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Technologies for Social Justice

Lessons from Sex Workers on the Front Lines

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ABSTRACT

This paper provides analysis and insight from a collaborative process with a Canadian sex worker rights organization called Stella, l'amie de Maimie, where we reflect on the use of and potential for digital technologies in service delivery. We analyze the *Bad Client and Aggressor List* – a reporting tool co-produced by sex workers in the community and Stella staff to reduce violence against sex workers. We analyze its current and potential future formats as an artefact for communication, in a context of sex work criminalization and the exclusion of sex workers from traditional routes for reporting violence and accessing governmental systems for justice. This paper addresses a novel aspect of HCI research that relates to digital technologies and social justice. Reflecting on the *Bad Client and Aggressor List*, we discuss how technologies can interact with justice-oriented service delivery and develop three implications for design.

CCS CONCEPTS

• **Human-centered computing** • **Human computer interaction (HCI)** • Human-centered computing-HCI theory, concepts and models

KEYWORDS

justice; sex work; violence prevention;

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1 INTRODUCTION

HCI has begun to address the design of digital technologies for justice [17,20] in a number of different settings such as street or workplace harassment [5,15], and the potentials of anti-oppressive design [56]. There has also been a movement in the literature towards topics of sexuality [60], pornography [55,69], and sex work [59,61]. This paper sits within these converging literatures, as well as alongside sex work research from other disciplines, to build a nuanced understanding of the ways in which digital technologies can be used alongside other forms of service delivery to advance and promote social justice.

We premise our understanding of sex work from the communities that engage in it and build on existing literatures (eg. [1,19,44]) that recognize sex work as a type of labour that should not be criminalized, but rather protected by labour and other relevant laws that promote human rights. Carol Leigh, feminist and sex worker rights activist who coined the term ‘sex work’ in 1987, explains that the term “acknowledges the work we do rather than defines us by our status [as a sex worker]”. Motivated by her “desire to reconcile [her] feminist goals with the reality of [her] life and the lives of the women [she] knew”, her activism worked to create an “atmosphere of tolerance within and outside the women’s movement for women working in the sex industry” [40]. In its current context however, the term sex work is used to refer to an activity practiced by people of all genders.

In this paper, we reflect on the use of digital technologies for service delivery within a peer-led sex worker rights organisation called Stella, l'amie de Maimie. After an overview of the organisation, we focus our discussions on the *Bad Client and Aggressor List*, which is central to their services. This tool was, and continues to be developed, through peer reporting and aims to provide information for sex workers in Montréal (and to a certain extent in wider Quebec) about potentially dangerous individuals.

The contributions of this paper are twofold: (1) we contribute to the growing debate around using HCI for

social justice. While there have been various interpretations of this, there has yet to be an analysis of the ways in which digital technologies could facilitate engagement with alternative narratives of justice, particularly in settings where workers may be criminalized. (2) To address this gap, we provide implications for design framed in Fraser's idea of multidimensional and 'abnormal' justice that will support the development of digital technologies for settings where restorative justice may be prioritized. This is a particularly timely contribution based on current political, social, and criminal justice debates at national and international scales related to wider issues of nationalism, racism, or the prison-industrial complex.

First, we contextualize our work in HCI literatures, Canadian legal structures, and Stella's organizational practice. Second, we describe our methods and outline how service delivery relates to restorative justice. Third, we develop three implications for design aimed at researchers seeking to develop technologies that supports service delivery with and groups that are stigmatized or criminalized.

2 BACKGROUND AND RELATED WORK

HCI has been conceptualising justice through the development of a framework for Justice-Oriented Interaction Design [17], social justice in UX [48], the connections of storytelling and social justice [68], or implications for HCI specifically related to sex work [59]. While the debates surrounding justice and HCI have been useful in laying the groundwork for the relationship between 'justice' and HCI, we believe more nuanced discussions of what 'justice' actually means in relation to digital technologies, and the ways in which humans interact with it are needed. In this paper we focus on this, and how it relates to the consideration of restorative justice necessitated by engendering identities that are stigmatized or are made marginal by other socio-cultural means.

We hope to address part of this gap in the literature by using Fraser's ideas of three-dimensional justice [22]. In this framework, justice is seen as a constantly evolving process that works towards a more just world on three levels. These relate to three questions that can be simplified to the following: What does justice look like? How can we move towards this idea of justice? And who decides what the answers to these two questions are? After describing the nuances of these questions and their meanings, there are instances where institutional ideas of justice are incongruent with what those affected by these frameworks consider 'just' – Fraser calls this 'abnormal justice' [23].

We must also acknowledge that "social justice is not an outcome of design in itself" [59], but the processes, as well as the wider work of research collaborations involved in these designs in and of themselves are also seen as part of this 'social justice' outcome. We want to also raise the importance of technologies that are useful for research purposes and wider civic and rights contexts, to move towards an understanding of civic design [16], and more thoughtful engagement with Third Sector Organisations [60]. We do this by bringing to the fore the importance of '*just sustainabilities*' which "demand new ways of accounting for difference and inequity at the societal scale as cornerstones of truly sustainable design." [17]. Furthermore, it is important to not only engage in respectful and ethical, as well as trusting [12] conduct, but also to ensure the sustainability of these projects in different ways [17]; to engage in holistic explorations of the research collaborations as justice-oriented within which support organisations activists, researchers, and others work.

Bringing Fraser's framework into conversation with HCI literatures, we learn to foreground collaboration and collective, situated work to design technologies with communities in mind and with differential understandings of justice - to collectively answer Fraser's three questions not only of wider political structures, but also of our research in and of itself. Furthermore, using multidimensional justice [21,22,71] provides us with a way of unpicking what we mean with 'justice' in HCI and how it relates to wider socio-legal structures and political frameworks. Using this lens to look at sex work specifically, we learn that Canadian sex work laws can be interpreted as an example of abnormal justice: where the government uses criminal law to address sex work, claiming that criminalization of sex work will protect sex workers (institutional ideas of justice), while organisations run by sex workers, like Stella, argue that protection requires removing criminalization (sometimes known as decriminalization). In fact, it is well recognized by social justice movements fighting for the decriminalisation of sex work, that the criminal justice approach is not a way of achieving justice for sex workers [3,37]. Instead, justice for sex workers is seen as being able to work free of the threat of police repression, criminal and other convictions, violence, discrimination, and stigma.

2.1 Sex Work, Support, and Technologies

Like other industries, the sex industry, and practices of buying and selling sex have evolved alongside societal developments, perhaps most importantly technology [32,52]. Although sex workers are often seen as being

marginalised in society and “hard-to-reach”, in regards to technology sex workers have been found to “represent a unique demographic for high technology penetration, [having] multiple devices per person, and intensive usage in their everyday practices” [50]. Sex workers have moved online to advertise or provide their services [14,51,52] and despite legal frameworks which criminalize their work, they are making use of digital technologies such as social media in innovative ways [32,52]. Cunningham and Kendall [14] raise important legal and regulatory questions surrounding the advertising and exchanging of digitally mediated sexual encounters for this growing online market that incentivises reputation-building as well as screening practices. Furthermore, digital technologies have been designed to support peer-sharing [49], to track health information in developing contexts [67], or to support sharing of safety information [59]. What may be lacking in the current research however, is the development of digital technologies with sex workers directly that take into account their agency and skillsets.

The interplay between change and control in developing potential futures with digital technologies in organisational contexts is vital in engaging this more nuanced approach [63]. This is because these digital technologies and infrastructures can themselves generate new infrastructure to challenge wider existing structures such as legal contexts. Technologies are also scalable, and possess upward flexibility; providing us with new opportunities for sex work support services in rethinking organizational control [63] or potentials for justice [59]. One example of this is the creation of a Sex Work Database in Canada. This database brings together “academic research, print and visual media, grassroots activism, and commemorative responses related to missing and murdered women and sex work” and functions as an activist archive that brings together documents produced by sex workers that deliberately assembles “an anti-colonial feminist argument that highlights marginalized voices, and embraces principles of social justice and reciprocity” [19]. Learning from this collaborative project, we see that technologies are not only built with embedded values [24], but also that these can support wider political struggles – in this case the ‘tagging’ of archived documents was seen as activism for sex worker rights [19].

The technological context for the sex industry and the capacity for sex workers to use technology in their activism and service delivery will vary by region and is impacted by the legal context for sex work. In Canada, sex work is criminalized. In 2014, the Conservative government implemented a ‘Swedish inspired’ legal

regime that made the purchase of sexual services illegal, and also criminalized advertising, material benefits (earnings from sex work), or procuring. They also made changes to the communicating law, which effectively criminalized the exchange of sexual services for the first time in addition to communication and third party involvement. There are a myriad of academic and non-academic debates surrounding ‘what works’ when it comes to regulating the sex industry; but many sex workers and allies would support, and campaign for a decriminalized approach [2,10,37]. Further to this, the Canadian Alliance for Sex Work Law Reform state that in addition to removal of all criminal laws against sex work, “[e]xploitation in the sex industry can be addressed using a labour framework that engages provincial legislation related to public health, occupational health and safety, and employment law” [10]. Ultimately, laws impact on the ways that sex workers can share information, communicate about potentially dangerous individuals, engage with clients and employ vital safety strategies in their work.

2.2 Stella, l’amie de Maimie

Stella, l’amie de Maimie (or Stella) is a sex worker led organisation and registered charity that provides space and support for sex workers in Montréal, Canada. The organisation was founded in 1995 as part of a HIV-related public health participatory action research project that placed sex workers at the centre of HIV prevention [13,62]. Members of the organisation also played a major role in mobilizing additional narratives and communities in the *Bedford vs. Canada* legal case [72], which delivered a landmark decision declaring three of Canada’s most commonly used prostitution laws as unconstitutional, and through that recognized the human right of safety and security for sex workers. As the organization is made up of a majority of sex workers, Stella’s team brings unique knowledge and strategy to fighting violence against sex workers.

On their website, Stella state the following as their primary mission: “*to improve quality of work and life for sex workers, to educate the greater public on the different ways that sex work happens as well as about our lived experiences as sex workers, so that sex workers might also enjoy and benefit from the same rights to safety and security that are commonplace for other people.*” [57] Stella works towards this mission through service delivery and activism, underpinned by “*solidarity amongst sex workers and by creating spaces where sex workers can access power.*” [57].

2.2.1 Service Delivery. Stella provides a number of different services to reach their goals, and integrates a rights based approach into everything they do. To further not only their own goals, but also wider-reaching goals of the sex worker rights movement, they build local, national, and international networks and collaborations.

Stella produces an eclectic yet unified image of the organisation through their use of artefacts and publications. Seeing these as an artefact ecology, allows us to move beyond understanding the objects as physical artefacts with some level of digital interaction, and instead supports us in considering the ways in which people interact with them in different contexts of everyday life [7,33].

Stella use artefacts such as condoms, crack pipes, or publications that relate directly to their organisational goals. For example, small cards that Stella created to increase sex workers' knowledge about their rights and legal context were designed and formatted intentionally for sustainable use: they are sized like business cards to fit discreetly into a small bag and can easily be passed on to others. The language that is used on the cards to disseminate legal information is easy to understand, colour-coded, and translated into four languages. Working alongside Stella staff to analyse their use of this artefact ecology [7] helped us identify different uses for the artefacts, especially when discussing their political nature. We use this analysis to better understand the use of the *Bad Client and Aggressor List* described below.

2.2.2 The Bad Client and Aggressor List. When sex workers experience violence on the job, they are able to fill out a short form where they are asked to describe the incident and alleged perpetrator. Sex workers are able to report such incidents with Stella through a number of channels (in-person on outreach, by dropping into the office, via e-mail or phone call). Following this, staff remove any identifying information about the sex worker, and write a brief but detailed description of the alleged perpetrator, which is then added to *The List*. As such, *The List* is made up of edited versions of informal reports from sex workers about incidents with presumed clients which either move beyond their agreed boundaries, involve violence, or disrespect. Often these experiences are shared amongst the community, so *The List* functions both as a warning system and to promote solidarity. To share this information among sex workers, it is incorporated into the monthly Bulletin created by and for sex workers in Montréal.

The bulletin also contains many other pieces of information on services available and activities for sex workers, as well as a regular advice-column written by a

well-known sex worker columnist. The bulletin is printed and shared in the drop-in centre and on outreach, and is also e-mailed to sex workers and other organizations in the area. Staff were interested in finding out how they could improve this service by considering the use of digital technologies to collect and share this vitally important information to increase its usage and reach.

Sex workers have been sharing this kind of information informally for as long as they have been doing their work. Penfold et al. found that inter-agency working supported through a similar system resulted in increased reports of violence in the UK [46]. Bringing together this learning with digital technologies, Strohmer et al., have explored the use of digital technologies by a UK-based charity to carry out a similar kind of reporting and alerting process [59]. Learning from the work carried out in the UK, we reflect on the current use of non-digital technologies, and have also taken into account the implications for design as outlined by [59] to imagine digital futures with Stella.

3 METHODS

To foreground collective knowledge-building surrounding Stella service delivery and the potential of integrating digital technologies to facilitate a movement towards multidimensional justice [21,22] with and for sex workers, we used a Participatory Action Research (PAR) framework [9,36,47]. Stella staff were involved in the development of the overall research questions, the methods, interview and workshop schedules, the process of analysis, and writing a charity report as well as this paper.

Our fieldwork took place over 3-months at Stella from April to June 2018. We carried out 3 interviews, 3 workshops, observations, a collaborative analysis of the artefact ecology produced by the organisation, and various informal chats with members of Stella staff. The majority of data collection took place in English, though some discussions in the workshops took place in French and were later translated into English by the authors. Audio recordings from the interviews and workshops were transcribed and analysed using thematic analysis [8]. We have loosely categorized the work into three distinct but interconnected stages of research: (1) sensitization of the first author within the organization to contextualize the political and social implications of our three questions of justice within the context of Montréal (observations and informal chats); (2) collaborative artefact ecology analysis to better understand the ways in which Stella creates and utilizes key artefacts for service delivery and activism (similar to the work carried out by Bødker et al. [7]); (3) a

series of three workshops with staff to discuss in detail the processes and experiences around the *Bad Client and Aggressor List*, focusing in particular on staff experiences with digital technologies.

The workshops each included a diverse group of roughly 12 members of staff including outreach workers, communications staff, and management. Each workshop was based on a flexible schedule of activities and concentrated on different aspects: (a) understanding the information flow involved in producing and sharing *The List* through a card-based mapping exercise and discussions; (b) understanding the form used to collect this information by reflecting on the existing form in small groups prior to a group discussion based on staff experiences of using the form; and (c) potentials for novel interactions using design fictions that were developed based on the analysis of the two prior workshops and other data collection as a way of facilitating discussion around digital technologies, justice, and the future of service delivery. This paper focuses on the data collected through the workshops, but the researchers' prior experiences and staff's historical understanding of the organization contextualizes this data; affecting the ways in which we understand, interpret, and analyze the data.

4 SERVICE DELIVERY AND RESTORATIVE JUSTICE

Restorative justice, though sometimes understood simply as an alternative to the criminal justice system, is defined as “an approach to justice that focuses on addressing the harm caused by crime while holding the offender responsible for their actions, by providing an opportunity for the parties directly affected by the crime – victims, offenders, and communities – to identify and address their needs in the aftermath of the crime” [34] by the Canadian department of justice. The term ‘restorative justice’ was often used by staff when talking about the ways in which their work fits in to wider justice debates, as well as sex worker rights activism. They also discussed *The List* specifically as an element that contributes to the restorative justice of sex workers who have experienced violence. While it does not provide a space for perpetrators to be held accountable, it does provide a space for sex workers to seek and implement protections in a context where they themselves are often sought out as criminal, where they are not provided with a context to restore the injustices they experienced. It also provides an opportunity for the ‘victim’ and the ‘community’ to identify and address their needs in the aftermath of violence [34]. On top of this, restorative justice is built on

principles of “respect, compassion and inclusivity” to encourage “meaningful engagement and accountability and provides an opportunity for healing, reparation and reintegration” [34]. Looking at this then, we see that *The List* provides an opportunity for sex workers to create alternative forms of reporting violence, in a context where the justice system too often either rejects sex workers' experiences of violence or does not account for their realities. As it does not provide a space for perpetrators to be held accountable though, we argue that instead of seeing *The List* as a representation of restorative justice in its full form, we see it an example of an alternative approach to justice seeking, based in part in the ideals of restorative justice.

As shown above, justice correlates to the ways in which Stella work, and how, as one member of staff said: “*everything we do is activism, our existence is the revolution.*” This was said in a joking way, while also maintaining an air of seriousness. What it does however, is clearly show the link between service delivery and activism in the organisation. Service delivery feeds into activism, and vice versa, while also maintaining them as distinct. For example, Stella's weekly health clinic is a direct way of delivering non-discriminatory and anonymous medical services, and is appreciated as such by sex workers from all parts of the industry. At the same time however, and while understanding that creating separate and isolated services for sex workers is not necessarily the end goal, its existence is a form of activism, as this is the only place where sex workers (particularly including those without official documents) can receive anonymous and non-judgemental health services in Montréal. This kind of service delivery then becomes, in itself, part of a process of restoring justice to the lives of sex workers. At the same time however, those using the services do not necessarily see themselves as engaging in activism or a revolutionary act – they are attending a sexual health clinic. In this way, the organisation engages in a kind of prefigurative politic, or what we term ‘tacit activism’, that is embedded and necessary, implicit in the actions taken to, in this case, deliver services. Below, we address in more detail how operating in a context of criminality affects the ways in which service delivery, and *The List* specifically, contributes to creating alternative forms of justice for sex workers.

4.1 Operating in Criminality

In Canada and many other parts of the world, sex workers operate within a legal system that delegitimizes and criminalizes their work. As explained earlier, the laws introduced in 2014 criminalized for the first time the exchange of sexual services by introducing a variety of

criminalizations against advertising, receiving a material benefit from prostitution, procuring, and the sale of sexual services near a park, playground or daycare. Despite an included immunity where sex workers cannot be arrested and prosecuted for advertising and receiving a material benefit from their own services, sex workers are still committing a crime through their involvement in sex work. It is this context that creates isolation, targeted violence, discrimination, stigma and a host of other impacts. Research has repeatedly demonstrated that the criminalization of any element of sex work negatively affects the workers, and creates dangerous conditions (e.g. [3,26,66,70]).

One member of staff said in an interview, “*I think anything you do when you're operating in criminality, you just need to know the risks and then make your decisions based on what you know about those risks.*” Advertising, and receiving a material benefit from the exchange or purchase of a sexual service is illegal in Canada. Despite the aforementioned immunity in Canadian criminal law, activities related to advertising and other aspects of the work remain a crime. This impacts on how sex workers use, and feel about technology (perhaps especially privacy) and influences the ways in which sex workers organize and undertake their work.

Operating within systems that criminalize them, sex workers are limited in how they can communicate and undertake their work. This criminalisation and their surveillance under protection by law enforcement means sex workers try to avoid detection and apprehension from authorities in their work and personal lives. Alongside a variety of other reasons, this means sex workers rarely report violence through official channels. Stella staff explain that sex workers have reported being arrested or surveilled when attempting to report violence, rather than receiving support. Despite this, “*there's a system of reporting that needs to happen so we [as sex workers] can communicate [with] each other.*” This communication however, needs to exist outside the context of criminalization and the criminal justice system, or as a member of staff explains, “*outside of a context where we're talking about arrest and jail and all this shit being the response to violence.*”

Peer-communication of a criminalized and highly stigmatized community such as sex workers, functions as a reflection of what justice reform in this space could look like. Or at least, it could be seen as an impulse for discussion of alternative responses to violence prevention and reporting. Ultimately, *The List* is a response to the fundamental question: “*in a context of criminality, how do*

we get this information [about potentially dangerous individuals] around?” This person subsequently stated that the human interaction and other forms of communication surrounding *The List* is “*the closest you're going to come for [this sharing of information].*”

A core element of this communication however, is that it considers but is not limited to an officially recognized group that can follow up and provide a holistic approach to *The List*. Stella staff explain that this does not require an ‘organization’ per se as many sex workers have informal online lists where they support each other and collect information about bad clients and aggressors. It was however also noted that Stella holds an important position in this context of criminalization as they bridge two very different positions: (1) they are a registered charity, holding powers and privileges that come with this recognition. At the same time, (2) Stella is led by sex workers who may also work within the industry and intimately know the impacts of criminalization. Ultimately, Stella’s status provides an experiential view of the industry and different community reporting systems that a sole worker or group of workers sharing information about alleged perpetrators of violence may not have. Part of the tradition of the way that violence reporting tools like *The List* are created and distributed in Canada is to maintain the element of ‘by and for’ sex workers – an element central to Stella as an organization and *The List* specifically.

Stella staff also highlighted the importance of accountability to community members that they have as an organization, to ensure complete anonymity and to provide a safe space for sex workers. As part of the work to navigate these protections and risks, staff undergo various steps: “*We try to scan [the report] for information that would identify workers and where they are, and eliminate that information from reports*” As an organization, Stella also knows that different workers and workspaces require different levels of anonymity and protection from surveillance, and know that “*nobody is immune, right?*”

4.2 The List as Alternative Justice

Understanding what it looks like to operate in a context of criminalization provides insight into why technologies like the *Bad Client and Aggressor List* are so necessary. Sex workers’ own threats of criminalization, and a mistrust of the criminal justice system makes clear why they prefer to communicate with each other about ‘bad clients’ and ‘aggressors’ in an alternative system and outside the constraints of surveillance, arrest, and risked jail time. With this in mind, we provide a reflection on how *The List*

in and of itself is “*profoundly, profoundly political*”, and “*a very good example of a restorative justice approach, because it's an alternative way of dealing with crime against a person*” and seeking justice for sex workers.

The List operates in a system of “abnormal justice” [22] (which can also be understood as injustice here) while preventing violence, redistributing power to sex workers, and engaging community. All of these are deeply political acts, and demonstrate the need for alternatives to institutional justice seeking. One participant said: “*this List is a really good way to meet the human rights needs of sex workers, it's sort of like some people want [perpetrators of violence] to go to prison, and some people are like 'it's not actually working for my community cause it's only certain people [from certain communities] going [to prison]'*.”

From this, we learn that a degree of nuance is necessary when addressing criminal justice for sex workers in relation to perpetrators of violence. Prison sentences for perpetrators are not the only option, not only because it does not address systemic issues around violence against sex workers, but also because it does not address their racial and social profiling by law enforcement. Staff recognize the dilemma in aiming to prevent and proactively advocate against violence while also understanding the injustices surrounding traditional models: “*People don't think of alternative ways to address violence except police and jail and this shit. When we think about [the Bad Client and Aggressor List], it's a very innovative tool.*” Another participant continues, saying it may be “*more important that we know who the violent people are and maybe we'll deal with it in our own way.*” This demonstrates that in addition to being a communication and important working tool for sex workers, *The List* is also a “*very political tool*” that enables sex workers to reflect on the injustices of the justice system and to support the imagination of more just alternatives. As researchers and designers we need to learn from this reflexive understanding of violence prevention, especially when designing digital technologies to facilitate movements towards more ‘just’ worlds.

4.3 Raison d’être for The List

Throughout history, sex workers have communicated with one another about potentially dangerous individuals, situations, groups, and other threats outside of the constraints of criminal justice systems. The first Canadian version of this was published in Vancouver by the “Alliance for Safety of Prostitutes” (ASP) in 1983. The Prostitution Collective in Victoria, Australia developed the first Ugly Mugs Scheme in May 1986, using the term ‘ugly

mugs’ to describe clients who become violent [65]. Artefacts such as the *Bad Client and Aggressor List* are vital in a context of criminalization, where sex workers may not want to engage with police to formally report violence because of previous or expected discriminatory and stigmatizing treatment. These ways of communicating allow sex workers to maintain confidentiality, community, and to keep safe at work. They are also recognized as effective violence prevention tools and in 1996 Stella’s *Bad Client and Aggressor List* (then the “Bad Trick List”) won the “Prix Sécurité des Femmes” from the Montréal City responsible for the security of women in urban settings [58].

One participant explains, “*this kind of communication tool...the written, this typed version is probably the closest to its original intention [communication about potentially dangerous individuals among sex workers] which was started in many different places around the world because sex workers cannot [openly] communicate amongst ourselves.*” She also made clear this was necessary: “*we need to communicate amongst ourselves.*”

Most academic discussions and literature around tools such as *The List* or the Ugly Mugs scheme [46] assume they are developed solely for the purposes of harm reduction or violence prevention [43,59]. Our conversations with the team at Stella however, made it clear that there are multifaceted and more complex reasons why sex workers use such peer-communication tools. Here, we describe only a few of these reasons: violence prevention, recognizing agency, affirmation, and community communication.

4.3.1 Violence Prevention. One of the core reasons for *The List* is to prevent violence perpetrated against sex workers – a way to share information, to help sex workers avoid particularly dangerous individuals. One participant reminds us that the collected information must be useful to sex workers when she asks: “*Would it help prevent someone seeing a client?*” or would the information and details collected help identify a client, an aggressor, or a specific situation? Even though *The List* is a tool for violence prevention, Stella staff understand that there may be barriers to this, and that the reports do not always result in sex workers avoiding a particular client or violent situation. One participant stated: “*realistically, maybe some sex workers can afford to just say no to a bunch of clients, but I think the reality is that people still see those guys.*” Despite this, *The List* may still prevent violence, even if a sex worker chooses to see a client they know to be violent. Stella staff explained that sex workers are prompted to take more safety precautions because of *The*

List: “they change their routine, they take different measures, they make sure the money they have on them is with a friend before they get in a car, they go only to a place, they tell a guy to park and they walk to him to get in his car, or whatever. But yea, they’ll still take his money.”

4.3.2 Recognizing Sex Worker Agency. Stella promotes sex worker self-determination and agency; the *Bad Client and Aggressor List* is an integral part of this work. Its intent is not to encourage or discourage sex workers from working, but rather to provide an opportunity for sex workers to make more informed decisions about their work, the clients they see, and what precautions to take in a negotiation process. Making informed decisions means recognizing the decision-making process through a sex workers’ deliberation. One participant explained: “maybe it didn’t prevent the assault, or maybe the second you recognize [the resemblance to an aggressor] you were like ‘fuck this shit’ and you got out of there before something bad happened.”

4.3.3 Affirmation. The *List* can also function as an artefact of self-affirmation. Reading *The List* may help affirm sex workers in their experiences, which they may describe as ‘creepy incidents’. On top of this *The List* also functions as a reminder to trust one’s instinct about clients, as one of the participants pointed out: “I think it can help just like, if you had creepy incidents with clients that didn’t quite make it to [the *Bad Client and Aggressor List*] maybe they could have, but you didn’t report them but then you see a description that matches the same guy you’ve seen.” Linking this back to the importance of agency in sex work, as well as Stella’s main aims, this helps support sex workers not only directly, but also more emotionally as it is among the most important skills that a sex worker has and needs to remain safe at work. It also helps affirm sex workers in their experiences of their work, rather than promoting the harmful discourse of sex work as violence: sex workers need to maintain the right to recognize violence when it occurs, rather than have all of their experiences defined as violence for them.

4.3.4 Community Communication. Sex workers rarely report violence they may experience to police and other officials [27] for a variety of reasons ranging from discriminatory treatment and stigmatizing responses, to outright dismissal from authorities of violence against sex workers. One participant said, “[sex workers] don’t want to press charges to the police in general. It doesn’t mean that they won’t, but in general.” Instead, many prefer reporting to support organisations such as Stella in Montréal (or for example National Ugly Mugs in the UK [38,59]). Other times, they may also report the violence in online forums or through social media channels. Using *The List* allows peer-to-peer reports where sex workers attempt to prevent violence with each other. They must do this ‘for

themselves’ as it is not always something they can rely on from others outside of the sex industry. Particularly, where police may reproduce stigmatizing treatment to sex workers who want to report, this channel for community communication really allows sex workers to communicate with each other and prevent violence, or as one participant stated: “it’s really to get that power and give back to somebody else so [aggressors] cannot be harmful.” This individual power, when collectivized in community via a widespread communication like *The List*, then becomes important not only for the individuals making the report and those reading the alert, but also for the community as a whole. This also highlights that *The List* is a sex worker led, community initiative, and that this is seen as central to its success.

4.4 Humanity in Service Delivery

The *Bad Client and Aggressor* form and list are used by sex workers who come to Stella and by staff to fulfill all of the above aims. It is part of an ecology of service delivery, where human interaction is essential. The ways *The List* is formatted and distributed is essential to consider, and the Stella team made clear the importance of people within this process. Here, we relate this *humanity* to human interaction, care, trust, or other related ‘human’ elements of service delivery. Using *The List* as a communication tool (as a way to connect and talk with other sex workers) is equally important to its distribution.

When we look at *The List* beyond its existence as a tool, and instead see it as part of a wider ecology [42], we see that human contact is the start and end-point of the production of the monthly list. In-person, phone, or in other ways digitally mediated human contact is often how information about incidents is collected. It is also often how this information is shared among sex workers. A member of staff explained part of this process: “So there’s the listening part so we can do the intervention with someone who’s reporting, and then there’s the part where we’re like okay, what’s the objective of diffusing this information.” It is within this context that we must evaluate the use of *The List*, and to innovate potential new avenues for collecting, sharing, or using the information. The list needs to be viewed as a holistic technology that takes humanity into consideration. Several members of staff made this imminently clear: “We’re talking about heavy shit, you know” and sex workers who are engaging with a support service, particularly if they have experienced any form of violence, need to feel like they have options to talk to someone who is supportive, if they choose to do so.

While discussing possible digital interventions to make *The List* more accessible, we discussed the importance of people, solidarity, care work, and trained staff. This is because they “need to be careful around [discussing] bad clients and aggressors.” Conversations about violence in the context of outreach work need to be nuanced and must consider the context in which this takes place. For example, during street outreach, when people are working, “it’s not usually the appropriate time to fill out the form. [...] people won’t fill it [out]. People may be high, or in a rush. We need to be careful in how we do it, because you don’t want to [say] ‘let’s talk about what happened to you’ and then go [away], you know.” Furthermore, there may be situations where the ways in which questions are asked towards the people who have experienced violence may awaken previous traumas, so the interaction must not only be on a caring and human level, but must also be trauma informed [28]. One member of staff said that an outreach worker cannot just ask a person whether they have experienced violence because “it can awaken all kinds of things for the person.” *The List*, or any other digital innovation that may carry out similar work, cannot only be a tool for violence prevention. Instead, they are part of an ecology that supports the facilitation of connections, relationships, and human interaction.

While human contact is important to the use of *The List*, Stella staff does not presume that sex workers want to discuss the incident or engage in follow up interventions such as counselling or completing a police report. When an incident is reported to a member of staff, they are trained to engage in conversations with the individual, to ask them questions such as: “Do you want to press charges? Do you want us to accompany you all the way [through the criminal justice system]? If they want, that’s part of our job.” Many however, will not want a follow up or an accompaniment from staff, even if they fill in a report form. The choice to request or decline further support from Stella or other organizations must be respected “because we can’t assume that everyone wants interventions [or support], if it’s just a report.”

4.5 Posting Information Online

Much of our discussion was focused around putting the information shared via the *Bad Client and Aggressor List* online, as well as how we could design novel technologies to make it more useful. Privacy risks were often flagged around this, and one participant stated being online “risks identifying workers.” This shows how anonymization becomes important in a context where service users may be criminalized, particularly when designing digital technologies to support peer-communications akin to *The*

List. But ultimately the following statement from a member of staff brings the importance of technologies to the fore: “we cannot say [online technologies are] not an option. [They are] an option, definitely, because that’s where it’s all going.” This understanding led to wider discussions of technologies in society, and the ways in which sex workers use and appropriate them; smartphones are becoming more affordable and available to sex workers in all parts of the industry, internet access more ubiquitous, and peer-alerting networks through forums and social media are being used. Stella currently use some digital platforms and technologies to share information and communicate with sex workers. For example, Stella staff uses a mobile phone application to communicate with a group of sex workers, but at the same time, it is understood that this particular app is “not [a] community for everyone” and that not all online applications work for every sex worker or sex working community. To be able to access mobile applications, sex workers “need to have internet access, a cell phone or laptop, and not everyone has that.” The Bulletin (with the *Bad Client and Aggressor* information) is also e-mailed to sex workers and distributed by other organisations.

Our discussions on innovative technologies concluded that regardless of whether information is posted online, remained in the current paper and PDF format, or whether we created a hybrid form of these two options, we needed to ensure sex workers were able to obtain, read, store, and use this important information. In discussing this, it reiterated the Stella mandate, that the “inclusion and diversity of sex workers” is essential to service delivery. While online service delivery may be useful in some ways, it cannot replace existing practices “because of the sex worker on the street [...] they don’t have access to [reliable and continuous] online anything. And they’re the ones really using [The List].”

When discussing different potential designs for digital improvements to *The List* with staff, the diversity of the sex industry was raised again: “there is something interesting in terms of who uses [the different] formats and how the different formats [of information sharing] suit the different kinds of workers based on levels of criminality, levels of literacy, based on a whole whack of stuff.” As we were talking about increasing the inclusion of sex workers who contribute to and receive *The List*, one participant stated: “I think all these different platforms were made for different people. Like, this one [the paper version of *The List*] is for the people on the street, the people who [don’t] have access to anything or for the people in a crack house [that are visited as part of the outreach activities], this [the proposed online database, one of the imagined futures for *The List*] is more for maybe escorts or maybe masseuses”

who may have regular access to computers or indoor spaces to look at the information.

Expanding on this point, it was raised by others that the inclusion and exclusion of certain groups by each separate technology was not necessarily a problem though, *as long as other options remained available*. This opened conversations about the necessity of multiple technologies to record and collect information about bad clients and aggressors: “*we need different types of platforms for different types of sex workers. So, I think we need all of them [the imagined technologies] in a different way.*” This statement is important, because it makes clear that sex workers are a diverse group of individuals who have different needs, access, and approaches to technologies.

Having a more complex understanding of the access to and use of digital technologies beyond the artificial dichotomy that street sex workers do not have access to these technologies and that escorts do, would allow us to build more useful tools for service delivery. This more complex understanding would provide us with a reason to diversify not only the kind of information that is received and shared, but also the ways in which it is received and shared for a potentially digitally enhanced *Bad Client and Aggressor List* (or similar). One way of building this necessary but complex understanding is to look beyond traditional boundaries and explanations of the different areas of the sex industry. Instead, we can build ecologies of understanding that take into account multiple realities and mixed accessibility to digital technologies. These should not be based on place of work as is traditionally done in sex work research (and to a certain extent service delivery), but instead could be considered in separate but connected areas such as: place of work, digital infrastructures, and access to hardware and software. Instead of seeing these three things as entirely separate from one another, or that one implies the other, we argue that we must look at these three areas together and with an intersectional lens that accounts for the different positionalities and experiences of sex workers.

5 IMPLICATIONS FOR DESIGN

Based on the above findings, there are a number of different opportunities for future developments in the use of digital technologies to support the ongoing use of the *Bad Client and Aggressor List* and similar justice-oriented tools for service delivery. Designing for alternative forms of justice is incredibly complex, but also necessary for the future of the design of digital technologies in social, third sector, or civic contexts. As we have demonstrated throughout this paper, digital technologies can play a part in these justice-oriented collaborative efforts in

supporting the ongoing labour of volunteers, staff, and sex workers accessing services. In the case of this paper, this has related primarily to violence prevention, solidarity, or rights advocacy. Looking at these three areas in particular, digital technologies can support the work in collecting, sharing, and using information especially when this is collected and contextualized by human interaction. This human interaction may be digitally-mediated, but as we argue below, should not be replaced with novel digital technologies. Instead, we provide implications for the design of these within a framework of restorative and social justice seeking.

Using the *Bad Client and Aggressor List* as a starting point to reflect on the kinds of technologies that could be useful, we have developed three implications for design: (1) technologies need to be adequately contextualized; (2) the need for multiple formats and types of service delivery to reach as diverse an audience as possible; and (3) a recognition that technologies in and of themselves will not be able to solve complex issues of calls abnormal justice. We believe that these implications will support meaningful engagement to design digital technologies with support services, or others engaged in justice-oriented work.

5.1 Contextualizing Technologies for Justice

When designing technologies for social justice, we must ensure we adequately understand the contexts in which we design, including but not limited to the social, historical, political, and legal circumstances. To do this, it is helpful to keep in mind the three questions Fraser [22] poses to build a more just world: What is justice? How is it decided what this justice looks like? And who decides the answers to these two questions? Looking at these questions, one must understand the contexts not from privileged positions as researchers and designers, but rather from the position of those one is designing and innovating with and for. In some ways, participatory design and related research approaches (see for example: [11,53]) may be useful for doing this. For example, Kensing and Blomberg have analyzed the ways in which participatory design (PD) relates to issues of politics of design, participation, and methods across personal, organizational, and national levels [35]. Others expand the discussions of PD to public rather than work-life [6] (HCI, rather than PD, is later also expanded towards explicitly civic contexts [45]). PD is often design-focused, the explicit motivations of such work however also exists to “strengthen workers’ control over their work lives and to create more democratic work environments” [6]. This paper does not discuss PD directly, but we believe that as a growing community of justice-oriented HCI researchers,

we can learn from Beck [4], Irani et al. [29,30,31], Björnginsson and Ehn [6] or others to explore the politics in our research and to develop digital practices and ‘things’ that support workers’ engagements with political processes on personal, organizational, and national [35] (arguably also international [21]) levels. Following these scholars, we also encourage researchers working in wider justice-oriented research approaches to HCI to also consider the political and activist potentials in their work. The following questions may be useful for reflection: how can the participatory processes affect not only the lives of those directly involved, but also those associated with those individuals? Who is not participating, and how does their absence affect the project?

Seeing technologies for justice within the sex industry specifically as an example for this contextualization, we look into the ways in which legal frameworks in particular can affect research. Not only have Cunningham and Kendall raised legal questions for online markets associated with sex work [14], but with the introduction of laws specific to advertising in a Canadian context, and similar laws implemented elsewhere in the world, we must consider what kinds of technologies are designed. We have to consider how they sit within existing and evolving legal frameworks, and the ways in which they either support or counter these developments. While working within institutions such as universities or NGOs requires us to do work that is legal, we do question to what degree we are able to subvert the legal status quo, to move away from the existing abnormal justice [22,23,41], and instead move towards systems that are just (and sustainable [17]). We urge researchers and designers to question political and legal structures that maintain systems of abnormal justice and ask them to not be afraid of disobedience to these systems when necessary.

While seeing digital technologies or platforms as tools for translational service delivery [45] or citizen-led developments [25], the collection and dissemination of information related to alleged crimes or in stigmatized, marginalized, or criminalized communities, brings about particular necessities. Here, we must ensure that whatever digital technology we design is more than ‘a tool’ and instead see it as part of an ecology [42] that is based in social, historical, legal, or ethical contexts as well as personal experiences of those that are part of the ecology itself [29] and wider community [54]. To do this, we must understand the ways in which humans interact with it, how it fits in with other existing digital and non-digital service provisions, and how it sits within particular social, political, historical, and legal contexts.

5.2 Multiple Formats and Shifting Paradigms

We also argue that when designing digital service delivery, we must understand that one approach will not work for the complex and interconnected ecology of existing services, service delivery, and heterogeneous experiences of individuals accessing these services. When designing technologies for restorative or social justice, digital platforms, tools, or ecologies may be useful in some ways, but we also must ensure that we do not exacerbate or amplify the digital divide [64]. Rather than unifying services, we argue for the need to diversify service delivery to ensure diverse groups of individuals are reached, but also to allow for people with different degrees of access, interest, time, or money to be able to make use of the pieces of information that they feel is important and useful to them. To provide services that empower their users to make decisions about their own needs [18], and to ensure accessibility for different parts of the community.

Our point of view seems to be in direct contrast with some current trends in HCI to build generalizable technologies and platforms that can be easily translated to different contexts and countries, but correlates with other spaces of HCI that relate to designs with ideals of justice at their core (e.g. [17,56,59]). While building a digital platform to collect and share information about potentially dangerous individuals on a national level may work in some countries such as the UK [59], it is important to acknowledge that this may not be translated to other contexts easily. For example, looking at the potential to design a digitally mediated national *Bad Client and Aggressor List* for touring sex workers in Canada, there are a number of immediate legal concerns (different provinces and territories have different laws surrounding sex work), as well as pragmatic issues (who is going to fund and maintain this service?), or risks associated with such digital tools. These risks and issues become exacerbated in spaces where community members participating in any design work or research are structurally disadvantaged through stigmatization, marginalization, or criminalization.

When exploring both the importance of designing for different parts of a community, and the trend of designing globalized technologies, we argue that the humanity of service delivery must not get lost. Ultimately, we urge designers to design for particular communities, in an informed and respectful, ethical, and just way, rather than attempting to design all-encompassing generalizable digital tools that aim to solve complex issues. In relation to designing with and for sex workers, this might mean

moving away from designing technologies only to protect or reduce harm to sex workers (which may reinforce the idea that sex work is inherently dangerous) and instead work towards the normalisation of sex work as a design space by designing technologies for sex workers' unique business models. In turn, changing the design paradigm in this way could help tackle the stigma and abnormal justice endured by sex workers, which are propped up in some ways by the focus on globalised and protective technologies.

5.3 Technologies are not Solutions

Building on the importance of adequately contextualizing technologies, and advocating for the use of multiple formats of service delivery, we now also want to address HCI's tendency to assume that technologies are able to solve complex issues. In this paper, we have described multiple uses and purposes of a particular (partially digitally-mediated) technology (the *Bad Client and Aggressor List*) as a way of imagining processes that are more just for sex workers experiencing violence. We argue that *The List* has been successful in achieving its many purposes exactly because it does not strive to solve the problem of violence, but rather because it is recognized as an intervention that can support the ongoing battle for sex workers rights. It is pragmatically, aesthetically, and emotionally situated within Stella's aims; embracing the humanity and peer elements necessary for *The List* to do its work [57].

Similar to *The List*, finding new ways of communicating among groups that are forced to use underground channels is invaluable for these same communities to thrive; this takes place alongside technological and legal developments [14]. What is imperative when designing digital innovations that aim to support these existing channels of communication (especially so if these novel technologies aim to replace existing structures) however, is that we must ensure that the original purpose of these often-analogue systems cannot get lost [65]. For example, in the case of the *Bad Client and Aggressor List*, the focus on informing, communicating, and empowering must remain. This is similar but distinct to the implication that technologies (and also non-digital interventions) in sex work support services should aim to facilitate the fighting of stigma related to the industry [27,59], regardless of what kind of digital innovation we develop. This is translatable to many technologies we wish to design within the context of restorative or social justice. Again, raising Fraser's three questions [22,41], we believe that thoughtfully answering the 'what, how, and who' of justice in our research spaces will lead us to genuinely

take into consideration rich accounts of the context in which these may be designed. To do this, we should reflect on our privileged perceptions as researchers, and instead foreground those adversely affected by abnormal justice [23]. Building robust and interdependent relationships with the communities we aim to support can help inform this broader awareness of the politics involved in the designs and engagements. Using a participatory framework could also allow us to advocate for change in political and legal structures that build the context within which these designs are created. Through this, we can then use design processes with the affected communities as a way of pinpointing routes towards and enacting genuine political change to tackle the injustices at their roots, rather than designing technologies in an attempt to rectify some of the symptoms of abnormal justice.

While we have a rich history of participatory action research and design in HCI and related fields (e.g. [11]), we believe more nuanced justice-oriented research and methodologies must be developed alongside organisations, groups, volunteers, or workers who are embedded in the design space to be able to meaningfully innovate [39]. To do this, it is important to be in constant communication and collaboration to ensure the context, histories, empowerment, and community that are so necessary to make such technologies useful remain at the center of the innovation. We must not replace existing communication strategies, but rather we need to ensure the developments make sense in the immediate ecologies within which they are placed.

6 CONCLUSIONS

This paper highlights findings from a participatory action research project between two universities and a sex worker rights organization in Canada. Together, we reflected on the organization's existing use of digital technologies for service delivery, and also imagined possible digital futures. Framing our work in Fraser's ideas of multidimensional justice, and particularly her idea of abnormal justice, we use the learning from this particular example, to develop three implications for the development of digital technologies with, in, and for communities who are often misrepresented, stigmatized, or criminalized.

Bringing together our three implications, we argue that nuanced and justice-oriented design of digital technologies can be made possible if we start to see technologies not as solutions to complex social problems, but rather as aides

that can support the humanity of service delivery and the people who engage in this kind of work. By developing tools that are multifaceted (yet mundane enough to be easily adopted) in themselves, and developing multiple of these technologies for different audience we are able to develop services that cater to the needs of individuals while simultaneously being useful in working towards justice for the often stigmatized service users. Ultimately, we stress the importance of people not only in the development of digital service delivery, but also in the delivery of these services, as well as their continued adoption and adaptation of use.

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