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RESEARCH

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.

Keywords: Socially engaged art, Rurban communities, Rapidly expanding rural communities, Grassroots community development, CSCW, HCI, PD, Place, Digital art, Participation, Collaborative design

1 Introduction

Rurban communities are rapidly expanding rural communities where rural and urban characteristics and cultures intersect (Stephens 2019; Buciega et al. 2009). They are liminal places, in a state of transition as demographics and ways of life

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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 et al. 2009). New community members bring contrasting perspectives, needs and cultures to formerly rural communities. As this liminality can persist for decades (Buciega et al. 2009; Baez-Ortitz et al. 2022; 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 et al. 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 et al. 2019; Murray et al. 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 et al. 2019; Dombrowski et al. 2016; Bray et al. 2022; Hansson et al. 2018; Leal et al., 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 et al. 2015; O'Leary et al. 2019; Ghoshal et al. 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 et al. 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 (Clarke et al. 2016, 2014;

Clarke and Wright 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 et al. 2019; Murray et al. 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 et al. 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 et al. 2009; Baez-Ortitz et al. 2022; 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; Baez-Ortitz et al. 2022). 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 et al 2015; Sherman 2018; Murray et al. 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 et al. 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, 2018, 2021; Meagher 2009; Lichter and Brown 2011; Shucksmith 2012; 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 et al. 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 et al. 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 et al. 2015; Harrington et al. 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 et al. 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 et al. 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 et al. 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 et al. 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 et al. 2019; Fox et al 2017b; DiSalvo et al. 2009), as well as CSCW interested in design processes that support conflict, participation and reflexivity for transformative outcomes (Dombrowski et al. 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 et al. 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 et al. 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 et al. 2019) and inclusion (Murray et al. 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 et al. 2015; Balfour et al. 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 et al. 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.

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.

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 min. 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, breakyourownnews.com and imgflip.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

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

Table 1 Participant aliases and ages

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

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, *Design for the Just City* graphics (https://www.designforthejustcity.org/engage/#values) and art from the Black Lives Matter movement. 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

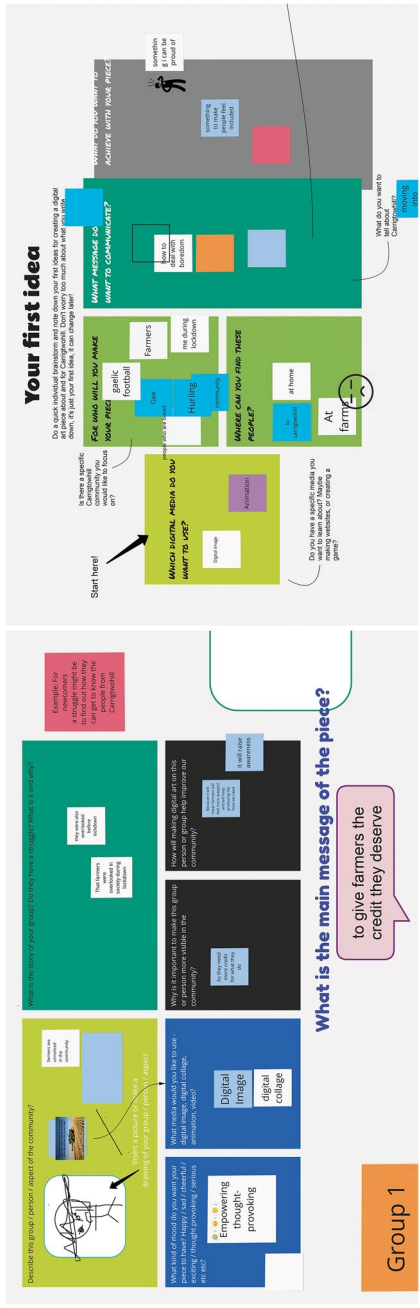


Figure 2 Examples of Miro Board acitvities

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

Table 2 List of objectives and activities per workshop

#	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
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, introduce some design principles and elements, more scaffolded critique, create Break Your Own News piece on idea (breakyourownnews.com), introduce 'homework' activity
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

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.

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; b). 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 et al. 2015). It also relates these findings to the rurban experience, expanding the CSCW interest in alternative places for technology design (Chamberlain et al. 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).

Figure 4 Examples of participants exploring their experiences during ideation activities

5.1.1 SEA exploratory activities

Digital and collaborative ideation activities acted as supports for exploring rurban experience. For example, in Figure 4 (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 centre), and to promote the rural aspects of the community (Figure 4 right). 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.

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

Figure 5 Examples of clippings from the newspaper generator

examples, one around Dawn's motivation to create a space for teenagers (left), and one on Aaliya's experience with wearing the hijab in the community (right).

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.

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 left) illustrates her desire for more acceptance of the hijab, Beth's artwork (Figure 6 centre) references her experience of not being accepted as an autistic person, and Dawn's artwork (Figure 6 right) emphasises her frustration with the lack of spaces for teenagers and her belief in the ability of young people to shape the community.

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.

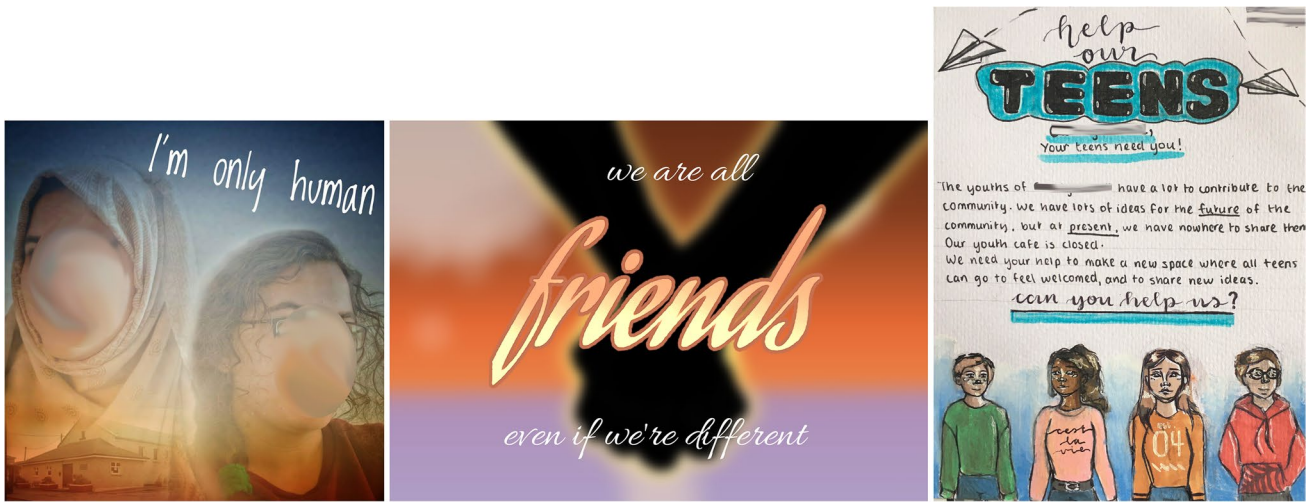


Figure 6 Participants' outputs communicating their experiences and calling for social change

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.

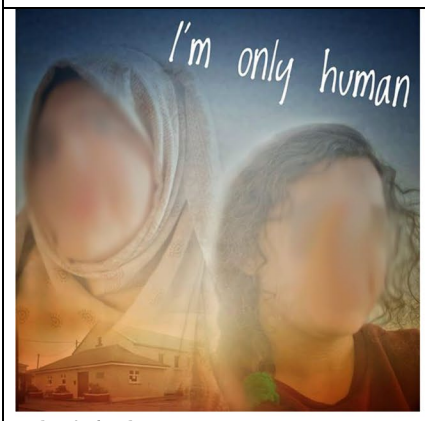
5.1.3 The artworks

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.

To summarise, having a range of collaborative digital SEA making and critiquing exercises supported the young people in articulating personal experiences

Table 3 Samples of final artwork with description and analysis

Final Artwork	Description and Analysis
 Aaliya'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.
 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).

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,[1] 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.

[1] Gaelic Athletic Association – Association for the national games of Ireland.

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 et al. 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.

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.

Figure 7 Deirdre's chosen image

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 left) and the integration of WhatsApp to share images and personal stories (Figure 8 right).

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.

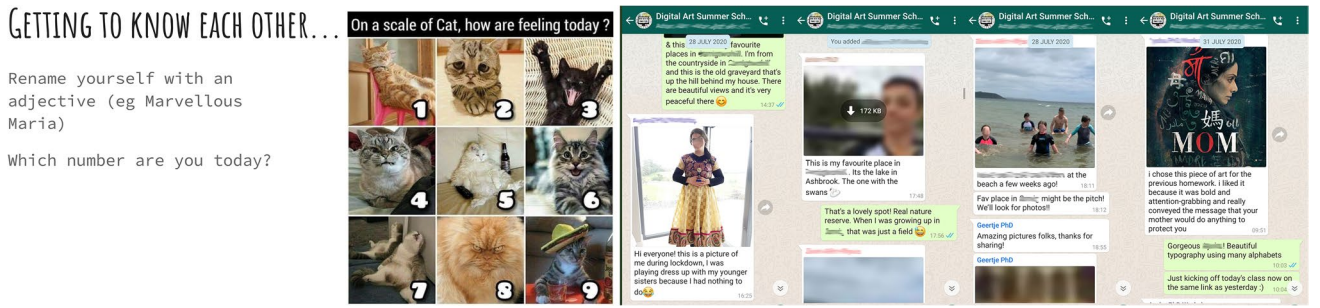


Figure 8 Relationship building through the use of icebreakers (see example on the left) and use of WhatsApp to share stories

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 et al. 2015; Fox et al. 2017a; 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 et al. 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. (2016)'s 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.

We approached this project to explore the value of SEA in CSCW design only to end up creating what can be seen as SEA-informed CSCW project and workshops. The lessons to be learned are both within this experiment in SEA-informed CSCW itself and in what the experience makes available for designing future CSCW systems and projects.

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 et al. 2008; Bardzell 2011; Clarke et al.

2016; Harrington et al. 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 et al. 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 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 stronger social bonds and 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 et al. 2014; Fox et al. 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 et al. 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 et al. 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 et al. 2015; Fox et al. 2015; Fox et al. 2017a; 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 the 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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