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Drawing a Map in the Sand: Locating an Ethics of Care in the ICT-Related Migration Practices of Older Volunteers in the US Southwest

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Abstract. Critical migration studies have highlighted the risks of using digital technologies in the space of migration, underlying its implication for migrants' privacy rights, government surveillance, and information capitalism. In U.S. Customs and Border Protection's Tucson sector, stretching across Arizona, one of the busiest and most dangerous borders in the USA, volunteer organizations work to prevent the death of unauthorized migrants undertaking the journey through the Sonoran Desert. Volunteers, typically elderly, study and map migratory trails to provide water where it is likely to be found by migrants. They employ a combination of paper-based and dated, yet sophisticated technologies for gathering essential data to support this potentially life-saving work. In this article, we discuss their information and data practices, and we argue that their approach is an example of the application of an ethics of care to an informational space. Based on interviews and participant observations, we suggest that volunteers' general refusal to adopt more efficient data practices indicate both a resistance to change from already ingrained practices, as well as an application of caring ethics within the field of migration and information for the pursuit of social justice.

Keywords: Migration Studies, Information and Data Practices, Ethics of Care.

1 Introduction

Covering a staggering 262 border miles, the Tucson sector is one of the busiest and most patrolled in the USA. Politics of prevention through deterrence, progressively deployed since the 1990s with intensified measures to impede crossing, ostensibly aims to discourage unauthorized migration; *de facto*, it channels individuals into increasingly perilous journeys [1]. Extending 100 miles into the US desert, patrolled borderland areas display checkpoints and a variety of surveillance technologies to detect unauthorized border crossings [2].

Volunteers of humanitarian organizations are actively engaged in trying to prevent the deaths of those who, despite the perils, decide to attempt a clandestine crossing.

These efforts encompass life-saving activities such as bringing water into the Sonoran Desert so that migrants might not die of dehydration and advocating for their rights and humane treatment. To inform their work, volunteers collect data, exchange information, and use different kinds of information and communication technologies (ICTs), digital and non. Their choices are informed by contextual infrastructures (the lack of cellular networks in some areas of the desert, the challenges of maintaining phone battery life during extended trips), social structures (migrants' vulnerability and consequent data privacy concerns), as well as the safety and security of the volunteers themselves. They employ a combination of paper-based and dated, yet sophisticated technologies, which seem to challenge the technological imperative assumptions related to the efficiency of newer technological solutions to improve organizations' work.

In this study, we propose an alternative approach to understanding the information and data practices of humanitarian aid volunteers working in the context of migration into the USA. Using Critical Studies of ICTs and Ethics of Care [3], our aim is to reframe their choices as a manifestation of care-informed technological and political action and produce insights about the responsible and secure use of ICTs within the intricate landscape of migration.

2 Literature Review

This section will discuss two intertwined themes in the literature that will be used to shed light on our research. First, we examine the risks posed by ICTs within the milieu of oppression and marginalization, focusing on migration. Second, we investigate the application of an "ethics of care" lens to these discussions. Our aim is to contribute to discussions on the ethical implications of ICT interventions in marginalized settings, emphasizing the transformative potential of an ethics of care approach and its potential for research within information systems and, more broadly, within the field of information science/studies (collectively, IS).

2.1 IS and Marginalization - the (Not) Good, the Bad, and the Ugly

In recent years, scholars have warned about the threats posed by the use of ICTs within social groups most at risk of marginalization, de facto challenging the technological imperative's assumption that ICTs are always the best tools for development and social change. Stemming from claims that technology is shaped by society [4], and that its outcomes are context-dependent, this literature critically questions previous enthusiastic ideas prioritizing the opportunities of access to knowledge that new technology offers [5-8].

Critical scholars in ICT4D have depicted ICTs as possible amplifiers of inequalities [9], insufficient tools for change [10], and unnecessary impositions when older information technologies would better respond to communities' needs [11]. The literature in IS and Science and Technology Studies (STS) has introduced a less than optimistic "dark side of tech" [12-15], which highlights that ICTs amplify societal biases and that data privacy risks are higher for people at the margins [16]. This is reflected in authors advocating for data minimalist practices in humanitarian work [17]. Critical IS scholars

have also highlighted how migrants are being used as experimental subjects in the development of surveillance technologies to feed the interests of information capitalism, as technology, military, and financial companies can count on their lack of legal representation and, consequently, near complete impunity [18].

The risks posed by the indiscriminate use of data and ICTs on migrants are multifaceted, especially as migration encounters increasingly data-intensive processes [2,17]. First, the divides in access, uses, and adoption of ICTs [19] can cause harm. The patterns of inequality causing the digital divides do not have borders, and still exist during the migration journeys [20], as shown by reports of the gender disparity in ICT access and use among the Rohingya refugees between Myanmar and Bangladesh [21]. Second, the fragility of technology [22] is exacerbated during migrants' journeys. ICTs rely on structures and infrastructures that are often designed to work at country level, not at international level. They are also usually not designed to work in extreme weather conditions where, for example, access to power or to a dry and dust free environment is difficult [20]. With any of these infrastructural failures, technology can fail people. Its failure can be particularly harmful within the precarious circumstances migrants already find themselves in, as shown by the higher number of deaths in places without mobile phone service in the Mediterranean [20]. Third, social structures, such as the legal and financial systems of a country, socio-technical arrangements, and tech corporations' agreements on where and how to supply their services, do influence the way ICTs work. Finally, similarly to other social groups at risk of marginalization, migrants might risk serious harm when their personal information is shared, which can include repercussions and persecution based in the disclosure of their identities or political and religious activities, exploitation by human traffickers and cartels, and the criminalization they may incur for unauthorized border crossing [22].

In this study, we inform our analysis by adopting a critical frame for understanding ICTs in the context of migration which considers the risks and harms that datafication and digitization of migration can pose for people and which advocates for a data minimalist approach whenever possible [17].

2.2 Ethics of Care to read Volunteers' Information and Data Practices

Our analysis is also informed by the framework of Ethics of Care [3] to read the information and data choices of volunteers working in the Tucson sector border. The ethics of care framework for research in ICT4D was proposed before by just a couple of studies [23,24], but has not been extensively adopted. Sweeney and Rhinesmith [23] advocate adopting an ethics of care perspective to foster more compassionate public institutions, especially within digital inclusion and collaborative social change efforts. The authors highlight the necessity of reevaluating core assumptions in community technology initiatives, usually encoded – as technology and techno-culture are – in masculine traits which do not favor relationality, diversity of knowledge, and interdependence. They assert that the current IS research lacks this perspective, hindering its ability to challenge and transform power dynamics, values, and beliefs that shape institutions, research, and practice. Schoemaker et al. [24] emphasize the potential of feminist science and technology studies to advance theories of data justice that advance IS research,

prioritizing the interests of the most oppressed. Once again, the authors highlight relationality, in this case, as a notion of justice, as outlined in feminist ethics of care.

Ethics of care is an ethical framework that emphasizes the importance of relationships, empathy, and compassion in decision-making. The concept was formulated to challenge traditional ethical theories which often prioritize being guided by abstract principles. In contrast, care ethics has a "relational ontology" [25, p. 3], which emphasizes attention to context and to individuals' specific needs and vulnerabilities, as well as caring as a fundamental moral value [3].

While the framework has historically been applied to the healthcare sector, its ideas, significance, and practice encompass a broader range of areas and needs, and have more recently been used to frame research in terms of social justice. Barnes and colleagues [25] present ethics of care as a "transformative way of viewing social relations within and beyond those contexts usually defined by reference to 'care'" (p. 4), thus highlighting its feminist roots. Stake and Visse [26] propose care ethics as a field of inquiry per se, which brings together different disciplines and provides an intellectual foundation to understand complexities, structures, and worldviews related to injustice and equitability. Likewise, Leget and colleagues [27] claim that care ethics is not limited to considering care as a set of values and attitudes connected to "kindness, dedication and generosity" (p.18), but aims to contribute to socio-political and practice-oriented agendas. They advocate for an empathetic ethics of care that emphasizes the interplay between theory and practice, urging research that prioritizes the lived experiences of practitioners within their socio-political context.

In care ethics, practitioners and carers are considered experts and knowledge coproduction is preferred. Care is considered not merely a tool, but a lifestyle and a perspective for scrutinizing practices and understanding people's identities and moral positions [28]. Practitioners' knowledge and experience is also informed by their responsibility in their work, which often necessitates navigating complex decision-making processes and ethically ambiguous circumstances, distinguishing between "doing what's right" and "doing what's good" [28]. Thus, the importance of being situated and considering contextual factors is reiterated.

This ethical dilemma is closely connected to the long-standing debate about the relationship between justice and care. In Tronto's thinking [3], care ethics "requires that caring needs and the ways in which they are met need to be consistent with democratic commitments to justice, equality and freedom for all" (p. 23). Tronto argues that integrating care and justice requires the simultaneous engagement of individual and collective responsibilities, and recognizes everyone's need for care, including our own. The critical feminist political foundational standpoint on which care ethics is grounded, as well as its focus on being a generative force for action and transformation of society, sees ethics of care as a tool for the pursuit of justice, not just of good [25]. The political orientation of care understands sharing work and responsibilities as a way to ensure the advent of more caring democracies [3,25]. "The transformations that care ethics seek are [...] that care thinking will impact on the way we think about politics and the way political decisions are reached" [25, p. 5].

In the current prevailing political climate surrounding migration regulations, which are increasingly stringent on a global scale, we propose an analysis of the experiences

and information and data practices of humanitarian aid volunteers operating in the US/Mexico desert through the radical [25] lens of the ethics of care to explore how a compassionate utilization of ICTs in context can contribute to societal transformation.

3 Methodology

This paper presents results from fieldwork with several leading volunteer migrant-aid groups in the US-Mexico border region of Arizona with whom we have had research relationships since 2010. The research questions guiding this study are:

- How can the information-sharing practices of volunteers from organizations who provide aid to migrants at the US-Mexico border be reframed as a manifestation of political choices informed by the principles of care ethics?
- What insights can be gained from the experiences of senior volunteers at these organizations in their interactions with migrants at the US-Mexico border, particularly concerning the responsible and secure utilization of information technologies within the intricate landscape of migration?

Our research in summer 2018 involved 20 open-ended interviews with migrant-aid volunteers, 10 participant observations during "water runs," and three observations of related migrant-aid activities. We also recorded field notes from informal interactions and coded transcripts using qualitative data analysis software. Interviews and observations took place during volunteer activities in the desert, at migrant shelters, weekly volunteer meetings, and participants' homes, representing a diverse range of volunteers in terms of age and experience. Data was analyzed thematically. Ethics approval for this research was obtained via the University of Washington's IRB process.

This paper is mostly informed by the data collected with volunteers from three of these organizations: *Humane Borders*, whose mission is to prevent migrant deaths by providing water on government and private land; *Tucson Samaritans*, who offer food, water, medical help, and emergency assistance to migrants, operating by hiking migratory trails and using smaller "water caches;" and *Green Valley-Sahuarita Samaritans*, a sister organization to Tucson Samaritans, closer to the Sahuarita community.

However, our discussions and comparisons also refer to the work conducted also with two additional organizations: *No More Deaths (NMD)*, a ministry of the Unitarian Universalist Church of Tucson which focuses on various humanitarian activities, including providing aid and running a migrant-aid camp; and *Kino Border Initiative (KBI)*, a faith-based, binational Roman Catholic and Jesuit-inspired organization providing humanitarian service to migrants on both sides of the border.

Each of these organizations is run by volunteers who are exceptionally active in terms of number, variety, and frequency of their volunteer work. The Tucson and Green Valley Samaritans — both organizations featuring a predominately older, even retirement aged volunteer base — have meticulously mapped migratory paths in the Pima County desert, using GPS devices to mark intersections of trails and roads. They use these maps to define manageable walking trails they can walk, and to identify critical points to leave water jugs. Humane Borders shares the primary objective of providing water in the desert for migrants, however employing a distinct strategy. They

predominantly manage water stations consisting of large tanks, which require accessibility with trucks from nearby roads. When we name specific volunteers, we use pseudonyms.

4 Findings

4.1 Using Data for Decision Making

Mapping the trails that are likely to be walked by migrants crossing the desert is central to the work of the Samaritans. This mapping exercise, far from a static image depicting the situation in a moment in time, is a live exercise that volunteers are continuously engaged with as water usage changes and new trails are discovered. Eric explains:

> *And it turns out, we're still mapping. Not as intensely as we're trying to do some other things. But we're not finding anything new, what we're doing is extending the trails. [...] you can't do the hauling so what you really want to do is narrow down, what are the important areas you've got to get into? Where are your best chances of getting people? (Eric, Tucson Samaritans)*

Each time a trail is walked, volunteers record on a paper form how much water and food are dropped off and notes about the site's condition, including how much water is left from previous drop offs. This data is used to make decisions about where to concentrate their efforts and whether new trails need to be discovered.

> *That gives you an idea of how frequently that trail's being used [...] And then the number of jugs found that were empty, we think that's a good indication. The Border Patrol, who are vandals, generally just slash them. They don't pour them out. And if we find empty jugs, we think that means that it was used by the migrants. Then we have the number of jugs that were vandalized or destroyed by animals [...] when we look at this... this tells us something about usage. (Eric, Tucson Samaritans)*

A similar record is kept of the water that is left at the Humane Borders stations, indicating how much water is added per trip — and presumably used — and the quality of the water for each station. Humane Borders water stations are not as straightforward to move, as they need to be reachable by big trucks that can refill them, and as placing one requires having permission from the landowner. However, data regarding water usage is collected to make the case for whether new tanks are needed.

4.2 Information Sharing and Access

Discussions on what information can be digitized and, especially, shared online are frequent among volunteers, especially among those who have coordinating roles. When discussing how and how much information about water runs and coordination is shared among volunteers, Caine explains that a lot of the information is being shared at in-person meetings, but not so much of that is online, which can be less than ideal for new people who still do not know how to sign up or get involved:

> *When we first started coming to Samaritans, lots of people were really hesitant to... see, you know, part of the discussion last night was, how do the new people know what trips to sign up for, because we don't have any information on the website,*

other than, mostly, we're going to have a trip, and the people that are already signed up with their phone numbers, so you can sign up, but you don't know where the trip is going to go. (Caine, Tucson Samaritans)

He traces this cautionary practice to the group's heritage in the early Sanctuary movement in the 1980s and the kind of secretiveness required during that time. Although the situation seems less concerning now, volunteers also mention that some caution is still needed:

Q: So, what would prevent you from having a calendar online where people sign up and know where the locations are, where they're going, and the type of trip or...

A: Well, we haven't agreed to do that, (laughter), and I think there isn't any good reason anymore not to have it, but historically that was the reason, people were afraid of vigilantes… There are still some vigilante groups out here, who disapprove of what we're doing and carry guns. [...] I think that comes from the Sanctuary history, because then, the Sanctuary people were under pressure, and they didn't want to share anything because they were afraid they were going to go to jail! […] when we first started coming to Samaritans, then a lot of people were really hesitant about putting stuff on the internet, they said, "Border Patrol is going to read this!" you know? They're going to know that we got a trip to such and such place, and… I think now, they know our drops, Border Patrol knows all our drops. (Caine, Tucson Samaritans)

Although not on the website, there are some efforts to have this kind of information both on paper and online, in a way that only volunteers can access, so it is easier for volunteers to coordinate. While this is not a leak-proof method, it seems to reassure the most concerned volunteers.

What she does, she takes that paper calendar that night and transfers it to an online version. [...] And then when people sign up online, which you can do, she transfers that to the paper version, so for example you'll know if this trip filled up after the meeting, and in some cases, they put a little trip description on, now, good for new people, or strenuous hiking, or no strenuous hiking. (Caine, Tucson Samaritans)

After people have gone on water drops, they also send a report via email to the volunteers' list. Sharing after the trip is considered less delicate:

We've got people who go out and do the water drops and all that. We get emails, I just got two today that they did a water drop and all the information that you see on those sheets there, in those reports... There's a central book back in the shed where we keep all our stuff that they... at the end of the day, they go and report it. (Eric, Tucson Samaritans)

Comfort with the technology (or lack thereof) and resistance to change also play a role in the way organizations designed their informational processes, although this appears to be more connected to exposure and familiarity with usage by certain volunteers than to whatever technology is selected.

Q: Do you think there is a different disposition regarding the use of technology?

A: Of course, there is. That's why old people have grandkids. [...] Well there is a reluctance to use technology. [...] One of the fascinating... people are just scared to death of maps. So, when I had maps and stuff out and we've got that migrant trail

[...] Mainly, people just don't know how to read a topographic map. They have no idea what a contour line is and everything. (Eric, Tucson Samaritans)

Similarly, Mary, with whom one of the authors went on a water run on a hot morning in July, mentions that people are resistant to change, and even some people that have been volunteering with the Samaritans for a long time still struggle with using a GPS, despite attending multiple training sessions. She pointed out that memory poses a challenge for some people. Additionally, using the GPS infrequently, such as once every two weeks, makes it difficult to remember how to operate it from one trip to the next:

You have to do like I did, I bought my own, I went through the training and I bought my own GPS and every time that I was going out hiking even on my own I was taking it with me, and so I learned, and now I know how to use it, but people don't do that. (Mary, Tucson Samaritans)

When asked about possibilities to use newer, perhaps digital, technologies for their work, Samaritans volunteers, even the ones that did feel comfortable with technology use and experimentation, did not seem to find any value added to it. Quite the opposite. Besides the technical difficulty of making anything that would require data work in the desert (while a GPS device is dependent on a satellite signal only, and paper forms do not require batteries), Mary mentioned the difficulty of finding technologies that would work for all volunteers and would integrate well with their everyday lives and ways of doing things.

First of all Samaritan are older people, a lot of them are not comfortable with technology, plus it's always difficult when you try to coordinate volunteers, because everybody uses different technologies and we never seem to find one that works for all […] Not everybody has a smartphone either. (Mary, Tucson Samaritans)

Some volunteers at Humane Borders had a slightly more positive view on the possibility of using, for example, a smartphone app to record part of the information that they are currently recording on paper. This different attitude may be determined by the different locations that Humane Borders volunteers navigate to leave water in the desert, more accessible and closer to main roads, likely to be covered by phone and data signal. Despite acknowledging that this "should be discussed at meetings" and that a similar idea was proposed in the past but "nothing happened", Simon explains:

I think it would be useful and people would use it, people do have smartphones [...] yeah there are some things in this paper [form] that don't make much sense, […] and if instead of having all these things there was an app, and in the app, you press a button at what time you leave and at what time you come back, and the app can calculate already how much time it takes, that would make much more sense, plus, it would be useful to add a section for comments, and a space for if we find anything at the stations. (Simon, Humane Borders)

4.3 Safe Information Practices, for Migrants and Volunteers

Volunteers showed an in-depth understanding of the way information could potentially be misused, leaked, or shared in ways that could put migrants at risk, particularly considering the socio-political context of undocumented migration in the USA. One of the most striking insights into the work of these volunteers is that their information

activities did not entail recording any personal data, except the names of the volunteers who go on the water runs. Should volunteers encounter migrants in the desert or around water caches, the contact would not be recorded, and no personal information about the migrant would be requested. As Eric explains:

> *If we run into a migrant, we don't ask them… They'll ask questions sometimes about, where are we? We don't give them maps. If we gave them a map, the Border Patrol would get on us right away. [...] We don't let them use our cell phones [...] because you don't know who they're going to call and they'll be calling a coyote or something [...]. We don't get them in cars. All we do is, we provide food and water. And clothing. [...] And medical care, yeah. […]*
>
> *Q: And you don't collect any information about the migrants that you serve?*
>
> *A: No. What would we do with it? Now, there are people that are interested in that. But our main mission is to save lives. (Eric, Tucson Samaritans)*

Eric continues by explaining also how their mapping activity originally raised concerns among some volunteers, who feared it could inadvertently disclose information pertaining to the likely whereabouts of migrants to the CBP. However, he mentions:

> *It's just crap. I haven't done anything the Border Patrol couldn't do. I think they already have. They've got helicopters and technology coming out of the kazoo. [...] These trails? Anybody can see the trail, you know. The Border Patrol doesn't wear glasses that keep them from seeing the trails. So, there's no secret about where the trails are. (Eric, Tucson Samaritans)*

Another concern for volunteers is related to information sharing activities that could put volunteers at risk. Thus, their activities have been designed to provide assistance in the liminal space of what's allowed within the legal framework. For example, volunteers insist that they do not provide migrants with information that may be interpreted as assisting unauthorized immigration, which could cause their own prosecution. All they would provide migrants with, as mentioned in the previous quote by Eric as well, is a backpack with food, water, clean clothing, and a first aid kit — supplies needed to keep people alive in their attempts to cross the desert. Shirley from Green Valley Samaritans recounts:

> *Not too long ago, I was on a search [...] and our driver spotted two migrants coming down a hill, [...] we have what is called a jump bag, so we grabbed the jump bag and we grabbed gallons of water, and a couple of other things and three of us hauled out of the car and ran as fast as we could off the road, and here came this two fellows, [...]and gave them food and water, and spent about two hours with them, [...] they pleaded with us, and we said we can't do it, because if we, especially with what's happening now, with the administration, I mean we could go to prison, […] and so, anyway, we just said no, we can't give them a map, but we can draw a map in the sand, this is the way you go. (Shirley, Green Valley Samaritans)*

On the Mexican side of the border at a KBI-managed shelter where some of the Samaritans also volunteer together with other associations, including NMD, volunteers allow migrants use cell phones to make calls. The system has been set up by NMD, and it consists of using smartphones with software that automatically deletes dialed numbers after every call. NMD has a slightly different approach to data than the Samaritans. Though the dialed numbers are erased, a log of call counts, the caller's first name, their

relationship with the call recipient, and the called country is maintained. NMD claims this data is used for prioritizing calls during peak times and is kept to support their advocacy work. Laura, a volunteer at the shelter, explains why the service is highly valued by the migrants:

Communication is important to them, we give them a chance to talk on the phone, on a secure phone. They can call whoever they want [...] Increasingly, over the years, more migrants have their own phones. Sometimes they don't have any airtime, sometimes they run out of battery, sometimes their phones are compromised and someone can listen in. Our phones give them a secure way to connect. The use of the phones may have declined over time, but it varies, some days there is more, some days less. (Laura, Samaritans)

The safety of volunteers during their activities in the desert is also a concern that is reflected in the technology choices of the Samaritans. SPOT trackers, devices that can provide location-based messaging, and connect to emergency responders in areas of desert that are out of cellular range, using GPS, are used to ensure the safety of volunteers during their water drops:

You mentioned safety. One thing I didn't mention and that has been a big concern. One of my concerns is that I get up one morning and I pick up the newspaper and it says, "Border Patrol Rescues Samaritan." [...] We've got two SPOTs. What it does is it gets... it's essentially a GPS but it's a GPS that reports [...] it's got three different settings. […] There's [one] that says, I need help, and it gives the location. Now, all that stuff comes back, there are about 10 of us, and it's set up so it just feeds right into our computer or cell phone, so as soon as they push the button and stuff, we get the information. The third button is if it's really serious, bad... it's really bad news, you send it and it goes to whoever's in charge of emergency and stuff. [...] and so if you send out a help signal, you're going to get someone from the Border Patrol. (Eric, Tucson Samaritans)

4.4 Issues with Current Information and Data Practices

These information practices, however, present some challenges. Volunteers know that recording information about water drops on paper may led to data accuracy and completeness issues:

Not all volunteers update the book. And so, obviously you would get very angry if you go to one spot you think has not been visited for three or four weeks and instead, you know, you just find a number of bottles that are not being recorded and someone went two days ago and just failed to write it. (Mary, Tucson Samaritans)

Additionally, the various groups sometimes work in overlapping areas and water may be placed by volunteers with other organizations, and this information is often not shared across organizations. Eric shows awareness and concerns about this lack of accuracy, as this data is at the basis of their volunteering mission:

So... The data is flawed. [...] If you make the assumption that you put water out equals you're going to save lives. What you've got to do is get the best possible data you can get. And we're not. You've put your finger on all the problems that we have. And just improvement in data collection would be a big step. Then since we're

dealing with this older group, getting them to use data is... they're just really scared of data and they don't understand it and stuff. (Eric, Tucson Samaritans)

Another issue is presented by Shirley. As mentioned above, volunteers from Samaritans and Human Borders do not collect data on migrants they may encounter. However, this is usually the kind of data that associations use to advocate for their cause and to inform their own work. Commenting on the data practices of organizations working on the Mexico side of the border, Shirley argues that gathering data from migrants can be crucial:

Well I think I'm not sure how they use that information to tell you the truth, other than helping people reconnect with their families and maybe for their own necessity of knowing [...] all of those things that I think are very pertinent in terms of our knowing how it's best for us to approach everything [...] you know, how many people did we see I the month of April, and what are the fluctuations in the number of people, and what is causing the fluctuation. How many people have been incarcerated in the United States, those kinds of things [...] and I think it helps [...] figure out the best way to continue to run this program […], to advocate. (Shirley, Green Valley Samaritans)

4.5 Another Way of Doing Advocacy

Not collecting data on the numbers of people they meet and potentially save, as NMD does and as KBI does at its shelters in Mexico, appears to make it more difficult for organizations like the Samaritans and Humane Borders to do advocacy work. However, both organizations have found ways to document and, therefore, advocate for their work in impactful ways. Besides the data on water usage and the maps of the trails they cleverly reconstructed, the Samaritans collect and archive artifacts they find in the desert that migrants left behind during their journeys. These are very rich testaments of the lives of the people that are crossing the desert in the Tucson sector. Shirley refers to them:

Here's a Rosary that was found on, I think it was just on the ground, and this is a diary, written by I think a young woman to her loved one, and obviously when we found this, it had not been there very long, because there's nothing smudged [...] the elements didn't eat it up. (Shirley, Green Valley Samaritans)

Documenting and making visible the number of migrant deaths in the desert is another critical piece of information that both organizations are utilizing to advocate for the work they do. From both, we heard about the pressing need of sharing this information, as official data often fails to account for the real numbers of retrieved body remains. As a heated Eric explains, their impression is that the CBP tends to underreport the number of deaths in the desert:

You talk to the Border Patrol and they'll tell you that the number of people dying is less than half of what we report. [...] The Border Patrol does a series of things. If they don't find it, it doesn't count. So, if you die make sure you're found by Border Patrol. [...] And what they find, very commonly, is just a disarticulated group of bones [...] So, what the Border Patrol does is that if you find something like that and it's old, they don't count it. Because, they say, you can't tell, maybe it's six months

but it could be two years old [...] But what they're trying to do is to reduce the... it's really interesting. When I first got started [...] they had a whole policy of deterrence by deaths ["prevention through deterrence,"]. And that didn't go over well so they backed away and now what they've done is they just don't count them, you know. (Eric, Tucson Samaritans)

The Samaritans put physical crosses in the places where human remains were found:

Alberto is in the process, the never-ending process, of putting a cross on the ground in the position of all these red dots [places where remains were found], and sometimes they know the name of the person, and usually they don't, but, anyway if they do know the name, he puts the person's name on the cross and, the cross has a little red dot on it too. (Caine, Tucson Samaritans)

In a similar fashion, Humane Borders, in collaboration with Pima and Maricopa Counties, produced a map of deaths in the deserts in the Tucson sector (officially the "Arizona OpenGIS Initiative for Deceased Migrants"). The map is updated every month with the exact location where remains have been found. The map is searchable, and it also contains other information such as date of discovery, cause of death, and, if known and if the family has been notified, name, and gender of the deceased. The map is often used by policy makers, scholars, and other members of the public who want to advocate for the situation for migrants in the country, as well as by family members of people who disappeared on their migration journeys who may be looking for answers.

4.6 Political Acts, within the Framework of Legality

Volunteers are engaging in acts that they perceive as intrinsically political in nature. Despite consistently emphasizing their adherence to legality, they employ strategies that stretch the legal boundaries to show solidarity with migrants and save lives. Within the political climate created by the Trump administration at the time, as well as the historical politics of migration into the US, bringing water in the desert is a political act in and of itself:

Oh sure it is! and we are very proud of the fact we have been Samaritans in general or individual Samaritans have been, a few have been arrested for doing this, and there have been, I think it's 45 cases where we have been, or one of us has been prosecuted, and we have won them all! (Caine, Tucson Samaritans)

A similar political act, and an act of care, is also shown by volunteers who witness "Operation Streamline" court cases. Operation Streamline is a joint initiative of the Department of Homeland Security and Department of Justice that enforces a "zero-tolerance" approach towards unauthorized border-crossing. Migrants are prosecuted and deported, with their cases grouped together and rapidly and collectively processed. As mentioned by Caine, volunteers feel showing up at the trials and denouncing the treatment received by the migrants is important, impactful, and can lead to change:

Why is it important to go witness that? [...] There are some things that, when they first started it, people observed and started talking about it, and they changed [...] and you know, you wouldn't, just saying the words I think doesn't have the effects of actually seeing them, I mean, it's hard to walk in those things, and you know, most of them, they have been in detention for a day or two, and they look pretty disheveled

and tired and beat up, when you see a large number of people like that, it's pretty striking. (Caine, Tucson Samaritans)

Samaritan volunteers routinely repeat that the way they do their volunteer work remains within the limits of the law. Volunteers explain it as a *modum operandi* that distinguish them from other, usually younger, groups of volunteers, such as those affiliated with NMD, while still working for the same cause and still achieving results — without compromising the safety and care for their own volunteers.

We just don't want to be hassled about, aiding and abetting illegal aliens, it's a crime! I mean, we can fight it, but you know, it's something that Samaritans have decided they don't want to fool with [...] you have to remember the age of the people in No More Deaths is considerably younger than our group, so they are able to do maybe more things that we can't, by virtue of whatever, but we still have people, you know, like myself and others who can probably run circles around a lot of those kids, and we try... we do that we can. (Caine, Tucson Samaritans)

In the interviews, the older volunteers discussed this awareness of their limits and eagerness to use their resources carefully, and perhaps more productively:

I can't imagine we would want to lay down in front of the bus for example, just because, partly because, that's just (laughter)... it's uncomfortable. If I lay down on the ground, I won't ever be able to get up! (Caine, Tucson Samaritans)

Older people don't like sleeping on the ground, they like having a bathroom. That's just one of those things. And so, they're not as attracted to that. (Eric, Tucson Samaritans)

5 Discussion and Conclusion

In this article, we examined the information practices of volunteers engaged in life-saving efforts at the US/Mexico border. We contend that their approach exemplifies the application of Ethics of Care to an informational space in what Castells calls this information capitalism era [29]. Resisting the adoption of newer, digital, ICT solutions, such as apps or other digital tools for recording and sharing information, and the collection of personal data for their advocacy work (all of which could make their work more efficient but that could also create more risks for migrants and, potentially, problems for volunteers themselves), these groups of predominately older volunteers exhibit an approach that prioritizes relations, empathy, and situatedness over a technological imperative that would seek to find technical solutions to all problems. In this case, technical solutions may contribute to exacerbating the problems and vulnerabilities of the migrants the volunteers are seeking to help.

Simultaneously, within this intricate and challenging environment, volunteers exhibit a remarkable knack for devising distinctive and forward-thinking approaches to address their information and data needs. It's intriguing to note that these volunteers, mainly comprising older individuals, navigate their tasks using older, dated technology. This observation prompts deeper contemplation about the dynamic interplay among age, technology, and successful involvement in this distinctive setting, urging us to

explore sustainable methods for effective engagement. These practices challenge ideas of digital exclusion among the elderly population [29]. While some older volunteers expressed apprehension towards adopting new technological solutions, others demonstrated a commendable willingness to experiment, showcasing a level of wisdom and digital literacy often overlooked in the literature. Their awareness about debates related to data protection and risks of digitizing information reveals a diverse landscape of attitudes and behaviors that goes beyond the simplistic portrayal of older adults as passive victims of the digital divide. Also, volunteers' extensive use of non-personal, non-biometric, and non-digital data was found also to extend to experiences of activism similar to the ones of community and activists archives [30], demonstrating novel forms of advocacy within humanitarian aid, in the pursue of social – if not data – justice [24].

Indeed, these volunteers' adherence to the Ethics of Care framework underscores their commitment to fostering empathy and attending to urgent needs within the complex sphere of migration in the USA. However, the constraints within their organizations' objectives reveal a paradox: while they strive to ameliorate the plight of migrants, their actions might inadvertently perpetuate the very structures they seek to challenge.

These volunteers, in their endeavor to disrupt elements of information capitalism and the surveillance state embedded in information and communication technologies (ICTs), display a profound awareness of the power dynamics shaping our digital landscape. Yet, their strict adherence to existing legal frameworks raises pertinent questions about the extent to which systemic change can be achieved within the confines of established norms and regulations. This tension highlights a broader societal struggle — one that extends beyond the realm of volunteerism and into the core of governance and policymaking. The quest for a genuinely compassionate democracy necessitates not only immediate humanitarian actions but also a radical rethinking of established systems. It calls for a deeper introspection into the underlying structures that perpetuate inequality and harm, demanding a courageous reassessment of societal norms and a willingness to challenge the status quo.

As these volunteers navigate the intricate interplay between ethics, legality, and societal transformation, their efforts serve as both a beacon of hope and a poignant reminder of the complexities inherent in effecting lasting change. Their journey toward genuine care and systemic reform necessitates not just tactical interventions but a fundamental reimagining of our societal fabric.

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