportunities for provocative dialogue dissensus + (re)framing experience + Making invisible experiences more visible + (re)thinking what is taken for granted	Learning about new voices + Reflection
Critical Thinking ~~Criticality (design theme)~~ + Perceived value inherent in a design	Critiquing Northrock + No message-related feedback + Analyse art piece
Creating change in the community ~~Provocation (design theme)~~ + Potential for behaviour change	Collaboration + Activate community + story impact + Challenge message

Difficulties engaging in the process + Moments of negativity, hostility or disillusionment	No discussion among teenagers - Not asking questions + Disengagement + Bored + Misses homework activity 2 + Misses homework activity 3 + Misses homework activity 4 + Misses homework activity 5 + Unsure about workshop task
Building empathy through design + ~~Empathy (design theme)~~ + Moments of expanded awareness of inclusion or diversity + Revealing and challenging stereotypes?	Relatedness + Being accepted + Appreciation + Included in community + Increase awareness + Supporting others
Creative exploration of design idea. Exploration (design theme) + handmade work + Digital creativity	Creative exploration
Motivation to create work	Story motivation + Interest in arts + Envisioned effect + Discovery as motivation + Learn something new
Moments of good engagement with the process	Proud of end result + Create hashtag or slogan + Catching up homework + Revisit homework + Message is understood by peers + <u>Co-creation with peers</u>
Relationship between design decisions or aesthetic choices and idea ~~themes chosen~~ + Initial stage of artwork	Translate idea to art piece + Story elements? + Foreseen sharing?
Ways of connecting with the community + Socialmedia as a vehicle for SEA	Sharing on social media + Recognising social media + Foreseen sharing + Share in physical space + Locations
Knowledge making re. challenges to and strengths of the community + Inclusion (understanding of the theme) + Initial understanding of inclusion in the community,	Agree with message + Engagement with messages of others
Emerging social participation	Sense of community + Discuss messages with people outside of workshop + Emergent follow ups

Descriptive definitions of rurban + Evidence of the rural in the rurban + Evidence of the urban in the rurban	Connection to Northrock
Experiences of diversity in the rurban setting + In group Out Group + Recognising differing rurban experiences + Rurban experiences of young people + Sociocultural definitions of rurban + Symbolic definitions of rurban	Diversity of ideas + Acknowledge differences
Public space queried by SEA activities + (re)configuring space	

3.5 Supplementary material chapter 9

3.5.1 Supplementary material 1: Content of digital summer school

W	Articulating experiences	Digital making	Reflection
W1	What message do you want to communicate? For who will you make your piece? What do you want to achieve with your piece?	Consider an existing digital art: What message does this piece communicate? How does it communicate this message? Is it effective? Why (not)?	Find a digital artwork that communicates a message similar to yours, and analyse why and how it works
W2	What is your message? Who is your audience? What do you want to achieve with your piece? Where do you reach your audience?	Create a quick poster of your idea - using 1 key word and 1 key image, using ObamaPoster-Maker.	Which unique perspective of Northrock do you want to highlight in your artwork? Find a location that connects to your idea and take a picture of it.
W3	Shared mapping of important locations in Northrock on Google Maps	What if a newspaper wrote about your idea? Make a newspaper clipping.	Sharing your idea with Northrock: How could you share it digitally and in-person? How would you like people to re- spond to your idea? How would you like to discuss your piece with the audience? Do you want people to take action when they see your piece?
W4	Critiquing the artworks of each other What can you see in the work? Describe the tone of voice. What other messages can you see in the work? How else could this work reach its audience? How else might this work make change in the community? Could this work help diversity and inclusion? How?	Make a breaking news item of your message, using Breaky-ourownnews.com	Think about how to share your idea online. Create a social media post with a slogan, image, and short text

W5	One-on-ones with facilitator to talk about final articulation and artwork	Create a meme about your work	Reflect on tone of voice of your art- work: Which colours, typography, image style fit with your tone of voice?
W6	Final presentations - Why did you chose this idea? What is your tone of voice and how does it relate to your design choices with colour, image and typeface? How does this piece relate to theme of inclusion and diversity? What is the main message of the piece? How could this piece improve the community? What are the obstacles to achieving your message? What is the thing you are most happy about with your piece?		Providing tip-top feedback to your peers: What did you like about the piece? What is a suggestion for improvement? Why is the message of this piece important? How does this piece improve Northrock?

3.5.2 Supplementary material 2: Content of chatty bench

Week	Articulating Experience	Reflection	Digital Making
Week 1	How was your week? What are the key events that happened? What was the best thing that happened this week? What were your greatest challenges this week?	What brought your to KGUV? When did you move to KGUV? What is your first memory in KGUV? Injustice in your neighbour- hood: Creating a map of your story (Part 1)- action | person | setting	Draw your Twine story here. Hot tip: Use the yellow post-its & Index cards to help
Week 2	How was life this week? What made you happy this week? What made you uncomfortable this week?	Draw your route from home to other places you go to most, e.g., work, uni, a park etc. Injustice in your neighbourhood: Creating a map of your story (Part 2): What were the challenges you faced in your story? What did you learn about your- self during this time? How did you overcome those challenges? If a similar situation happened in the future, how would you do things differently?	
Week 3	What did you struggle with this week? What are you passionate about this week? What gave you hope this week?	Imagine living on the moon. What would that look like? Who would be with you? What does your house look like? What would you be wearing?	What do you places in your Twine story remind you of? List places and the media
Week 4	What were you excited about this week? What were you annoyed by this week? What were you delighted by this week?	Friends in KGUV & in Brisbane - Tell us about a friend in KGUV. What is their name? What do they do? Where are they from? How long have you known them for? How do you know them? Where did you meet them? What did you talk about? What did you eat? Draw them from memory	Who are the characters in your story? Who are they based on? What is your important memory of them?
Week 5	What scared or frightened you this week? What amazed you this week? What are you grateful for this week?	What are the 4 objects in your house that give you joy? Map where they are in your house- write about them/draw them. Where is home? What is home? What makes home? Write or draw.	

3.5.3 Supplementary material 3: Enlarged figures of probes



Fig. 6. Northrock Probe (Slingerland and Murray 2020)



Fig. 7. Northrock Probe (Slingerland and Murray 2020)

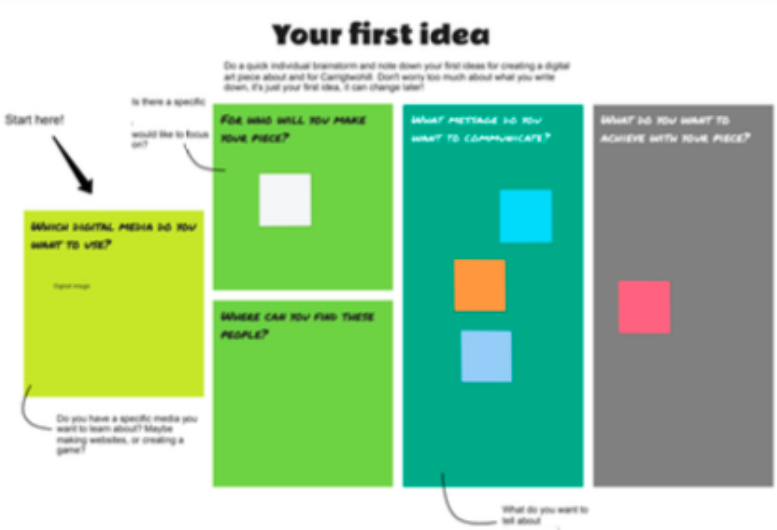


Fig. 8. Northrock Probe (Slingerland and Murray 2020)

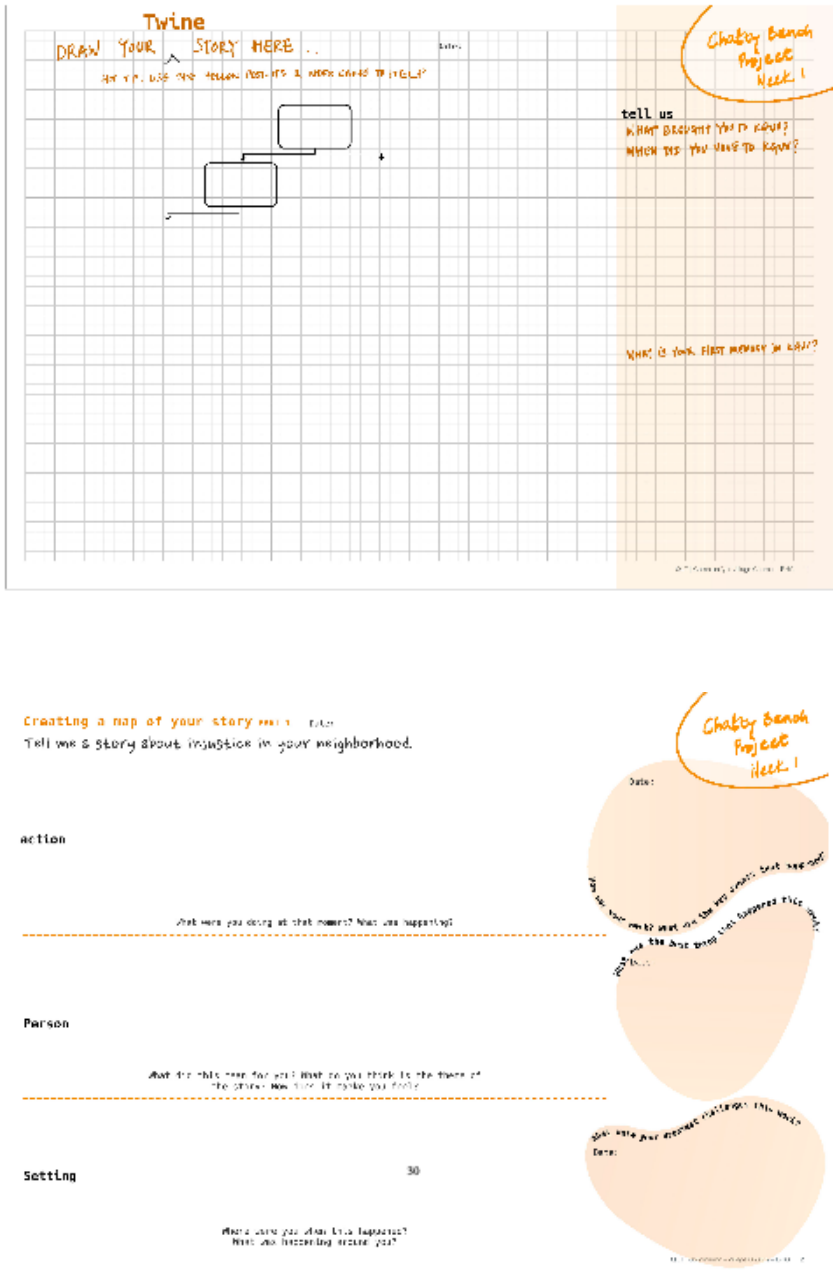


Fig. 9. Brisbane Probe Week 1 (Gonsalves 2020)

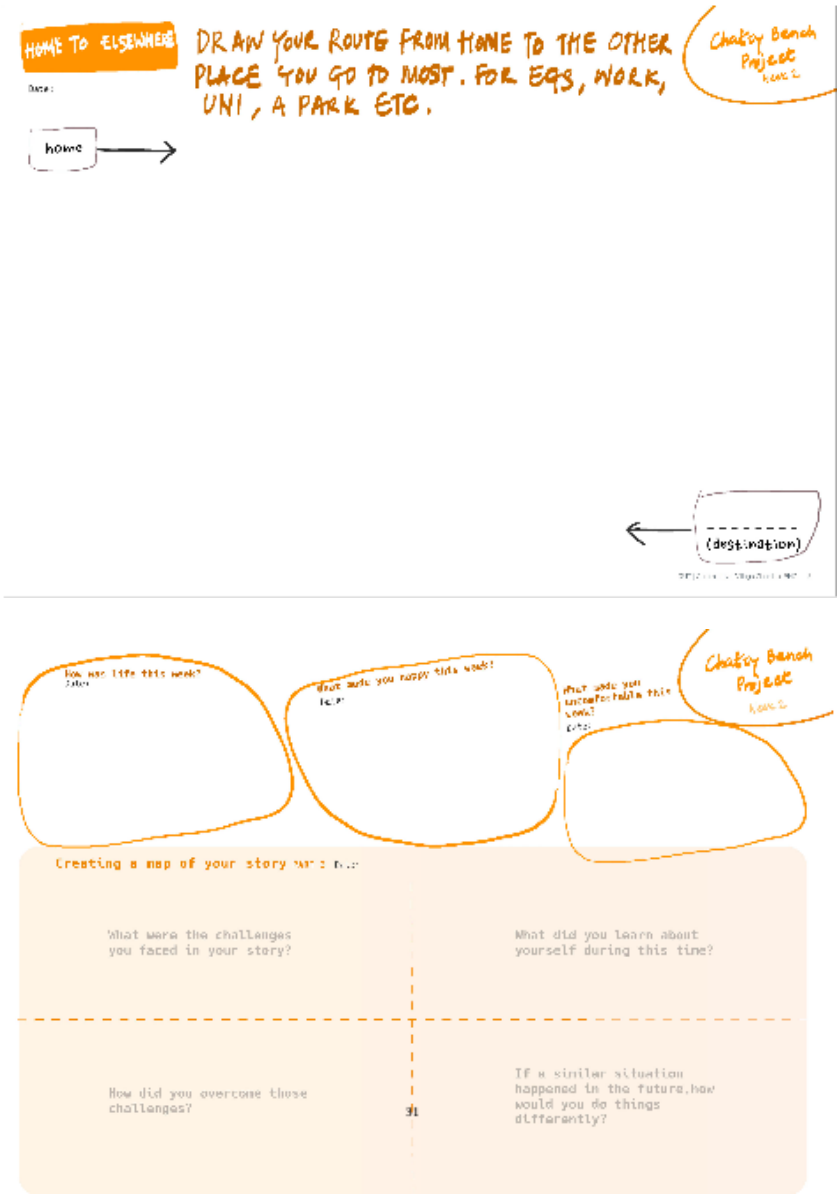
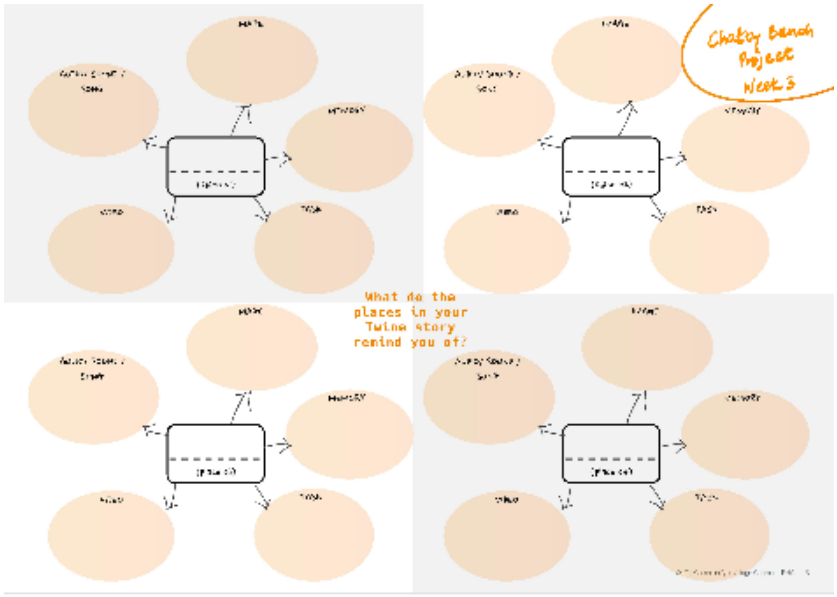


Fig. 10. Brisbane Probe Week 2 (Gonsalves 2020)



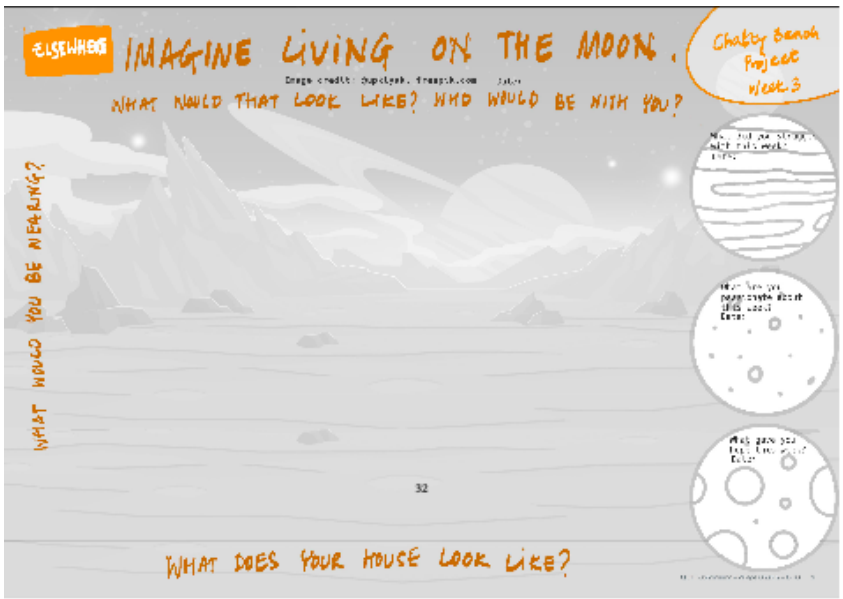


Fig. 11. Brisbane Probe Week 3 (Gonsalves 2020)



Fig. 12. Brisbane Probe Week 4 (Gonsalves 2020)

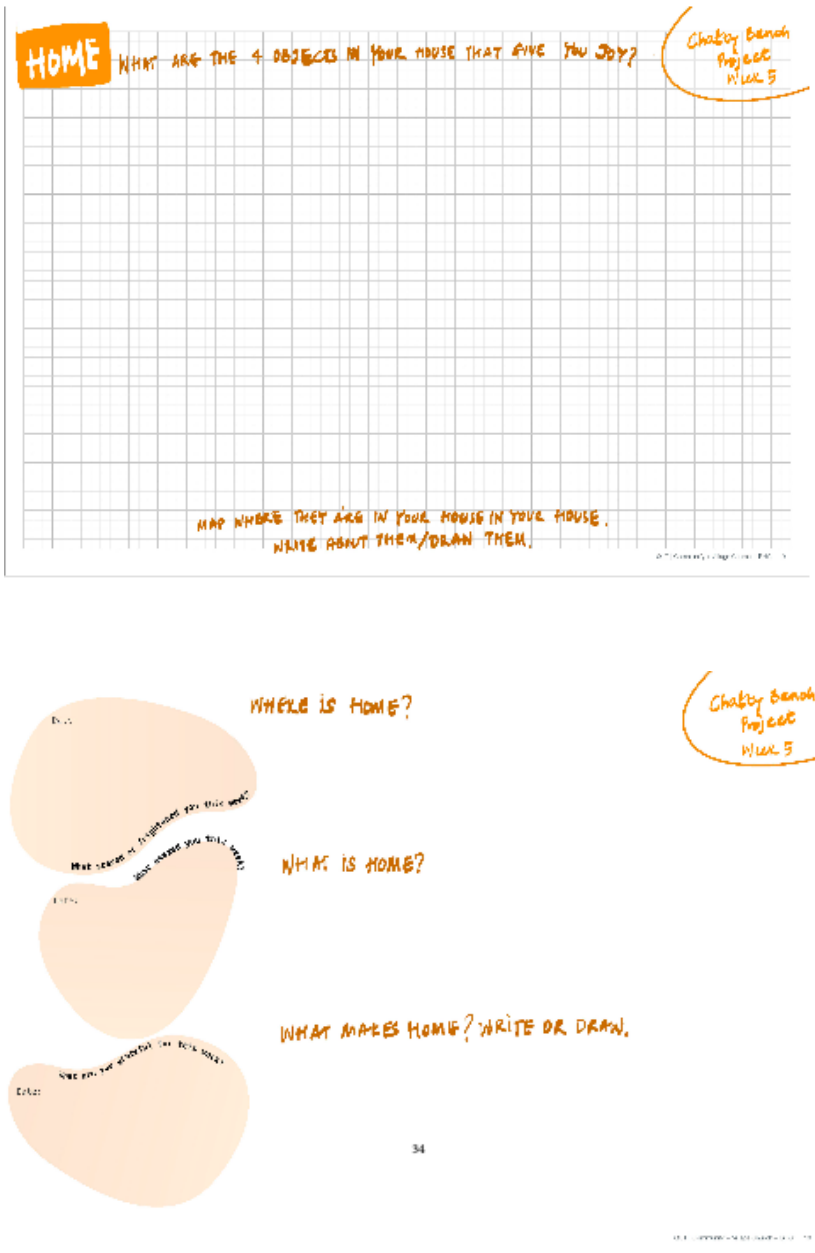


Fig. 13. Brisbane Probe Week 5 (Gonsalves 2020)

4 Final ethics application

Ethics application for this thesis involved a process of re-submission of the ethics form for each study. The ethics form below is representative of the final approved ethics application which includes all interview schedules, preliminary workshops design, information sheets and consent sheets.

University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

Ref.No.0206202006

ETHICS APPLICATION FORM

School of Applied Psychology UCC

(adapted from UCC Social Research Ethics Committee documentation)

Introduction

UCC academic staff and postgraduate research students who are seeking ethical approval should use this application form.

If this is a re-submission please use ~~strike-out~~ to indicate what you have deleted and highlight in yellow any additional information.

APPLICANT DETAILS

Name of applicant(s)	Maria Murray	**Date**	02/06/2020
Department/School/Unit, & Supervisor's Name	School of Applied Psychology, Prof. John McCarthy, Dr. Nadia Pantidi (Victoria University of Wellington), Dr. Trevor Hogan (CIT)	**Phone**	086 4080415

Correspondence Address	Villa Roma, 98 Doyle Road, Turners Cross, Cork.	**Professional Email**	117223045@umail.ucc.ie
Title of Project	An investigation of the role of digital technologies for community resilience and sense of identity in rapidly expanding rural communities		

Authorisation

Date when this research was considered by the Ethics Committee of the School of Applied Psychology

Result (please check one):

Approved	
Approved with minor comments (resubmission is not required)	
Approved pending clarification (a list of sections and required clarifications must be made below or appended)	
Approved pending approval from external body (the body or bodies from which approval is pending must be specified)	
Not approved	
Referred to Social Research Ethics Committee (SREC)	
Other	

Feedback for the applicant:

Reviewers' signatures:

Date:

Application Checklist

This checklist includes all of the items that are required for an application to be deemed complete. In the event that any of these are not present, the application will be returned to the applicant without having been sent to review. Please ensure that your application includes all of these prior to submission. Thank you.

Completed Application Checklist ☒
Completed Ethical Approval Self-Evaluation ☒
Completed Description of Project ☒
Information Sheet(s) ☒
The Consent Sheet(s) are GDPR Compliant ☒
Psychometric Instruments (citation) / Interview / Focus Group Schedules ☒
I have consulted the UCC *Code of Research Conduct* and believe my proposal is in line with its requirements ☒
If you are under academic supervision, your supervisor has approved the wording of and co-signed this application prior to submission ☒

CLINICAL RESEARCH SELF-EVALUATION

If the research project is clinical in nature, then it must be referred to the Research Ethics Committee of the Cork Teaching Hospitals (CREC).

The requirements of CREC are set out in the Committee's manual, which is freely available from the secretariat (crec@ucc.ie). In broad terms, prior approval is necessary where the research methodology involves:

		YES	NO
1	Therapeutic interaction with a human participant		☒
2	A clinical trial of, inter alia, a medical device, medicinal product or clinical technique as stipulated under relevant legislation		☒
3	Development of diagnostic techniques using human participants		☒
4	Access to, or utilisation of, human tissue and body fluids		☒
4	Access to, or utilisation of, identifiable medical data concerning individuals (such as clinical records) by parties not directly concerned in the provision of care to these individuals		☒
5	Interaction with / observation of individuals in a healthcare contact or setting		☒
	If yes to any of the above, consider whether your ethical application needs to be referred to the CREC. If you judge that it falls under the jurisdiction of the School of Applied Psychology, please justify this decision http://www.ucc.ie/en/research/ethics/		

SECONDARY DATA ANALYSIS

If this data is not sensitive and there is minimum risk of disclosure of the identity individuals, then the data may be used without ethical clearance.

		YES	NO
1	Do you consider that this data is sensitive and /or there is a risk of disclosure of the identity of individuals?		☒
2	Did the original study receive ethical approval, if YES, please attach documentation confirming that.	☒	
3	Will the data provided to you will be completely anonymous?	☒	
4	Will it be impossible to identify participants from resulting reports?	☒	
6	Will the use of the data not result in any damage or distress?	☒	
7	Was consent secured for the original data collection and were participants asked if they were willing to have their data archived and made available?	☒	
8	Does the analysis focus on potentially sensitive personal data? Please specifiy the nature of the data to be analysed in the description of the research*	☒	
9	Is the data protected by legislation or particular archival restrictions?	☒	
10	Is your use of the data GDPR compliant?	☒	

* Racial/ethnic origin of the participant, Political opinions,

ETHICAL APPROVAL SELF-EVALUATION

		YES	NO
1	Do you consider that this project has significant ethical implications?		☒
2	Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	
3	Will participation be voluntary?	☒	
4	Will you obtain informed consent in writing from participants?	☒	
5	Will you tell participants that they may withdraw from the research at any time and for any reason, and (where relevant) omit questionnaire items to which they do not wish to respond?	☒	
6	Will data be treated with full confidentiality / anonymity (as appropriate)?	☒	
7	Will data be securely held for a minimum period of ten years after the completion of a research project, in line with the University's Code of Research Conduct?	☒	
8	If results are published, will anonymity be maintained and participants not identified?	☒	
9	Will you debrief participants at the end of their participation (i.e. give them a brief explanation of the study)?	☒	
10	Will your project involve deliberately misleading participants in any way?		☒
11	Will your participants include children (under 18 years of age)?	☒	
12	Will your participants include people with learning or communication difficulties?		☒
13	Will your participants include patients?		☒
14	Will your participants include people in custody?		☒
15	Will your participants include people engaged in illegal activities (e.g. drug taking; illegal Internet behaviour)?		☒
16	Is there a realistic risk of participants experiencing either physical or psychological distress?		☒
17	If yes to 16, has a proposed procedure, including the name of a contact person, been given? (see no 25)		

18	If yes to 11, is your research informed by the UCC Child Protection Policy? http://www.ucc.ie/en/ocla/policy/	☒	
19	The Consent form(s) are GDPR compliant	☒	

DESCRIPTION OF THE PROJECT

19. Aims of the project (the research question being investigated)
This PhD research project aims to investigate the challenges faced by rural communities undergoing rapid expansion, with respect to the communities' identity and resilience and to identify whether and how these can be supported using digital technologies.

The research will examine the challenges to, and strengths of communities in this state of flux. It will look at how communities define key concepts around resilience and identity. It will focus on creative digital technologies and creative place-making as a means to potentially build resilience in these scenarios. It will look at how this might be designed and supported, as well as any possible impediments to this process. The research will also focus on how to equitably and broadly involve a community in such a process.

20. Brief description and justification of methods and measures to be used.
The aims of the project will be addressed using a phased participatory action research approach, through group interviews and workshops.

The initial phase of research will be undertaken with the aim of identifying the challenges and strengths inherent in a rapidly developing rural community and to investigate how these communities define key terms around resilience and community. This phase will involve semi-structured interviews (individual and group) around key themes identified through initial meetings with stakeholders in the community. A sample interview schedule is provided in Appendix 1. The outcome of this phase will inform phase two of the research.

Phase two involves conducting participatory design workshops using digital media to further explore themes and ideas for action that have been developed in the initial phase of research (e.g. identity, resilience). It is anticipated that these workshops will result in the development of co-designed digital media artefacts with the community members. The participatory design workshops will use an appreciative inquiry approach whereby key themes arising from the interviews are expanded upon through collaborative group activity. As the combined result of this activity, group discussion and reflection; the participants, with the researcher, will develop digital media artefacts representing what they feel are the most important and relevant themes and ideas arising from the workshops' process. The initial series of workshops will be run in a school local to the community and will involve approximately 20 transition year students under the age of 18. The second series of workshops will take place in collaboration with a local youth centre and will take place via video conferencing tools in use by that centre. It will involve approximately 10 local young people. All

workshops will take place remotely. It is anticipated that the participants will join the workshops from their homes, as this is the current set-up in use by the Youth Centre to comply with Covid19 guidelines in Ireland. They will use personal devices available to them in their homes. As facilitator, I will conduct the workshops from my home using video conferencing tools that allow for encrypted content.

21. Participants: recruitment methods, number, age, gender, exclusion/inclusion criteria, detail permissions

Participants will be recruited from existing groups within the Northrock community. Northrock has been identified as fitting the profile of a rural community undergoing rapid expansion. Initial participant recruitment will take place through members of the newly formed Integration and Inclusion group in Northrock. The researcher will attend the various meetings of the group and inform local gatekeepers of her research project. The researcher will also meet with other groups in the community, such as the Historical Society and the Tuesday Club (retired women's social group). It is hoped that participants will draw from both long-established and newly-arrived sections of the community. It is anticipated that the researcher will work with various groups over the duration of this PhD project of approximately 10 participants (per group) of no determinate age or gender preferences.

For the initial series of workshops, participants will be drawn from a local secondary school with the support of the school and relevant teachers and will comprise of approximately 20 transition year students under the age of 18 who have volunteered for the workshop series. The second series of workshop will recruit participants through the local youth club. There will approximately 10 young people taking part. Participation in the study will be voluntary; there will be no financial reward for taking part.

22. Concise statement of ethical issues raised by the project and how you intend to deal with them

There are no significant ethical concerns raised by this study as both the topic - that of whether digital technologies can support community resilience - is not of sensitive nature and the participants are not considered to be a vulnerable population.

Informed consent will be obtained before any study commences. Participants will have the right to withdraw from the study at any time up to 2 weeks after data collection. If a participant wants to withdraw from the study during the allotted timeframe, all of their data will be deleted and there will be no repercussions. In the case of minors, both children and parents will be issued with information and consent sheets prior to the workshops taking place. The primary researcher is currently garda vetted as part of her lecturing post in CIT, additional garda vetting has been put in place via the Teaching Council as per the instruction of the school.

Anonymity and confidentiality will be ensured throughout the entire research. Following each phase of the study, data files will be transferred immediately from recording devices to an ecrypted folder on a password protected laptop. Files will then be deleted from recording devices. All original data will be deleted after the right to withdraw has lapsed. The data collected will be stored in an encrypted folder in a password protected file and will only be viewed by the researcher and their supervisors. Any video or photographs captured during the workshops will be anonymised using specialist software. Specialist software will be used to pixelate images and video that might identify participants. Any audio captured will be transcribed and anonymised accordingly.

Participants will also be debriefed at the end of interviews/focus groups/workshops and if they feel distressed, which is not anticipated, contact information of available services (such as the Cork Samaritans) will be provided to them.

Finally, the anonymised data collected in the study will be stored on UCC's OneDrive kept in the School of Applied Psychology for 10 years as per the UCC Code of Research Conduct and this will be explained in the information sheet.

23. Arrangements for informing participants about the nature of the study (cf. Question 3 above).

A brief description of the nature of the study will be given in all meetings with potential participants, with further information available via email on request. If the participant agrees to take part in the study, they will ~~be given~~ be emailed an information letter prior to the focus group/interview/workshop. In the case of minors, these information letters will also ~~be given~~ be emailed to their parents/legal guardians.

The information letter will include information about the nature of the study and what participation in the study involves. The information letter will also include all relevant information concerning confidentiality and anonymity; where the data will be stored and for how long and who will see that data.

The information sheets are attached in Appendix 2.

24. How you will obtain Informed Consent (cf. Question 4 above).

Following briefing on the topic of the study and reading of the information letter by the participant, participants will then be asked to sign an informed consent form. The consent form will be emailed to the participants. The informed consent form will state that the participant agrees to take part in the study. It will detail that their participation in the study is voluntary, the participatory design workshops and semi-structured interviews will be

recorded and participants will have ensured anonymity throughout the entire study. In the case of minors, following briefing on the topic of the study and reading of the information letter, parents or legal guardians of the minors will be asked to sign an informed consent form.

The informed consent form will also include information concerning withdrawal from the study. Finally, the informed consent states that extracts from the focus groups and semi-structured interviews may be quoted anonymously in the write up of the study. On signing the consent form, they will be emailed back to the primary researcher.

The informed consent forms may be deleted once the right to withdraw from the study has lapsed.

The informed consent forms are attached in Appendix 3.

25. Outline of debriefing process (cf. Question 9). If you answered YES to Question 16, give details here. State what you will advise participants to do if they should experience problems (e.g. who to contact for help).
Debriefing will take place immediately after the participatory design workshops. Participants will be asked if they have any questions concerning the study or the area of research under investigation and contacting information will be provided in case of distress. The supervisors' contact information will also be provided in case participants would like to get in touch at a later date.

26. Positive Ethics: What are the benefits of this research: how will in contribute to theory and/or practice, how will it be disseminated, etc
This research will contribute to the understanding of rapidly developing rural communities, specifically in terms of resilience and inclusion dynamics. It will also contribute insights into how digital socially engaged art might be used with such communities to promote resilience and inclusion. The research will be disseminated in peer reviewed journals and at academic conferences.

27. Estimated start date and duration of project
Recruitment will begin in March 2018 as soon as ethics approval is granted. Data collection from the phases outlined aims to be completed by the end of May following data analysis up to September 2018 (for the focus groups).
For the first series of workshops, recruitment will begin hopefully in January 2019 or as soon as ethics approval is granted. Data collection is aimed to be completed by the end of May following data analysis up to November 2019. For the second series of workshops, recruitment will begin as soon as ethics approval is granted. Data collection is aimed to be completed by the end of October, followed by data analysis up to April 2021.

Signed _____ Date 05/06/2020_____
Applicant

Signed _____ Date _____
Research Supervisor/Principal Investigator (if applicable)

Please submit this form and attachments to ethics.ap@ucc.ie, with the words ethics application (followed by your full name) in the subject line). Please include a scan of the signatures required. No hard copies are required.

This form is adapted from pp. 13-14 of Guidelines for Minimum Standards of Ethical Approval in Psychological Research (British Psychological Society, July, 2004)

Last update: March, 2019

GDPR Compliance

Participants own their data and they need to give explicit consent to as how their data is used. Participants have legal recourse should the data be used in ways that they have not agreed to.

Any breaches of GDPR must be reported to the Data Controller.

Do your consent forms contain the following information?	**YES**	**NO**
The contact details of the Data Controller**.	☒	
The contact details of the Data Protection Officer.	☒	
Who is collecting the data? (e.g. School of Applied Psychology, UCC	☒	
Why the data is being collected.	☒	
Whether explicit participant consent being relied upon as the legal basis for processing the data?	☒	
How the data will be processed.	☒	
How long the data will be retained.	☒	
Who the data will be disclosed to.	☒	
The rights participants have in relation to their own data outlined.	☒	
The right to lodge a complaint with the Data Protection Commission.	☒	
The existence of study specific automated decision making (e.g. randomized allocation).	☒	
Based on this, are all of the consent forms for this study GDPR compliant?	☒	

** For the purposes of GDPR the Data Controller is the Head of School

APPENDIX 1.

SEMI-STRUCTURED INTERVIEW AND WORKSHOPS SCHEDULE

Introduction

Hello and welcome, as you probably already know my name is Maria Murray and this study is part of my PhD research at the School of Applied Psychology in UCC. First, I would like to thank you all for your time and interest in participating in this study. I am delighted you all could make it and I look forward to hearing your thoughts and experiences with respect to living and being part of the community here in Northrock. As mentioned in the Information Sheet you have all read, I expect the study to last approximately one hour and it will be audio-recorded. I hope we have a somewhat lively discussion and I very much welcome any stories or insights ye might have arising from the conversation we have today.

I have some topics I'm going to structure the conversation around, I'd like to hear from everyone and if I find we're going a lot off-topic I might gently bring the conversation back to the key topics! First let's start with some general introductions, if we go around the table, could each person please introduce themselves and say what brought them to Northrock & why they're interested in the focus group?

Main interview topics

- Life in Northrock
    - Can you tell me about your experiences of life in Northrock?
        - Prompts: What brought you to Northrock?
        - How do you find living here? How do you find meeting new people? What kinds of backgrounds have the people you have met come from?
        - If you have lived in other places, how would you describe your experience living here in relation to your previous experience? Can you tell me some examples of differences and similarities between [Rock] and those other places?
- Resilience
    - What changes have you noticed in the village during your time here?
    - How have these affected your life?
    - In what ways have you seen the wider village respond to these changes?
- Inclusion / integration / village identity
    - How would you describe [Rock's identity?
        - Prompts: What things do you feel are central to [Rock]'s identity?

        - Do you identify personally with these things? Do you feel you come in contact with people from all areas of the community? Can you think of a time or an occasion where you really felt part of the community, or not part of the community?
- Digital Technologies
    - What are your thoughts about digital technologies?
        - Prompts: Do you use digital technologies in your day-to-day life? to communicate with each other? To find out about events or other council matters in [Rock]? Are you members in any social media groups/ follow local groups online? Do you ever make digital media yourself?

- Is there any other question or issue you think it's important to address?

Debriefing

Thank you for your input today, it's been very valuable to what I'm doing and I hope it results in me putting together some workshops that will serve the interests of the community. I'll be in touch with more detail on those workshops and of course you would all be gladly welcome to join in those as well.

If you have any further questions about the research work, or my own role, I can answer them now. You can always email me or contact one of my supervisors if you prefer.

Participatory design workshops draft outlines

The workshops will consist of an initial questionnaire (see questions below), icebreaker activities, activities from art-based process (such as socially engaged arts) and design thinking, reviewal of case studies and response to an expanded shared understanding of themes through the creation of digital media artefacts. It is anticipated that there will be 10 x 80 minute workshop sessions in total.

Questionnaire content;

- Why have you chosen to participate in the workshops?
- What are your expectations of the workshops?
- What are your thoughts on [the themes] at the moment?
- How integrated do you feel with the wider community? Do you interact with many people from backgrounds other than your own?
- What role do you think culture (and heritage) can play in building a resilient/strong community?

- What do you think about exploring and representing culture digitally? What are the pros & cons of that?

Workshop 1 structure [draft]

Introduction (10 mins)

Icebreaker (10 mins) - exchanging interests

Activity 1 (50 mins) - World café on themes

Debriefing (10 mins)

Workshop 2 strcuture [draft]

Introduction (10 mins)

Activity 1 (20 mins) - Graphic Harvest

Case studies (40 mins)

Debriefing (10 mins)

Workshop 3 structure [draft]

Introduction (10 mins)

Activity 1 (30 mins) - Why/how ladder to further explore themes

Activity 2 (30 mins) - Generating ideas for digital art work ~~stories~~

Debriefing (10 mins)

Workshop 4 structure [draft]

Introduction (10 mins)

Activity 1 (20 mins) - Review plans for artworks ~~stories~~, review technologies

Begin prototyping ~~storyboarding~~ (40 mins)

Debriefing (10 mins)

Following the workshops, a second questionnaire will be distributed to the workshop participants for purposes of evaluation. Sample content of the questionnaire follows;

- How would you describe your experience in the workshops?
- What were the most & least useful parts of the activities?
- What were the most memorable moments (positive or negative) for you from the workshops?

- Would you be interested in continuing making digital stories? Why/why not/Can you provide a justification for your answer?
- What (if anything) did you learn about other community members after going through the process?
- Have your thoughts on [the themes] changed at all?
- Have your thoughts on the role of culture (and heritage) in building a resilient / strong community changed?
- What do you think now about exploring and representing culture digitally? What are the pros & cons of that?
- Have you any other feedback you would like to give at this stage?

APPENDIX 2.

INFORMATION SHEET A – GROUP INTERVIEWS/FOCUS GROUPS

Purpose of the Study: The study investigates the experiences of people living in rapidly developing rural communities, such as Northrock.

What will the study involve? The study will involve a focus group discussion which wil cover topics around life in Northrock and people's experiences with using digital media. The focus group will be audio recorded and later transcribed.

Why have you been asked to take part? You have been invited to take part because you are a member of the Northrock community, which has been identified as a rapidly developing rural community.

Do you have to take part? No. Participation in the study is completely voluntary. If you agree to participate in the study, you will be asked to sign a consent form. You have the option to withdraw from the study up to 2 weeks after the interviews take place and your contribution to the focus group discussion will be reducted from the final transcript.

Will your participation in the study be kept confidential?
Confidentiality on the part of the researchers is guaranteed, but the research team cannot guarantee that group members will maintain confidence. All of the data collected during the study will be anonymised, stored securely on a password protected folder and will only be viewed by me and my supervisors; Dr. Nadia Pantidi and Dr. Trevor Hogan. Real names or any other identifying information will not be used in the write up of the study and quotes included in the write up will be entirely anonymous.

What will happen to the information which you give? The data gathered will be anonymised, transcribed, and then analysed as part of my PhD dissertation results. Following completion of the study, the data will be kept

for 10 years in the School of Applied Psychology UCC as part of the UCC Code of Research Conduct and then destroyed.

What will happen to the results? The results of the study will be written up in my thesis. They will be seen by my supervisors and a secondary examiner from the School of Applied Psychology UCC as well as a external examiner. The results might also be used in research publications and conferences.

What are the possible disadvantages of taking part? There are no expected disadvantages.

What if there is a problem? If at any time your child feels distressed, overwhelmed or tired during the study, they can let me know and I will support them in what they decide is the best course of action. If you have any further questions about the study, you can contact my supervisor Prof. John McCarthy at john.mccarthy@ucc.ie. If you are concerned about your data, you can contact the UCC data protection officer, Catriona O Sullivan at gdpr@ucc.ie, or the School of Applied Psychology data controller, Carol Linehan at carol.linehan@ucc.ie. You have the right to lodge any complaint with the Data Protection Commission at https://www.dataprotection.ie/

Who has reviewed this study? The Ethics Committee of the School of Applied Psychology of UCC has reviewed this study and has granted its approval. If you agree to take part in the study, please sign the consent form overleaf.

INFORMATION SHEET B – WORKSHOPS (FOR ADULT PARTICIPANTS)

Purpose of the Study: The study is concerned with exploring themes relevant to rapidly developing rural communities and creating digital stories in response to those themes.

What will the study involve? The study will involve a series of workshops where you will be asked to engage with activities with the aim of developing digital stories. Before the first workshop begins and after all workshops are completed, I will ask you to complete a short questionnaire which will be used to evaluate the workshops. The workshops will be video recorded. The audio data will be transcribed for analysis purposes and all video captured will also be anonymised.

Why have you been asked to take part? You have been asked to take part because you are a member of the Northrock community, which has been identified as a rapidly developing rural community.

Do you have to take part? No. Participation in the study is completely voluntary. If you agree to participate in the study, you will be asked to sign a consent form. You have the option to withdraw from the study up to 2 weeks after the workshops take place. Your data will be removed from the final transcripts and any data from the questionnaires submitted will be destroyed.

Will your participation in the study be kept confidential? Confidentiality on the part of the researchers is guaranteed, but the research team cannot guarantee that group members will maintain confidence. All of the data collected during the study will be anonymised, stored securely on a password protected file and will only be viewed by me and my supervisors; Dr. Nadia Pantidi and Dr. Trevor Hogan. Real names or any other identifying information will not be used in the write up of the study and quotes included in the write up will be entirely anonymous.

What will happen to the information which you give? The data gathered will be transcribed, anonymised and analysed. The data will only be viewed and analysed by myself and my supervisors. The data will be kept confidential throughout the entire study. Following completion of the study, the data will be kept for 10 years in the School of Applied Psychology UCC as part of the UCC Code of Research Conduct and then destroyed.

What will happen to the results? The results of the study will be written up in my thesis. They will be seen by my supervisors and a secondary examiner from the School of Applied Psychology UCC as well as a external examiner. The results might also be used in research publications and conferences.

What are the possible disadvantages of taking part? There are no expected disadvantages.

What if there is a problem? If at any time your child feels distressed, overwhelmed or tired during the study, they can let me know and I will support them in what they decide is the best course of action. If you have any further questions about the study, you can contact my supervisor Prof. John McCarthy at john.mccarthy@ucc.ie. If you are concerned about your data, you can contact the UCC data protection officer, Catriona O Sullivan at gdpr@ucc.ie, or the School of Applied Psychology data controller, Carol Linehan at carol.linehan@ucc.ie. You have the right to lodge any complaint with the Data Protection Commission at https://www.dataprotection.ie/

Who has reviewed this study? The Ethics Committee of the School of Applied Psychology of UCC has reviewed this study and has granted its approval.
If you agree to take part in the study, please sign the consent form overleaf.

INFORMATION SHEET C – WORKSHOPS (FOR MINOR PARTICIPANTS)

Purpose of the Study: The study is concerned with exploring community resilience in rapidly developing rural communities and creating digital art around people's experiences in these communities.

What will the study involve? The study will involve a series of workshops where you will be asked to engage in a variety of activities with the aim of creating digital art about Northrock. Before the first workshop begins and after all workshops are completed, I will ask you to complete a short questionnaire which will be used to evaluate the workshops. The workshops will be video recorded. The audio data will be transcribed and all video captured will also be anonymised for analysis purposes.

Why have you been asked to take part? You have been asked to take part because you are a member of the Northrock community, which has been identified as a rapidly developing rural community.

Do you have to take part? No. Participation in the study is completely voluntary. If you agree to participate in the study, you will be asked to sign a consent form. You have the option to withdraw from the study up to 2 weeks after the final workshop session takes place. Your data will be removed from the final transcripts if you decide you want to withdraw from any part of the study and any data from the questionnaires submitted will be destroyed.

Will your participation in the study be kept confidential?
Confidentiality on the part of the researchers is guaranteed and we ask all participants to agree to the same, but the research team cannot guarantee that group members will maintain confidentiality. All of the data collected during the study will be anonymised, stored securely on a password protected file and will only be viewed by myself and my supervisors; Prof. John McCarthy, Dr. Nadia Pantidi and Dr. Trevor Hogan. Real names or any other identifying information will not be used in the write up of the study and quotes included in the write up will be entirely anonymous.

What will happen to the information which you give? The data gathered will be transcribed, anonymised and analysed. The data will only be

viewed and analysed by myself and my supervisors. The data will be kept confidential throughout the entire study. Following completion of the study, the data will be kept for 10 years in the School of Applied Psychology UCC as part of the UCC Code of Research Conduct and then destroyed.

What will happen to the results? The results of the study will be written up in my thesis. They will be seen by my supervisors and a secondary examiner from the School of Applied Psychology UCC as well as a external examiner. The results might also be used in research publications and conferences.

What are the possible disadvantages of taking part? There are no expected disadvantages.

What if there is a problem? If at any time your child feels distressed, overwhelmed or tired during the study, they can let me know and I will support them in what they decide is the best course of action. If you have any further questions about the study, you can contact my supervisor Prof. John McCarthy at john.mccarthy@ucc.ie. If you are concerned about your data, you can contact the UCC data protection officer, Catriona O Sullivan at gdpr@ucc.ie, or the School of Applied Psychology data controller, Carol Linehan at carol.linehan@ucc.ie. You have the right to lodge any complaint with the Data Protection Commission at https://www.dataprotection.ie/

Who has reviewed this study? The Ethics Committee of the School of Applied Psychology of UCC has reviewed this study and has granted its approval.
If you agree to take part in the study, please sign the consent form overleaf.

INFORMATION SHEET D – WORKSHOPS (FOR PARENTS /LEGAL GUARDIANS OF MINOR PARTICIPANTS)

Purpose of the Study: The study is concerned with exploring community resilience in rapidly developing rural communities and creating digital stories around people's experiences in these communities.

What will the study involve? The study will involve a series of workshops where your child will be asked to engage in a variety of activities with the aim of creating ~~digital stories~~ digital art about life in Northrock. Before the first workshop begins and after all workshops are completed, I will ask your child to complete a short questionnaire which will be used to evaluate the workshops. The workshops will be video recorded. The audio data will be transcribed and anonymised and all video captured will also be anonymised (using specialist software) for analysis purposes.

Why has your child been asked to take part? Your child has been asked to take part because she/he is a member of the Northrock community, which has been identified as a rapidly developing rural community.

Does your child have to take part? No. Participation in the study is completely voluntary. If you agree to your child participating in the study, you will be asked to sign a consent form. You have the option to withdraw your child from the study up to 2 weeks after the workshops take place. Your child's data will be removed from the final transcripts if you decide you want to withdraw him/her from any part of the study and any data from the questionnaires submitted will be destroyed.

Will your child's participation in the study be kept confidential? Confidentiality on the part of the researchers is guaranteed and we ask all participants to agree to the same, but the research team cannot guarantee that group members will maintain confidentiality. All of the data collected during the study will be anonymised, stored securely on a password protected file and will only be viewed by myself and my supervisors; Prof. John McCarthy, Dr. Nadia Pantidi and Dr. Trevor Hogan. Real names or any other identifying information will not be used in the write up of the study and quotes included in the write up will be entirely anonymous.

What will happen to the information which your child gives? The data gathered from the workshop sessions will be transcribed, anonymised and analysed. The data will only be viewed and analysed by myself and my supervisors. The data will be kept confidential throughout the entire study. Following completion of the study, the data will be kept for 10 years in the School of Applied Psychology UCC as part of the UCC Code of Research Conduct and then destroyed.

What will happen to the results? The results of the study will be written up in my thesis. They will be seen by my supervisors and a secondary examiner from the School of Applied Psychology UCC as well as a external examiner. The results might also be used in research publications and conferences.

What are the possible disadvantages of taking part? There are no expected disadvantages.

What if there is a problem? If at any time your child feels distressed, overwhelmed or tired during the study, they can let me know and I will support them in what they decide is the best course of action. If you have any further questions about the study, you can contact my supervisor Prof. John McCarthy at john.mccarthy@ucc.ie. If you are concerned about your data, you can contact the UCC data protection officer, Catriona O Sullivan

at gdpr@ucc.ie, or the School of Applied Psychology data controller, Carol Linehan at carol.linehan@ucc.ie. You have the right to lodge any complaint with the Data Protection Commission at https://www.dataprotection.ie/

Who has reviewed this study? The Ethics Committee of the School of Applied Psychology of UCC has reviewed this study and has granted its approval.
If you agree to take part in the study, please sign the consent form overleaf.

APPENDIX 3.
CONSENT FORM A – GROUP INTERVIEWS

I……agree to participate in Maria Murray's research study.

The purpose and nature of the study has been explained to me in writing.

I am participating voluntarily.

I give permission for my participation in a semi-structured interview with Maria Murray to be audio-recorded.

I understand that I can withdraw from the study, without repercussions, at any time, whether before it starts or while I am participating.

I understand that I can withdraw permission to use the data within two weeks of the interview, in which case the material will be deleted.

I understand that anonymity will be ensured in the write-up by disguising my identity.

I agree to keep the content of the group discussion and identities of group members confidential.

With regards to GDPR, I understand that if I am concerned about my data, I can contact the UCC data protection officer, Catriona O Sullivan at gdpr@ucc.ie, or the School of Applied Psychology data controller, Carol Linehan at carol.linehan@ucc.ie. I understand that I have the right to lodge any complaint with the Data Protection Commission at https://www.dataprotection.ie/

I understand that disguised extracts from the interview may be quoted in the thesis and any subsequent publications if I give permission below:

(Please tick one box:)
I agree to quotation/publication of extracts from my interview: ☐

I do not agree to quotation/publication of extracts from my interview: ☐

Signed: ……..
Date: ……..

PRINT NAME: ……..

CONSENT FORM B – WORKSHOPS (FOR ADULT PARTICIPANTS)

I……agree to participate in Maria Murray's research study.

The purpose and nature of the study has been explained to me in writing.

I am participating voluntarily.

I give permission for my participation in participant design workshops with Maria Murray to be audio-recorded and video recorded.

I understand that I can withdraw from the study, without repercussions, at any time, whether before it starts or while I am participating.

I understand that I can withdraw permission to use the data within two weeks of the workshop, in which case the data will be removed from transcripts and the questionnaires will be destroyed.

I understand that anonymity will be ensured in the write-up by disguising my identity.

I agree to keep the content of the group discussion and identities of group members confidential.

With regards to GDPR, I understand that if I am concerned about my data, I can contact the UCC data protection officer, Catriona O Sullivan at gdpr@ucc.ie, or the School of Applied Psychology data controller, Carol Linehan at carol.linehan@ucc.ie. I understand that I have the right to lodge any complaint with the Data Protection Commission at https://www.dataprotection.ie/

I understand that disguised extracts from the workshops may be quoted in the thesis and any subsequent publications if I give permission below:

(Please tick one box:)
I agree to quotation/publication of extracts from my workshop participation: ☐

I do not agree to quotation/publication of extracts from my workshop participation: ☐

Signed: ……..
Date: ……..

PRINT NAME: ……..

CONSENT FORM C – WORKSHOPS (FOR MINOR PARTICIPANTS)

I……agree to participate in Maria Murray's research study.

The purpose and nature of the study has been explained to me in writing.

I am participating voluntarily.

I give permission for my participation in the workshops with Maria Murray to be audio-recorded and video recorded.

I understand that I can withdraw from the study, without repercussions, at any time, whether before it starts or while I am participating.

I understand that I can withdraw permission to use the data within two weeks of the final workshop, in which case the data will be removed from transcripts and the questionnaires will be destroyed.

I understand that anonymity will be ensured in the write-up by disguising my identity.

I agree to keep the content of the group discussion and identities of group members confidential.

With regards to GDPR, I understand that if I am concerned about my data, I can contact the UCC data protection officer, Catriona O Sullivan at

gdpr@ucc.ie, or the School of Applied Psychology data controller, Carol Linehan at carol.linehan@ucc.ie. I understand that I have the right to lodge any complaint with the Data Protection Commission at https://www.dataprotection.ie/

I understand that disguised extracts from the workshops may be quoted in the thesis and any subsequent publications if I give permission below:

(Please tick one box:)
I agree to quotation/publication of extracts from my workshop participation: ☐

I do not agree to quotation/publication of extracts from my workshop participation: ☐

Signed: ……..

Date: ……..

PRINT NAME: ……..

CONSENT FORM D – WORKSHOPS (FOR PARENTS OF MINOR PARTICIPANTS)

I……agree to my child's participation in Maria Murray's research study.

The purpose and nature of the study has been explained to me in writing.

My child is participating voluntarily.

I give permission for my child's participation in the workshops with Maria Murray to be audio-recorded and video recorded.

I understand that I can withdraw my child from the study, without repercussions, at any time, whether before it starts or while she is participating.

I understand that I can withdraw permission to use my child's data within two weeks of the final workshop, in which case the data will be removed from transcripts and the questionnaires will be destroyed.

I understand that anonymity will be ensured in the write-up by disguising the identity of my child.

With regards to GDPR, I understand that if I am concerned about data usage, I can contact the UCC data protection officer, Catriona O Sullivan at gdpr@ucc.ie, or the School of Applied Psychology data controller, Carol Linehan at carol.linehan@ucc.ie. I understand that I have the right to lodge any complaint with the Data Protection Commission at https://www.dataprotection.ie/

I understand that disguised extracts from the workshops may be quoted in the thesis and any subsequent publications if I give permission below:

(Please tick one box:)
I agree to quotation/publication of extracts from my workshop participation: ☐

I do not agree to quotation/publication of extracts from my workshop participation: ☐

Signed: ……..
Date: ……..

PRINT NAME: ……..