

Drones: Effective Tools in American Foreign Operations?

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### Abstract

Unmanned, remote-controlled drone aircraft have a long history of use, but have virtually always been a subject of controversy due to the way they change the nature of warfare. Despite this, drones are increasingly used in foreign U.S. peacekeeping and anti-terrorism operations to pursue a variety of goals, including obtaining various strategic and tactical advantages, avoiding military casualties and other unintended deaths, reducing collateral damage and other traditional costs of warfare, and aiding humanitarian efforts, all of which are discussed following a brief history. Also addressed are some common public concerns relating to the ethics and effectiveness of foreign drone use, and the transparency of the military and involved government organizations. These various points are touched on in the context of answering the primary question of whether current U.S. drone technologies and use patterns in foreign operations are currently effective in reaching the noted goals, and also to explore whether their continued use in a similar manner is a positive trend.

*Keywords:* drone, unmanned aerial vehicle, UAV, terrorism, government transparency

### Drones: Effective Tools in American Foreign Operations?

Much of the implementation and usage of Unmanned Aerial Vehicles (UAVs, or drones) by government organizations has naturally changed in the years since their inception because of technological and tactical progress. However, several of the basic goals of government-sponsored foreign drone operations have remained largely the same: To reduce innocent deaths and collateral damage in target areas (Lewis, 2016); to make armed conflicts easier and less risky for the U.S., particularly by reducing military casualties (Schulzke & Walsh, 2016); to reduce the economic costs of military engagements and strike operations (Hall, 2015); to offer increased flexibility, accuracy, and endurance to military operations (Ali et al., 2016); and to aid in disaster relief missions when plausible, such as with the Global Hawk surveillance drone (Emery, 2016).

There are also some valid concerns about the effectiveness of such drone programs that have seen increased discussion in recent years. For example, some say that military drone strikes are not as transparent to the public as they should be, leading to the possibility that they may kill more innocent civilians than traditional ground operations, or that they could even prompt more people in affected populations to become bitter and subsequently join terrorist organizations (Hall, 2015). Within the new trend of repurposing military UAVs for humanitarian missions, some also say that there is a 'slippery slope' inherent in such uses, because of the perceptions that will continue to inextricably link such drones to warfare (Emery, 2016).

A brief introductory history along with each of these goals and concerns will be examined in the context of answering the effectiveness question, aiming to show through source research and synthesis that current U.S. drone programs are indeed fulfilling their intended purposes and will play a vital role in the future of international peacekeeping and humanitarian operations.

### **A Brief History of UAVs: World War I through Vietnam**

Beginning in the mid to late 1910's, prompted by World War I, something remarkable happened: Pilotless, radio-controlled aircraft and torpedoes left the confines of engineers' imaginations, and with American developments generally taking place under the sponsorship of the U.S. Navy, they began to take off into what has ultimately been a long and very influential aspect of U.S. military history and foreign operations.

Starting with torpedoes and disposable aircraft, the first modern examples were the British Army's development in 1914 of 'aerial targets' for training and long-range bombing, the December 1917 testing of the American-developed Hewitt-Sperry Automatic Airplane by Dr. Peter Cooper and Elmer Sperry, and then the successful flights by October 1918 of the more sophisticated 'Kettering Bugs' – named after their designer Charles F. Kettering of Delco / General Motors fame (Ali, Mirza, Naqvi, & Qaisrani, 2016).

The first proposal for a reusable unmanned aircraft, the Fernfeuer (Deep Fire) was then given in October 1939 by Dr. Fritz Gossiau of the German-based Argus Motor Works, and although it did not ultimately receive approval from the German government, it would have exhibited two of the main distinguishing factors of modern UAV effectiveness: true remote controls (although also present in some previous developments) and the ability to return to home base after use (Ali et al., 2016).

After World War II, the major powers of the world continued to advance their unmanned aircraft and missile programs. One of the most important designs resulting from this effort was the 'Firebee' drone developed by American company Ryan Aeronautical, which was widely deployed and used extensively for surveillance in the Vietnam war (Ali et al., 2016). This was likely the turning point that opened the door for new types of drones, and helped the CIA and

U.S. military command to see the major potential in drone programs. UAVs were now not only effective bomb-droppers, but were also able to grant other tactical advantages, such as remote observation capabilities and more accurate weapons deployment.

### **Casualty Reduction and Transparency**

Such realizations of the ways in which UAVs could change the face of warfare led to the emergence, according to Gross (2014), “of a new way of fighting, recognizing the value of precision and accuracy over raw, indiscriminate force” during the Vietnam war. Partially because of this new focus, UAV targeting and weapons systems have attained much better accuracy in recent years, greatly improving the chances that an intended target (and only that target) will be hit in a given drone strike, thus improving effectiveness; there are, however, situational factors that affect weapon accuracy according to Gross, such as distance, projectile types, and weather conditions, which can’t always be negated by technological improvement.

That could be a problem if better technology affected only the drone’s own machinery. However, Schulzke (2016) argues that there are some accuracy benefits that stem just from having remote pilots. Such pilots are not on the battlefield themselves, which virtually eliminates their need to engage in self-defense measures, especially since the drone itself is rather difficult to attack from the ground. This enables the controllers to follow “far more demanding rules of engagement” and to “refrain from using lethal force against ambiguous potential threats, such as when it is unclear whether a person is a civilian or a non-uniformed enemy combatant” (Schulzke, 2016).

These increased accuracy factors, in keeping with the goal of reducing collateral damage and innocent civilian deaths, are one major aspect of how drones and their operators are continuing to improve. According to Oblinger (2011), however, there continues to be

understandable public demand for more transparency and accountability, due to the morally, legally, and politically controversial nature of how drones achieve this goal vs. traditional warfare. There are several key items that factor into this drive for accountability, including some that originate within military history and organization itself.

The first factor is an ethical awareness shared by both the public and the military. In America it is considered highly unjust to end human lives or destroy personal property without proper cause and intent, which means that drone use is understood to only be as fair as the underlying conflict, just as with any other military advantage (Strawser, 2010). In a similar light, many public calls for accountability have to do with military ‘casualty aversion.’ According to Schulzke and Walsh (2016), casualty aversion is mostly about the public’s desire to avoid military casualties as much as possible, usually by keeping American soldiers off of the battlefield. Thus, it is ethically justified for the military to employ the ‘principle of unnecessary risk,’ in which the command structure is obligated to find ways to reduce the risks and casualties of troops as much as possible while still carrying out orders (Strawser, 2010). This is one of the main purpose of U.S. drone programs, in fact: to “[provide] a mechanism for engaging in conflict while limiting U.S. soldier fatalities. Soldier deaths in post-9/11 conflicts, particularly in Iraq, were met with sharp criticism... By using drones, many missions would no longer require as many U.S. soldiers in the field, decreasing the number of casualties” (Hall, 2015).

A second factor involves war protocols that have been established in relation to historical international conflicts. Some major ones come from Additional Protocol I (AP I) of the Law of Armed Conflict, which is a set of international military protocols initially created by the Hague conventions of 1899 and 1907 and the Geneva conventions in 1949, and which have been signed as treaties by the U.S. (Oblinger, 2011). AP I article 57.2 states, in part, that military

commanders should “do everything feasible to verify that the objectives to be attacked are neither civilians nor civilian objects[,] ‘take all feasible precautions’ to avoid or minimize incidental loss or damage, and choose (where possible) objectives ‘expected to cause the least danger to civilian lives and civilian objects’” (Berry et al., 2015). This partially explains - because of its position as an international law - how military accountability has become a global legal concern, and implies a certain amount of transparency to ensure that the requirements are met. This also provides another premise for the goal of perpetually increasing accuracy: Making UAVs more accurate will ‘minimize incidental loss or damage’ and help drone programs to continue to withstand public scrutiny, ultimately helping them to be even more effective moving forward.

### **Economic Cost Benefits**

In addition to ethical benefits, the use of UAVs also provides several economic advantages. Compared to traditional manned aircraft, UAVs do not need to have pressurized cabins, space for humans, or other traditional design requirements needed to accommodate a pilot and/or passengers, considerably reducing costs (Keene, 2016). Just how great is the difference? According to Hasik (2008), the cost of operating a regular manned military aircraft is “at least \$1500 per hour” compared to an approximately \$100 per hour cost for operating the Predator UAV, excluding command-and-control costs such as active satellite uplinks.

Sending out a UAV vs. putting ‘boots on the ground’ also provides a significant cost savings. According to Harrison (2013), for fiscal year 2014, the average cost of deploying a service member was projected to be about \$2.1 million. Even when divided over the maximum range of 24 hours per day for an entire year, this figure still works out to around \$240 per hour,

more than double Hasik's noted estimated operating cost of a Predator drone, making drones generally a more cost-effective option.

### **Operational Advantages and Potential Long-Term Effects**

UAVs also offer various strategic and tactical advantages to military operations, besides their targeting accuracy. Unlike the small, lightweight consumer drones commonly seen in the U.S., the original Predator UAV for example "can stay aloft for up to forty hours" without refueling, while the Predator B has a top flight speed upwards of 220 knots (about 253 MPH), can carry up to 750 pounds of cargo, and can reach an altitude of 45,000 feet (Hasik, 2008). These features, combined with some impressive camera and sensor packages, makes such drones uniquely effective in certain types of missions, such as performing constant surveillance over terrorism hotspots.

One common concern with such surveillance and precision targeting, however, is the long-term effects that it has on the populations in the affected areas. Keene (2016) argues that terrorist operatives killed by targeted drone strikes often gain martyr status in their communities, and can usually be quickly replaced. He also states that this fuels 'enemy propagandists,' giving them the powerful argument that "the use of drone strikes is an injustice from which they need to defend themselves," potentially leading even more affected people to join terrorist organizations. Oblinger (2011) argues that these effects can be balanced out with a "soft power, grassroots approach," taking the "education of [affected] civilians and concern for their long-term well being" into consideration. To achieve this, she has proposed "working with vulnerable citizens on a daily basis, teaching them basic skills, lessons on human rights and religion, and learning to cohabitate with people from different and [often] warring sects of their own religion." She goes



on to say that such efforts may not change existing terrorists, but could likely deter youth from joining extremist causes.

### **Military Drones in Humanitarian Efforts**

Another proposed way of building goodwill in populations affected by drone strikes is to repurpose certain types of drones for humanitarian aid uses. According to Emery (2016), such drones may suffer from many of the same negative perceptions as their more hostile brethren, and that this is ‘deeply problematic,’ but mentions that “there has been a significant shift” in public sentiment and discourse on the matter. He shares examples of the Northrop Grumman RQ-4 Global Hawk line of drones - which were previously used extensively for surveillance in Iraq and Afghanistan - being used by the U.S. Air Force to help fight wildfires in California in 2007, and assisting “with infrastructure and damage assessments” in the Philippines after Typhoon Haiyan. Such instances show that drones have proven their worth in “coordinating on-the-ground rescue efforts and disaster risk assessments” (Emery, 2016), and could potentially provide many forms of useful aid in areas where they have traditionally been used solely for anti-terrorism strikes. It may take time to overcome the perception duality problems, but combined with other on-the-ground forms of aid (such as working with vulnerable citizens as mentioned earlier), it is possible for negative perceptions to be overcome, helping drones to be more effective overall in such areas.

### **Looking Forward**

In conclusion, while there are some controversies surrounding the U.S. military’s drone programs, it is clear that they are here to stay. They also offer many moral, political, and economic benefits, which will only increase as drone technologies advance and improve their flexibility, accuracy, and operational endurance. Such benefits include reducing serviceman and

innocent civilian casualties, reducing the costs associated with manned aircraft and putting ‘boots on the ground’, and potentially being available for humanitarian use. It has also been noted that there are some valid ethics and transparency concerns, and that it can be difficult to gauge the psychological impacts of drone usage on citizens in the Middle East. To overcome many of these, however, we can continue to improve drone technology, offer more ‘soft power’ diplomacy and help, make drones less intrusive and disturbing to the involved populations, and balance out some of the combat effects by repurposing some drones for humanitarian aid. All of these will help UAVs to continue being effective tools in American foreign operations, and achieve a vital role in the future of warfare, peacekeeping, and humanitarian efforts.

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