

Standing Committee on Access to Information, Privacy and Ethics (ETHI) - study of the use and impact of facial recognition technology

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Abstract

People on the move are often left out of conversations around technological development, and like other marginalized communities, they often become testing grounds for new surveillance tools. Facial recognition technology underpins much of the types of technological experiments we are seeing in the migration and border space. Technologies which introduce biometric mass surveillance into refugee camps, immigration detention proceedings, and airports. The proliferations of technological experiments range from big data predictions about population movements in humanitarian crises, to the use of automated decision-making in immigration and refugee applications, to AI lie detectors deployed at European airports. However, these experiments do not account for the far-reaching impacts on human rights and human lives of people on the move. Unfortunately, currently little regulation exists to govern technological experimentation, compounded by an opaque decision-making ecosystem where private sector priorities dominate the agenda. This governance gap leaves room for far-reaching incursions on people's human rights, particularly in this time of exception, with emergency legislation allowing for further use of surveillance and tracking technology to proliferate. Blanket technological solutions do not address the root causes of displacement, forced migration and economic inequality, all factors exacerbating the vulnerabilities communities on the move face.

Introduction: Technological Testing Grounds at the Border

People on the move are stuck in an ever-growing panopticon of technological experiments² increasingly making their way into migration management. Facial recognition technology underpins much of the types of technological experiments we are seeing in the migration and border space. Technologies which introduce biometric mass surveillance into refugee camps, immigration detention proceedings, and airports. A whole host of actors and players operate in the development and deployment of

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² Petra Molnar, (2020), "Technological Testing Grounds: Migration Management Experiments from the Ground Up," EDRI and Refugee Law Lab, <https://edri.org/wp-content/uploads/2020/11/Technological-Testing-Grounds.pdf>

migration control technologies, obscuring responsibility and liability, exacerbating systemic racism and discrimination, and obfuscating meaningful mechanisms of redress. When looking at the impacts of various migration management and border technologies – technologies such as AI-lie detectors, surveillance drones, and various automated decision-making tools – it is important to consider the broader ecosystem in which these technologies develop. An ecosystem which is increasingly replete with the criminalization of migration, anti-migrant sentiments, and practices such as pushbacks³ leading to thousands of deaths at borders.

Snapshots from the Ground: Discriminatory Technologies that Kill

High-risk migration technologies are a world-wide phenomenon. A few weeks ago, our team was in the Sonora desert at the US/Mexico border, to firsthand see the impacts of technologies which are being tested out. These technological experiments include various automated and AI-powered surveillance towers sweeping the desert and the recently announced robo-dogs which are now joining the global arsenal of border enforcement technologies.⁴ The future is not just more technology, it is more death. Thousands of people have already perished making the dangerous crossing, like Mr. Alvarado, a young husband and father from Central America, whose memorial site we recently visited.⁵ Indeed, surveillance and smart borders have been proven to not deter people from making dangerous crossings – instead, people have been forced to change their routes towards less inhabited terrain,⁶ leading to loss of life both in the US/Mexico desert as well as along the maritime borders of the EU. If these technological experiments continue, in the not-so-distant future people like Mr. Alvarado will be pursued by high-speed, military-grade technology designed to kill.

The US/Mexico frontier is not the only region where violent border and migration technologies are being deployed. Around the frontiers of Europe, we have also been documenting the rise of new prison-like refugee camps in the Aegean islands, part of an

³ UNHCR (2022), “News Comment: UNHCR warns of increasing violence and human rights violations at European borders, <https://www.unhcr.org/news/press/2022/2/62137a284/news-comment-unhcr-warns-increasing-violence-human-rights-violations-european.html>

⁴ Petra Molnar and Todd Miller (2022), “Robo Dogs and Refugees: The Future of the Global Border Industrial Complex,” *The Border Chronicle*, https://www.theborderchronicle.com/p/robo-dogs-and-refugees-the-future?utm_source=url

⁵ Ibid.

⁶ Geoffrey Allan Boyce, Samuel N. Chambers and Sarah Launis, “ Democrats’ ‘smart border’ technology is not a ‘humane’ alternative to Trump’s wall,” (*The Hill*, 11 February 2019) <https://thehill.com/opinion/immigration/429454-democrats-smart-border-technology-is-not-a-humane-alternative-to-trumps>

increasingly virtual and violent Fortress Europe.⁷ Speaking to a young mother from Afghanistan on the eve of her family being forcibly transferred to one of these camps on the island of Samos this past September, she hurriedly typed out a message: “if we go there, we will go crazy.”⁸ It is not difficult to imagine why – the new camp is surrounded by layers of barbed wire, with algorithmic motion and “risk” detection surveillance, finger-print scanners, and even virtual reality technology currently being tested out to monitor people living inside.⁹

The Human Rights Impacts of Border Technologies such as Facial Recognition

These reflections from the ground are but a snapshot of the surveillance and automated decision-making technologies which have been increasingly used in securing border spaces, infringing on people’s life and liberty and their freedom of movement. In the lucrative political economy which underpins a growing border industrial complex, various actors are involved in developing and deploying high risk migration management technologies.

For example, the EU’s border force FRONTEX has made technological innovation a cornerstone of its strategy and operations. Over the last number of years, the agency has positioned itself at the vanguard of technosolutionism, piloting and deploying various technological interventions for border surveillance and migration management such as a new aerostat maritime surveillance system,¹⁰ using Greece as a testing ground. On Friday March 26th, 2021, FRONTEX also put out a press release, stating it commissioned a fulsome report from the Rand Corporation on various uses of Artificial Intelligence in border operations, including: “automated border control, object recognition to detect suspicious vehicles or cargo and the use of geospatial data analytics for operational awareness and threat detection.”¹¹ As recently as November 2021, FRONTEX publicly committed to flying surveillance airplanes over the English Channel, after the death of 27

⁷ Petra Molnar, (2021), “Surveillance is at the heart of the EU’s migration control agenda,” Euractiv, <https://www.euractiv.com/section/justice-home-affairs/opinion/surveillance-is-at-the-heart-of-the-eus-migration-control-agenda/>

⁸ Petra Molnar, (2021), “Inside new refugee camp like a ‘prison’: Greece and other countries prioritize surveillance over human rights,” The Conversation, <https://theconversation.com/inside-new-refugee-camp-like-a-prison-greece-and-other-countries-prioritize-surveillance-over-human-rights-168354>

⁹ Katy Fallon and Lydia Emmanouilidou, (2021), “With drones and thermal cameras, Greek officials monitor refugees,” Al Jazeera, <https://www.aljazeera.com/news/2021/12/24/greece-pilots-high-tech-surveillance-system-in-refugee-camps>

¹⁰ FRONTEX, Press Release, “Frontex to Launch Maritime Surveillance by Aerostat Pilot Project,” September 11, 2020, <<https://frontex.europa.eu/media-centre/news-release/frontex-to-launch-maritime-surveillance-by-aerostat-pilot-project-KzMGfe>>

¹¹ FRONTEX, Press Release, March 26, 2021, “Artificial Intelligence – based Capabilities for European Border and Coast Guard,” <https://frontex.europa.eu/media-centre/news/news-release/artificial-intelligence-based-capabilities-for-european-border-and-coast-guard-1Dczge>

people at sea attempting to reach the shores of the UK. FRONTEX has also time and time again been allegedly implicated in deadly pushbacks.¹²

Another useful example is the EU-funded project, ROBORDER,¹³ which explicitly ‘aims to create a fully functional autonomous border surveillance system with unmanned mobile robots including aerial, water surface, underwater and ground vehicles.’ The EU borders are not the only site of this type of border technology. In the U.S., politicians have presented similar ‘smart-border’ technologies as a more ‘humane’ alternative to the Trump Administration’s calls for a physical wall. Most recently, this includes a partnership between the US Custom and Border Patrol, Google Cloud AI, and Anduril Industries to create a new “virtual” wall of surveillance towers and drones, a move that has been endorsed by the new Biden Administration.¹⁴ However, these technologies can have drastic results. For example, border control policies that use new surveillance technologies along the US–Mexico border have actually [doubled migrant deaths](#)¹⁵ and pushed migration routes towards more dangerous terrain through the Arizona desert, creating what anthropologist Jason De Leon calls a ‘[land of open graves](#)’¹⁶. With similar surveillance technology on the rise at the shores of Europe that is increasingly used to facilitate interceptions and pushbacks of boats,¹⁷ similar increase of watery graves will likely occur.¹⁸ Thousands have already died.

¹² Matina Stevis-Gridneff, (2021), “E.U. Border Agency Accused of Covering Up Migrant Pushback in Greece,” New York Times, <https://www.nytimes.com/2020/11/26/world/europe/frontex-migrants-pushback-greece.html>

¹³ Roborder, “Aims and Objectives,” (Roborder) <https://roborder.eu/the-project/aims-objectives/>

¹⁴ Lee Fang and Sam Biddle, “Google Ai Tech Will Be Used For Virtual Border Wall, Cbp Contract Shows,” (*The Intercept*, 21 October 2020), <https://theintercept.com/2020/10/21/google-cbp-border-contract-anduril/> see also <https://truthout.org/articles/biden-is-rejecting-trumps-border-wall-but-proposing-his-own-virtual-wall/>

¹⁵ Geoffrey Allan Boyce, Samuel N. Chambers and Sarah Launis, “ Democrats’ ‘smart border’ technology is not a ‘humane’ alternative to Trump’s wall,” (*The Hill*, 11 February 2019) <https://thehill.com/opinion/immigration/429454-democrats-smart-border-technology-is-not-a-humane-alternative-to-trumps>

¹⁶ Jason De Leon and Michael Wells, “The Land of Open Graves, Living and Dying on the Migrant Trail,” (*University of California Press*, October 2015) <https://www.ucpress.edu/book/9780520282759/the-land-of-open-graves>

¹⁷ See for example Forensic Architecture, “The Left-To-Die Boat,” (Accessed 23 October 2020), <https://forensic-architecture.org/investigation/the-left-to-die-boat> see also Charles Heller and Chris Jones, “Eurosur: saving lives or reinforcing deadly borders?” (*Statewatch* 01 February 2014), <https://www.statewatch.org/statewatch-database/eurosur-saving-lives-or-reinforcing-deadly-borders-by-charles-heller-and-chris-jones/>; See also Niamh Keady-Tabbal and Itamar Mann, “Tents at Sea: How Greek Officials Use Rescue Equipment for Illegal Deportations,” (*Just Security*, 22 May 2020), <https://www.justsecurity.org/70309/tents-at-sea-how-greek-officials-use-rescue-equipment-for-illegal-deportations/>

¹⁸ See also the work of the Border Violence Monitoring Network, <https://www.borderviolence.eu/>

The use of these technologies by border enforcement is only likely to increase in the “militarized technological regime”¹⁹ of border spaces and the growing and lucrative border industrial complex,²⁰ without appropriate public consultation, accountability frameworks, and oversight mechanisms. The increased reliance on border securitization and surveillance through new technologies, as also explicitly underscored by the EU’s New Migration Pact²¹ and its focus on border enforcement and deterrence also works to send a clear message that human lives are expendable in order to protect Europe’s borders.

Technological Discrimination at the Border

The impacts of new technologies on the lives and rights of people on the move are far reaching. The right to life and the right liberty, the right to be free from discrimination, the right to privacy, and a host of other fundamental internationally protected rights are highly relevant to technological experimentation in migration and refugee contexts.²² For example, aspects of training data which are mere coincidences in reality may be treated as relevant patterns by a machine-learning system, leading to arbitrary, incorrect, or discriminatory outcomes.²³ Given the problematic track record that automated technologies already have on race and gender, similar issues likely occur in migration surveillance and decision-making. Proxies for discrimination, such as country of origin, can be used to make problematic inferences leading to discriminatory outcomes.

Algorithms are vulnerable to the same decision-making concerns that plague human decision-makers: transparency, accountability, discrimination, bias and error.²⁴ The

¹⁹ Csernaton, R. 2018. “Constructing the EU’s high-tech borders: FRONTEX and dual-use drones for border management, *European Security*, (27)2: 175-200

²⁰ Todd Miller, (2021), “A lucrative border-industrial complex keeps the US border in constant ‘crisis,’ *The Guardian*, <https://www.theguardian.com/commentisfree/2021/apr/19/a-lucrative-border-industrial-complex-keeps-the-us-border-in-constant-crisis>

²¹ European Commission, “New Pact on Migration and Asylum,” (*European Commission*, 23 September 2020) https://ec.europa.eu/info/strategy/priorities-2019-2024/promoting-our-european-way-life/new-pact-migration-and-asylum_en

²² For a fulsome analysis of the applicability of international human rights law and the variety of rights engaged in migration management technologies, see Petra Molnar, ‘Technology at the Margins: The Human Rights Impacts of AI in Migration Management.’ *Cambridge Journal of International Law* 8(2) 2019.

²³ This is one reason why the EU’s General Data Protection Regulation (GDPR) requires the ability to demonstrate that the correlations applied in algorithmic decision-making are ‘[legitimate justifications for the automated decisions](#). See for example Lokke Moerel and Marijn Storm, “Law and Autonomous Systems Series: Automated Decisions Based on Profiling - Information, Explanation or Justification? That is the Question!,” (*University of Oxford, Business of Law Blog*, 27 April 2018) <http://www.law.ox.ac.uk/business-law-blog/blog/2018/04/law-and-autonomous-systems-series-automated-decisions-based-profiling>

²⁴ Tufekci (n 29) 216–217.

opaque nature of immigration and refugee decision-making creates an environment ripe for algorithmic discrimination. Decisions in this system – from whether a refugee’s life story is ‘truthful’ to whether a prospective immigrant’s marriage is ‘genuine’ – are highly discretionary, and often hinge on assessment of a person’s credibility.²⁵ To the extent that these technologies will be used to assess ‘red flags’, ‘risk’ and ‘fraud’, they also raise definitional issues, as it remains unclear what the parameters of these markers will be.

One of the most visceral examples of the far reaching impacts of facial recognition is the increasing appetite for AI polygraphs, or lie detectors used at the border. The EU has been experimenting with a now-derided system called iBorderCTRL²⁶, and Canada²⁷ has tested a similar system called AVATAR.²⁸ These polygraphs use facial and emotion recognition technologies to purportedly discern whether a person is lying when presented with a series of questions at a border crossing. However, how can an AI-type lie detector deal with differences in cross cultural communication when a person due to religious or ethnic differences may be reticent to make eye contact, or may just be nervous? Or what about the impact of trauma on memory and the fact that we often do not recollect information in a linear way? Human decision-makers already have issues with these complex factors. It is unclear how these system will be able to handle cultural differences in communication, or account for trauma and its effects on memory, such as when dealing with a traumatized refugee claimant unable to answer questions clearly.²⁹ Refugee claims and immigration applications are filled with nuance and complexity, qualities that may be lost on automated technologies, leading to serious breaches of internationally and domestically protected human rights in the form of bias,

²⁵ See eg Vic Satzewich, *Points of Entry: How Canada’s Immigration Officers Decide Who Gets In* (UBC Press, Vancouver 2015).

²⁶ Robb Picheta, “Passengers to face AI lie detector tests at EU airports,” (CNN, 3 November 2018) <https://edition.cnn.com/travel/article/ai-lie-detector-eu-airports-scli-intl/index.html> accessed 23 July 2019.

With Hungary and Greece being some of the crucial entry points for refugee claimants into mainland Europe, it is perhaps no accident that these locations were chosen as the site of experimentation.

²⁷ Jeff Daniels, “Lie-detecting computer kiosks equipped with artificial intelligence look like the future of border security,” (CNBC, 15 May 2018) <https://www.cnbc.com/2018/05/15/lie-detectors-with-artificial-intelligence-are-future-of-border-security.html>

²⁸ Molly Kendrick, “The border guards you can’t win over with a smile,” (BBC, 17 April 2019) <https://www.bbc.com/future/article/20190416-the-ai-border-guards-you-cant-reason-with>. Various other pilot projects to introduce facial recognition at the border across the world have been explored in a recent report by CIPPIC. See Tamir Israel, “Facial Recognition at a Crossroads: Transformation at our Borders and Beyond,” (CIPPIC, September 2020) https://cippic.ca/uploads/FR_Transforming_Borders.pdf

²⁹ These issues also of course exist with human decision-makers, and there are increasingly cogent critiques about officers misunderstanding how the psychological effects of repeated trauma can impact person’s ability to testify and appear ‘truthful.’ See for example the work of Hilary Evans Cameron, *Refugee Law’s Fact-Finding Crisis: Truth, Risk, and the Wrong Mistake* (Cambridge University Press, Cambridge 2018).

discrimination, privacy breaches, and due process and procedural fairness issues, among others. It remains unclear how the right to a fair and impartial decision-maker and the right to appeal a decision will be upheld during the use of automated decision-making systems.³⁰

Technology Can be Harmful- Particularly at the Border

Ultimately, the primary purpose of the technologies used in migration management is to track, identify, and control those crossing borders. The issues around emerging technologies in the management of migration are not just about the inherent use of technology but rather about how it is used and by whom, with states and private actors setting the stage for what is possible and which priorities matter. The data gathering inherent in the development of these technologies also includes the expansion of existing mass-scale databases that underpin these practices to sensitive data, especially biometrics. Such data and technology systems provide an enabling infrastructure for many automated decision-making projects with potentially harmful implications. The development and deployment of migration management is ultimately about decision-making by powerful actors on communities with few resources and mechanisms of redress.

The introduction of new technologies impacts both the processes and outcomes associated with decisions that would otherwise be made by administrative tribunals, immigration officers, border agents, legal analysts, and other officials responsible for the administration of immigration and refugee systems, border enforcement, and refugee response management. Border enforcement and immigration and refugee decision making sits at an uncomfortable legal nexus: the impact on the rights and interests of individuals is often very significant, even where the degree of deference is high and the procedural safeguards are weak. There is also a serious lack of clarity surrounding how courts will interpret administrative law principles like natural justice, procedural fairness, and standard of review where an automated decision system is concerned or where an opaque use of technology operates.

The political economy in which this technological development and deployment occurs also cannot be ignored. The unequal distribution of benefits from technological development privileges the private sector as the primary actor in charge of development,

³⁰ There has been much opposition to the iBorderCTRL project, with a number of civil society organizations speaking out. For example, in November 2018, Homo Digitalis filed a petition to the Greek Parliament regarding the pilot implementation of the iBorderCtrl project: Eleftherios Chelioudakis, "Greece: Clarifications sought on human rights impacts of iBorderCtrl (EDRi, 2018) <https://edri.org/our-work/greece-clarifications-sought-on-human-rights-impacts-of-iborderctrl/>

with states and governments wishing to control the flows of migrant populations benefiting from these technological experiments. Governments and large organizations are the primary agents who benefit from data collection³¹ and affected groups remain the subject, relegated to the margins. It is therefore not surprising that the regulatory and legal space around the use of these technologies remains murky and underdeveloped, full of discretionary decision-making, privatized development, and uncertain legal ramifications.

The complexity of human migration is not easily reducible to an algorithm. Yet states are willing to experiment with these new unregulated technologies in the space of migration precisely because it is a discretionary space of opaque decision-making. The development and deployment of technologies also reinforce the North-South power asymmetries and concretise which locations are seen as innovation centres, while spaces like conflict zones and refugee camps become sites of experimentation under the guise of 'humanitarianism' and 'empowerment of migrants' through innovation.³² Technological innovations exude the promises of increased fairness and efficiency.

The appetite for these advances also reveal the fissures of imbalanced power relations in society. Technological development does not occur in a vacuum, but replicates existing power hierarchies and differentials. Technology is not inherently democratic and issues of informed consent and right of refusal are particularly salient in humanitarian and forced migration contexts when, for example, refugees in Jordan have their irises scanned in order to receive their weekly rations under the justification of efficiency, while not being able to refuse biometric registration.³³ Technologies of migration management also operate in an inherently global context. They reinforce institutions, cultures, policies and laws, and exacerbate the gap between the public and the private sector, where the power to design and deploy innovation comes at the expense of oversight and accountability.

In the opaque and discretionary world of border enforcement and immigration decision-making - structures which are underpinned by intersecting systemic racism and historical discrimination against people migrating - technology's impacts on people's human rights are very real. Ultimately this conversation is not just about technology. It is about broader questions - questions around which communities get to participate in conversations around proposed innovation and whose perspectives matter when it comes to the

³¹ Ruth Okediji, 'Does Intellectual Property Need Human Rights?' (2018) 51 *N.Y.U. J. Int'l & Pol.* 1.

³² See eg initiatives such as 'Techfugees: Empowering the Displaced Through Technology' <https://techfugees.com/> accessed 17 March 2019.

³³ Bethan Staton, 'Eye Spy: Biometric Aid System Trials in Jordan' (IRIN, 18 May 2016) www.irinnews.org/analysis/2016/05/18/eye-spy-biometric-aid-system-trials-jordan accessed 23 July 2019.

development and deployment of technologies with far-reaching impacts. In my work based on years of on-the-ground research and hundreds of conversations with people who are themselves at the sharpest edges of technological experimentation at the border, it is clear that the current lack of global governance around high risk technologies creates a perfect laboratory for high risk experiments, making people on the move, migrants, and refugees a testing ground.

Currently, very little regulation on facial recognition exists - in Canada and internationally. However, the EU's recently proposed regulation on artificial intelligence demonstrates a regional recognition that technologies used for migration management need to be strictly regulated - with ongoing discussions around an outright ban on biometric mass surveillance, high risk facial recognition, and AI-type lie detectors. Canada should also take a leading role globally and introduce similar governance mechanisms that recognize the far-reaching human rights infringements of high risk technologies and ban the high risk use of facial recognition in the migration and at the border.

We desperately need more regulation, oversight, and accountability mechanisms of border technologies used by states like Canada. The EU is currently undergoing the process of ratifying the first-ever set of regulations on Artificial Intelligence, setting a high standard for rights-respecting technologies and drawing red lines around harmful uses of AI and other automated and biometric technologies. Canada should be doing the same. We also need to recognize that the use of technology is never neutral. It is a political exercise which highlights how the allure of quick fixes and the hubris of innovation does not address the systemic and historical reasons why people are marginalized and why they are forced to leave their homes in the first place.