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Violation of the Airspace of Countries by Unmanned Aerial Vehicles (Drones) from the Perspective of International Law

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Keywords

airspace,
armed conflict,
digital technologies,
drone,
human rights,
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international convention,
international law,
law,
unmanned aerial vehicle

Abstract

Objective: to illustrate the challenges to international law and the shortcomings of current regulation caused by the rapid development of drone technology, by the example of using unmanned aerial vehicles (drones) in airspace.

Methods: the study is based primarily on a set of methods for interpreting the provisions of international law, which allow analyzing the provisions in the field of using unmanned aerial vehicles (drones).

Results: based on international air law and humanitarian law, the article examines the issues of unmanned aerial vehicles (drones) using airspace. The main sources of law in this area are analyzed, including the provisions of international air law, especially the Paris, Madrid, Havana and Chicago Conventions. An attempt is made to answer the questions arising from the development of unmanned technologies as to which rules of international law apply to their use and whether existing international law is capable of responding effectively to them. The article shows the current understanding of the legal status of airspace over the territory of a state. The author puts forward the question whether the sphere of unmanned aerial vehicles, automatic and autonomous weapons, which combines scientific and military achievements with new technologies, is exceptional. In this regard, the problem of using unmanned aerial vehicles as a universal weapon in international conflicts is touched upon. A conclusion is made that the use of intelligent, guided and robotic weapons capable of automatic

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decision-making, such as drones, requires the revision of existing conventions or the establishment of new legal standards for these weapons. It is proposed to consider such drones as military aircraft of a special type.

Scientific novelty: international legal responsibility of states for the military use of drones has not received an unambiguous assessment in the doctrine. However, much in this issue depends on the legal interpretation of the most important international legal categories. Further development of this issue is directly related to the issues of international responsibility and the concept of state sovereignty over airspace.

Practical significance: the development of unmanned aviation at the present stage demonstrates the imperfection of the existing legal framework, which is designed to regulate these relations. With regard to the study of the global trend in the current international law, the identification of the shortcomings in the provisions of the latter is important primarily for their further modernization, taking into account modern scientific achievements and the development of the concept of a state sovereignty over its airspace.

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Introduction

Some thinkers are of the opinion that new digital technologies in general and drones in particular have challenged the current international law and the current international law has emerged in the face of new technologies and new weapons; faced with this type of technology, it has reached its lowest level; as a result, active international

law has not been able to respond to the needs arising from new technologies, hence, new laws must be formulated in accordance with such technologies to control them (Bace et al., 2024).

Today, the initiative in many wars belongs to countries with air superiority. To a large extent, the aggression of superpowers against weaker countries is done through air strikes, because these expensive and strategic weapons are simpler and more reliable than others (Niu et al., 2024; Ambos, 2008).

Regarding drones, Gilley states that «unmanned aerial vehicles are capable of meeting current legal standards»¹ and compares the authorization of a drone attack to the authorization of a manned aircraft. He concludes that if an attack by a piloted aircraft is impermissible, it is also impermissible by a drone (unmanned aerial vehicle, UAV). Over time, the use of UAVs has expanded in several civilian and military applications (Siddiqi et al., 2022).

As a result, the pilot does not determine the law, so there is no need for a new regulation for the use of drones, and the current law will respond to the new needs. Gill continues that «the law is the law»² regardless of «platform», and no new law is needed for drones³.

By using the current international law and the existing rules, it is possible to take steps within the humanitarian law and the law of armed conflict, as well as by using soft law, to develop appropriate rules in the field of new technologies and new weapons without the need to change the existing ones. It is appropriate either to create a new law, or to consider the current international law ineffective and ignore it (Majd et al., 2021).

Therefore, we can examine the export production and the use of new technologies in the field of new weapons with the existing rules and find a solution to get out of the deadlock of «no restrictions in the field of new weapons» (Ishiwatari, 2024).

1. Sovereign airspace and status of unmanned aerial vehicles (drones)

The complete and exclusive sovereignty of the state in its airspace is embodied in Article 1 of the Chicago Convention, and according to Article 2 of the Convention, the air sovereignty of the state includes the space above the land and the waters of the territory adjacent to its sovereignty, which this type of sovereignty is defined and officially recognize by the Chicago Convention (Clarke, 2014; Ishiwatari, 2024).

It seems necessary to pay attention to the fact that in the discussion of the relationship between UAVs and the Chicago Convention, the subject of the UAV is mostly addressed

¹ EU-OSHA. (2023, September 11). Unmanned aerial vehicles: implications for occupational safety and health. <https://clck.ru/3EGYKv>

² Ibid.

³ Ibid.

and other issues such as sovereignty are not mentioned. This is because by default the government using the drone has received the consent of the territorial government and has not necessarily violated the principles of non-interference and non-use of weapons, or it is based on the country's request for help. So, the use of drones is allowed based on the country's territorial consent or the country's request (Clarke & Moses, 2014).

Sovereignty here refers to the independence of the air and space of each country independent of other countries. Article 1 of the Chicago Convention states that «the contracting state has complete and exclusive sovereignty over the airspace above its territory»⁴, while Article 8 of the Chicago Convention explicitly prohibits the flight of drones without the prior consent of other states.

It should also be noted that the future of drones largely depends on how they are used by governments. It means that the status of a drone is not certain in advance and is determined by what the government has planned for it. A drone may be used for a military operation and at another time for humanitarian aid (Tatsidou et al., 2019), so the nature of the flight is important in the law and regulations that govern it. Drones are not subject to any absolute and special prohibition in law (Abeyratne, 2010).

2. The Chicago Convention and its role in the organization of air traffic of aircraft

For the first time, the 1919 Paris Convention on Aviation provided a definition of an airplane, according to which «an aircraft is any device capable of taking off or moving in the air»⁵ at the International Civil Aviation Conference in 1944 in Chicago. More than 50 countries were present in that conference, invited by the United States to create a legal institution for the development of national aircraft after World War II.

The direct involvement of the pilot's human factor in flying an aircraft is not the definition criterion. As a result, drones correspond to the definition by the Paris Convention and the 1967 ICAO definition, and their regulations include drones to a certain extent (Ishiwatari, 2024).

The ICAO member states under the Chicago Convention agreed to accept its principles. The first and most important principle is the full sovereignty of the member states over the airspace of their territory. There is no doubt that the government's sovereignty over its airspace is one of the most important properties of contemporary international law. Violation of the airspace of countries by foreign planes is against international law and has caused significant accidents (Vogel, 2011).

⁴ International Civil Aviation Organization. (2000). Convention on International Civil Aviation (8th Ed.). <https://clck.ru/3EGYe5>

⁵ The 1919 Paris Convention: The starting point for the regulation of air navigation. The postal history of icao. <https://clck.ru/3EGfbC>

Article 8 of the Convention is the only article that has a passing reference to unmanned aircraft and considers their flight subject to the special permission of the country over which the drone is flying. Therefore, the drone, as a flying device, has been under the legal regime of the Chicago Convention to some extent, and the permission to operate in the territory of other countries is subject to obtaining the consent of those countries.

Article 3 of the Convention separates national and state aircraft. It states that none of the state aircraft of the treaty member countries has the right to fly over or land in another country without obtaining permission. However, it seems that the mandatory power of these two articles is not enough to legalize the plurality of drone activities. Other regulations are needed, especially regarding airspace violations, violations of the sovereignty of states, and violations of humanitarian and human rights standards (Vogel, 2011).

3. International airspace regime and responsibility for its violation

The General Assembly approved the definition of aggression on December 14, 1974, in meeting No. 2319, without voting and according to the consensus of the members. This resolution has an approval document and an appendix defining encroachment as follows.

According to Article 1, aggression means the use of armed force by a government against the sovereignty, territorial integrity or political independence of another government or its use in other ways contrary to the United Nations Charter. Article 2 on the preemption of a government in the use of armed forces says that the Security Council has the authority to, according to the United Nations Charter, confirm the occurrence of violation for reasons such as insufficient intensity of the measures taken or not accepting their results (Vogel, 2011).

The Paris Convention as the first international document in the field of air rights stipulates that each of the signatories of the Convention will recognize the complete and exclusive sovereignty of states over the airspace above their territory.

This general statement of governments has been repeated and specified in subsequent treaties and conventions. The 1926 Madrid Convention, the 1928 Havan Convention and, most importantly, the 1944 Chicago Convention all emphasize the exclusive jurisdiction of states over the airspace above their territory. It seems that even before the outbreak of the First World War, this perception of the legal status of the airspace above the land was common among governments. For example, we can point to the reaction of the Dutch government in the years before the start of the war, protesting against the German planes passing over the territory of that country without obtaining prior permission.

Such violations have a major difference with other crimes within the jurisdiction of the International Criminal Court, namely genocide, crimes against humanity, and war crimes, and provide a suitable basis for committing the aforementioned crimes.

There are permanent members of the Security Council who can make various flights and violate sovereign territories easily and by using the right of veto, allowing this type of aircraft in the space of other countries, despite their displeasure.

In the case of unmanned aircraft, serving as an automatic weapon or with a documented remote control, in principle there is no pilot to judge and bear the responsibility for the violation. In general, the ground controller is responsible and the human element of this situation is considered (Nelson & Gorichanaz, 2019; Bassi, 2019).

Therefore, according to the international regulations, the executive agents of Hedayad Behbad and their related human chain are responsible for all events. Because they are thousands of kilometers away from the battlefield, the agents of the drones will be exempted from the responsibilities such as the necessary forecasts in the attacks and the guarantee of separation and proportionality (Vogel, 2011).

4. Concept and principle of a state's sovereignty over its airspace

Regarding the rights of airspace and air rights, the most prominent universalist was Yu. Kolosov who in 1977 in Prague put forward the concept of identifying the exclusive and complete sovereignty of any country over the airspace of that country's territory⁶. The concept defines a country's airspace as the air layer above its land and water territory, which continues as long as there is an atmosphere, and after that a zone beyond the atmosphere, or space, begins.

Article 1 of Paris Convention dated October 13, 1919 confirmed the absolute and exclusive sovereignty of the states over their territorial airspace and territorial waters. The Chicago Convention dated December 7, 1944 also confirms this principle. Article 2 of the 1958 Convention Geneva also stipulates that the said sovereignty includes the upper space of the territorial sea and its bottom. According to Article 3 of the Civil Aviation Law approved in 1338 Hijri Shamsi, government has absolute and exclusive sovereignty over the coastal waters.

If drones enter a country's airspace without permission, such aircraft can be intercepted for identification purposes, forced to leave the airspace through a designated air route, and directed to land for investigation or prosecution. Therefore, none of the government planes have the right to fly over or land on the territory of another country without obtaining permission through a contract, etc., and not complying with its terms and conditions. There can be other serious violations of international law.

According to international air law, every country has the right to restrict or prohibit the flight of other countries' aircraft in a part of its territory for military or security reasons. Also, countries should respect the sovereignty of other countries if they use photography equipment. Each contracting state can prohibit or restrict the use of photographic equipment over its territory (Vogel, 2011).

These principles, by comparison of priority, prove the prohibition of using spy planes over the territories and countries and confirm the illegality and immorality of this action.

⁶ Proceedings of the Workshop on Space Law in the Twenty-first Century. <https://clck.ru/3EPvCk>

Therefore, the fact that these illegal acts are more frequent than before shows their insolence and heinousness.

According to the Article 8 of Chicago Convention, the flight of unmanned aircraft that are capable of flying independently without a pilot is not allowed over the territory of any country without obtaining a special permit and observing the provisions contained in the said permit. Each of the countries has agreed to fly drones in the areas declared free for national planes and put under the necessary control and supervision to prevent possible dangers for national planes. According to this Article, the violation of the Iranian territory by the American drone is condemned.

5. Using armed drones and issues of international humanitarian law

Originally, drones were designed as reconnaissance aircraft. In this case, the discussions of humanitarian and human rights were less explored and investigated. At some point, however, missiles began to be joined and utilized with unmanned systems ([Sopha et al., 2024](#); [Rainer, 2014](#)).

Since then, discussions of humanitarian rights became more seriously than before, in addition to the existence of laws and regulations in the use of new technologies. Discussions are going on concerning the humanitarian consequences of such technologies; the position of international law, especially international humanitarian law, is highlighted in the face of using new technologies, including drones ([Sopha et al., 2024](#)).

The use of armed drones has caused serious questions in the field of international law, specifically international humanitarian law, human rights and the use of force. If it is concluded that governments in certain circumstances fulfill their obligations but they violate their international law, the issue of the government is also raised. Therefore, the need to pay attention to the main principles and foundations of humanitarian rights in this field is felt more and more, while these drones attack people without any declaration of war or without an armed conflict. If there is such a conflict, drones are used against people.

The use of drones in the line of armed ammunition should be also limited in non-combat situations in parallel with humanitarian rights under the control of human rights regulations. Regarding the legitimacy of using drones, some points should be checked. Firstly, drones are considered a weapon, an important tool for launching missiles and bombs; so, they should comply with human rights standards.

Today, it is accepted that humanitarian and human rights must be implemented during armed conflicts. As a result, not only the Geneva Conventions, but also the standards of human rights must be respected, and any resort to force, even by drones, must be done with respect and guarantee of minimum human standards.

6. International responsibility of countries committing violations

The International Court of Justice in various cases relied on the principle of not resorting to force as a mandatory rule in international law. The most important source

in determining cases of aggression is the relevant resolution by the United Nations General Assembly. According to this resolution, the mere entry of military equipment into a country is considered aggression and violates the principle of non-use of force. According to Article 51 of the United Nations Charter, recourse to defense is legitimate only against armed attack as one of the examples of aggression, and legitimate defense against other forms of aggression is not recognized ([Sopha et al., 2024](#)).

Drones are neither among state aircraft nor among civil state aircraft, but they can be considered as military aircraft of a special nature. According to the Chicago Convention, the unauthorized entry of these drones into the airspace of a country will be an example of aggression and the international responsibility of the states will follow.

Before an armed attack by a drone, resorting to legitimate defense is not relevant and armed attack is basically not the use of spy drones; hence, legitimate defense against spy drones will not be raised.

On the other hand, the victim state can reciprocate by confiscating the UAV in peacetime or confiscating it in wartime. In this case, the international responsibility will not be towards the victim state. Spying on countries, including the United States, with the help of military drones, in addition to violating some principles of the Chicago Convention, is also contrary to principles such as the prohibition of interference in the country's internal affairs and the non-use of force. The responsibility of the countries from whose territory this action took place is also clear from the viewpoint of international law, because the silence of the governments indicates their satisfaction ([Chen & Wang, 2009](#)).

Filing lawsuits against states in relation to the country's international violations caused by sending spy drones to another country's airspace is a matter that does not have sufficient legal and expedient grounds ([Wang et al., 2024](#)).

It seems that the best way to compensate for the intrusion of foreign drones is to stop and confiscate them, which has been achieved so far thanks to modern information technologies. In addition to these actions, ICAO also recommended to file a complaint at the United Nations Secretariat, the Civil Aviation Security Council ([Askerbekov et al., 2024](#); [Wang et al., 2024](#); [Dolata & Schwabe, 2023](#)).

The main international authority for grievances and lawsuits to prevent threats and acts of aggression is the Security Council, and the aggrieved government must take legal action by filing a complaint with the Security Council regarding the penetration and infiltration of the hostile country's military drones ([Li & Dang, 2024](#)).

Regarding the judicial proceedings, it should be said that in the first case of stopping the drones, no international judicial body has the authority to deal with this matter. Only if the parties' consent to judicial proceedings, the International Court of Justice can deal with the case, which is very unlikely to happen due to the current situation. Since the aerial vehicles are considered to be governmental and not state, they do not refer to the Chicago Convention. The dispute resolution mechanisms and facilities of this convention do not apply to them ([Dolata & Schwabe, 2023](#)).

The International Court of Justice is the authority to deal with legal claims between countries, not on issues such as encroachment and so on. Of course, it would be useful if the Security Council allowed this and resolved the political part by itself. But if the UN Security Council delays dealing with the issue legally, it is natural that the government will do it through the International Court of Justice (Zègre-Hemsey et al., 2024).

But only the legal aspect of this issue can be examined in court. This issue has two dimensions, one is political and the other is legal; the International Court of Justice can only deal with the legal aspect. Undoubtedly, the matter is rather complicated, but at the same time, the satisfaction of the other party must be taken into account. It is not possible to refer the case to the International Court of Justice without the parties to the dispute giving their consent or declaring their confirmation of the court jurisdiction. Unless the governments have already accepted this jurisdiction during the course of events, the two parties or parties involved in the dispute must agree that the matter should be referred to the court. Therefore, filing a lawsuit in the International Court of Justice is subject to the consent of the parties to the lawsuit. In any case, violating the airspace of countries is considered a threat to peace and security, and the threatened government can refer to the UN Security Council.

Conclusion

The use of unmanned aircraft in international conflicts as all-use weapons is a very complex issue. Though unmanned aircraft are weapons, the provisions governing arms control are not applied to them. As a result, in the context of the law of hostilities, these planes are used as means or in line with the method of war.

For this reason, the international community insists that the use of drones must be accepted in accordance with the provisions of the United Nations Charter and international law. The use of this type of aircraft should be carried out in accordance with the main and fundamental provisions of international humanitarian law, including the principle of separation, the principle of pride, the principle of proportionality and the principle of caution. The issues of territorial integrity, sovereignty of governments and airspace of countries should also be taken into account.

In this article, we examined the violation of the airspace of countries by drones from the perspective of international law. We considered international air law, especially referring to the Chicago Convention, international humanitarian law and its very important provisions, such as the prohibition of useless sacrifice and proportionality. Also, multilateral export control measures and restrictions governing drones in the fields of their application (international air law and the relationship between sovereign governments and international humanitarian law and protection of civilians) were

examined so that a better lesson could be learned from the current position of the UAV in international law.

The use of intelligent, guided and automatic decision-making robot weapons such as drones is a complex issue, due to the ambiguity in observing the principle of separation and proportionality. It is necessary to revise the existing conventions or to establish new legal standards regarding this type of weapons.

The topic of individual criminal responsibility in case of committing international crimes is not as easy as for classical weapons. This is due to the presence of multiple controllers of these types of weapons. In any case, executive agents and remote control operators, in the entire human chain of directing these types of weapons, are responsible for the created situations.

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Нарушение воздушного пространства страны беспилотными летательными аппаратами (дронами) с точки зрения международного права

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Ключевые слова

беспилотный летательный аппарат,
воздушное пространство,
вооруженный конфликт,
дрон,
международная конвенция,
международное
гуманитарное право,
международное право,
права человека,
право,
цифровые технологии

Аннотация

Цель: на примере использования беспилотными летательными аппаратами (дронами) воздушного пространства показать вызовы международному праву и недостатки действующего регулирования, обусловленные стремительным развитием беспилотных технологий.

Метод: исследование построено прежде всего на совокупности способов толкования положений международного права, позволяющих проанализировать положения в области использования беспилотных летательных аппаратов (дронов).

Результаты: в статье на основе международного воздушного и гуманитарного права рассматриваются вопросы использования беспилотными летательными аппаратами (дронами) воздушного пространства. Проводится анализ основных источников права в этой сфере, которыми служат, в частности, положения международного воздушного права, особенно Парижской, Мадридской, Гаванской и Чикагской конвенций. Предпринимается попытка ответить на возникающие в связи с развитием беспилотных технологий вопросы о том, какие нормы международного права распространяются на их использование и способно ли действующее международное право на них эффективно реагировать. Показано современное представление о правовом статусе воздушного пространства над территорией государства. Автор задается вопросом, не является ли исключительной областью беспилотных летательных аппаратов, автоматических и автономных видов вооружений, объединяющей научные и военные достижения с новыми технологиями. В этой связи затрагивается проблема использования беспилотных летательных аппаратов в международных конфликтах в качестве универсального оружия. Делается вывод о том, что при использовании интеллектуального, управляемого и роботизированного оружия,

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способного автоматически принимать решения, такого как беспилотники, необходимо пересмотреть существующие конвенции или установить новые правовые стандарты в отношении этого вида оружия. Такие беспилотники предлагается рассматривать как военные воздушные суда особого типа.

Научная новизна: международно-правовая ответственность государств за военное применение беспилотных летательных аппаратов не получила в доктрине однозначной оценки, вместе с тем многое в данном вопросе зависит от юридического толкования важнейших международно-правовых категорий, а дальнейшая разработка данной проблематики непосредственно связана с развитием вопросов международной ответственности и концепцией суверенитета государства над воздушным пространством.

Практическая значимость: развитие на современном этапе беспилотной авиации демонстрирует несовершенство сформированной правовой базы, которая призвана регулировать указанные отношения. В связи с исследованием общемировой тенденции в контексте действующего международного права, выявление недостатков положений последнего имеет значение прежде всего для дальнейшей их модернизации с учетом современных достижений науки и развития концепции суверенитета страны над ее воздушным пространством.

Для цитирования

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