Drones : Good or Bad?

A drone is an unmanned aerial vehicle (UAV). That is, it is an aircraft without a human pilot aboard. Drones are the upcoming necessity and are used for many purposes in many fields. For example:

1. **Attack drones** - These are used only by the military. They are equipped with lethal weapons and used for controlled air strikes in hostile or inaccessible areas.

2. **Crowd control drones** - These drones are equipped with non-lethal weapons such as tear gas or sound cannons, they are used to break up large crowds of people without causing any substantial physical harm. Typically used by the military and law enforcement.

3. **Delivery drones** - These drones were originally developed for the military to deliver goods to ground troops, they are equipped with a claw or similar delivery system and are able to remotely drop items or gently place items in a desired target area. Some big shipping companies like DHL and Amazon are starting to implement these types of deliveries to minimize shipping times, overhead costs, and dangerous driving conditions.

4. **Monitoring drones** - Equipped with both standard and infrared cameras as well as sensitive weather instrumentation, these drones are used to monitor a variety of areas. For example, drones equipped with these cameras and instruments are used to help prevent street crimes or aid in the detection and prevention of forest fires. These drones are also used for reconnaissance missions as well as other military applications.

5. **Photography/videography drones** - These drones are becoming more popular in the art world. Prior to drone technology, aerial photos and videos had to be taken from an airplane or helicopter, and this process was very expensive. Now that commercial drones have become available, photographers and videographers of all kinds can get those stunning shots without the big budget.

Pros

1. **Disaster Relief** - When disaster strikes a region, drones can be used to provide food, medicine, supplies and other necessities. When rescue missions are undertaken, drones with infrared sensors can be used to look for humans or life forms with the help of heat signatures.

2. **Mapping** - They can be used to take Aerial photos for topographic maps. Since places keep changing with time, aerial photos help cartographers map a region.

3. **Safety Inspection** - They can contribute to safe infrastructure maintenance and management. Consider the difficulty of inspecting the underside of a bridge or the top of a skyscraper, not to mention the costs and risks. With UAS, scaffolding, cranes, or harnesses are not required. Just deploy the system to assess the structure's condition remotely.

4. **Efficient Farming** - They can streamline agriculture management. Using a crop management system to observe, measure, and respond to variability in individual plants, farmers can target areas requiring attention. By pinpointing these areas, farmers can provide care only where needed — improving yield, conserving resources, and avoiding waste.

5. **Media Coverage** - They can give media access to hard-to-reach places. Aerial photography for a news broadcast or a blockbuster film can be efficiently, economically, and safely captured by a UAS.

6. **Insurance** - Drones can be used for inspecting damages in areas or to inspect homes before providing insurance cover. While traditional methods of inspections are time-taking and can be dangerous for the person carrying out the inspection, drones can complete the inspection

7. **Infrastructure** - By the use of drones we can safely identify problems in Pipelines, Power lines, Cell towers, Cooling towers, Solar panels, Windmills or wind turbines and all types of critical infrastructure. This is extremely difficult to do manually, thus resulting in many avoidable problems occurring because the "easy fix" was missed.

Cons

1. **Possible abuse** - This is most likely the biggest threat to drone technology. Drones are known to be used by the military for law enforcement operations, so many people are wary that the technology is vulnerable. Debates regarding gun control, wars, and foreign policies abound, so many fear the repercussions of abuse of the privileges. Drones have cameras, and with them being more accessible, owners could abuse it in violating the privacy of others.

2. **Legal concerns** - The legal framework surrounding the drone industry is still developing. There are still a lot of cases regarding the use of unmanned systems by law enforcement agencies for surveillance of civilians. Telephone surveillance laws took a lot of time, and with data still being refined, legal concerns have slowed the developments of UAS.

3. **Public Perception** - A flying machine crashed on the White House lawn, and some were seen flying over Paris, fueling public rage as they were untraceable. The public is yet to be fully convinced as they see unmanned systems as robots that would cause more harm than good.

4. **Privacy** - One of the most common concerns from the public about UAVs is privacy. Drones can collect data and images without drawing attention, in this way the rights of privacy may be in jeopardy if government entities were to use drones to monitor the public.

Of course, all the cons listed can be reduced by safe monitoring of drone flight and by the awareness of the rules related to drone flight. But the question is whether that will rally happen, and what recourse people have when drones are abused. The use of drones has increased tremendously in the past few years and their use continues to grow as they get embraced by the society.