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REMOTE TECHNOLOGIES IN CRITICAL INFRASTRUCTURE DRONE
OPERATOR TRAINING

Victoriia Zhyhir,

Doctor of Pedagogical Sciences, Professor
(Berdyansk State Pedagogical University)

Serhii Onyshchenko,

PhD, Associate Professor
(Berdyansk State Pedagogical University)

Modern remote technologies make it possible to act effectively without risk and losses, but at the same time they undermine the social legitimacy and authority of those norms of military ethics, which the military has traditionally followed throughout the history of mankind. The use of drones makes it possible to eliminate the risk of one's own soldiers, workers of critical infrastructure, limiting only financial costs while increasing the efficiency and instrumental justification of operations. However, this fundamentally changes the moral character of special operations and makes them illegitimate from the point of view of the traditional professional ethics of critical infrastructure workers, since participants in anti-military operations are no longer required to demonstrate such traditional qualities as heroism, courage, self-sacrifice, and respect for the enemy [5, with. 354].

The operator of a critical infrastructure drone cannot accurately identify a specific person or object on video, therefore, according to UN expert F. Alston, the lack of visual contact between a critical infrastructure drone operator and the target as a whole make conducting special operations less emotional and, accordingly, easier to implement, since the target is visible to the operator only as faceless pixels on the monitor screen [4].

Operators see the target and the results of their actions on the screen, being many thousands of kilometers away from places of critical infrastructure. But everything that happens for them has the effect of a computer game, a technological operation. Otherwise, these people lead the life of ordinary employees, they can come to the office for work in the morning and go home in the evening, build a career, change jobs, etc.

Training critical infrastructure drone operators is more like learning mathematics and computer modeling, rather than the usual long-term training of military specialists. They follow technology, from which the human dimension falls out. These people understand that the decision about the defeat is made on the basis of information that is not available to them, operations are often carried out in complex rapidly changing circumstances, unfavorable weather conditions. Sometimes it is difficult to foresee accidental circumstances, which can lead to mistakes and, as a consequence, accidental victims who might not have been [1].

All this is a source of stress for operators who acutely feel the contradiction between direct virtual involvement in a combat situation and the technological safety of their actions. As a result, a complex psychological complex is formed in them: on the one hand, moral devaluation of violence, and on the other - guilt and feelings of

legitimization of behavior. Such a distortion of the former ethical norms of this profession cannot help but disturb society.

True, today operators of critical infrastructure drones are still exposed to very real dangers, even without being physically present on the battlefield. So, the enemy can detect the control point of drones and launch a missile attack on it. Social networks also often provide an opportunity to identify operators and organize their murder [1]. Or create such a psychological atmosphere that they develop paranoia, considering the high percentage of psychological deviations and illnesses among representatives of this profession. With this, they pay for professional split personality and constant transitions from one morality to another within one day, which is a strong emotional test for any person [5, p. 355].

Ethical questions about the use of drones on critical infrastructure objects are expressed not only by the operators who control them, but also by the developers of technologies and algorithms.

References

1. Бойові дрони : правові, морально-етичні та наукові питання. НЛЮСВІТ. *Інтернет-журнал*. 2015. URL : <https://tech/37572-boevye-drony-pravovye-moralnojeticheskie-i-nauchnye-voprosy.html> (Дата звернення : 10.09.2024).
2. Концепція розвитку інженерно-педагогічної освіти / Під керівництвом О. Е. Коваленко. Міністерство освіти і науки України, 2004. 20с.
3. Онищенко С.В. Проблема інформатизації професійної освіти (енергетичної галузі) в сьогоденні. *Науково-дослідна робота в системі підготовки фахівців педагогів у природничій, технологічній і комп'ютерній галузях : матеріали ІХ Всеукраїнської науково-практичної Інтернет конференції (21-22 вересня 2023 р.)*. Запоріжжя : БДПУ, 2023. С. 117-119.
4. Холіков І.В. Міжнародно-правова відповідальність у контексті правової регламентації військового використання безпілотних літальних апаратів. URL : <https://russiandrone.ru/publications/mezhdunarodno-pravovaya-otvetstvennost-v-kontekste-pravovoy-reglamentatsii-voennogoispolzovaniya-be/> (Дата звернення : 10.09.2024).
5. Fatić A. The ethics of drone warfare. URL : <https://www.semanticscholar.org/paper/The-ethics-of-drone-warfare-Fatic/362e9532e934d8eed50c2de299a1e0c8fd90a12a> (last download : 11.09.2024).
6. Onyshchenko S. Analysis and Prospects for Training UAVs Pilots in the System of Professional Training of Future Engineers-teachers of Energy and Technological Fields. *Modern conditions of development of science, education and production in the world – 2024 : collective monograph*. (Series of monographs Slovak Publishing House NES Nová Dubnica s.r.o. Monograph 2). Nová Dubnica : NES Nová Dubnica s.r.o., 2024. P. 43–50.