Building the Virtual Wall

by Juan Llamas-Rodriguez

The US government is pouring millions into automating border enforcement. It's a good story for tech journalists, a lucrative opportunity for defense contractors, and bad for everyone else.

A small robot with a caterpillar track rolls into a dark tunnel. It holds a camera flanked by two flashlights. Lasers help it navigate this cramped space and trace an efficient route. At the other end of its connecting cable is a US Customs and Border Protection agent with a joystick. They are looking for smugglers and drugs.

Over the past few years, the US government has deployed these robots to disrupt the most famous technical achievement of Mexican narco-trafficking cartels: border tunnels. These underground miles-long structures have ventilation systems, electrical grids, and pulley-operated secret entrances and exits. Cartels spend millions of dollars and recruit talented architects and engineers from a mining state in northern Mexico to build them.

The popular fascination with these tunnels runs deep. Journalists obsess over their design. American films like Fast and Furious and television shows like Weeds feature detailed reconstructions of them. When famed cartel leader Joaquin "El Chapo" Guzman escaped from

prison (the second time) through a tunnel, both Taiwanese animation studios and Las Vegas museums created artistic renderings of the structure.

For years, technophiles have argued that robots are the key to shutting down narco-tunnels. Citing developments by the Idaho National Laboratory and Canadian robot maker Inuktun, a 2009 Wired article claims that robots could be "the greatest weapon to emerge from the government's attempt to stamp out the trade in illicit substances across its border." A 2010 PR release from the MITRE Corporation boasts that their work on sensing robots could eventually provide "an effective, low-cost, and reliable solution to long-term border surveillance." In 2015, a similar write-up from Makeshift magazine calls these robots "unlikely allies" of the US Border Patrol and features a color illustration of a fedora-wearing, anthropomorphized robot walking in the dark and holding a flashlight.

In fact, robots have done little to stop drug trafficking between the U.S. and Mexico. Tunnel Task Forces, the CBP divisions in charge of border tunnel detection and shutdown, are the first to point this out. Border guards, like any human workers threatened by automation, have an interest in making themselves appear indispensable, but the evidence suggests that the labor of border enforcement can't yet be automated away.

In 2014, CBP produced a multimedia report to showcase the work of their Tunnel Task Forces around the border called What Lies Beneath. It shows that robots don't replace the human labor of border policing—but they do make aspects of the work easier and safer. Robots function as scouts once a suspected smuggling tunnel is detected by agents. They inspect the tunnel to ascertain whether it is clear for agents to enter and whether it is structurally sound. The work that CBP officers perform remains largely unchanged. Tunnel discovery itself still relies on old-fashioned methods of intelligence gathering such as informants or citizen reports. And before the agency can close a tunnel, at least one agent must enter to certify that it is cross-border—in other words, that it reaches beyond the geopolitical border. Human agents still do the work of border enforcement, albeit with better tools.

Still, there's a deeper problem with the obsession over tunnel robots: it's not merely that the robots don't live up to the hype, it's that the tunnels aren't especially important. Narco-tunnels may thrill the popular imagination, but they aren't very significant for drug smuggling. Both the Drug Enforcement Agency (DEA) and the CBP admit that most drugs enter the U.S. through regular ports of entry—smuggled in cars, ships, and planes—and that tunnels constitute a small fraction of total trafficking operations.

In spite of this, money continues to pour in. The 2016 defense authorization bill passed by Congress and signed by President Obama included about $120 million earmarked for a research and development project for border tunnel detection technologies.The partner in this project, and its primary beneficiary, is the Israel Defense Forces (IDF), which contends with its own version of border tunnel policing across its controlled territories in Gaza.

More broadly, the U.S. government remains committed to finding technological solutions to border enforcement problems. The CBP recently developed a drone program to help spot illicit crossings from the air. Enthusiasm wilted in early 2015, however, when the Office of Inspector General (OIG) noted that the program had failed to prove its value despite a staggering $443 million investment. The OIG recommended that the agency "put those funds to better use."

Cameras, sensors, and other types of surveillance technologies may add to the border's technical sophistication, but they often contribute little to the practical matters of border management. Organizational inefficiency, ecological precarity, and rampant corruption remain more pressing concerns in this regard, yet technological disruption is unlikely to fix such problems. Broader systemic change would require sustained attention to rethinking policy, economics, and infrastructure—but this is unlikely to attract glossy features and defense funds.

The fascination with technological innovations for border policing also points to the dehumanization inherent in practices of border management. The implications extend beyond border patrol agents losing their jobs to automation. The illusion of precision and mastery provided by technologies of border policing shrouds the harmful implications of border mechanization for the communities and environment of the region. Likewise, the potential weaponization of these technologies threatens to transform border management into border warfare. Tunnel robots are imagined as fedora-wearing sleuths for now, but it may not be long before they become literal fighting machines.

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