CORA Cork Open Research Archive
Cartlann Taighde Oscailte Chorcaí

Title	From her story, to our story: Digital storytelling as public engagement around abortion rights advocacy in Ireland
Authors	Michie, Lydia;Balaam, Madeline;McCarthy, John;Osadchiy, Timur;Morrissey, Kellie
Publication date	2018-04-01
Original Citation	Michie, L., Balaam, M., McCarthy, J., Osadchiy, T. and Morrissey, K. (2018) 'From Her Story, to Our Story: Digital Storytelling as Public Engagement around Abortion Rights Advocacy in Ireland', CHI '18: Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems, Montreal QC, Canada, 21-26 April, ACM NY, USA, Paper No. 357 (15pp). doi: 10.1145/3173574.3173931
Type of publication	Conference item
Link to publisher's version	10.1145/3173574.3173931
Rights	© 2018 the authors. This work is licensed under a Creative Commons Attribution International 4.0 License. - https://creativecommons.org/licenses/by/4.0/
Download date	2026-10-13 13:36:51
Item downloaded from	https://hdl.handle.net/10468/5870

UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

From Her Story, to Our Story: Digital Storytelling as Public Engagement around Abortion Rights Advocacy in Ireland

Lydia Michie[1], Madeline Balaam[2], John McCarthy[3], Timur Osadchiy[1], Kellie Morrissey[1]
[1]Open Lab, Newcastle University, Newcastle upon Tyne, UK,{l.e.michie2; t.osadchiy; kellie.morrissey}@ncl.ac.uk
[2]Media Technology & Interaction Design, KTH Royal Institute of Technology, Sweden, balaam@kth.se
[3]School of Applied Psychology, University College Cork, Cork, Ireland, john.mccarthy@ucc.ie

ABSTRACT
Despite the divisive nature of abortion within the Republic of Ireland and Northern Ireland, where access to safe, legal abortion is severely restricted, effecting legislative reform demands widespread public support. In light of a building pro-choice counter-voice, this work contributes to a growing body of HCI research that takes an activist approach to design. We report findings from four design workshops with 31 pro-choice stakeholders across Ireland in which we positioned an exploratory protosite, HerStoryTold, to engender critical conversations around the use of sensitive abortion narratives as a tool for engagement. Our analysis shows how digital storytelling can help reject false narratives and raise awareness of the realities of abortion laws. It suggests design directions to curate narratives that provoke empathy, foster polyvocality, and ultimately expand the engaged community. Furthermore, this research calls for designers to actively support community mobilization through providing 'stepping stones' to activism.

Author Keywords
Social Movements; Feminist HCI; Activism; Storytelling; Reproductive Rights;

ACM Classification Keywords
H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous;

INTRODUCTION
In both the Republic of Ireland (RoI) and Northern Ireland (NI), abortion remains a highly divisive sociopolitical and religious issue and abortion laws remain among the most restrictive in the World. In the Republic, abortion law is written into the Constitution, giving the life of the unborn fetus a right to life equal to that of the pregnant woman [74]. In NI, the Abortion Act 1967 (which allows legal abortion up to 24 weeks in the rest of the UK) does not extend to cover NI, meaning women have to travel to England, Scotland or Wales to access these services [75]. In both countries, abortion remains illegal even in cases of rape, incest, or fetal abnormality. As a result, in 2016 alone, 3,265 women living in the RoI and NI travelled to the UK to procure safe, legal abortion [62]. As a private patient, the abortion procedure alone can cost anywhere between £400 to £2000 [16,55] and, when factoring in additional costs such as travel, accommodation and child care (over half of women in Ireland accessing abortions are already parents [2]), such trips become out-of-reach to large numbers of women.

In response, pro-choice campaign efforts have begun to upset the status quo and have brought abortion reform to the forefront of current political debates. As such, pro-choice advocacy efforts must now focus upon harnessing widespread public support for reform. Our work recognizes the emergent adoption of abortion narratives as a tool for advocacy and, as such, seeks to explore if and how HCI designers can effectively curate such narratives to promote public awareness and support engagement with pro-choice advocacy. We take an activist approach to design, aligning ourselves with the pro-choice movement and position our work within existing HCI research that examines activist design and storytelling. We report findings from design workshops with 31 pro-choice stakeholders across the RoI and NI in which we used a prototype storytelling platform, HerStoryTold, to explore this space. we contribute implications for storytelling to challenge false narratives, provoke empathy, foster polyvocality, and expand the collective community. Beyond awareness, our findings contribute calls for action to support the further mobilization of this engaged community.

ABORTION RIGHTS ACTIVISM IN IRELAND
Despite the strict laws surrounding abortion in Ireland, the demand for abortion remains. As mentioned, a large number of women living in the RoI and NI travel overseas to procure safe, legal abortion. However, for the many women who can't afford to travel, the only choice is to break the law. In recent years, technology has played a significant role in breaking down barriers to abortion for these women. Most prominently, the emergence of online telemedicine services, such as Women on Web (who supply

This work is licensed under a Creative Commons Attribution International 4.0 License.

Copyright is held by the author/owner(s).
CHI 2018, April 21–26, 2018, Montréal, QC, Canada.
ACM ISBN 978-1-4503-5620-6/18/04.
https://doi.org/10.1145/3173574.3173931

medical abortion pills by post to countries where abortion is illegal), are providing a more affordable option for thousands of women each year [59,70] - albeit at a much higher potential legal cost (a possible life sentence in NI and up to 14 years in the RoI). Furthermore, the adoption of different technologies to deliver these drugs has gained global attention - for example using drone technology to distribute pills across borders [79] - presenting a novel crossover in service provision, activism and technology. However, whilst hugely valuable, such circumvention of the law cannot be deemed a legitimate, long-term solution (nor is it intended to be). Between 2011 and 2015, 3,467 medical abortion pill packages were intercepted en route to Irish addresses [48] and there have also been a growing number of prosecutions of women caught using, or helping other women to use them [40]. Restricting access to safe abortion is considered by various international human rights organisations to infringe upon both women's rights and health [66]. Moreover, whilst strict abortion laws undoubtedly affect all women living in the RoI and NI, abortion access is inherently an intersectional issue; in putting a price tag on safe abortion and heavily policing those who can't afford to travel, such laws disproportionately affect different women *within* the population - for example migrant women facing travel restrictions [71] or low-income mothers who would require paid childcare to travel.

However, in recent years, there has been a growing counter-voice building from pro-choice campaigns across both the RoI and NI that has shown promising effect. The modern pro-choice movement has made effective use of both online and offline spaces to organize and mobilize and have taken a multifaceted approach to doing so - combining digital media, creative arts and merchandising with more traditional forms of protest such as rallies, marches and lobbying [5,23,67]. Notably, their use of social media has garnered widespread national and international attention. For example, the trending hashtags, #TwoWomenTravel, followed two Irish women as they live tweeted their abortion journey to England to Irish politician, Enda Kenny [46]. Such disclosure of personal abortion narratives on social media as a tool for challenging stigma has begun to emerge more widely around the World, for example with the US social media campaign, #ShoutYourAbortion [1]. Furthermore, bespoke abortion narrative websites such as [39] and [60] have also emerged, promoting anonymous disclosure in dedicated spaces beyond social media.

The global spotlight this movement has brought to abortion rights in the RoI and NI has arguably put visible pressure on Irish and UK governments. In NI, the recent UK coalition between the Conservative Party and NI's highly right wing Democratic Unionist Party shone a spotlight on abortion rights in NI and sparked public outrage - leading to the abolition of procedure fees for NI women accessing NHS abortion in England, Scotland or Wales within a matter of months [36]. In the RoI, following considerable campaigns by pro-choice groups to repeal the Eighth Amendment (the constitutional protection of the right to life of the unborn child that makes abortion illegal), has led to Government recommendations for a national referendum on abortion laws in 2018 [61]. Whilst this speaks volumes to the power and successes of the pro-choice movement thus far, achieving abortion reform in the RoI now relies upon securing a majority vote - putting awareness and engagement at the forefront of pro-choice advocacy efforts. In recognizing both these advocacy goals and the growing presence of online abortion disclosure as a pro-choice tactic, this research **explores the potential for abortion storytelling platforms to effectively raise awareness and promote public engagement around abortion rights advocacy in the RoI and NI.** It is important to note here that, whilst traditional advocacy is often considered to be the influencing of public policy through formal structures and institutions, our experience and interactions with advocates working in this area suggests a more holistic interpretation within the Irish abortion rights context; advocacy here is equally concerned with influencing public opinion and raising public consciousness. As such, within this paper, we define advocacy as any attempt to raise awareness and shift perceptions of abortion – not only in the political sphere, but also in the private and public spheres.

RELATED WORK

Research into reproductive rights, and abortion more specifically, is well-established across multiple domains; from feminism and sociology, to health, law, and public policy. However, within HCI, there exists a considerable dearth of research that addresses this issue. Indeed, historically, a focus on any aspect of women's health, bodies, and rights remained largely underexplored within the discipline [3]. However, the emergence of Feminist HCI, that calls into question the grand, masculine-bias of the technological field and recognized the erasure of female perspectives in design [11,12], has heralded an increasing body of HCI design that addresses broader feminist domains. For example, work in women's health [38,51], maternal health [8,49,73], and motherhood [9,28] has gained increasing traction amongst designers. Equally, whilst design for reproductive rights more specifically is yet to have gained much attention within the field, considerably more HCI work has explored the intersection of activism and technology.

Cyberactivism & Slacktivism

Social movement theorists and technologists alike have long-since studied the adoption of existing communication technology by grassroots movements [77], in more recent years paying considerable attention to the adoption and adaptation of social media platforms for political dissent [77,81,82]. Such research explores how technology has fundamentally changed the ways in which citizens participate; upsetting top-down traditional models and giving way to new, elite-challenging forms of bottom-up,

grassroots engagement [6,44,56]. Further research in this space has also examined the strategic use of social media by official advocacy organizations and has shown the importance of such platforms as sites for shaping lobbying debates and public image [21].

Beyond its use for communication, further work has explored the mobilizing role of social media, seeking to understand if and how cyberactivism translates into 'boots-on-the-ground' offline activism. Attempts to estimate the effect of online activism on actualizing tangible change increasingly employ big data analytics, such as data scraping, to make large-scale quantitative inferences about this relationship [24,42]. Bruns and Burgess are leading researchers into the formation of media publics on Twitter and have explored how hashtag communities form during elections and how they shape the subsequent political agenda [20]. Relevant to our own work, is the work of Morgan et al. [57] who analyzed Twitter hashtags to investigate the correlation between social media activity and US state-level reproductive health policy. Other work has used Twitter analytics to analyze how online language use correlates with the spread of Anti-Abortion Policy in the US [85]. Whilst these studies do report a correlation between online abortion sentiments and political legislation, they say nothing of the direction of this relationship. Indeed, other scholars have argued that such quantitative analyses can overestimate how social media traffic translates into activity and call for such research to be supplemented by 'on the ground' studies [6]. Related to this, are common concerns about the tendency for social media to nurture 'Slacktivism' – supposedly low cost, low-risk participation. [52] argue that these lower level forms of activism substitute - rather than supplement - larger civic actions (such as protests) as they satisfy *"...people's inner urge to take action..."* (p.811).

Radical Research & Design for Dissent

Whilst much work has gone into passively observing how social movements use digital technology, other scholars - particularly within HCI - have explored how expert designers can *actively* support activist communities to more efficiently appropriate existing technology, or to create new technologies that directly address their goals and needs [7,32,76]. Within traditional academia, particularly in quantitative paradigms, objectivity has historically been considered the gold standard [72]. However, where research enters highly political arenas, the line between academic and activist becomes increasingly blurred [29]. Nowhere is this more apparent than HCI - as can be seen in the political and unionized roots of the Scandinavian participatory design tradition, or in the field's prominent history of 'design for democracy' that focuses on how technology can reconfigure citizen participation and the delivery of public services [14,17,18,35,63]. With this in mind, many scholars reject the notion that researchers should, or even can, remain neutral and apolitical [84]. Instead they argue that, when choosing to engage with politically motivated organisations and community partners, researchers are doing so based on tacit – or often intentional - beliefs about the communities or issues under exploration [45].

Moreover, several HCI scholars have actively encouraged taking an activist approach to design. DiSalvo [32,33] has been a prominent scholar in the emerging areas of 'agonistic' and 'adversarial' design – calling for HCI to move beyond solely designing for Politics, and towards political design. In order to do so, he argues that designers should actively create spaces and computational artifacts that intentionally stimulate critical conversations around controversial and contested societal issues [32]. Many HCI practitioners have begun to explore such approaches within specific application areas; for example, Grimes-Parker [43] has applied an activist approach to designing tools for health, looking beyond individual health behaviors. Instead, she explores how ICT can address the wider political structures that underpin and widen health disparities at a community level. Similarly, there exists a growing tradition of cyberfeminism (both in HCI and beyond) that explores how digital technology can be used to form networks between women worldwide and create spaces of feminist resistance online [27,37,54]. Additionally, the increasing attention paid to hacktivism and 'White Hat hacking', further illustrates the increasing prominence of expert technologists using their skills to further activist agendas [13,30]. In considering how designers might support advocacy, our own research takes an activist approach that explicitly aligns itself with the pro-choice movement.

Storytelling as Activism

Advocacy has a long tradition of storytelling[77], with the strategic use of stories by organizations having long-since been recognized for their ability to create *"...collective identity and movement issue framing"* (p.69). However, this existing work largely refers to the top-down, selective curation of stories by movement organizers for maximum impact (for example on static webpages and campaign material). However, digital technology is fundamentally changing the way we collect, share, and consume stories. The use of digital storytelling, that makes use of mixed media (predominantly video) to recount experiences, has been gaining increasing attention within HCI [65,68]. In particular, studies have explored the role of community-generated stories; for example, the work of Clarke et al. [25] considers how digital narratives created *by* vulnerable and marginalised communities can act as both a cathartic and therapeutic tool, as well as promoting empowerment and cross-cultural understanding. Moreover, the work of Dimond et al. [31] explores how crowdsourced community storytelling through Hollaback! – an online platform for women to share stories of street harassment – impacts those who share; whilst their research largely focused upon the role of storytelling for the individual sharer, their findings hint at the potential for such sites to support the coming-together of a collective community. As such, the authors

call for further research into the role of storytelling for influencing those *without* lived experience [31].

STUDY DESIGN

In order to explore the potential for digital storytelling platforms to effectively raise awareness and promote public engagement around abortion rights advocacy in the RoI and NI, we organized a set of four design workshops with pro-choice stakeholders in different locations across Ireland. Within each workshop, we utilised an exploratory prototype storytelling platform that sought to engender critical conversation about the use of sensitive, personal abortion narratives for the purpose of advocacy. In the RoI, we ran workshops in Dungarvan, Cork City, and Dublin. In order to ensure we included the Northern Irish perspective, we also held a workshop in Belfast. Each workshop lasted three hours and involved a mixture of round-table discussions and several group activities (outlined below). Given the effective and prominent adoption of social media by pro-choice campaigns, we considered these groups to be the most likely primary users of digital storytelling for the purpose of advocacy. As such, we actively sought to recruit pro-choice stakeholders by targeting relevant groups, pages, and individuals, such as: local, regional and national pro-choice campaign groups; well-known pro-choice politicians and activists; university societies and feminist groups; abortion support organizations and forums; and tech companies and collectives. We produced digital workshop flyers to advertise the events on which we linked to an online registration form. Flyers were disseminated publicly primarily through Facebook and Twitter.

Participants

A total of 31 participants attended the workshops, with a very wide and evenly spread range of participant ages (18 up to 60 years old). The majority of attendees were female, with only 3 men attending. Participants also came from a wide range of professional backgrounds, including: pro-choice activists and volunteers; academics and students; journalists, digital marketers and communications officers; games designers, developers and technical support; healthcare professionals, including midwives, therapists and social workers; public sector professionals and teachers; as well as others who expressed an interest as mothers, fathers, and general allies of the pro-choice movement. The workshop in Dublin was attended solely by members of one major national pro-choice advocacy organization, allowing for more professional and organizational insights to campaigning in this context.

Ethics and Risk Mitigation

The research was granted full ethical approval by Newcastle University Ethics Committee. The highly contestational nature of abortion within Ireland meant that, particularly given the public advertising of the workshops, the research team had to take extra precautions to avoid any disruption to events and possible confrontation or threats to participants (and the research team) from anti-choice protesters. In order to mitigate these risks, we did not advertise any venues publically. Instead, once participants registered online, we emailed them privately with details of the venue; although this did not altogether eliminate the risk of anti-choice protestors registering to attend, we also ensured each venue was staffed at the time of the workshop and that the staff were aware of (and comfortable with) the topic, in case any support or intervention was required. Informed consent was obtained prior to commencing each workshop and stored data was anonymized to protect the identity of participants.

Tic-Tac-Tactic: Round 1 - Setting a Criteria

Before arriving, participants were asked by email to arrive having in mind *any* memorable campaign - old or recent, digital or non-digital, and not specifically related to abortion. The first workshop activity was an informal round-table discussion of what made these campaigns memorable and/or successful - intended to get participants thinking initially about the broader, essential tenets of effective advocacy. These tenets were then to be translated into a more rigid set of criteria - or 'tactics' - against which the prototype platform would later be judged. In order to produce these participant-led criteria in an engaging and strategic manner, the 'Tic-Tac-Tactic' game was designed by the lead researcher to encourage rapid consensus-making whilst also helping to break the ice. This activity involved splitting the participants into four teams. Each team was provided with a custom-built cork 'Tic-Tac-Tactic' Board **(Figure. 1)** and was given 12 minutes to decide between them on the top nine essential tactics for an effective advocacy campaign – writing them on Post-it notes and sticking them onto the board's squares. The four teams were then asked to pair up (making two larger teams) and were given only eight minutes to compare boards and reach a consensus on a new top tactics together (rearranging the Post-its as they did so). Finally, the entire workshop group consulted to decide upon an ultimate top nine tactics together.

Figure. 1 - Tic-Tac-Tactic Boards

Following this task, there was a 40-minute round-table discussion of the specific cultural contexts surrounding abortion rights in the RoI and NI, the goal of which was to understand both where advocacy efforts should be targeted, and to establish the context-specific sociocultural and political factors that currently hinder abortion reform in the

RoI and NI. This allowed for our analysis to reflect upon how digital storytelling might address them. To provoke these discussions, we prepared several open questions, such as "Why is abortion illegal in Ireland?", and "Should we try to persuade pro-life voters to change their mind?".

HerStoryTold: A Protosite for Critical Reflection

As mentioned earlier, an observed trend of abortion disclosure in online spaces has heralded the emergence of several bespoke abortion narrative sites. From this, we became interested in exploring if and how the medium of storytelling can be crafted as a tool for pro-choice advocacy. The existing sites in this space, however, remain heavily focused upon simple text-input and offer little flexibility in the modes of sharing and displaying these narratives. As such, in order to help us explore this concept, we designed and built a prototype storytelling platform, HerStoryTold – intended to capture the narratives of women living in the RoI and NI who have travelled for abortion. The protosite was used, not as an early iteration of a real proposed system, but rather as a design material within the workshops, intended to provoke critical reflection upon the use of sensitive abortion narratives as a tool for advocacy.

Dear Governments of Ireland and Northern Ireland,

It has come to our attention that you have been neglecting the rights of your women for far too long. We are disappointed to see that you continue to deflect your responsibilities and have, as a result, incurred unnecessary and unfair expenses at a personal cost to all women who require safe, legal abortion.

Below is a breakdown of the cumulative outstanding balance owed to these women:

Procedure	€568,000
Travel	€113,600
Food	€45,440
Childcare	€34,300
Accommodation	€68,160
Other	€17,040
Number of days paid work missed	901
Total	**€846,540 for 568 trips**

This works out at an average cost of: **€1490,39** per trip

Last year, approximately **3,265** Irish women travelled to the UK to obtain safe abortion. Therefore, we estimate your outstanding balance to be **€4,866,114**

This repayment is well overdue. Please act now.

Figure. 2 - Overdue Invoice

The protosite was designed to differ from existing sites by capturing and displaying different aspects of a woman's abortion journey in novel and visually-creative ways. This included: a live ticker of trips taken, a tally of money spent, and miles travelled (by users); a journey map that plotted sharers' journeys as overlapping lines on a scalable map; an overdue invoice **(Figure. 2)** to the government displaying accumulative expenses of all users' journeys; Thank You Post-it notes **(Figure. 3)** to someone or something that made a positive impact on their journey; and messages to strangers where users left kind words of advice and encouragement to other women facing the same journey.

Figure. 3 – Thank You Notes

The data displayed in these output graphics was fabricated by the research team. We also created a set of longer text-based stories that were intended to reflect a range of experiences (some upsetting, some neutral, and some positive). Although not fully-functional, the final protosite was a high-fidelity interface that used static content to imitate live content - allowing participants to interact with the site in a realistic way.

Tic-Tac-Tactic: Round 2 - Protosite Critique

Having reached consensus on the top tactics for effective advocacy during the first round of Tic-Tac-Tactic, the final activity asked participants to critique the protosite based on these self-selected criteria. The group was split into four teams and each were given devices loaded with the protosite. We provided each team with an updated Tic-Tac-Tactic board (having rewritten the finalized nine effective tactics onto each board) and a bag containing wooden noughts and crosses.

Figure. 4 – Protosite Critique

After explaining the site concept, the groups were asked to browse the site and, whilst doing so, assess it based on the criteria on the Tic-Tac-Tactic boards – placing a wooden nought on the tactics it did achieve, and a cross on the ones it didn't **(Figure. 4)**. This activity helped to structure the subsequent group feedback and allowed for participants to both critically reflect upon the strengths and limitations of

storytelling sites as advocacy tools and to highlight alternative spaces for digital abortion rights advocacy.

Data Analysis

Each workshop was audio recorded and activities were documented photographically. The recordings were transcribed and analyzed using Thematic Analysis in line with the guidelines set out by Braun and Clarke [19]. TA generates the kind of detailed description of the patterns of responses within an interview that can be very useful when examining an under-researched or new area, or when exploring participants' views in a pre-theoretical way, as was the case in this research. This involved: systematically generating initial codes across the entire dataset; cross-referencing codes for salient or recurring themes; and reviewing and refining these themes until a finalized thematic map emerged. Our analysis merges the discussions across each of the separate workshop activities in order to frame the storytelling protosite in line with both the broader requirements of effective advocacy and the sociocultural and political contexts within which such a site would be used.

FINDINGS

Our analysis generated four themes: Breaking the Silence; Challenging False Narratives & Exposing Realities; Expanding the Collective Community; and Mobilizing the Community. Here we outline these findings, using anonymized illustrative quotes to support our findings (each quote states if it is from a workshop in the RoI or NI).

Breaking the Silence

In both the RoI and NI, our engagements highlighted a lack of meaningful debate between pro-life and pro-choice advocates, with both sides *"shouting over the heads of the people in the middle" (P6 RoI).* As such, our participants suggested much more fruitful potential in designing digital advocacy tools that instead target those who are currently disengaged. However, rather than a total lack of awareness of the presence of abortion debates (which would be hard considering the current political climate around abortion within both countries), this disengagement was thought to stem instead from a culture of silence that fosters denial, inhibits open dialogues, and discourages voicing alternative opinions. Explaining this culture of silence, participants explained how abortion is often the *"big elephant in the room"(P4 RoI)*, even amongst close family and friends. This discomfort or unwillingness to talk openly about the issue, even at an individual level, was considered to be part of a wider culture of 'turning a blind eye'. Within both the RoI and NI, the reluctance to engage was thought to be underpinned by deeply-rooted religious values that foster denial and pride: *"… they just say, "it's against the Church. It's against the Lord" … that's easier than them having to think they're wrong…" (P5 RoI).* As a result, attempts to open any form of dialogue about abortion are frequently shut down, stagnating engagement with abortion rights debates altogether. Furthermore, even for individuals who may want to engage, in the RoI workshops participants explained how conformity is embedded in Irish culture - discouraging individuals from airing personal opinions publicly or from standing out. In Belfast, participants suggested this reluctance is particularly prominent in NI, given that political conflict means being *"more protective of yourself and your opinions" (P26 NI).* In considering how HCI design might then challenge this silence and facilitate difficult conversations around abortion, participants from the advocacy organization suggested emulating certain offline public engagement tactics. Advocates explained that approaching these dialogues requires sensitive repackaging of the conversation: *"you've got to meet them where they're at" (P20 RoI).* To do so, it was considered effective to *"start with the easy cases" (P21 RoI)* - referring to cases of rape or fetal abnormality - and building up to harder dialogues gradually *"like stepping stones" (P20 RoI).* However, whilst pointing to potential avenues for technology to facilitate changing minds gradually over time - such as facilitating intergenerational and interpersonal communication – participants felt a sense of urgency and called for design that promotes much faster, widespread engagement, particularly given the upcoming referendum in the RoI.

Challenging False Narratives & Exposing Realities

During each workshop, participants discussed several scare-mongering tactics used by the "Pro-Life" campaign. In particular, they expressed how these campaigns are reliant upon the perpetuation of false narratives. Such narratives were seen to reinforce stigma and silence, and justify denial. However, participants felt that several features of our protosite, HerStoryTold, had the ability to *"be more transparent and factual and try to dispel some of the untruths" (P29 NI).* Firstly, participants suggested that pro-choice campaigns often propagate a **narrative of trauma**, focusing heavily upon cases of distressing abortions so as to frame the procedure as dangerous or scary - discouraging women from having them, and further justifying those who wish to deny access to them. However, several features of HerStoryTold were thought to challenge this narrative. For example, participants felt the Thank You Notes **(Figure. 3)** offered a novel and more positive perspective on abortion experiences: *"[they] could make you cry … even if it's a journey you take totally on your own…someone's done a nice thing somewhere along the line and made it slightly better." (P18 RoI)*

Furthermore, in commenting on the 'Messages to Strangers', one participant said: *"[they're] normalizing it... making it seem like less of a big scary, awful thing…" (P28 NI).* Equally, through encouraging positive reflection, participants felt it possible to also challenge a pro-life **narrative of regret**. Participants highlighted how a predominance of abortion regret stories online and in pro-life materials is difficult to counter as the direct counter-narrative would be birth regret: *"[saying] "I love my child but I wish I didn't have it." … would be really hard to do without being completely vilified" (P18 RoI).* However,

whilst birth regret narratives would understandably be hard to collect, participants felt that creating a space for positive reflection on a woman's abortion *decision* presented an equally effective alternative counter-narrative: *"[it shows] it's actually a relief for a lot of people…a very positive thing … she's happy with her decision" (P5 RoI)*. The presence of positive reflection appears to offer opportunities to destigmatize and normalize abortion more generally. However, as the stories on the protosite were fabricated, it is important to note here that, designing digital storytelling platforms to harness this, would call for designers to proactively encourage positive reflection through design.

Participants expressed how there remains a need to problematize the lack of access. The use of costs and expenses on HerStoryTold was thought to expose the hidden realities of current abortion laws. For example, the Overdue Invoice **(Figure. 2)** was thought to highlight the inequity of abortion travel: *"… there's a class element significant to this campaign, which is why the numbers matter…poor women can't travel, wealthier women can" (P26 NI)*. Further discussions of how to raise awareness of these hidden realities pointed to opportunities for HCI to do this beyond storytelling. In discussing how to creatively make visible the difficult emotional, financial and medical decisions facing women who seek abortion, participants in more than one workshops suggested creating interactive scenario-based abortion travel games: *"you'd have to raise the money, book your flight, and your abortion clinic … now you're sick, and don't want to fly home" (P8 RoI)*. One participant even suggested creating *"virtual reality abortion" (P15 RoI)*. During the Tic-Tac-Tactic activity in each workshop, fun, novelty, and humour were considered effective campaigning tactics: *"our whole society is built on humour … it's such a powerful tool" (P12 RoI)*. Whilst promoting positive reflection and exposing hidden realities has the potential to break a culture of silence and begin engaging the disengaged, participants felt that creating longer-lasting engagement would require moving the audience from feeling sympathy - to experiencing empathy.

Expanding the Collective Community

In each workshop, when deciding upon the top tactics for effective advocacy, participants highlighted the need to create emotional resonance with the issue at hand. It was felt that denial and disengagement fundamentally stem from a lack of personal attachment or experience. As such, participants expressed a need to pull the audience into the story and pointed to several avenues through which storytelling could do this. Firstly, during the protosite critiques across several workshops, participants suggested making HerStoryTold more personally relatable, expressing a desire to be able to filter stories based on locality: *"you could link stories to areas…if I can see someone in my area has been for this, it makes it more relatable and it humanizes it more" (P28 NI)*.

However, participants also highlighted a need for effective advocacy to be inclusive, accessible, and broad-reaching: "*change doesn't happen in a single social identity group … [it's about] ensuring that you're building a broad range of allies" (P8 RoI)*. Some of the most positive reactions to HerStoryTold centered upon the features that hinted at the wider community involved in a woman's personal abortion journey: *"the Post-its are amazing! … you see that it is not only that person that is going through it, there's [notes] to my husband, to the clinical staff" (P16 RoI)*. They suggested that, in shining a light on the other people involved in abortion journeys, the site points to a *"silent solidarity" (P18 RoI)* and reminds *"those who may be bystanders, that they aren't actually, because they are part of the story" (P14 RoI)*. However, the use of these features was still considered exclusively for women with first-hand abortion travel stories. In order to move beyond this, participants suggested creating a more inclusive and interactive space that welcomes the contributions of a 'community of bystanders': *"I would love to see the stories of say a flight attendant…I think the more we make it our story, or a societal story, I think that's powerful" (P13 RoI)*.

Furthermore, in discussing the need for polyvocality, several participants criticized the site's focus on women who have travelled for abortion: *"by prioritizing one set of stories, you have another set of stories which just aren't there" (P22 RoI)* - suggesting a need to create *"space for people who take the pills at home" (P23 RoI)*. In excluding the voices of these women, the site overlooks a key affected community and misses an opportunity to further reveal the hidden consequences of abortion laws. However, in a context where abortion is so stigmatized, participants highlighted how disclosing personal abortion experiences can carry considerable social repercussions for those who share their story, particularly if spaces were to include the voices of those who have taken the illegal abortion pill at home: *"There's more implications...it's illegal so they can be traced to an IP address. I wouldn't have said that a few years ago until they started actually arresting people!" (P30 NI)*. As such, some participants felt that storytelling platforms would need to protect those who share stories by enforcing blanket anonymity: *"You're putting it on the internet … [users] may not know all the implications and repercussions…so it's kind of protecting them from themselves" (P15 RoI)*. However, others felt such spaces should provide optional anonymity in order to avoid reinforcing the idea that abortion should be kept secret (in turn perpetuating shame and stigma) and to encourage others to share: *"maybe if you have women on there, with their names and their pictures, it would be like "if she can, do it, maybe it's nothing something to be ashamed of"" (P15 RoI)*. Whilst our findings thus far show promising potential for digital storytelling to both raise awareness and foster wider engagement, how then do we move beyond this, and moreover, do we need to?

Mobilizing the Engaged Community

Awareness was considered a valuable goal; however, participants criticized the site for failing to provide avenues through which the engaged community could take an active role in spreading its message: *"It's questionable how much the online presence can have an impact unless it's connected to social media" (P1 RoI*) – suggesting that the site needed a cross-platform approach. However, one participant worried that relying upon awareness as the primary goal could promote slacktivism *"…where people think they're helping and they're not actually going out and doing anything" (P26 NI).* Conversely, several participants highlighted a fine line between slacktivism and bravery: *"…in certain parts of the country, wearing a badge that says Repeal the 8th...it's actually a really brave thing to do …you're putting yourself out there in communities that don't have those kinds of discussions." (P22 RoI).*

The geographical significance of expressing solidarity is particularly relevant in the NI context. Whereas the silent majority in the RoI were considered to be disengaged due to denial and a subsequent resistance to engaging *with* pro-choice debates, disengagement in NI appears to be more about resistance to engaging *in* pro-choice activism. Participants in Belfast highlighted how abortion reform in NI already has significant majority support from the public. However, unlike the RoI - where the presence of a Constitution means single-issue referendums that require majority support - the tribal politics within a post-conflict NI, combined with a multi-issue party manifesto voting system, means that *"people don't vote here on social issues. People vote on green and orange issues" (P28 NI).* Furthermore, our earlier findings suggest that heightened political tensions in NI discourage people from airing their opinions in public. As such, unlike the RoI, lack of support is less of an issue, and instead, advocacy efforts in NI may be better placed in trying to mobilize people to more publicly voice their support for abortion reform. Discussions across several workshops pointed to opportunities for digital advocacy to do this by promoting smaller acts of resistance and 'easing people into activism': *"Not everyone can feel as capable or confident to do the keyboard warrioring or marching on the streets, so [showing solidarity publicly] is a first step into activism…" (P22 RoI).*

DISCUSSION

Our engagements present both opportunities and challenges for designing digital storytelling in this contentious space. Specifically, they show opportunities not just for HCI to play a significant role in raising public consciousness and expanding the pro-choice community **(Design as Advocacy)**, but also to foster further engagement in pro-choice activism beyond awareness **(Design for Activism)**.

Design as Advocacy

Whilst digital storytelling provides opportunities to raise awareness and promote engagement, these opportunities themselves present several paradoxes for exploration in HCI.

Challenging Stigma Through Design

Our findings suggest that, through actively encouraging positive reflection upon abortion journeys, effectively designed digital storytelling could challenge persistent false narratives that perpetuate a culture of silence and inhibit abortion reform. However, whilst this presents opportunities to destigmatize abortion by normalizing the experience, it presents our first paradox for design: **how can we normalize abortion without trivializing the issue?** Whilst normalizing both abortion decisions and abortion procedures is undoubtedly an important design concern, there remains a need to simultaneously highlight the problematic and negative consequences of restricted abortion access. The goal is twofold: to remove the taboo and stigma for women who seek abortion; and to persuade the silent majority to find their voice within this issue. Our findings point to several creative opportunities for design to balance these needs by highlighting the inequities and hidden costs of travelling for abortion. Most notably, there appears to be a space for provocative games design - specifically scenario-based interactive abortion journeys - to raise awareness of the realities of strict abortion laws.

Such an approach could mirror DiSalvo's calls for political design that provokes critical reflection and public awareness of under-addressed political or social issues [33]. In creatively and purposefully designing artifacts that express matters of concern, DiSalvo suggests design can add an experiential quality to these issues and in turn support the formation of a collective, concerned public [34]. Furthermore, Sengers et al. [69] argue that critical reflection should be a core design outcome and highlight the role of such design in *"bringing unconscious aspects of experience to conscious awareness"* (pg. 50). Several recent HCI researchers have explored how design might raise awareness around topics that are culturally taboo. Labella [4] is an augmented system that promotes embodied intimate interaction and self-discovery for women's pelvic fitness, promoting learning through ambiguity play and using humour to deconstruct the awkwardness around an intimate and often embarrassing issue. The Menstruation Machine – a wearable metal device that simulates menstruation - provides another example of critical design that provokes thought, raises awareness and makes a political statement about the need to normalize a marginalized experience [10]. Furthermore, other studies have also explored the use of scenario-based games for addressing taboo topics at a community level [47]. Whilst this provides broader opportunities for HCI to challenge a culture of silence and spark initial engagement with abortion rights advocacy, our findings also suggest that designers can do more to translate initial interest into more long-term, meaningful engagement.

Making Her Story, Our Story: Designing Empathy

Our findings suggest that evoking empathy is an effective means of expanding the invested community; as Poletta [64] suggests, "*effecting real change may require people to identify with experiences that are very far from their own"* (p. 167). Whilst HCI is no stranger to the concept of empathy, much of the existing work in this space explores methods for researchers to better-understand the groups with which they engage [53,78,80]. However, in the context of our research, the role or potential for empathy is not to understand others, but to *make others understand*. Our work points specifically to promising avenues through which digital storytelling might do this. Notably, through creating more interactive and inclusive spaces for sharing, storytelling can break down a dichotomy between the active sharer and the passive reader and create a wider community of allies out of a community of bystanders. However, doing so presents a further paradox for designers: **how can we foster polyvocality whilst ensuring anonymity and safety?** Due to the contentious nature of abortion debate within the RoI and NI, there are very real potential consequences for those who disclose their identity on such sites. Furthermore, our research calls for the inclusion of those who could not travel for abortion; thus, in designing spaces that capture disclosures of potentially illegal activity, the need for data security is heightened further. However, our research also highlights a tension between protecting identities and furthering stigma. Promoting anonymity could indeed counterproductively feed into ideas that those who sought abortion should remain silenced. At the same time, disclosing identities could encourage and inspire others to do the same, creating a ripple effect that fosters a collective community of unashamed pro-life voices.

The risk of online harassment is certainly not unique to the abortion design space; indeed, this tension between balancing safety with freedom of expression online is a parallel issue within the field more broadly. For example, in their study into the use of photo-sharing for women experiencing domestic violence, Clarke et al. [26] highlight the need to balance women's desire for anonymity with their simultaneous need for self-expression. The balancing of polyvocality and privacy also presents further questions around the role of the designer. Specifically, balancing a desire for a larger and more inclusive user-base with a need to ensure that these users are protected from any abuse of the site, creates questions around the vetting and monitoring of content. If we wish to move away from the heavily-curated, top-down selective use of digital storytelling that is more frequently used within advocacy, **then who is responsible for such vetting, and who decides which voices should be included?** Pockets of HCI have explored the potential for community-commissioning platforms around sensitive issues [41], for example in dementia [58] and breastfeeding [9]. However, further work is needed to understand how such platforms might function in highly contestational settings with higher risks of cyber-attacks. Others have sought to directly address online harassment *through* their work. Much of the existing design in this space applies machine learning models for detecting abusive language [22,83]. However, the online platform, HeartMob, takes a community-based, human-led approach to both identifying and responding to online harassment [15]. Intended as a private space for people to share their experiences of online harassment and seek support from bystanders, the platform focuses on creating communities of accountability and amplifying the scope of the problem.

Design for Activism

Thus far, we have highlighted the potential and value in using digital storytelling as an advocacy tool to raise public consciousness and ultimately expand the collective community of pro-choice allies. Earlier in this paper however, we cited work that questions if and how online engagement translates into 'on-the-ground' activism [52] - suggesting a distinction between efforts to raise awareness online (advocacy), and actions that create change (activism). From the findings of this research, however, we consider this to be an oversimplified dichotomy and instead argue that the line between the two is increasingly blurred; online engagement is simply one (equally valuable) step in a wide spectrum of activist activities.

In contrast to research that cites slacktivism as a major hindrance to mobilization, our findings have shown how the meaning attached to supposedly 'easy' acts of solidarity is both culturally and geographically bound; what to some seems lazy, to others poses huge potential risk. As such, it follows that one's willingness and/or ability to engage in different forms of action is equally as defined by their sociocultural and geographic context. At a basic level, this calls for designers working in this space to provide simple 'tools for solidarity' that facilitate these lower-level forms of activism (such as social media sharing features, email / SMS / twitter templates for sharing concerns, or recognizable merchandise). At the other end of the scale, however, there remains a need to provide more substantial 'tools for action' for those who may wish to do more. In light of this, we suggest taking a multi-faceted, 'stepping stones' approach to activist design, whereby designers create a range of tools that encourage engagement at different levels – allowing individuals to ease into activism at a pace and level that suits them.

That being said, once engaged, it remains important to encourage and support individuals in moving beyond their initial 'activism comfort zone' in order to maintain and build a movement's momentum. In considering how we might do this, it is useful to turn to Lave and Wenger's theory of Legitimate Peripheral Participation (LPP) [50]. Lave and Wenger explain how Communities of Practice form around specific domains of interest when a group of individuals exchange knowledge and skills with the shared goal of addressing a problem. The more individuals within these communities interact, the more they learn, and the

better the community becomes at addressing the problem. LPP describes how, for newcomers to the community, this learning takes place initially at the periphery. The more these newcomers are able to observe and interact with the more experienced 'old timers' at the core, the faster they are able to move up the engagement pipeline. Traditionally however, LPP dictates that those who are physically separated from the established experts have limited access to their skills, tools, and knowledge, and thus limited mobility along this pipeline [50]. In the context of our work this can be seen, for example, in rural/urban divides in pro-choice activism; pro-choice individuals in rural settings not only find themselves cut off from the pro-choice activities occurring in larger cities, but may also find it harder (and more risk-laden) to identify and interact with other pro-choice voices in their area. Yet if targeting undecided or harder-to-reach voters is the priority of activist efforts, then reaching these areas is key and as such, tapping into these rural pro-choice advocates is ripe with potential. Thus, the ability for technology to transcend geographical boundaries presents further opportunities for activist HCI to improve an individual's mobility *across* these stepping stones of activism (and up the engagement pipeline). One example could be through the design of digital systems that better-facilitate interaction, collaboration, and skills/knowledge exchange across the pro-choice community, regardless of geography – allowing the peripheral (or isolated) newcomers to benefit from improved access to advice, support and resources from the established 'experts' at the core of the pro-choice movement.

Finally, we end our discussion with a reflection upon what it means to take an activist approach to design as academics, both in the context of reproductive rights, but also more broadly for HCI. Our findings have shown that the ultimate and immediate goal of pro-choice advocacy over the coming years is to shift public opinion along its axis, fostering a new majority pro-choice public. However, whilst we recognize the need to support legislative reform, as scholar-activists our ethical, moral, and social responsibilities extend beyond our individual and personal alignments. There is, and always will be, a need for researchers to remain critical and forward-thinking in order to consider the longer-term effects of our design efforts. In the context of our study, we recognize the current marginalization of both those who seek abortion as well as of those whom publicly express support for its legalization. However, if we are to design to promote the shifting of the status quo around abortion, it is very possible that - rather than eliminating stigma altogether - the result of such a shift would instead be the marginalization and othering of what would become a pro-life minority. It is very likely that having conducted this same research with pro-life advocates would have yielded similar criticisms of the opposition (i.e., a stubbornness to consider alternative perspectives to their own). As such, the ultimate goal - and indeed biggest challenge - for the activist researcher in this space, instead becomes about how we can foster and sustain meaningful dialogue *between* these two sides through the systems and artifacts we build. Whilst our research here has suggested building spaces that welcome the voices of a wider community of pro-choice allies, we present a wider call for HCI to consider how we might foster true polyvocality by bringing conflicting voices together in the same space. Indeed, this presents a broader challenge of our time, for which we cannot provide answers, only further questions. Despite having more communication tools than ever before, the reality is a public that is becoming more and more blinkered to what is happening in the world around us. In a context where false news reigns, and opinion is becoming more important than fact, we ask: how can HCI design and deliver technologies that afford dialogue and empathy in contested spaces?

LIMITATIONS AND FUTURE WORK

In reflecting upon our research, it is important to note that the perspectives captured here only represent those of 'pro-choice' stakeholders. As a first entry into this highly contestational research area, it was not deemed appropriate to bring together polarized sides of the debate so early on, neither was this particular methodology suited to such a setting. However, future research should explore these alternative perspectives. This includes consideration of how to identify and recruit the disengaged silent majority. Finally, we consider it paramount that any future work in this space engages with those at the very heart of this issue - women who have been, or who may one day be, restricted by current abortion laws.

CONCLUSION

This research has addressed a current dearth in HCI for Reproductive Rights and responded to calls for activist design that stimulates critical conversations around contested issues. We have pointed to design opportunities for digital storytelling to be effectively curated as an advocacy tool. Specifically, we have presented opportunities to: raise awareness and challenge stigma through the exposing of hidden realities; foster empathy and polyvocality as a means of expanding the collective community; and provide stepping stones to activism that allow for engagement at different levels. In doing so, we respond to calls for further-understanding of how digital storytelling might be used beyond catharsis, and contribute insight into a gap in knowledge about the role online engagement plays in effecting tangible change.

ACKNOWLEDGMENTS

We would like to thank all participants for their time and invaluable input. This work was funded under the EPSRC Centre for Doctoral Training in Digital Civics at Newcastle University (EP/L016176/1). Data supporting this publication is openly available under an 'Open Data Commons Open Database License'. Additional metadata are available at: http://dx.doi.org/10.17634/154300-74. Please contact Newcastle Research Data Service at rdm@ncl.ac.uk for access instructions.

REFERENCES

1. #ShoutYourAbortion. 2017. Shout Your Abortion — Abortion is normal. Our stories are ours to tell. This is not a debate. Retrieved September 19, 2017 from https://shoutyourabortion.com/
2. Abortion Rights Campaign. 2017. *Abortion FAQs*. Retrieved August 2, 2017 from https://www.abortionrightscampaign.ie/wp-content/uploads/2016/01/FAQs.pdf
3. Teresa Almeida, Rob Comber, and Madeline Balaam. 2016. HCI and Intimate Care As an Agenda for Change in Women's Health. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (CHI'16), 2599–2611. https://doi.org/https://doi.org/10.1145/2858036.2858187
4. Teresa Almeida, Rob Comber, Gavin Wood, Dean Saraf, Madeline Balaam, Rob Comber, and Madeline Balaam. 2016. On Looking at the Vagina Through Labella. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (CHI'16), 1810–1821. https://doi.org/https://doi.org/10.1145/2858036.2858119
5. The Coalition to Repeal the Eighth Amendment. 2017. Repeal Eight | The Coalition to Repeal the Eighth Amendment. *Repeal Eight*. Retrieved August 2, 2017 from http://www.repealeight.ie/
6. Mariam Asad and Christopher a. Le Dantec. 2015. Illegitimate civic participation: supporting community activists on the ground. In *Proceedings of the Computer Supported Cooperative Work* (CSCW'15), 1694–1703. https://doi.org/https://doi.org/10.1145/2675133.2675156
7. Mariam Asad, Sarah Fox, and Christopher A Le Dantec. 2014. Speculative Activist Technologies. In *Proceedings of iConference*, 229–243. https://doi.org/https://doi.org/10.9776/14074
8. Johanna E. Awotwi and Johanna E. 2012. ICT-enabled delivery of maternal health services. In *Proceedings of the International Conference on Theory and Practice of Electronic Governance* (ICEGOV'12), 369. https://doi.org/https://doi.org/10.1145/2463728.2463798
9. Madeline Balaam, Rob Comber, Ed Jenkins, Selina Sutton, and Andrew Garbett. 2015. FeedFinder: A Location-Mapping Application for Breastfeeding Women. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (CHI '15), 1709–1718. https://doi.org/10.1145/2702123.2702328
10. Jeffrey Bardzell, Shaowen Bardzell, and Lone Koefoed Hansen. 2015. Immodest Proposals: Research Through Design and Knowledge. In *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI'15), 2093–2102. https://doi.org/10.1145/2702123.2702400
11. Shaowen Bardzell. 2010. Feminist HCI : Taking Stock and Outlining an Agenda for Design. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (CHI'10), 1301–1310. https://doi.org/https://doi.org/10.1145/1753326.1753521
12. Shaowen Bardzell and Jeffrey Bardzell. 2011. Towards a Feminist HCI Methodology: Social Science, Feminism, and HCI. In *SIGCHI Conference on Human Factors in Computing Systems* (CHI'11), 675–684. https://doi.org/dc47ft
13. Jessica L. Beyer and Jessica L. 2014. The Emergence of a Freedom of Information Movement: Anonymous, WikiLeaks, the Pirate Party, and Iceland. *Journal of Computer-Mediated Communication* 19, 2: 141–154. https://doi.org/10.1111/jcc4.12050
14. Gro. Bjerknes, Pelle Ehn, Morten Kyng, and Kristen Nygaard. 1987. *Computers and democracy : a Scandinavian challenge*. Avebury.
15. Lindsay Blackwell, Jill Dimond, Sarita Schoenebeck, and Cliff Lampe. 2017. Classification and Its Consequences for Online Harassment: Design Insights from HeartMob. In *Proceedings of the ACM on Human-Computer Interaction* 1, CSCW: 1–19. https://doi.org/10.1145/3134659
16. Fiona Bloomer and Kellie O'Dowd. 2014. Restricted access to abortion in the Republic of Ireland and Northern Ireland: exploring abortion tourism and barriers to legal reform. *Culture, Health & Sexuality* 16, 4: 366–380. https://doi.org/10.1080/13691058.2014.886724
17. Susanne. Bødker and Susanne. 1991. Through the interface : a human activity approach to user interface design. L. Erlbaum. Retrieved September 19, 2017 from http://dl.acm.org/citation.cfm?id=532624&CFID=980675921&CFTOKEN=62762341
18. Sussane Bodker and Susanne. 1996. Creating Conditions for Participation: Conflicts and Resources in Systems Development. *Human–Computer Interaction* 11, 3: 215–236. https://doi.org/10.1207/s15327051hci1103_2
19. Virginia Braun and Victoria Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3, 2: 77–101. https://doi.org/https://doi.org/10.1191/1478088706qp0

63oa

20. Axel Bruns and Jean Burgess. 2012. Researching News Discussion on Twitter. *Journalism Studies* 13, 5–6: 801–814. https://doi.org/https://doi.org/10.1080/1461670X.2012.664428

21. Adam William Chalmers and Paul Alexander Shotton. 2016. Changing the Face of Advocacy? Explaining Interest Organizations' Use of Social Media Strategies. *Political Communication* 33, 3: 374–391. https://doi.org/10.1080/10584609.2015.1043477

22. Eshwar Chandrasekharan, Mattia Samory, Anirudh Srinivasan, and Eric Gilbert. 2017. The Bag of Communities: Identifying Abusive Behavior Online with Preexisting Internet Data. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (CHI '17), 3175–3187. https://doi.org/10.1145/3025453.3026018

23. Alliance for Choice. 2017. Trust Women Campaign — Alliance for Choice. *Alliance for Choice*. Retrieved September 19, 2017 from http://www.alliance4choice.com/trust-women-campaign/

24. Munmun De Choudhury, Scott Counts, Eric J. Horvitz, and Aaron Hoff. 2014. Characterizing and predicting postpartum depression from shared facebook data. In *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing* (CSCW '14), 626–638. https://doi.org/10.1145/2531602.2531675

25. Rachel Clarke and Pete Wright. 2012. Evocative of experience: crafting cross-cultural digital narratives through stories and portraits. In *Proceedings of the 7th Nordic Conference on Human-Computer Interaction Making Sense Through Design* (NordiCHI'12), 318–321. https://doi.org/10.1145/2399016.2399066

26. Rachel Clarke, Peter Wright, Madeline Balaam, and John Mccarthy. 2013. Digital portraits: Photo-sharing after domestic violence. In *Proceedings of the CHI Conference on Human Computer Interaction (CHI'13)*, 2517–2526. https://doi.org/10.1145/2470654.2481348

27. Tressie Cottom. 2016. Black Cyberfeminism: Ways Forward for Classification Situations, Intersectionality and Digital Sociology. In *Digital Sociologies.* Policy Press, 211 - 249.

28. Catherine D'Ignazio, Alexis Hope, Becky Michelson, Robyn Churchill, and Ethan Zuckerman. 2016. A Feminist HCI Approach to Designing Postpartum Technologies. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (CHI '16), 2612–2622. https://doi.org/10.1145/2858036.2858460

29. Christopher A. Le Dantec and Sarah Fox. 2015. Strangers at the Gate. In *Proceedings of the ACM Conference on Computer Supported Cooperative Work & Social Computing* (CSCW '15), 1348–1358. https://doi.org/10.1145/2675133.2675147

30. C Dianne Martin. 2017. TAKING THE HIGH ROAD: White Hat, Black Hat: The Ethics of Cybersecurity. *ACM INroads*. https://doi.org/https://doi.org/10.1145/3043955

31. Jill P. Dimond, Michaelanne Dye, Daphne Larose, and Amy S. Bruckman. 2013. Hollaback! The role of storytelling online in a social movement organization. In *Proceedings of the conference on Computer supported cooperative work* (CSCW'13), 477. https://doi.org/10.1145/2441776.2441831

32. Carl Disalvo. 2010. Design, Democracy and Agonistic Pluralism. *DiSalvo, Carl. "Design, democracy and agonistic pluralism." In Proceedings of the design research society conference,* 366–371. Retrieved September 14, 2017 from http://blog.ub.ac.id/irfan11/files/2013/02/Design-Democracy-and-Agonistic-Pluralism-oleh-Carl-Disalvo.pdf

33. Carl DiSalvo. 2012. *Adversarial design*. MIT Press. Retrieved September 19, 2017 from https://mitpress.mit.edu/books/adversarial-design

34. Carl DiSalvo, Jonathan Lukens, Thomas Lodato, Tom Jenkins, Tanyoung Kim, Carl DiSalvo, Jonathan Lukens, Thomas Lodato, Tom Jenkins, and Tanyoung Kim. 2014. Making public things: how HCI design can express matters of concern. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI'14), 2397–2406. https://doi.org/10.1145/2556288.2557359

35. Pelle Ehn and Pelle. 1989. *Work-oriented design of computer artifacts*. Arbetslivcentrum. Retrieved September 19, 2017 from http://dl.acm.org/citation.cfm?id=1102017&CFID=980675921&CFTOKEN=62762341

36. J. Elgot and H. McDonald. 2017. Northern Irish women win access to free abortions as May averts rebellion | World news | The Guardian. *The Guardian*. Retrieved August 2, 2017 from https://www.theguardian.com/world/2017/jun/29/rebel-tories-could-back-northern-ireland-abortion-amendment

37. Malin Sveningsson. Elm and Jenny Sundén. 2007. *Cyberfeminism in Northern Lights : digital media and gender in a Nordic context*. Cambridge Scholars Pub.

38. Daniel A. Epstein, Nicole B. Lee, Jennifer H. Kang, Elena Agapie, Jessica Schroeder, Laura R. Pina, James Fogarty, Julie A. Kientz, and Sean Munson. 2017.

Examining Menstrual Tracking to Inform the Design of Personal Informatics Tools. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems* (CHI '17), 6876–6888. https://doi.org/10.1145/3025453.3025635

39. Everydaystories.org. 2017. Everyday Stories - Highlighting The Impact Of The 8th Amendment - About. Retrieved from http://everydaystories.org/about/
40. S Fenton. 2017. Northern Irish police raid women's homes in crackdown on abortion pills | The Independent. *Independent*. Retrieved August 2, 2017 from http://www.independent.co.uk/news/uk/crime/northern-ireland-abortion-pill-raids-police-women-homes-workplaces-a7627211.html
41. Andrew Garbett, Rob Comber, Edward Jenkins, and Patrick Olivier. 2016. App Movement: A Platform for Community Commissioning of Mobile Applications. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (CHI'16), 26–37. https://doi.org/10.1145/2858036.2858094
42. Paolo Gerbaudo. 2012. *Tweets and the streets : social media and contemporary activism*. Pluto Press.
43. Andrea Grimes-Parker. 2013. Designing for Health Activism. *Interactions* 20, 2: 22–25.
44. Daniel Halpern, Nik Ahmad Rozaidi, and Seol Ki. *Towards a Social Network e-government Agenda? Measuring Participation 2.0 in the Arab World*. In Proceedings of the Annual International Conference on Digital Government Research (d.go'12), 223-231. https://doi.org/http://dx.doi.org/10.1145/2307729.2307765
45. Tad Hirsch and Tad. 2009. Communities real and imagined. In *Proceedings of the fourth international conference on Communities and technologies* (C&T'09), 71. https://doi.org/10.1145/1556460.1556472
46. E. Hunt. 2016. Irish woman live-tweets journey for abortion in Great Britain | World news | The Guardian. *The Guardian*. Retrieved August 2, 2017 from https://www.theguardian.com/world/2016/aug/20/irish-woman-live-tweets-journey-for-abortion-in-britain
47. Minal Jain and Pradeep Yammiyavar. 2015. Game based learning tool seeking peer support for empowering adolescent girls in rural Assam. In *Proceedings of the 14th International Conference on Interaction Design and Children* (IDC '15), 275–278. https://doi.org/10.1145/2771839.2771895
48. Sirin Kale. 2016. The Irish Government Is Seizing an Increasing Number of Abortion Pills - Broadly. *Broadly*. Retrieved August 2, 2017 from https://broadly.vice.com/en_us/article/paedxy/ireland-customs-seizing-increasing-number-medical-abortion-drugs
49. Neha Kumar and Richard J. Anderson. 2015. Mobile Phones for Maternal Health in Rural India. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (CHI'15), 427–436. https://doi.org/10.1145/2702123.2702258
50. Jean. Lave and Etienne Wenger. 1991. *Situated learning : legitimate peripheral participation*. Cambridge University Press.
51. Mirim Lee, Bon-chang Koo, Hee-seok Jeong, Joongsin Park, Juhee Cho, and Jun-dong Cho. 2015. Understanding Women's Needs in Menopause for Development of mHealth. In *Proceedings of the 2015 Workshop on Pervasive Wireless Healthcare* - (MobileHealth'15), 51–56. https://doi.org/10.1145/2757290.2757295
52. Yu-Hao Lee and Gary Hsieh. 2013. Does slacktivism hurt activism?: the effects of moral balancing and consistency in online activism. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI '13), 811. https://doi.org/10.1145/2470654.2470770
53. Stephen Lindsay, Katie Brittain, Daniel Jackson, Cassim Ladha, Karim Ladha, and Patrick Olivier. 2012. Empathy, participatory design and people with dementia. In *Proceedings of the ACM Conference on Human Factors in Computing Systems* (CHI'12), 521–530. https://doi.org/10.1145/2207676.2207749
54. Cam Macdonell and Cam. 2015. Ushahidi: a crisis mapping system. *ACM SIGCAS Computers and Society* 45, 2: 38–38. https://doi.org/10.1145/2809957.2809969
55. Marie Stopes International. 2017. Fees: How much is an abortion for Irish women? | Costs, payment, how to book, Irish, Overseas Clients abortion. Retrieved August 2, 2017 from https://www.mariestopes.org.uk/overseas-clients-abortion/irish/costs-payment-how-book/fees-how-much-abortion-irish-women
56. John. McCarthy and Peter. Wright. 2015. *Taking [A]part: The Politics and Aesthetics of Participation in Experience-Centered Design*. The MIT Press. Retrieved August 25, 2017 from https://books.google.co.uk/books/about/Taking_A_part.html?id=o7LDBgAAQBAJ&redir_esc=y
57. Corrin Morgan, Erika Alexander, Jerome Watts, Aaron Noble, and Oliver L. Haimson. 2016. #ReproHealth: A State-Based Investigation of Reproductive Health Rights Policy and Social Media Activity. In *Proceedings of the iConference 2016*.

https://doi.org/10.9776/16468

58. Kellie Morrissey, Andrew Garbett, Peter Wright, Patrick Olivier, Edward Ian Jenkins, and Katie Brittain. 2017. Care and Connect: Exploring Dementia-Friendliness Through an Online Community Commissioning Platform. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (CHI '17), 2163–2174. https://doi.org/10.1145/3025453.3025732

59. Wendy V Norman and Bernard M Dickens. 2017. Abortion by telemedicine: an equitable option for Irish women. *BMJ*: j2237. https://doi.org/10.1136/bmj.j2237

60. notathomeireland.com. 2018. NOT AT HOME — Ireland. Retrieved January 3, 2018 from http://notathomeireland.com/

61. M O'Regan and M O'Halloran. 2017. Abortion referendum to be held next year, Varadkar says. *Irish Times*. Retrieved August 2, 2017 from https://www.irishtimes.com/news/politics/oireachtas/abortion-referendum-to-be-held-next-year-varadkar-says-1.3119981

62. Office of National Statistics. 2017. *Abortion Statistics, England and Wales: 2016*. Retrieved August 2, 2017 from www.nationalarchives.gov.uk/doc/open-government-licence/

63. P. Olivier and P. Wright. 2015. Digital civics: Taking a local turn. *Interactions* 22, 4: 61–63. https://doi.org/10.1145/2776885

64. Francesca. Polletta. 2006. *It was like a fever : storytelling in protest and politics*. University of Chicago Press.

65. Francesca Polletta, Pang Ching, Bobby Chen, Beth Gharrity Gardner, and Alice Motes. 2011. The Sociology of Storytelling. *Annual Review of Sociology* 37: 109–130. https://doi.org/10.1146/annurev-soc-081309-150106

66. Rachel Rebouché. Abortion Rights as Human Rights. https://doi.org/10.1177/0964663916668391

67. Repeal. 2017. REPEAL. *Repeal Campaign*. Retrieved August 2, 2017 from http://www.repeal.ie/

68. Nitin Sawhney. 2009. Voices beyond walls. The Role of Digital Storytelling for Empowering marginalised Youth in Refugee Camps. In *Proceedings of the 8th International Conference on Interaction Design and Children* (IDC '09), 302–305. https://doi.org/10.1145/1551788.1551866

69. Phoebe Sengers, Kirsten Boehner, Shay David, and Joseph "Jofish" Kaye. 2005. Reflective design. In *Proceedings of the 4th decennial conference on Critical computing between sense and sensibility* (CC'05), 49. https://doi.org/10.1145/1094562.1094569

70. Sally Sheldon. 2016. How can a state control swallowing? The home use of abortion pills in Ireland. *Reproductive Health Matters* 24, 48: 90–101. https://doi.org/10.1016/j.rhm.2016.10.002

71. Katherine Side. 2016. A geopolitics of migrant women, mobility and abortion access in the Republic of Ireland. *Gender, Place & Culture* 23, 12: 1788–1799. https://doi.org/10.1080/0966369X.2016.1262831

72. P. D. Siplon. 2014. Once You Know, You Are Responsible: The Road from Scholar to Activist. *Journal of Health Politics, Policy and Law* 39, 2: 483–489. https://doi.org/10.1215/03616878-2416361

73. Reem Talhouk, Sandra Mesmar, Anja Thieme, Madeline Balaam, Patrick Olivier, Chaza Akik, and Hala Ghattas. 2016. Syrian Refugees and Digital Health in Lebanon: Opportunities for Improving Antenatal Health. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (CHI'16), 331–342. https://doi.org/10.1145/2858036.2858331

74. Maeve Taylor. 2015. Women's right to health and Ireland's abortion laws. *International Journal of Gynecology & Obstetrics* 130, 1: 93–97. https://doi.org/10.1016/J.IJGO.2015.04.020

75. Jennifer Thomson. 2016. Explaining gender equality difference in a devolved system: The case of abortion law in Northern Ireland. *British Politics* 11, 3: 371–388. https://doi.org/10.1057/bp.2015.47

76. Vasillis Vlachokyriakos, Matt Jones, Shaun Lawson, Patrick Olivier, Clara Crivellaro, Pete Wright, Evika Karamagioli, Eleni-Revekka Staiou, Dimitris Gouscos, Rowan Thorpe, Antonio Krüger, and Johannes Schöning. 2017. HCI, Solidarity Movements and the Solidarity Economy. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (CHI '17), 3126–3137. https://doi.org/10.1145/3025453.3025490

77. Ariadne Vromen. 2017. Social Media Use for Political Engagement. In *Digital Citizenship and Political Engagement*. Palgrave Macmillan UK, London, 51–75. https://doi.org/10.1057/978-1-137-48865-7_3

78. Jayne Wallace, Peter C. Wright, John McCarthy, David Philip Green, James Thomas, and Patrick Olivier. 2013. A design-led inquiry into personhood in dementia. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI'13), 2617. https://doi.org/10.1145/2470654.2481363

79. Women on Waves. 2017. Abortion Drones — Women on Waves. Retrieved August 2, 2017 from

https://www.womenonwaves.org/en/page/6402/abortion-drones

80. Peter Wright and John McCarthy. 2008. Empathy and experience in HCI. In *Proceeding of the twenty-sixth annual CHI conference on Human factors in computing systems* (CHI'08), 637. https://doi.org/10.1145/1357054.1357156

81. Volker Wulf, Konstantin Aal, Ibrahim Abu Ktesh, Meryem Atam, Kai Schubert, George P Yerousis, Dave Randall, and Markus Rohde. 2013. Fighting against the Wall: Social Media use by Political Activists in a Palestinian Village. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (CHI '13), 1979–1988. https://doi.org/https://doi.org/10.1145/2470654.2466262

82. Volker Wulf, Kaoru Misaki, Meryem Atam, David Randall, and Markus Rohde. 2013. "On the ground" in Sidi Bouzid: investigating social media use during the tunisian revolution. In *Proceedings of the 2013 conference on Computer supported cooperative work* (CSCW'13), 1409. https://doi.org/10.1145/2441776.2441935

83. Dawei Yin, Zhenzhen Xue, Liangjie Hong, Brian D Davison, April Kontostathis, and Lynne Edwards. Detection of Harassment on Web 2.0. Retrieved January 8, 2018 from http://www2009.eprints.org/255/6/Yin_etal_CAW2009.pdf

84. Anna M Young, Adria Battaglia, and Dana L. Cloud. 2010. (UN)Disciplining the Scholar Activist: Policing the Boundaries of Political Engagement. *Quarterly Journal of Speech* 96, 4: 427–435. https://doi.org/10.1080/00335630.2010.521179

85. Amy X. Zhang and Scott Counts. 2016. Gender and Ideology in the Spread of Anti-Abortion Policy. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (CHI '16), 3378–3389. https://doi.org/10.1145/2858036.2858423