

4. THE POWER BEHIND THE DRONE

The potential benefits of unmanned aerial vehicles (UAVs, or more commonly, drones) used in civilian life are countless--as are the potential threats. Drones are small, inexpensive, easy-to-use, agile, and technologically sophisticated. As tiny as insects and starting at about \$75, drones can be controlled by cell phone to snake around obstacles and tunnel through small openings, making them ideal for surveilling, conveying, chemical monitoring, filming, and data recording. Drones can survey and spy, help and harm, monitor and menace. Uses and abuses are limited only by imagination.

First Street Research Group is a Washington DC organization that analyzes lobbying data and political influence. First Street data show that in 2011, six companies requesting licenses to operate drones domestically have alone spent over \$25,000,000 lobbying Congress. These six are just a small part of the powerful drone lobby, which includes aerospace companies, defense contractors, technology manufacturers, software companies, security corporations, and universities. The drone lobby donates to campaign coffers of members of Congress, helps draft laws regulating and funding drones, and promotes the beneficial uses of drones.

Drones do perform many useful functions that save time, money, and lives. Farmers use drones to monitor crops, real estate agents to show far-flung properties, rescue crews to deliver emergency supplies to injured climbers, and safety engineers to assess hazardous conditions. Other beneficial uses include storm tracking, energy exploration, hostage assessment, wildfire management, infrastructure inspection, and criminal surveillance.

Some uses of drones, however, are both positive and negative. Hunters use drones to track wildlife, while animal rights groups use drones to track hunters. A group of South Carolina pigeon hunters being drone-tracked by SHARK (SHowing Animals Respect and Kindness) shot the drone from the sky. The celebrity photo agency, Splash News, is developing its own silent celebrity-tracking drone so paparazzi can get candid pictures of celebrities without resorting to dangerous car chases and undignified hiding in the bushes. Parents can track teenagers who sneak out at night, and record evidence of where they went, who they were with, and what they did. Of course, teenagers can do the same to their parents.

Other uses of drones are deleterious. Drones make crimes easier to commit, and to commit without detection. The civilian use of military assassin-bug drones that explode when they hit their targets presents opportunities for private vendettas. A small, silent drone could be given the capability to drop biochemical weapons on the Superbowl. A cell phone-operated camera drone that looks like a little bird, could be programmed to hover for hours outside a 37th floor bedroom window, and send back continuous video unsuspecting victims, which the voyeur could post online, sell, or use as blackmail.

Increasing the threat to privacy, Camero, a decade-old company specializing in radar-based imaging systems, sells equipment with technology that can "see" through ceilings and walls. The 3 April 2013 Congressional Research Service Report, *Drones in Domestic Surveillance Operations: Fourth Amendment Implications and Legislative Responses*, predicts that "Currently, UAVs carry high-megapixel cameras and thermal imaging, and will soon have the capacity to see through walls and ceilings."

Drones pose physical dangers. In 2012, the Federal Aviation Administration predicted that as many as 30,000 drones will be licensed for domestic use in the US by 2020. However, just one company, 3-D Robotics, had already sold over 30,000 drones for domestic use by spring of 2013. As more unmanned aerial vehicles crowd the skies, the likelihood of accidents increases, as many drones cannot avoid small flying objects. Some states and municipalities have banned them, even before they have been detected in the area.

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