Geopolitics of Proliferation of Armed Unmanned Aerial Vehicles

Abstract

The paper looks at the effects of the increased proliferation of armed UAVs. It briefly elucidates the military history of UAVs, before examining the phenomenon of proliferation of these UAVs. It looks at how both states and non-state actors have been using these increasingly. It examines the impact of drones in contemporary warfare, particularly that of low-tech and low-cost drones which operate as loitering munitions. Finally, it looks at the larger geopolitical impact of the proliferation of drones. It describes how this phenomenon has strengthened the hand of certain states like Turkey and Iran, while weakening that of states like Saudi Arabia.

Introduction

The last decade has seen an immense proliferation of armed Unmanned Aerial Vehicles (UAV's, also known as Drones). UAVs are no longer limited to their roles as surveillance and training pilots, but have been used as substitutes of manned aircrafts to carry out deadly attacks without the commensurate risk of loss or capture of a pilot. While in the initial years of this period saw the use of armed drones by state actors against non-state ones (particularly, terror groups) to eliminate high value targets that would otherwise be difficult to eliminate, recent years have seen them used by state armed forces against other states, as well as by non-state actors against state and other non-state actors. In other words, both the users as well as the context of uses has increased in the last few years.

This paper would examine the recent history of the proliferation of armed drones. It would see how states as well as non-state actors have been adapting towards using these according to the situations they find themselves in. Next, I would examine what effect it has on the outcomes of the conflicts in which they have been utilized, as well as the geopolitical ramifications of such use. Lastly, I would take a cursory look at some proposals to counter this trend of drone proliferation, and see if they have any merit.

History of armed UAVs

The history of modern UAVs can be traced back to the First World War. The invention can be credited to English inventor and engineer, Sir Archibald Montgomery Low, who developed the first powered drone aircraft. These were to be controlled through radio transmission, a principle that has in its most fundamental form remained unchanged to this day. The drones were extremely rudimentary, however, and had limited use. They were mostly used either for training purposes (as targets for other fighters or AA guns) or as flying bombs. (Blom, 2010)

It was not until the Vietnam war period that communication technology had advanced enough to allow the emergence of reconnaissance drones. One of the major reasons for the spurt in development was the shooting down of U-2 piloted by Gary Powers over the USSR. The Ryan Model 147 Lightning Bug was one of the first of its kinds, and it and the several variants it spawned were used extensively by the US armed forces to keep an eye on North Vietnam, China and North Korea. (Ehrhard, 2010) The details of the Soviet reconnaissance drone programs remain hidden, but it's suffice to say that they too developed similar drones.

Another innovative use of drones was by the Israeli forces in the 1973 war. The dense Egyptian and Syrian SAM batteries meant that it was a very hazardous environment for Israeli aircrafts. Clearing them out through manned fighters and bombers could have resulted in high casualties, which the Israelis could not afford. Instead, they used UAVs to lure the enemy SAM batteries to fire their missiles at them, and then took out the batteries with anti-radiation missiles. The Israelis also extensively used UAVs during the 1982 invasion of Lebanon. UAVs were used

in an ISR (Intelligence, Surveillance, Reconnaissance) capacity, as well as decoys to lure Syrian SAM's. (Kreis, 1990)

The US armed forces also deployed ISR drones during the 1991 Gulf War. The RQ-2 Pioneer drone, jointly developed by US and Israel, flew over 300 combat reconnaissance missions during the conflict. (Pike, 2000). The famous Predator drone saw first usage during the Kosovo war, where it performed ISR roles for NATO forces. While many were shot down or were destroyed after technical failure, the lack of casualties meant that they were continued to be used extensively. (Becker, 1999) The armed version of the Predator (carrying Hellfire AGMs) was only introduced after 9/11 in the ensuing War on Terror. They were used extensively in the invasion of Afghanistan, as well as later. Predator drones were also used in the 2003 invasion of Iraq, as ISR drones, as decoys and for firing AGM's.

Drones have been used extensively in the War on Terror. They are considered an efficient and effective way to eliminate high value targets in environments where manned missions would not be possible. While the legality of drone usage in sovereign territories of other countries has been at best questionable, the lack of alternatives mean that it is unlikely that drone usage for this purpose would go away anytime soon.

Proliferation of drones

The last few years have seen a massive proliferation of drones. Drones are no longer the monopoly of strong and technologically developed states (like the US and Israel). A number of countries (like Turkey and Iran) have indigenously developed very effective drones, and have supplied it to their allies (both states as well as non-state actors). The result of this has been the increased use of drones for warfare, both in a conventional as well as unconventional capacity.

The conventional use of drones is by states, against other states and non-state actors. The Armenia-Azerbaijan war of 2021 demonstrates the effectiveness of these drones. Azerbaijani drones were able to lure the fire of hidden Armenian SAM's, making their locations known. It was advised to them by the Israelis, and is the same tactic used by Israelis in the 1973 war. (Dixon, 2020) Saudi Arabia has also deployed American drones against Houthis, in a search and destroy role. The use of Turkish drones by the GNA faction in Libya can be called both

conventional as well as unconventional, depending on if they are seen as the legitimate government of Libya or just another group in the Libyan Civil War. But the tactic is surely conventional, as they are used against Russian-supplied SAM batteries of the LNA to great effect. (Marson & Forest, 2021)

Unconventional use of drones is mostly by non-state actors, either against states or against other non-state actors. The non-state actors in question are unable to develop their own drones, and are reliant upon their state allies to procure them. In comparison to the drones used in conventional warfare, these drones are often much lower on the technological plane and cost much less.

The most prolific recent users of unconventional drone warfare have been the Houthis. They have managed to wrest control of much of Yemen, and have been successful in resisting the Saudi-led coalition's efforts to drive them back. Part of their resistance has been to strike at the heart of Saudi mainland through low-tech drones (sourced primarily from Iran, their main state backer). The drones they use have been designed to carry high explosives, and explode when near their targets. The ability to loiter makes them superior to cruise missiles. The Saudi Air Defenses have so far proved incapable of detecting and destroying them before they could reach their targets.

Another very important non-state actor to use drones is the Hezbollah, who incidentally were the first non-state actor to use them against a state. In 2004, Hezbollah used an Iranian made drone to surveille upon Israeli cities and installations. (Plaw & Santoro, 2017) Since then, Hezbollah has used drones extensively against Israel, and while these drones haven't been too much of a threat due to Israel's interception capabilities, they certainly have caused their fair share of panic and terror among the Israelis.

Impact of drone proliferation

The recent proliferation of drones, both in conventional and unconventional usage, has several impacts. In conventional usage, it reduces the cost that states might endure when fighting against other states or non-state actors. It is true that drones could be shot down (and probably more likely to be shot down, due to flying lower and at lesser speeds), but the cost attributed to it

is much lower. Drones are cheaper than fighter jets, and the human cost is completely eliminated. The risk of capture of a pilot, which could prove a huge morale boost for the opposing side, is also completely eliminated.

Costs of conflict act as barriers to conflict; the higher the cost, the more unlikely it is for conflicts to start and sustain. Lower costs mean that states are more prone to get into conflicts and sustain them. One of the major reasons for states to end wars is a protracted cost (financial and human), leading to domestic pressure. Since drone warfare diminishes the first kind and completely eliminates the other, the domestic pressure to end wars would reduce.

Since the proliferation has mostly been to states that are otherwise lacking in the technological front, it could act as an equalizer in inter-state conflicts. In wars among states that deploy drones and those that do not, drones could prove to be the edge required to tilt the balance of conflict on their side. Skilled use of drones also requires certain tactics and strategy, and this opens up space for new military innovations. The military leadership would need to rethink how wars are to be fought and include drones in their calculations. Naturally, those states whose military leadership failed to adapt would be left behind.

However, the much larger impact would be through the unconventional use of drones. The proliferation of combat drones among non-state actors is the big story of the last few years. These drones are a massive upgrade over the offensive capabilities that they hitherto possessed, and brought them further along to parity with the state actors. While the drones that non-state actors use are much less technologically advanced compared to that used by states, the innovative ways in which non-state actors deploy these drones play to their strengths and extract the most amount of utility out of them.

The use of drones as loitering munition against the critical civil and military infrastructure of states poses a challenge, since it has very little cost (in terms of drones intercepted) but very high benefits (in terms of value of infrastructure destroyed). States would thus need to aim to have a very high rate of interception or concede the upper hand to their opponents. While Israel has been fairly successful in this, countries like Saudi Arabia have lagged behind and paid the price.

Larger Geopolitical impact of drone proliferation

So far, I have looked at what the effect of drone proliferation would be among conflicts between states, among states and non-state actors and even among non-state actors. As a result of these effects, some states gain an upper hand over others due to the strategy they chose. This is by no means permanent, as a revision of strategy is always possible in the medium to long term. However, this section is a survey of how proliferation of drones has affected the larger geopolitics in the present (and likely to do so in the near future).

States which rely on supporting non-state actors in other countries to serve their agenda have benefitted from these developments. The most important example of this is Iran, which has proxy actors in most other countries in the Middle East to advance their interests. (Lane, 2021) Iran has armed these proxy actors with rudimentary but highly effective drones, and as a result of this the proxies have been able to gain an upper hand in the conflicts of the region. Since most of these proxy actors are locked in combat against the states that Iran competes with in the region, Iran's position vis-à-vis these states has improved.

Another such state which has benefitted from the proliferation of drones is Turkey. While Turkey is not considered to be as much of a geopolitical heavyweight as Iran, in recent years Turkey has been making its moves in arming non-state actors which it thinks would advance its interests. The most successful such group was the Government of National Accord (GNA) in Libya, which actually gained UN recognition as the legitimate government of Libya. In the latter phase of the Libyan civil war when the GNA was locked in battle with the Russian-backed Libyan National Army (LNA) of Gen Haftar, Turkish drones were used to devastating effects against the LNA.

Conversely, countries like Saudi Arabia, which lack an indigenous arms industry that can design and manufacture such drones, would lag in the competition. While these countries can purchase drones from advanced countries (which Saudi Arabia has indeed done), the prohibitive cost of these advanced drones mean that they cannot be supplied to allied non-state actors or used in unconventional ways. The real reason that gives unconventional drones their edge is their disposability (which again comes thanks to their low technology and ease of manufacture).

Sophisticated drones don't have this edge and are just one more arrow in the quiver of the conventional military forces.

On the other hand, such countries could (and some already have) become victims of attacks by low-technology drones used by non-state actors. Saudi Arabia has been under several such attacks by Houthis, the most high profile of which was the one carried out against Aramco facilities on 14th September 2019. (Al Jazeera, 2019) While the exact culprit behind the said attack remains unclear, with the US pointing the blame at Iran, the conclusion remains the same. Iranian drones have been targeting Saudi Arabia, and Saudi Air Defenses have been clearly falling short.

Conclusion

The proliferation of armed drones seen over the last few years would have a paradigm-shifting effect on the future of conventional and unconventional warfare. Specifically, it has strengthened the hands of those states that have developed highly effective but very affordable low-technology drones, and have supplied them to their allied states as well as non-state actors. Countries like Turkey and Iran have clearly benefited from these developments, while other countries like Saudi Arabia have seen their positions weakened. It remains to be seen whether this would create greater geopolitical developments, or would coming technological developments from more advanced countries blunt the effectiveness of these crude drones. However, what is clear either way is that warfare is only going to get more and more complex, with states coming under increasing challenge from non-state actors, who would be supplied by other states.

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