Increased Use of Artificial Intelligence in Border Zones Prompts Privacy Questions

The United States is increasingly using artificial intelligence (AI) to monitor its borders. This technology aims to secure borders more efficiently and safely by processing large amounts of data quickly. In recent years, the US has rapidly integrated "smart border" AI into its operations, which could significantly change how the government patrols its borders.

AI border technologies come in various forms. They include algorithms designed to evaluate travelers' subtle facial expressions, analyze fingerprints and faces, and scanner software that can distinguish humans from animals in remote border areas. Many of these systems evolved from surveillance tools that have existed for decades but have become more automated. Now, computers—not human beings—make initial decisions about potential threats and how authorities should respond.

Facial recognition technology has been implemented in many airports and border zones globally. This technology allows pre-registered passengers to verify their identity in seconds without presenting passports or other documents. Similar systems in US airports offer travelers relief from the lengthy security procedures typical of modern international travel.

However, these systems have raised significant privacy concerns. Critics warn of "technology creep," where systems originally developed for border zones gradually spread into mainstream society, potentially leading to widespread surveillance of the general public. It's often unclear whether travelers have consented to provide their biometric and other information to government authorities, or what rights individuals have in their evolving relationships with AI technologies.

The US government has invested heavily in border surveillance technology, including AI. In fiscal year 2021, the Department of Homeland Security received over $780 million for technology and surveillance at the border. This substantial investment supports the vision of a "virtual wall"—an extensive network of drones, sensors, and other technologies designed to detect unauthorized border crossings.

This concept of a virtual wall isn't new. The George W. Bush administration attempted to implement the Secure Border Initiative Network (SBInet) to integrate personnel, technology, and infrastructure for border security. However, after spending about $1 billion, the project was canceled in 2011 due to technical difficulties and cost overruns. This earlier failure highlights the challenges in implementing large-scale technological solutions at the border.

Despite past setbacks, evolving AI technology has renewed interest in digital border surveillance. US Customs and Border Protection (CBP) has deployed a system of autonomous surveillance towers, expected to number 200 by the end of fiscal year 2022. These solar-powered structures use a combination of radar, cameras, and AI algorithms to scan remote border areas and identify the source of movement.

These towers feed data into a system called Lattice, which provides real-time interpretation of surveillance information. The AI has been trained to differentiate between tumbleweeds, vehicles, and people, ignoring animals and other false positives. When the system detects people or vehicles, it alerts Border Patrol agents, allowing for quicker and more efficient responses.

AI is also employed at the US-Canada border. The Northern Border Remote Video Surveillance System (NBRVSS) consists of 22 sites with high-resolution cameras and radar systems equipped with AI capabilities. This system can detect and monitor vessels leaving the Canadian shoreline from miles away, distinguishing between normal and unusual vessel movements.

Proponents argue that these AI systems enable fewer agents to monitor more territory and process more data about migrants and travelers faster and at lower cost. This efficiency is particularly important given the high turnover rate among border patrol agents due to challenging working conditions.

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However, civil liberties groups are concerned that these technologies could infringe on the rights of both foreign nationals and US citizens. The border is largely exempt from the U.S. Constitution's Fourth Amendment protections against unreasonable searches and seizures. CBP is permitted to operate immigration checkpoints within 100 miles of the international border, an expanded border zone encompassing areas where approximately two-thirds of the U.S. population resides.

Critics warn that the use of this technology could lead to extensive surveillance beyond border areas. There's evidence that border surveillance equipment has been used by local police far from the border and for non-immigration purposes, raising concerns about a growing surveillance network affecting the broader population.

Research suggests that expanded surveillance infrastructure may have unintended consequences. Some studies indicate that it pushes migrants attempting to cross illegally towards more remote and dangerous routes, potentially leading to increased deaths due to environmental hazards and exhaustion.

The European Union is also exploring AI use for border monitoring, particularly in the Mediterranean Sea. They've been researching and testing systems involving drones and other autonomous vehicles to detect illegal border crossings and environmental threats like oil spills.

As nations continue to develop and implement AI border systems, it's crucial to weigh both the potential benefits and drawbacks. While these technologies might enhance travel efficiency and border security, they also raise serious concerns about privacy, human rights, and the appropriate limits of government surveillance that need to be carefully addressed.

Questions:

1. How might AI-powered border surveillance change the way people travel between countries? Think about both positive and negative effects.

2. The article mentions "technology creep." What could happen if border surveillance technology starts being used in everyday life?

3. Some people say AI border technology makes borders safer, while others worry about privacy. If you were in charge, how would you balance safety and privacy at the border?