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ABSTRACT

The Mexico-U.S. border is a space considered `smart´ due to the amount of surveillance technology used for national security purposes. The technological ecology consists of integrated fixed towers, remote video surveillance systems, mobile video surveillance systems, Predator B surveillance drones, mobile X-ray units, automated license plate readers, cell phone tracking towers, implanted motion sensors, biometric data collection, and DNA sampling (Aizeki et al. 2021). Whilst these instruments are usually linked to irregular border crossers, transborder commuters, who physically cross the border every day, also experience the same surveillance regime. This paper discusses the technological 'self-defense' protocol I developed in 2019 when conducting transborder research for my doctoral thesis, which required intense border crossings across Mexico and the U.S. During the ten months of fieldwork, U.S. CBP had the capacity to search my personal device and belongings without a warrant, raising ethical concerns about data protection. As a result, the protocol developed to protect data and participants considered the 'smart' border as part of the methods designed that included encrypting information. In hyper-surveilled spaces, data protection represents a challenge for border researchers and the people involved in such a project.

Introduction

Border scholarship (Laine 2021) that discusses the ethical concerns that apply to the migration regime has mostly focused on issues such as necropolitics, detention centers, mobility management, and family separation. In contrast, scholars have written relatively little on the ethical implications when conducting transborder research on both sides of the Mexico-U.S. border. In this broader border context, it is fundamental to further the discussion of vulnerability, ethics, and research. To conduct fieldwork at this border entails being subject to searches, inspections, and potential penalizations with personal and professional repercussions. This paper contributes to the research ethics of border scholarship, drawing on my doctoral fieldwork in the Cali-Baja region conducted in 2019.

The Mexico-U.S. border is one of the most crossed borders, with millions of regular crossings. For example, in 2022 124.7 million passenger cars and 38.4 million pedestrians crossed this border (U.S. CBP 2023b). The analysis of researchers is primarily focused on the hardship of irregular crossings, with limited qualitative data gathered about regular crossings and borderland dynamics. Notwithstanding, critical approaches have emerged in the last decades to further the borderland analysis. In an effort to contribute to such critical approaches, my doctoral research examined transborderism at the Mexico-U.S. border, guided by the following questions: (i) why is transborderism practiced via education in the border twin cities of Mexicali-Calexico and Tijuana-San Diego? (ii) what are the challenges transborder pupils and students face in their dynamics at the Cali-Baja region? and (iii) is it possible to implement a practical transborder framework in the current binational relations in education? With the objective of understanding transborderism and the binational political implications of this practice, I focused on transborder pupils and students living in Mexico whilst attending school/university in the U.S.

Iglesias Prieto (2011) defines transborderism as 'the frequency, intensity, directionality, and scale of crossing activities; the type of material and symbolic exchanges; and the social and cultural meanings attached to the interactions' (2011, 143). In this sense, transborderism is a practice and condition that stems from regular high-intensity physical border crossings, creating a 'thirdspace' (Soja 1996): a transborder region where practices of simultaneity occur. This transborder space has its own dynamics, paradigms, and understandings that could only be understood from within (Valenzuela 2014). In other words, such a transborder space manifests the peculiarities of the lived experiences of constant physical border crossing that can be difficult to grasp by a non-transborder person. Transborder commuters, those that study or work on one side of the border whilst residing on the other – such as living in Mexico but studying in the U.S. – are just one group of people in this borderland. However, they experience high levels of surveillance when navigating this border due to their life dynamic that includes frequent border crossings, even twice a day. This means that any change to the border crossing dynamic directly affects their everyday journeys and lives.

Such a change occurred in 2001, following the 9/11 attacks. After 2001, border researchers adapted to the 'new field' that included navigating 'high-tech gimmicks and ineffective identity-based security' apparatus (ACLU 2022a). The ethical implications of research methods, data collection, protection, and storage had to reflect the risks and complexities of the `new normal´. Heavy surveillance, database cross-referencing, and the searching of personal devices, among other factors, posed potential ethical risks to participants, researchers, and research projects.

In this paper, the discussion of the intersection between ethics and transborder research is divided into three parts. First, a brief description of my doctoral research is presented highlighting the main elements of the investigation. This will provide the context in which I had to collect, store, and protect the data gathered in the fieldwork in California and Baja California during 2019. Then, the paper discusses the development of a technological `self-defense´ protocol (Aizeki et al. 2021) to mitigate the potential risks of conducting transborder research given the high level of surveillance in the region. A set of key principles for conducting research at the border is presented. Finally, the paper presents an account of how the Mexico-U.S. `smart border´ is 'thickening', affecting current and future research in the region. In the closing remarks I present some final considerations.

Exploring the Cali-Baja region through transborder pupils and students

In social sciences, knowledge production is concerned with everyday practices, the meanings they create, and how these meanings relate to world paradigms. Data and knowledge production using ethnographic methods contribute to the process of connecting the field with overarching theories, even when looking at deeply complex sites such as the Mexico-U.S. border (Meneses 2022). Border scholars (Chávez 2016; Dear and Leclerc 2013; Heyman 2017; Iglesias Prieto 2011; Vélez-Ibañez 1999), have successfully implemented ethnographic methods centered on heterogenic sociocultural practices that respond to the borderland reality. Such border reality includes the different ways that the border influences the everyday on both sides including language, social norms, and overall perceptions. For example, transborder commuters have a deeper engagement with the border than those that do not cross it as often. However, even those that do not cross it usually mix English and Spanish and carry both Mexican Pesos and U.S. Dollars in their pockets. It is in this way that this scholarship deepens our understanding of the border by adding complexity to the multiple dynamics present at this region.

My interest in exploring transborderism in the Cali-Baja region stemmed from personal experiences as a border citizen. I was raised in Mexicali, Baja California, which is one of the Mexican border cities considered in the doctoral research. Whilst attending university within the interior zones of Mexico, I realized how peculiar my upbringing had been. I grew up in a city where the resistance and integration of two asymmetric countries manifest in the everyday life of this borderland. My understanding of the Mexico-U.S. border included both regular and irregular crossings. Additionally, I had professional working experience with irregular migration and transnational education programmes in cooperation with the U.S. For example, I was an International Organization for Migration (IOM) field operator at this border providing humanitarian aid to returnees from the U.S. I was also the coordinator for migrant education programmes in the U.S. within the Mexican Secretariat of Public Education. However, transborder populations were not considered in any of the programmes. I suspected that those pupils and students holding a visa or a passport were not considered to be vulnerable population in the context of border controls, and the suspicion led me to investigate transborder practices.

My doctoral thesis thus explored transborderism and its practices in the Cali-Baja region through the perspectives of former transborder pupils and students who lived in Mexico whilst attending school/university in the U.S. This population of learners crossed the Mexico-U.S. border through the Ports of Entry at Mexicali-Calexico and Tijuana-San Diego regularly, holding either a visa or a U.S. passport (Meneses 2022).

The ethnographic-bend methods used included in-depth interviews with open-ended questions with a total of twenty-seven former transborder pupils or students. I investigated: the parents´ motivations to pursue a transborder life for their children; the learners´ experience of walking through the POEs; their encounters and the type of their interactions with U.S. CBP officers prior and post 9/11; and border(ing) practices inside border schools in the U.S. The empirical data was collected through ten months of fieldwork in the states of California, U.S., and Baja California, Mexico. Specifically, the data were collected in six different cities: Mexicali, Tijuana, Guadalajara, and Mexico City, located in Mexico, and the U.S. cities of Calexico and San Diego. It is important to clarify that the fieldwork was completed in 2019 prior to the COVID-19 outbreak.

A total of thirty participants shared their experiences, including twenty-seven former transborder learners, some of them also parents to current transborder learners. I also interviewed two Mexican policymakers in transnational education and one scholar in the field of transborderism. The findings revealed: (i) the link between a reconfigured American dream and the reasons for becoming transborder via education, (ii) that the hardship of crossing the border makes this process very challenging and, (iii) that school dynamics do not reflect the regional transborder reality. For example, (i) there is no school protocol to mitigate border closures directly affecting the pupil or student and considering them absent or late affecting their marks, student record, and scholarships; (ii) the enforcement of English only language policy even during the breaks when the student population is bilingual.

The contributions put forward by the research were three-fold. Theoretically, it contributed to the emergence of literature on transborderism in the Mexico-U.S. border by focusing on this life dynamic through the figure of transborder learners. Empirically, the research revealed the specific challenges that transborder learners face with health and academic repercussions. Politically, a Specific Agreement of Cooperation in Transborder Education between Mexico and California was proposed in support of these learners, reflecting the complex Cali-Baja reality.

However, the challenges of researching a highly surveilled space limited the feasible methods for data collection. Data protection challenges were also analysed as these were crucial given the border policies and dynamics. These challenges also show the level of complexity of the border regime. This dataveillance will be discussed in the following section.

'Technological Self-Defense': Transborder Methods at the Mexico-U.S. Border

The contemporary U.S. national security continuum was developed as a result of the attacks on The World Trade Center on 11 September 2001 (Vaughan-Williams 2010). Mexico-U.S. border protection and control became central for national security strategies, conflating terrorism with human mobility and border crossing. This included harsher border protection dynamics at land Ports of Entry (PoE), in particular with Mexico, leading to the creation of the U.S. Customs and Border Protection (CBP) and the U.S. Immigration and Customs Enforcement (ICE) in 2003. US CBP and ICE have consistently increased their budget from $9.2 billion in 2003 (American Immigration Council 2021) to a projected $25 billion for the 2024 fiscal year (The White House 2023), of which $535 million will be for border technology at and among PoEs. By the time President George W. Bush left the White House in 2009, the border had entered its 'smart' phase implementing high-technology tools at the land PoEs between Mexico and the U.S. and nearby areas, affecting regular and irregular border crossers. Data gathering, sharing, and surveillance became a norm at this site. For example, the Secure Communities Program cross-referenced local detainees' fingerprints with national databases operated by the Federal Bureau of Investigation (Meneses 2022).

Whilst the collection of biometric data alone is significant, U.S. CBP had the additional authority to conduct searches on personal devices of any border crossers via land, sea, or air, including U.S. citizens from 2018 to 2021. Figures provided by the American Civil

Liberties Union (ACLU), show that searches on devices increased by 400% in 2018 alone, affecting more than 33,000 travellers (Schwartz 2019). A participant shared that she would even delete the WhatsApp and Facebook Messenger apps whenever sent for secondary revision. This is when the border crosser is sent to a more thorough and extensive inspection and interrogation, that could take hours, after the first contact with U.S. CBP at the border checkpoint. However, the 9th US Circuit Court of Appeals ruled in 2019 that CBP officers could only search devices for digital contraband (which was restricted in scope to child pornography), and not for other types of `intelligence`. Since this rule only became law in 2021 (Davis 2021), searches on personal devices were a serious concern when I conducted transborder research in 2019.

During my fieldwork, any information stored on my personal device, including social media, could potentially be accessed by U.S. CBP officers if requested, including participant information and our correspondence regarding their experiences. As a researcher who would repeatedly cross the border to collect data, this fact had to be central to my methods. How could I assure the participants that the information they shared with me would be protected from U.S. CBP officers if my laptop and/or mobile were to be searched? Would I raise some flags by the number of border crossings undertaken? Would my border crossing history as a resident work in my favour? What protection did the law provide me with in this regard?

The digital privacy of U.S. citizens is protected by the First, Fourth, Fifth, and Fourteenth Amendments to the U.S. Constitution when entering the country through land POEs. In a hypothetical scenario in which the personal device of a U.S. national gets inspected at the border, the First Amendment protects the freedom of speech of this person, the Fourth limits unreasonable warrantless searches, the Fifth protects the person from self-incrimination, and the Fourteenth guarantees citizenship rights of due process and equal protection (Cope et al. 2017). As I am a citizen of Mexico and not a U.S. citizen border crosser and researcher, none of these Amendments would protect my digital privacy, nor would I be protected from the consequences of withholding information gathered in my fieldwork that could be considered 'of concern' by the officers. With this surveillance regime in mind, the planning of methods, data storage, and protection, required some adaption and technological `self-defense.'

Vulnerabilities and ethical implications are concomitant when conducting transborder research. Transborder research entails high-intensity physical regular border crossing, engagement with a mix of Spanish, English, and Spanglish languages, and complex knowledge of the border and borderlands dynamics. However, this type of research limits the type of methods that could be used that could maintain confidentiality and safety of subjects and of oneself given the level of surveillance conducted at the border. Some of my colleagues suggested I adopt experimental methods and move away from traditional settings and interviews. For example, it was suggested that I listen to the narratives of participants as we cross the border northbound. This idea is interesting but not realistic due to the heavy surveillance at the PoEs that includes microphones. Anecdotes of people having their visas cancelled, or sent for secondary revision, due to `suspicious´ conversations whilst waiting in line to cross the border, are widespread. The risks of this method could deter potential participants and compromise the validity of the information shared. I did suggest this to participants, but only one of twenty-seven agreed to crossing the border from the U.S. to Mexico with me by car.

Also, I would be limited to interviewing people holding the same visa as mine, limiting the number of eligible participants, because of differences in types of visas. There are several types of visas, and each has a designated lane to cross. Again, the high level of surveillance and hardship at the land Ports of Entry had to be considered, especially due to the risk by association, as will be discussed briefly.

Overall, conducting experimental methods on the Mexico-U.S. border requires creativity and adaptability and is doomed to fail if the researcher does not understand the binational context where the participants live and interact. For instance, I could not cross the border with participants as several anxieties and elements came into play that result in consternation and apprehension; for example, several modes of border surveillance such as cameras and microphones, the different types of visas that divide border crossers into different lanes, and being associated with someone that could lead up to having the visa removed. In this context, if a participant was to accept a method that puts them at risk, it raises ethical, safety, and methodological concerns. Although crossing the border with the participants would be ideal, it is impossible given the surveillance context at the time.

Furthermore, the information to be shared by participants may be highly sensitive, placing them in a vulnerable situation, notably when discussing their interactions with U.S. CBP officers and school authorities. I knew that certain individuals had committed fraudulent activities, like paying for a utility bill in their parent's name to get access to public education by falsely claiming residency in a specific school district on a monthly basis. If this information was accessible, U.S. CBP law enforcement could penalize those involved in such activities. The legal consequences of such acts range from a penalization fee to parent imprisonment. To minimize the risk, only former pupils were interviewed, without providing the name of their schools or districts.

After deep consideration about the site and research methods, it was decided that in-depth and semi-structured interviews in locations selected by the participants, on either side of the border, would be most appropriate. The in-depth conversation would cover border crossings in detail. The sites were chosen by the participants with the intent of helping them to feel more comfortable. Fieldwork observations contributed to the data analysis. At this stage four main things were of concern: (i) the interviews needed to be voice recorded, since these were in-depth, lasting approximately two hours each, and I wanted to observe carefully the mix of languages as part of the analysis; (ii) the participants would need to sign a consent form; (iii) data protection, including from U.S. CBP officers when crossing the border; and (iv) possible consequences if my devices were searched whilst crossing. I had to make sure to protect the participants, the fieldwork, and myself as much as possible.

For this reason, a `self-defense and data protection´ protocol was created and implemented after every interview conducted in the U.S. to minimize the risks. Even though crossing the border southbound is less risky than crossing northbound, as no direct contact with U.S. CBP officers is required, there is always the possibility that an officer, whether near the border crossing point or inside the city, could stop me and conduct a warrantless search. I needed to operate with the expectation of a worst-case scenario. The voice recordings were optional, although all participants agreed to it, and these were saved with a personal phone with recording device. Immediately after completing recordings, I uploaded them to an encrypted cloud storage service, followed by

the app deletion on my mobile. Although deleting an app does not delete the data entirely, it increases the chances of passing undetected. Additionally, data encryption was the best option for protecting the data from anyone trying to access it without the correct password as it would make the data unintelligible (Cope et al. 2017). The use of an external voice recording device would make the process of crossing the border even harder as I would be physically carrying the information when crossing the border back to Mexico. I would also be running the risk of losing all the data if this physical voice recording device was confiscated by U.S. CPB officers. To have the recording digitalized, uploaded, and encrypted as soon as possible, was the best option given my resources.

The consent forms were also physical evidence that could compromise data protection. To minimize the risk, no full names were provided, and I emphasized the section in which they could choose to be quoted using their real name or a pseudonym. I also took a picture of the document and uploaded it immediately to cloud storage. Instead of destroying the physical evidence, I decided to fold the paper and put it inside a book. To take books across the border is a common practice so I thought it would be a safe option. Also, the consent form did not contain any sensitive information from the participants about their interactions with U.S. CBP officers or school authorities. However, I would be able to destroy the physical consent form if necessary.

These measures were needed to protect the participant's information, but also to protect myself and the research. In general, the interviews could pose a risk to me, affecting the research and the participants by association. If the people involved are considered a subject of concern by U.S. CBP officers, the repercussions of association can vary. Both the participants and I could be questioned at the PoE, held in detention for hours, or sent to secondary revisions.

Furthermore, the non-immigration visas could be removed by the authorities, including mine. In such a case, the fieldwork would have been interrupted, limiting the number of observations, participants, and data collected. Moreover, it could have impacted my family and future professional horizons. With this risk constantly in mind, I had to think twice about who I was interviewing, giving special attention to any record misconducts flagged by U.S. CBP. For example, I decided not to conduct an interview with someone that was charged with drugs possession even though this person was absolved afterwards. I read about this incident in the paper as this person is a well-known figure and some of the participants reminded me of the event as a warning to be careful of who I was interviewing. Furthermore, the border environment was particularly tense at that moment due to the 2018–2019 Central American Caravan that led to border closures in Tijuana and San Diego.

The Mexico-U.S. border, aligned to the changing vocation of geopolitical borders, reacts to live events with the capacity to change the border condition, disrupting it to a considerable level, resulting in closures. For example, the San Ysidro Port was closed on 25 November 2018 after members of the Central American Immigrant Caravan attempted to cross into the U.S. This border closure could have potentially led to a series of border closures if tensions had continued. During 2020 and the onset of the COVID-19 pandemic, border crossing restrictions were implemented for non-U.S. nationals and non-essential travellers.

It is in this context that the following key principles need to be considered when designing and conducting transborder field research:

1) Risk assessment: the researcher should first and foremost consider the risks for every-one involved especially when visiting hyper-surveilled regimes. As mentioned pre-viously, in the case of the U.S. any visa or any immigration `add on´ such as SENTRI (a Trusted Traveller Program) could be removed by any U.S. CBP officer. The constant border crossing and the data collected could potentially raise concerns for immigra-tion officers. The risks identified should be made clear to the participants prior to their participation.

2) Political environment research: the researcher should conduct extensive political and social context research to determine the appropriateness of the methods for data col-lection and observations. For example, in the case of the Mexico-U.S. border, it is not enough to know the policies in place at the checkpoints but the potential political scenarios that could disrupt the border affecting the fieldwork. For example, is there a programme or new policy that is expected to be enforced during fieldwork? Is there a migration-related event such as a Caravan that could lead to border closures, as has happened in the past?

3) Develop a self-defense protocol: considering the risks and policies that will frame the methods for collecting data, the development of a self-defense protocol could miti-gate some of the potential risks and disruptions the researcher might face. This proto-col should consider physical and digital protection for everyone involved. The researcher should think about encrypting data and using protected cloud storage ser-vices that could require some payment. The researcher should also know their rights in case detained by the authorities and know, in-depth, the border crossing dynamic including the types of revisions, visas, lanes, and some critical times when the waiting times can increase in hours and revisions increase.

4) Adaptability: the researcher should always be able to adapt to unexpected situations such as border closures or entry denial that could disrupt the entire fieldwork with per-sonal and professional repercussions. To consider a worst-case scenario as most likely will help the researcher design methods that could quickly adapt to sudden changes without affecting deeply the research project. For example, considering different devices is helpful, such as voice recording the interviews plus taking handwritten notes about the main arguments of the conversation and adding some field obser-vations in a different notebook. If the interviews could no longer occur for several reasons or have been removed by immigration officers, the separate notebook could help mitigate the unfortunate event. The border changes every day, and the research project should be able to cope with changes.

5) Extra political considerations: the nationality and/or citizenship of the researcher do have an impact when researching borders as these are points of racialization and securitization. To have a binational team as a method (Hamann et al. 2022) should be considered to keep crossing borders and building bridges. This method however could have some limitations if the team experience some communication issues.

To be in constant transit between worlds requires some capabilities as mentioned above. The vulnerability of all of the people involved, the ethical implications of being

under constant surveillance and the rigour of the methods make transborder research particularly challenging. Unfortunately, the smart border wall technology is not only increasing in this region but also is used in non-border areas. By understanding the challenges of researching the border today, we can prepare for researching the interior zones, at least of the U.S., in the near future.

Thickening the smart border wall

One of the priorities of the U.S. government is the continued development of border(ing) technology, thickening the `smart wall´ to allegedly increase national protection from 'outside threats'. Even though President Biden halted the construction of Trump´s physical border wall when taking office in 2021, the ´smart´ wall border was never questioned. This venture is also shared with the Mexican government. In July 2021, the Mexican President Andres Manuel López Obrador agreed to invest approximately $1.5 billion U.S. dollars in border technology over the following two years. In exchange, President Biden agreed to issue more working visas and to accept more refugees into U.S. territory (Weissert and Miller 2022). In this case, Mexico also contributes to the technologization of this border regardless of how intrusive this may be to the population living in this borderland. For example, approximately thirty million people living along the Mexico-U.S. border, of which twenty million are based on the U.S. side (SBCC 2023), are affected by this high-tech surveillance border regime. The total U.S. border zone affects approximately two hundred million people (Azarmi 2019), that is, two-thirds of U.S. residents live under this border regime (ACLU 2022b).

The Mexico-U.S. ´smart border´ was first introduced by the U.S. during the Alliance for the Mexico-U.S. Border Summit, held in Monterrey, Mexico in March 2002. Although the border had been hardening in the 1990s, this `new´ paradigm quickly developed after the terrorist attacks of September 2001. The U.S. began to (re)think border management, shifting the way borderlands have subsequently operated. The Plan of Action agreed upon by both governments during the Summit recognized the impact of the terrorist attacks in the North American region and established the development of a modernized apparatus that would address the demands of a twenty-first-century border. This would be achieved by implementing state-of-the-art technology and binational cooperation mechanisms to guarantee more efficient border management (Emmerich 2002). In this way, the `smart´ but not `humane´ border regime is directly connected to the terrorist and national security continuum leading to the establishment of law enforcers that understand themselves as a 'threat base organization' (U.S. CBP 2023a). It is important to emphasize two points: (i) the term `smart´ is not inherently `better´ for border crossers and, (ii) the smart border is a layer added to the already very aggressive and surveilled physical border and not a substitute for it.

Since the 2002 Summit, major investments have been made in border security, including high-tech modes of surveillance. The fiscal year 2024 President´s Budget allocated $535 million U.S. dollars for border technology (The White House 2023). Border infrastructure refers to the modernization of land Ports of Entry, technological security, and ensuring the safe treatment of migrants under CBP custody. Similarly, the budget for the 2023 fiscal year approved by the U.S. Senate granted to U.S. CBP $16.464 billion of which $230

million is for border technology and $70 million was provided for Non-Intrusive Inspection (NII) high-tech systems (U.S. DHS 2023). These NIIs have the objective of increasing detection and interdiction capabilities at PoEs.

This budget is reflected by the number of high-tech surveillance `solutions´ currently used at the Mexico-U.S. border. To name a few, U.S. CBP uses integrated fixed towers, remote video and mobile surveillance systems, Predator and smaller surveillance drones, mobile X-ray units, automated license plate readers, cell phone tracking towers, implanted motion sensors, biometric data collection, and collection of DNA samples (Aizeki et al. 2021). The use of Artificial Intelligence in drones seems to be the future of border surveillance (Ghaffary 2020). All these tools produce data (name, birth date, gender, photograph, and time of crossing) on every border crosser, regular or irregular, with data for non-U.S. nationals being stored for seventy-five years. In contrast, data for U.S. citizens is only stored for fifteen years (Nakashima 2008). When conducting research on both sides of the border, the researcher must consider the hostile technological environment when collecting data in a transborder context. However, the technology developed for the border has been employed in non-border regions, raising some future research, political and ethical concerns.

For example, some protests in favour of immigrants were air surveilled by drones in the San Francisco Bay Area. Intentions of also observing student protests in San Diego were revealed in 2017 (Maas and Katz-Lacabe 2018). The Baltimore police department did something similar, by air surveilling some protests in 2016 with technology developed and used in the Iraq War (Reel 2016). If the high-tech border surveillance tools are being transferred to non-border areas, from U.S. CBP to police departments, we can envision the rise of `smart´ neighbourhoods, cities, states, and perhaps countries. Low-income districts, diaspora communities, and vulnerable populations inside the U.S. could be the next subjects to experience this hyper-surveillance regime even if in interior zones of the U.S.

Furthermore, if the use of border technology has been implemented outside the border areas, what are the implications of this transfer for future research methods at the Mexico-U.S. border and inside the U.S.? What about the influence of Frontex technologies in interior European zones? Who is the best-equipped person to conduct transborder research? What is the future of data protection and self-defense technologies under hyper-surveillance regimes?

Conclusion

The Mexico-U.S. border is a complex space with several overlapping political, economic, and sociocultural dynamics. The methodological and ethical implications are intertwined when looking at the borderland's population. The same reasoning applies to field researchers that become subjects of surveillance just by being physically present at the Mexico-U.S. border. My doctoral research required a protocol that navigated the intersections between ethics, methods, and high-tech border surveillance. A deep and complex understanding of the border crossing dynamic was a vantage point when designing the research, preventing, perhaps, some setbacks. However, this knowledge could not guarantee that neither the participants nor I would have our data collected, be subjected to searches, and be surveilled in general.

In this context, we should put the intersection between ethics and border research as one main element when producing knowledge from the field. Best practices and

innovative methods should be shared in fora to keep up with the constant changes in border policies and technologies. Being flexible, adaptive, and aware of all the ethical implications of this environment is pivotal for any border researcher and perhaps for non-border researchers in the near future as border technology continues to be implemented in interior zones.

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Note on the contributor

Mitxy Mabel Meneses Gutierrez's research is in border studies, international migration, and international policy formation and cooperation, which draws on postcolonial and decolonial perspectives. Her main focus is transborderism in the Americas and the international implications of this practice. She is a Lecturer in Politics and International Relations at Sheffield Hallam University. She also holds experience as a policy-maker in international relations and has worked in the United Nations within the International Organization for Migration (IOM).

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