Swedish Defence University
Center for International and Operational Law

IHL and Drone-Enabled Surrender

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1. Introduction

It is an irrefutable truth that under international humanitarian law, it is prohibited to intentionally make the object of attack a person who has surrendered. The act of surrender serves as ‘one of the most important rules’ of international humanitarian law (IHL) by being a counterweight to the death and destruction of armed conflict. Armed conflict without the legal guarantee for protection entrenched within the act of surrender would remove the incentive for those participating in hostilities to lay down their weapons and cease fighting. Indeed, surrender as a concept does thematically epitomise the principle of balance between military necessity and humanity that marks the foundation of IHL. Considering the importance of the rule of surrender in achieving the humanitarian goals of IHL, it is crucial that individuals engaged in armed conflict understand what conduct qualifies as an act of surrender, according to IHL.

Recognising and understanding the application and scope of IHL rules is becoming an increasingly difficult task. The ever-changing and complex nature of contemporary warfare can challenge the perennial rules of IHL. In recent decades the use of unmanned aerial vehicles, drones and other technologically advanced means of war has become an increasingly prevalent part of armed conflict. In the ongoing international armed conflict (IAC) between the Russian Federation and Ukraine, thousands of drones have been employed for various tasks, with the most novel one being the use of drones for enabling surrender. New weapon systems are not inherently incapable of complying with IHL since it was explicitly intended to accommodate technological advancements, even those that were not predicted at the time of its creation. Nonetheless, applying pre-existing legal rules to govern a novel technology raises concerns about whether the rules are precise enough

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2 In this paper, I will frequently use the term ‘drone’. There have been recent advocations to use the term ‘RPA (remotely-piloted aircraft)’ instead of drone or UAV to better encompass the human aspect of control. For the sake of clarity, and consistency I will continue to use the term drone
to account for the distinct and potentially unprecedented features of that technology. Despite the historical and modern legal significance of the rule of surrender, there is still ambiguity on what a legally effective act of surrender entails.

1.1 Purpose Of The Thesis

The purpose of this thesis is to comprehensively analyse the legal framework surrounding surrender in armed conflicts, with a specific focus on the feasibility of surrendering to military drones. The thesis aims to examine the existing international humanitarian law regime on surrender and evaluate its adequacy in addressing the emerging challenges presented by the utilisation of drone technology.

The emergence of drone-enabled surrender introduces a range of complex legal questions and practical considerations. Therefore, this thesis seeks to explore and provide insights into two fundamental aspects related to the feasibility of surrendering to military drones in armed conflict.

The first aspect entails an examination of what constitutes a legally effective act of surrender under IHL. It is crucial to identify and understand the specific criteria and requirements that define a legally effective act of surrender, considering the unique circumstances introduced by drone-enabled surrender. By analysing relevant treaties, customary international law, and legal precedents, this thesis aims to shed light on the legal principles and standards that govern the surrender process.

The second aspect of the thesis involves an assessment of the legal challenges associated with cross-domain surrender and the implications it has for the ability of ground forces to perform legally effective acts of surrender to drones. As drones operates in an aerial domain distinct from traditional ground-based combat, this thesis will explore the legal implications, limitations, and potential obstacles arising from the surrendering process in a cross-domain context.
Based on the examination of these two aspects, the overarching research question derived from this thesis is: Is a legally effective act of surrender to a drone feasible under the existing international humanitarian law regime?

By addressing this research question, the thesis aims to contribute to the scholarly discourse on the legal implications of drone technology in armed conflicts. The findings and analysis presented in this thesis will provide a comprehensive understanding of the existing legal framework on surrender and evaluate its efficacy in dealing with the unique challenges posed by the utilisation of military drones. Ultimately, the thesis aims to further the theoretical discussion on a novel and emerging issue.

1.2 Disposition

This paper is structured as follows:

Section 2 of this thesis explores surrender within its broader historical and theoretical context. By delving into the development of the rule of surrender within conventional and customary international humanitarian law, this section provides a better understanding of the evolution and significance of surrender as a fundamental principle. Furthermore, it explores the function of the rule of surrender during armed conflict, emphasising its role in maintaining a balance between military necessity and the protection of individuals engaged in hostilities. Within this context, Section 2 also investigates State practice, examining relevant examples and instances to identify the circumstances under which an offer of surrender is deemed effective under international humanitarian law. This section also introduces some of the key issues with cross-domain surrender. To enhance clarity and facilitate analysis, this section proposes a three-pronged assessment that can be utilised to determine what constitutes a legally effective act of surrender.
Section 3 of the thesis shifts focus towards analysing the feasibility of legally effective acts of surrender when surrendering to drones. This section starts with defining what a drone is and how they have been utilised in the IAC between the Russian Federation and Ukraine for facilitating prearranged surrender and the direct battlefield surrender to drones. Building upon the groundwork established in the previous section, this section examines the unique challenges and considerations that arise when traditional ground forces attempt to surrender to military drones. By evaluating the existing legal framework and taking into account technological advancements and operational realities, this analysis seeks to determine the practicality and viability of surrendering to drones in compliance with international humanitarian law. This section will explore potential legal obstacles and operational implications that may arise when attempting to perform a legally effective act of surrender to a drone. This section differentiates between the issue of surrendering to a drone in a direct battlefield scenario and the issues of pre-arranged surrender to a drone.

Lastly, section 4 of this thesis presents concluding observations drawn from the analysis conducted in the preceding sections. It provides a concise summary of the key findings regarding the feasibility and effectiveness of legally surrendering to military drones in armed conflict. By reflecting on the theoretical basis, state practice, and the unique challenges posed by drone-enabled surrender, this section offers insights into the current state of the legal regime on surrender and its ability to address the emerging challenges in the context of drone warfare.

2. Surrender In International Humanitarian Law

The concept of surrender permeates through a military and legal dimension, each carrying its own significance. In the military dimension, surrender signifies the defeat of one party and the victory of the opposing force. In the legal dimension, surrender indicates that the person surrendering is no
longer actively participating in hostilities and is considered *hors de combat*. From a legal perspective, when a valid offer of surrender is communicated and received by the opposing force, there is a legal obligation to accept the surrender by refraining from targeting surrendered individuals.

This section aims to delve into the legal nature and scope of the rule of surrender. Specifically, it traces the evolution of this rule within both conventional and customary international humanitarian law, examining its application in international and non-international armed conflicts. Furthermore, this section seeks to identify the theoretical foundation underlying the rule of surrender, shedding light on its legal status and content.

2.1 Theoretical Basis And The Legal Development Of The Rule Of Surrender

Throughout history, tribal communities, city-states, empires and kingdoms frequently battled each other, often without showing mercy, as starting a war was seen as an initiation of a ‘total war’, a 17th-century concept of Clausewitzian origins which nonetheless describes the timeless phenomenon of military conflict were those involved were ‘willing to make any sacrifice in lives and other resources to obtain a complete victory’. Many historical conflicts were plagued by a culture of unregulated warfare where surrender was a dangerous option without guarantees. In Pictet’s words:

In the earliest human societies, what we call the law of the jungle generally prevailed; the triumph of the strongest or most treacherous was followed by monstrous massacres and

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3 The commonly used French phrase *hors de combat* is in international humanitarian law interchangeable with the meaning ‘out of combat’.

unspeakable atrocities. The code of honour forbade warriors to surrender; they had to win or die, with no mercy.\textsuperscript{5}

The dangers of surrender are not limited to antiquity; in the first world war, ‘it was often as dangerous (sometimes more so) to retreat, to surrender or simply remain \textit{in situ} as to push on to the objective or to continue to fight.\textsuperscript{6}

The gradual emergence of limited regulation to armed conflict in ancient Greece and Rome still left the protection of surrendering soldiers unregulated.\textsuperscript{7} The Greek code of honour failed to incorporate restraints upon indulgence for extreme acts of military anger and hatred.\textsuperscript{8} The killing of defeated enemy soldiers was often when most casualties were inflicted in ancient warfare\textsuperscript{9}, and cavalry pursuit of defeated enemies was a bedrock tactic.\textsuperscript{10} The Roman view of regulating armed conflict is in brevity portrayed by the proverb from the renowned orator Cicero: ‘\textit{silent enim leges inter arma}’ (In times of war, law falls silent).\textsuperscript{11}

During the Medieval Ages, Christianity and the writings of prominent Catholic theologians heavily influenced the efforts to develop a comprehensive regulatory framework to govern armed conflicts and alleviate the suffering caused by wars. The notion of a ‘just war’, as advanced by St. Augustine, stipulated that wars were subject to limitations and that a justifiable rationale was

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\textsuperscript{6} Kellet as quoted in Victor Davis Hanson, \textit{The Western Way of War: Infantry Battle in Classical Greece} (2009) 183.


\textsuperscript{9} Hanson (n 6) 179-184.

\textsuperscript{10} Ibid.

\textsuperscript{11} A Latin maxim attributed to Marcus Tullius Cicero ‘Silent Enim Leges Inter Arma’ - \textit{(ICLR)} <https://www.iclr.co.uk/knowledge/glossary/silent-enim-leges-inter-arma/>.
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necessary to initiate them.\textsuperscript{12} Once warfare was recognised as having a legal and theological basis, it became natural to apply considerations of law and humanity to guide the conduct of war, at least in conflicts between Christian rulers. The emergence of knights and their code of chivalry had a significant impact on the legal regulation of armed conflict. Their code of chivalry obligated knights to treat enemy knights with honour and respect, and a crucial principle contained therein was the duty to accept valid offers of surrender. Nonetheless, there were three notable exceptions to this rule. Firstly, the code of chivalry only governed the conduct of recognised knights, not the interactions between knights and common soldiers. Secondly, the code only applied to hostilities between Christian rulers, relieving Christian knights of any obligation to accept offers of surrender by combatants of non-Christian nations.\textsuperscript{13} Thirdly, in situations where a city was under siege and refused to surrender, the code of chivalry was set aside, and knights were permitted to sack the city. Despite these exceptions, the rules within the code of chivalry had a civilising effect. They were a significant humanitarian development, representing the first time that warfare was subjected to an intellectual assessment, with the recognition that limitations on warfare could be achieved through the imposition of legal regulation.\textsuperscript{14}

Further attempts to regulate warfare were sparked in the aftermath of the Thirty Years War. The atrocities of the conflict ‘led to the jurisprudential consideration of the \textit{jus in bello} and established a number of principles to be observed by combatants’.\textsuperscript{15} Among these principles, military necessity emerged as an especially crucial one. In accordance with this principle, combatants were permitted to engage only in actions that were essential for achieving the goals of

\textsuperscript{12} John Mark Mattox, \textit{St. Augustine and the Theory of Just War} (Continuum International Publishing Group Ltd 2006).


\textsuperscript{14} Ibid 113.

\textsuperscript{15} Ibid.
the war. In other words, any conduct that did not contribute to the ending of the conflict was deemed impermissible.

The principle of military necessity was initially intended to operate as a principle of restraint but was defined so broadly that it essentially became a ‘doctrine of deference to military judgment about what is really militarily necessary’. Consequently, this broad interpretation allowed almost any conduct to be justified as accruing a military advantage, even if it had highly questionable implications or effects from a humanitarian perspective. As a result, rather than serving as a limiting principle, military necessity became a permissive principle. As a consequence, the principle of military necessity failed to provide an effective mechanism to restrain the savagery and brutality that were associated with earlier armed conflicts.

During the Age of Enlightenment, European philosophers introduced the principle of humanity as a counterbalance to the principle of military necessity. The principle of humanity rested on the notion that all human beings, regardless of their station or circumstance, possessed inherent human dignity and that the law was an essential instrument for advancing that dignity. Initially, the principle of humanity was used to reorient the legal basis of European societies away from notions of divine right and religious privilege in favour of values such as equality, tolerance, and justice. Eventually, the normative influence of the principle of humanity impacted the regulation of armed conflict and sought to have a humanising effect on it by encouraging the adoption of rules that more effectively protected the human dignity of those affected by armed conflict. Over time, this transformed the laws of war into international humanitarian law, which was based upon the principles of military necessity and humanity.

The institution of surrender - the epitome of a legal regime based on the balance between military necessity and humanity - is profoundly underrepresented in international humanitarian law. In most of the statutes, surrender is only mentioned in conjunction with the offence of perfidy, or it is listed as one of the circumstances in which combatants may become *hors de combat* and, therefore, no longer legitimate targets of attack. Nevertheless, both Additional Protocols to the 1949 Geneva Conventions imposes obligations upon the State parties to actively refrain from making a person who has expressed an intention to surrender the object of attack, which should implicitly be interpreted as an obligation to accept legally effective acts of surrender.

In the context of an international armed conflict Article 41 of Additional Protocol I (AP I), describing the ‘[s]afeguard of an enemy *hors de combat*’ explains that:

1. A person who is recognised or who, in the circumstances, should be recognised to be ‘*hors de combat*’ shall not be made the object of attack.

And it is clarified that:

2. A person is ‘*hors de combat*’ if:

   (…) 

   (b) he clearly expresses an intention to surrender (…) 

   (…) 

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19 See (International Committee of the Red Cross (ICRC), Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977, 1125 UNTS 3 art 37(1); Rome Statute establishing the International Criminal Court (entered into force 3 September 2002) 2187 UNTS 90 (ICC Statute), art 8(2)(b)(xi) and 8(2)(c)(ix)): Engaging in actions that intentionally deceive or lure adversaries for the purpose of causing harm or capturing them is deemed unlawful. This type of conduct is commonly referred to as perfidy. It is firmly established that pretending to surrender with the intent of gaining the trust of an enemy constitutes an act of perfidy.


21 AP I (n19) art 41; International Committee of the Red Cross (ICRC), Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II), 8 June 1977, 1125 UNTS 609, art 4.

22 Buchan (n 1) 9.
Provided that (...) he abstains from any hostile act and does not attempt to escape. 23

In the context of a non-international armed conflict, Article 4 of Additional Protocol II (AP II) outlines a set of ‘fundamental guarantees’ from which it is specifically stated that:

All persons who do not take a direct part or who have ceased to take part in hostilities, whether or not their liberty has been restricted, are entitled to respect for their person, honour and convictions and religious practices. They shall, in all circumstances be treated humanely, without any adverse distinction. It is prohibited to order that there shall be no survivors.24

Moreover, that it is profoundly morally wrong to intentionally make the object of attack a person who has surrendered is almost universally acknowledged to be a cardinal principle in the military law, rules and codes of operations promulgated by States.25 Currently, the customary international legal status of the rule of surrender is supported by the fact that a considerable number of military manuals adopted by states - which serve as important sources of State practice26 for identifying obligations under customary international humanitarian law - stipulate that it is prohibited to attack persons who have surrendered.

23 AP I (n 19) art 41.
24 AP II (n 21) art 4.
26 Interchangeable with ‘Widespread’ and used for phrasing: Maritime Delimitation and Territorial Questions between Qatar and Bahrain, Merits [2001] ICJ Rep 40, [205].
27 Military manuals are important sources for State practice when determining obligations under customary international humanitarian law. This was explained by the ICTY in the Tadić judgment, which stated that when identifying State practice in the context of customary international humanitarian law, ‘reliance must primarily be placed on such elements as official pronouncements of States, military manuals and judicial decisions’: ICTY, Prosecutor v. Dusko Tadic aka ‘Dule’ (Decision on the Defence Motion for Interlocutory Appeal on Jurisdiction), IT-94-1, International Criminal Tribunal for the former Yugoslavia (ICTY), Appeals Chamber 2 October 1995, [99].
28 Customary international law is based on general State practice accepted as law as explained by art 38(1)(b) of the Statute of the International Court of Justice: Statute of the International Court of Justice (entered into force 24 October 1945) 1 UNTS XVI, art 38(1)(b).
The principle of surrender is evidently a universally recognised customary rule of international law that applies to all types of armed conflicts, both international and non-international. According to the International Committee of the Red Cross (ICRC), armed forces are required to accept legitimate offers of surrender as outlined in various military manuals. The ICRC’s comprehensive study on customary international humanitarian law elaborates on this rule under Rule 47:

Attacking persons who are recognised as hors de combat is prohibited. A person hors de combat is:

(a) anyone who is in the power of an adverse party;

(b) anyone who is defenceless because of unconsciousness, shipwreck, wounds or sickness; or

(c) anyone who clearly expresses an intention to surrender, provided he or she abstains from any hostile act and does not attempt to escape.

2.2 What Constitutes A Legally Effective Act of Surrender?

Military manuals are meaningful sources of State practice. However, these manuals do not provide conclusive practical guidance on what a legally effective act of surrender is. The limited State practice complicates efforts to define the parameters of a rule of treaty and customary law. However, even with limited State practice, it is possible to draw general conclusions and make tentative inferences about the meaning of the rule of surrender under international humanitarian law.

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29 Jean-Marie Henckaerts and Louise Doswald-Beck (eds), Customary International Humanitarian Law, Vol I: Rules (International Committee of the Red Cross (ICRC) and Cambridge University Press 2005, reprinted 2009) (ICRC Study) rule 47. The ICRC Study does not serve as a source of international law; rather, its purpose is to document and outline the customary norms of international humanitarian law that are applicable to both international and non-international armed conflicts.

30 ibid.
by considering available State practice in conjunction with the broader theoretical framework in which the rule operates. Recognising what conduct would constitute a legally effective act of surrender under international humanitarian law is a difficult task which can greatly vary depending on context. Correspondingly, acts that would indicate surrender can fundamentally differ from the perspective of different States, military units or across different military domains. Therefore it is highly likely that conflicting forces in a given conflict may have varying interpretations of the relevant conventions, and recognising surrender is, in essence, a matter of recognising an intention.

Moreover, the rationale that underlines the surrender regime is that it is not justifiable for the purpose of military necessity to attack persons who have expressed intent to no longer participate in the hostilities. Undeniably, the recognition of surrender requires the ability to detect the presence or absence of several intentions. Firstly, surrender entails the intention to no longer actively participate in the hostilities and subject oneself to enemy control. Secondly, it entails the intention to communicate the first intention so that others perceive it. There is also a third intention that it is crucial to display for surrender, which is the intention to ensure that the failure to perceive the intent to cease hostilities would be unreasonable or negligent. This third intention is vital because there is a performative element to surrender, whereby as long as certain ‘positive conditions’ are met, such as having a genuine intent to cease participating in hostilities, the indication of surrender is the act of surrender itself and transforms one from being a legitimate target to an illegitimate one. To accomplish this transformation, the indication of surrender must possess the declarative force aimed at by the third intention.

Because of the apparent ambiguity relating to what a legally effective act of surrender is, I suggest applying a three-pronged assessment to methodically capture the existing essence of the lex

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31 Buchan (n 1) 12.


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on the regime on surrender deriving from the customary interpretation that surrender is conditioned upon the fulfilment of cumulative criteria. Under customary international law, a legally effective act of surrender should be assessed on the fulfilment of six cumulative conditions: first, the intention to surrender must be clearly communicated to the adversary. Second, the offer of surrender must be genuine. Third, the offer of surrender must be unconditional. Fourth, the person offering to surrender must discard or lay down their weapons and cease participating in hostilities. Fifth, the person offering to surrender must not attempt to escape or attempt any hostile acts. Lastly, the person offering to surrender must comply with the instructions from the adversary. Accordingly, I propose the following three-pronged assessment to establish when an offer to surrender would constitute a legally effective act under international humanitarian law:

(I) Have persons who offer to surrender performed a concrete positive act that unequivocally demonstrates their intention to cease direct participation in hostilities?

(II) Is it feasible in the given circumstances for the opposing force to accept the offer of surrender?

(III) Have the persons who offered to surrender refrained from taking any hostile act and submitted themselves to their captor?

2.3 Have Persons Who Offer To Surrender Performed A Concrete Positive Act That Unequivocally Demonstrates Their Intention To Cease Direct Participation In Hostilities?

The context in which the rule of surrender operates requires persons who are directly participating in hostilities. Therefore it is important to identify what conduct qualifies as directly participating in hostilities and to whom international humanitarian law deems that it is applicable. International

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35 Yoram Dinstein, The Conduct of Hostilities under the Law of International Armed Conflict (4th edn, Cambridge University Press 2022) para 635; See also Oslo Manual (n 34) commentary to Rule 103.
humanitarian law differentiates between two legally relevant categories of people, civilians and combatants. Combatants\footnote{AP I (n 19) art 50(1); ICRC Study (n 29) rule 6.} are, by virtue of their status, assumed to consistently directly participate in hostilities and are, as such, on the grounds of military necessity, targetable at all times.\footnote{Combatants are, through their function, constantly contributing to the military capacity: Ian Henderson, *The Contemporary Law of Targeting: Military Objectives, Proportionality and Precautions in Attack under Additional Protocol I*, vol 25 (International Humanitarian Law Series, Brill | Nijhoff 2009) 86–87.} The category of combatants applies foremost to the regular armed forces of a State that are recognised as such in domestic law. Combatants can also include members of irregular armed forces that display a ‘sufficient degree of military organisation and belong to a party to the conflict’.\footnote{Nils Melzer, International Committee of the Red Cross (ICRC), *Interpretive guidance on the notion of direct participation in hostilities under international humanitarian law*, (May 2009) 22.} Generally, for members of irregular armed forces to be considered combatants, they need fulfil four criteria: ‘(a) responsible command; (b) fixed distinctive sign recognisable at a distance; (c) carrying arms openly; and (d) operating in accordance with the laws and customs of war’.\footnote{Ibid.} However, membership in irregular armed forces is seldom regulated under domestic law and is more accurately determined through applying functional criteria similar to those employed for organised armed groups in non-international armed conflict. Meaning that membership in irregular armed forces can be determined based on the possession of a ‘continuous combat function’.\footnote{The principle that only individuals within an organised armed group who have a ‘continuous combat function’ to directly participate in hostilities are to be considered combatants stems from the ICRC’s *Interpretive Guidance*, ibid 25. However, some scholars hold a different view, contending that all members of the military component should be treated as part of an organised armed group for targeting purposes, irrespective of their specific functions. See: Michael N. Schmitt and Eric W. Widmar, “‘On Target’: Precision and Balance in the Contemporary Law of Targeting”, *Journal of National Security Law and Policy*, Vol. 7, No. 3, (2014) 387.} This function requires a lasting integration into the group and participation in hostilities on repeated occasions, demonstrating a continuous combat function rather than a sporadic or temporary one.\footnote{United Nations General Assembly, Report of the Special Rapporteur on the Promotion and Protection of Human Rights and Fundamental Freedoms while Countering Terrorism (18 September 2013), UN Doc A/68/389, para 69.}
Being considered a combatant in an IAC is significant because if captured, combatants are entitled to prisoner-of-war status.\textsuperscript{42} In the context of an IAC, combatants who intend to surrender must act purposefully to disprove the assumption that they represent a military threat. Consequently, it is the responsibility of the surrendering party to communicate their intentions clearly, unambiguously, and unequivocally to the capturing unit. This burden of proof rests entirely on the surrendering party.\textsuperscript{43}

In IHL, civilians are negatively defined, meaning they are those who do not qualify as combatants. Unlike combatants, civilians do not consistently contribute to their force’s military capacity unless, ‘for such a time’\textsuperscript{44} as they directly participate in hostilities. Civilians do not represent a threat to the military security of the opposing party and can, therefore, not be directly targeted. As a consequence of civilians’ legal immunity from direct targeting, they do not possess a constant legal capacity to surrender. When civilians engage in conduct that amounts to ‘direct participation in hostilities,’ they become a threat to the opposing military’s security, and the concept of military necessity justifies their direct targeting. This type of conduct includes acts of war that are likely, by their nature or purpose, to cause actual harm to the enemy armed forces personnel or material.\textsuperscript{45} As long as they directly participate in hostilities, civilians are subject to direct targeting, including during the preparation phase and immediately after a hostile act. However, during the period of direct participation, civilians have the option to surrender. Like combatants, they must take a positive action that clearly shows they no longer intend to participate in hostilities.

\textsuperscript{42} Geneva Convention (III) relative to the Treatment of Prisoners of War (entered into force 21 October 1950) 75 UNTS 135 (GC III) art 4(a).

\textsuperscript{43} US Law of Armed Conflict Deskbook (International and Operational Law Department, The Judge Advocate general’s School 2000) 97.

\textsuperscript{44} AP I (n 19) art 51(3).

\textsuperscript{45} International Criminal Tribunal for the former Yugoslavia (ICTY), \textit{Prosecutor v Stanislav Galic}; Judgment, IT-98-29-T, Trial Chamber, 5 December 2003, [48].
In contrast, there is no combatant status in NIACs. Instead, for the purpose of targeting and to uphold the principle of distinction during a NIAC, there is a distinction between, on the one hand, civilians\(^{46}\) and, on the other, armed groups or armed forces.\(^{47}\) Furthermore, considering that there is no definition of a combatant nor of a civilian in a non-international armed conflict under the treaties, the prevailing assertion strengthened by the International Criminal Court’s position in the Katanga case\(^{48}\) is that a civilian is anyone who is not a member of the State or non-State armed forces. Therefore, a civilian is also negatively defined within the context of a NIAC, which is consistent with similar definitions found in customary IHL. Nevertheless, civilians enjoy similar legal protection from direct targeting in NIACs. However, civilians can be made the object of attack for such a time as they directly participate in hostilities.\(^{49}\) Consequently, civilians possess the legal capacity to surrender, where they directly participate in hostilities. In both international and non-international armed conflicts, those who want to surrender must clearly indicate their intention to no longer participate in hostilities by positive action. For this reason, IHL does not require a belligerent party to offer its adversary the chance to surrender before attacking, even if the adversary is completely outmatched and defeated.\(^{50}\) Nonetheless, according to IHL, individuals are considered hors de combat and are therefore immune from attack if they are ‘in the power of the adverse

\(^{46}\) Common Article 3 to the Four Geneva Conventions of 1949, refers to the term civilian but does not define who a civilian is. See Geneva Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field (entered into force 21 October 1950) 75 UNTS 31, art 3; Geneva Convention (II) for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea (entered into force 21 October 1950) 75 UNTS 85, art 3; GC III (n 42) art 3 (Common Article 3); Geneva Convention (IV) Relative to the Protection of Civilian Persons in Time of War (entered into force 12 August 1949), 75 UNTS 287 (GC IV), art 3.

\(^{47}\) Common Article 3 (n 46); AP II (n 21) art 1.

\(^{48}\) The Prosecutor v. Germain Katanga, ICC-01/04-01/07 OA 8, International Criminal Court (ICC), trial chamber judgement 25 September [2014], para 788.

\(^{49}\) AP II (n 21) art 13.

\(^{50}\) There is no requirement for a combatant force engaged in armed conflict to extend an opportunity to surrender to its adversary prior to launching an attack: US Department of Defense, ‘Report to Congress on the Conduct of the Persian Gulf War – Appendix on the Role of the Law of War’ (1992) 31 ILM 612, 641.
This does not require the physical capture of the individual by the opposing force, as a person may be so completely under the control of the opposing force that they are no longer a military threat. In these cases, the opposing force is not obligated to offer the opportunity to surrender before attacking but is instead prohibited from targeting the individual.

Furthermore, the obligation to accept valid offers of surrender finds substantiation in the principles of military necessity and humanity. Once individuals unmistakably convey their intention to abstain from engaging in hostilities, they cease to be a military threat, thereby negating any military necessity to engage them as targets. Moreover, the deliberate targeting of individuals who have voluntarily removed themselves from the theatre of war represents an intolerable and unjustifiable violation of human dignity and stands in stark contradiction to the fundamental principle of humanity. Thus the obligation to accept valid offers of surrender can be viewed as essentially embodying the logical manifestation of the principle that the lawful application of military force is strictly confined to what is required by military necessity. It is evident that there exists no imperative to inflict harm upon individuals who are rendered hors de combat.

Therefore, it is important to try to identify what conduct constitutes the ‘positive act’ which displays an intention to no longer directly participate in hostilities. Within international legal rules, the positive act of ‘having laid down [one’s] arms’ or the act of ridding yourself of your weapon or fighting capability reverberates through history and practice as a universally recognised act indicative of surrender. However, while IHL rules prohibit making persons who have surrendered the object of attack and are thus imposing an obligation to accept valid offers to surrender, they do not provide clear guidelines on what behaviour or acts indicates an intention to surrender. For

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51 AP I (n 19) art 41(2)(a) ICRC Study (n 29) rule 47.


instance, AP I Article 41(2) only states that a person is *hors de combat* if they ‘express an intention to surrender’. Equivalently, Common Article 3 and Article 4 of AP II include surrender rules but do not specify the conditions for a surrender to be legally effective.⁵⁴ The ICRC argues that customary international law also prohibits targeting those who have surrendered. Still, its Rule 47 does not offer further clarity, stating only that a person is immune from attack if they ‘express an intention to surrender’. The ICRC commentary to Rule 47 tries to clarify that a clear intention to surrender is manifested by ‘laying down one’s weapons and raising one’s hands’ or alternatively ‘displaying a white flag’.⁵⁵ A similar explanation of what conduct constitutes an intention to surrender is offered in the commentary to Article 41(2) of AP I, which also identifies ‘[laying] down his arms and [raising] his hands’⁵⁶ as the key conduct. The absence of a clear and normative description of what conduct qualifies as an act of surrender in the international humanitarian law treaties emphasises the importance of examining State practice and *opinio juris*. Thus, whether laying down one’s weapons and raising one’s hands or displaying a white flag constitutes a legally effective way of communicating an intention to surrender rests on whether that conduct is supported by State practice.⁵⁷ Indeed, many military manuals issued by States regard laying down weapons and the raising of hands as an acceptable means of expressing an intention to surrender, indicating that this conduct is legally recognised under IHL.⁵⁸ It is worth noting that there is an important distinction between surrender and retreat. The fact that persons who are retreating have discarded their

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⁵⁴ ‘Persons taking no active part in the hostilities, including members of armed forces who have laid down their arms and those placed *hors de combat* (…) shall in all circumstances be treated humanely…’ Common Article 3 (n 46); Additional Protocol II (n 21) art 4.

⁵⁵ ICRC Study (n 29) 168


⁵⁷ Buchanan (n 1) 20.

weapons should not be confused with the conduct of laying down one’s weapons, deliberately
displaying an intent to surrender.\textsuperscript{59}

Moreover, the act of waving a white flag has, since time immemorial, been indicative of surrender, but in a legal context, a white flag is more complex than one might think. Some States still view the waving of a white flag as indicating an intention to surrender, evidenced by several military manuals. For example, in France’s \textit{Manual on the Law of Military Operations}, waving a white flag is, together with laying down weapons and raising hands, recognised as expressing an intention to surrender.\textsuperscript{60} A similar view is found in the Belgian \textit{Manual for Teaching Soldiers}, which also identifies a white flag as indicative of an intention to surrender.\textsuperscript{61} On the other hand, it should be noted that some States do not consider the act of waving a white flag as communicating an intention to surrender. Instead, a prevalent view is that a white flag symbolises an intention to negotiate. The United Kingdom’s (UK) \textit{Manual on the Law of Armed Conflict} explains that waving a white flag is ‘[a] signal of a desire to open communication with the enemy’.\textsuperscript{62} A similar position can be found in the United States (US) \textit{Law of War Manual} ‘[a]s a legal matter, the white flag, when used by military forces, indicates a desire to communicate with the enemy’.\textsuperscript{63} Additionally, both the UK’s and the US Manuals explain that a white flag has no legal meaning in the law of war other than signalling a desire to negotiate.\textsuperscript{64} Nevertheless, the UK Manual notes that depending on the specific circumstances, a white flag can indicate the surrender of individual soldiers.\textsuperscript{65}

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{59} Oslo Manual (n 34) commentary to Rule 103 (4).
\item \textsuperscript{60} France (n 58) 159.
\item \textsuperscript{61} Belgium (n 58) 15.
\item \textsuperscript{63} US \textit{Law of War Manual} (n 58) 844.
\item \textsuperscript{64} ibid 844; UK \textit{Manual} (n 62) 259.
\item \textsuperscript{65} ibid.
\end{enumerate}
\end{footnotesize}
the disagreement and ambiguity of what ‘positive act’ constitutes a legally effective offer to surrender, a pragmatic approach strikes the best balance between military necessity and humanity.

2.4 Is It Feasible In The Given Circumstances For The Opposing Force To Accept The Offer Of Surrender?

For an act of surrender to be legally effective, the offer of surrender must be made under circumstances where it is feasible for the enemy to reasonably accept.\textsuperscript{66} The United States \textit{Law of War Manual} explains that:

\begin{quote}
[T]he feasibility of accepting the surrender refers to whether it is practical and safe for the opposing force to take custody of the surrendering persons in the circumstances. For example, consider the situation of enemy soldiers who man an antiaircraft gun and shoot at an enemy aircraft, and then who raise their hands as if to surrender seconds before a second aircraft attacks their position. In the circumstances, it would not be feasible for the crew of the attacking aircraft to land and accept their surrender.\textsuperscript{67}
\end{quote}

Thus, the test that is imposed by IHL is based on if it would be reasonable for a combatant or fighter acting in the circumstances at the time to accept the offer of surrender.\textsuperscript{68} This approach emanates from and is consistent with the obligation that arises both under the law of non-international\textsuperscript{69} and international\textsuperscript{70} armed conflict that fighters and combatants must when launching an attack, take all

\textsuperscript{66} The US \textit{Law of War Manual} (n 58) 238; Oslo Manual (n 34) Rule 104.
\textsuperscript{67} ibid.
\textsuperscript{68} Buchan (n 1) 24
\textsuperscript{69} AP II (n 21) Article 57(1): The customary status of this provision in non-international armed conflict is confirmed in the ICRC Study (n 29) rule 15.
\textsuperscript{70} AP I (n 19): The customary status of this provision in international armed conflict is confirmed by the ICRC Study (n 29) rule 15.
feasible precautions to minimise or avoid damage to non-military objects, civilians and those persons who are *hors de combat*.\(^{71}\) Albeit, The ICRC Study’s rule 15 explicitly requires the need to take precautions to minimise or avoid civilian harm, injury, damage and incidental loss of civilian life. However, it should be interpreted as an obligation to reduce harm to all non-military objects, including those placed *hors de combat*. This aligns with AP I Article 57(2)(a)(i), which specifies that those launching or planning for an attack must take all feasible measures to confirm that the targets are military objectives within the meaning of paragraph 2 of Article 52 and not civilians or civilian objects nor subject to special protections.\(^{72}\)

In regard to this requirement, there has been significant debate on the feasibility of legally effective acts of surrender from ground forces to aircraft.\(^{73}\) There are a number of legal and practical challenges with cross-domain surrender. Military theory would explain military domains as based upon the element in which that type of warfare is conducted. There are six recognised military domains: air, space, subsurface naval, surface naval, ground and cyberspace.\(^{74}\) Any act of surrender between military forces that operates in different military domains presents unique challenges.

The issues related to drone-enabled surrender, specifically in the context of surrendering to aircraft, are not without precedent. For example, during the Second Gulf War, a combat operation involving a US Apache helicopter encountered a truck with two Iraqi insurgents. The two insurgents reportedly came out of the truck wanting to surrender.\(^{75}\) The US helicopter pilots contacted the military headquarters and explained the situation. The US military headquarters relayed back legal

\(^{71}\) ICRC Study (n 29) rule 15.  
\(^{72}\) AP I (n 19) art 57(2)(a)(i), art 52(2).  
\(^{73}\) Dinstein (n 35) para 637.  

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advice from a US military lawyer who explained that ‘they could not surrender to an aircraft and therefore remained valid targets’.\textsuperscript{76} Having received what they believed to be prudent legal advice, the pilots of the Apache helicopter opened fire on the Iraqi insurgents who were now attempting to drive away. The Apache helicopter first launched a hellfire missile\textsuperscript{77} which failed to connect with the truck. A subsequent strafing run where the helicopter fired from its 30 mm canon successfully killed both Iraqi insurgents.\textsuperscript{78} According to Roberts, commenting on the incident, the US military lawyer’s legal advice that ground forces cannot surrender to aircraft was ‘dogmatic and wrong’.\textsuperscript{79} The ambiguity of what conduct actually displays a legally effective act of surrender is not unique to cross-domain surrender. In the 1991 Gulf War, Iraqi tanks approached Saudi Arabian troops with their gun turrets turned to the rear, which some believed was a sign of surrender. However, instead of surrendering, the tanks reversed their guns and fired on the Saudis. If this was indeed a legitimate sign of surrender, then the subsequent attack on the Saudi forces could be considered the war crime of perfidy. If not, it could be regarded as a lawful ruse of war.\textsuperscript{80}

Another interesting incident in the 1991 Gulf War involving the US Navy frigate, the USS \textit{Nicholas}, depicts similar issues of cross-domain surrender. The USS \textit{Nicholas} was part of a surface action group tasked with conducting combat search and rescue operations against Iraqi forces in the area in support of the coalition’s air attacks in the vicinity of offshore oil platforms in the northern Gulf.\textsuperscript{81} When the USS \textit{Nicholas} reached its mission zone after dark, it launched reconnaissance helicopters to search if nearby oil platforms were manned. The helicopters using thermal imaging, ibid.

\textsuperscript{76} Ibid.

\textsuperscript{77} A Hellfire Missile is a precision strike, semi-active laser air-to-ground or air-to-air subsonic missile and is one of the main weapon systems of an Apache helicopter.

\textsuperscript{78} Leigh (n 75).

\textsuperscript{79} Professor Sir Adam Roberts Emeritus Professor of International Relations at Oxford University and joint editor of Documents on the Laws of War, quoted in Leigh (n 75).


\textsuperscript{81} Ibid 103.
discovered that the oil platforms were, in fact, manned and had fortifications. The following day the reconnaissance helicopters were sent out again to gather more information before the platforms were engaged. The helicopters observed that several of the platforms were equipped for surface-to-air combat with what seemed to be fully functioning anti-aircraft batteries. The log entries that were included in the reports also stated that the helicopters had observed two individuals on two separate oil platforms who appeared to be waving white flags. The helicopters did not receive any fire from the anti-air batteries, nor did they observe any hostile acts. Nevertheless, the USS *Nicholas*, helicopters and Kuwaiti ships attacked the platforms with a varying arsenal of rockets, missiles and gunfire. After the engagement, survivors were located and taken aboard the ship, and one of the survivors asked why they had been attacked after they had tried to surrender. After the incident, a board of investigation recognised that the decision made in the fog of war to engage the oil platforms was complex. One of the main legal concerns that affronted the board of investigations was that under the law of naval warfare at sea, a legally effective act of surrender is not made individually but instead made as a unit by striking the ship or entity’s colours. On the other hand, the two persons who individually waived a white flag - an act that in land warfare can signify an intention to surrender or display a desire to communicate - would nevertheless not render the other members of the opposing force un-targetable. As Robertson notes, the complexity of this incident was a consequence of the unique circumstances presented by the ‘blending [of] land and naval warfare’

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82 ibid.
83 ibid.
84 ibid.
85 ibid.
86 In naval warfare, the traditional sign of an act of surrender is the striking of the ship’s colours or flag: Oslo Manual (n 34) rule 103 (6).
87 Robertson (n 80) 111.
88 ibid.
The foregoing incidents, simplified in the interest of brevity, do nonetheless capture the essence of the issues with cross-domain surrender. The feasibility of surrendering to an aerial vehicle was discussed at length by the Group of Experts in the Oslo Manual on Select Topics of the Law of Armed Conflict99 and in the Harvard Air and Missile Warfare Manual90. As a consequence of the inherent difficulties of ground forces surrendering to aircraft, one approach suggested in both Manuals holds that such attempts are never legally effective.91 According to this view, ground forces would not gain hors de combat status vis-à-vis an aircraft because the offer to surrender from the ground forces cannot be considered genuine when it is factually impossible for the adverse party to accept it.92 Meaning that an offer of surrender is only genuine if it is made in circumstances in which it is feasible for the opposing party to accept.93 This criterion is often understood to include the feasibility of taking persons who have displayed an intention to surrender into physical custody.94 According to this interpretation, ground forces displaying an intention to surrender cannot reasonably expect that aerial vehicles are capable of taking them into physical custody. Thus, their offer to surrender cannot be regarded as genuine.95 An opposing view holds that the inability of an aircraft to physically take personnel on the ground who have communicated an intention to surrender into custody does not remove the hors de combat status of the ground personnel vis-à-vis the aircraft. Instead, the protection against attack derives from the genuine intention to surrender, and it commences as soon as that intention has clearly and unequivocally been communicated to the

99 Oslo Manual (n 34), at para 3 of commentary to rule 104.
90 Harvard Program on Conflict Research, Commentary on the HPCR Manual on the International Law Applicable to Air and Missile Warfare (2010), at para. 8 of commentary to rule 15(b).
91 Oslo Manual (n 34), at para 3 of commentary to rule 104.
92 ibid.
93 ibid.
94 HPCR Manual (n 90) at para 8 of commentary to rule 15(b).
95 Oslo Manual (n 34) rule 104.
adversary’s aircraft. As noted by the Group of Experts in the *Oslo Manual*, an intermediate case-by-case approach should not immediately preclude ground forces from gaining *hors de combat* status vis-à-vis an aircraft, even without the possibility of taking the surrendering party into physical custody. Thereby basing the determination of a legally effective act of surrender both on the genuine expression of an intent to surrender and the effective possibility of physical capture based on the proximity to ground forces or to the general contact zone. Arguably, the intermediate approach strikes a pertinent balance between the principles of military necessity and humanity, and it is also consistent with the historical precedents where ground forces have successfully surrendered to aerial vehicles.

Many of the issues with cross-domain surrender are an effect of the physical and material distance between the two entities. At its core, surrender constitutes a legal exchange comprised of a genuine offer to surrender and its subsequent acceptance. Thus the battlespace distance between ground forces and aircraft limits the opportunities to communicate or perceive the intentions of the other party. There are several factors to consider when determining if an offer to surrender is genuine that are made even more difficult in contexts of cross-domain surrender because of the distance between the parties. For example, to perceive if an offer to surrender is genuine, it is essential to consider the adversary’s cultural mores with respect to surrender and the adversary’s history of compliance with international humanitarian law, especially with respect to perfidy. For example, the consensus among the Group of Experts in the *HPCR Manual* was that individuals who express an intention to surrender must do so genuinely and in good faith. If the ground forces of a Belligerent Party repeatedly raise their hands to avoid being targeted by enemy military aircraft, 

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96 HPCR Manual (n 90) at para 7 of commentary to rule 15(b).
97 ibid.
99 Oslo Manual (n 34) at para 4 of commentary to rule 103.
despite knowing that the aircraft is incapable of taking them prisoners and subsequently resume fighting once the aircraft has departed, such actions could be deemed as perfidious conduct.100

2.5 Have The Persons Who Offered To Surrender Refrained From Taking Any Hostile Act And Submitted Themselves To Their Captor?

According to Article 41(2) of AP I101 and Rule 47 of the ICRC Study102, an act of surrender is only legally effective if the surrendered person does not engage in hostile acts or attempts to escape as a person attempting to escape or engage in a hostile act would no longer be considered hors de combat. Nonetheless, it is not entirely clear what constitutes a hostile act, as AP I does not provide a definition. In the US Law of War Manual, a legally effective act of surrender is invalidated if a person commits ‘[any] hostile acts or resistance or manifestations of hostile intent, including efforts to escape or to destroy items, documents or equipment to prevent their capture by the enemy’.103 State practice, therefore, seems to be a broad interpretation of what constitutes a hostile act. State practice suggests that surrendered persons who do not unconditionally comply with their captor’s demands, such as kneeling or lying on the ground, may be considered to have committed a hostile act and lose their immunity from targeting. Surrendered persons have a continuing obligation to comply with their captor’s demands as long as these demands are reasonable and do not violate international humanitarian law. Captors cannot demand that captives engage in conduct that puts them in danger or violates their legal rights. At its core, persons who, by their positive act, have displayed a genuine intention to surrender operate under the premise that they are no longer directly participating in hostilities and pose no immediate threat to the enemy. However, if these individuals

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100 HPCR Manual (n 90) at para 9 of commentary to rule 15(b).
101 AP I (n 19) art 41(2).
102 ICRC Study (n 29) rule 47.
attempt to escape or engage in hostile actions, thus refusing to submit to the authority of their opponent, they signal their reengagement in hostilities. Consequently, they reintroduce themselves as a potential military threat, and the opposing force is, on grounds of military necessity, justified in targeting them.\footnote{The response to a hostile act should be proportional and ‘it should not amount to the refusal to give quarter’: Commentary to AP I (n 56) art 41 para 1621.}

3. The Feasibility of Surrendering to Drones

3.1 What Are Drones?

In order to address the legal challenges of ground forces surrendering to drones, it is first important to define what a drone actually is. The term ‘drone’ encompasses any unmanned or remotely piloted flying craft. To determine if a vehicle falls under the definition of a drone in this context, it must meet two criteria: it must be capable of flight and controlled by a ground pilot. The US Department of Defence’s definition of a drone is as follows:

\begin{quote}
[a]powered, aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be remotely piloted, can be expendable or recoverable, and can carry a lethal or nonlethal payload.\footnote{Joint Chiefs of Staff, Joint Pub. 1–02, United States Department of Defence Dictionary of Military and Associated Terms 571 (2009).}
\end{quote}

Contrary to popular belief, the history of the use of drones can be traced to antiquity.\footnote{Vivek Sehrawat, Drones and the Law: International Responses to Rapid Drone Proliferation (1st edn, Emerald Publishing Limited 2021) 5.} Drones or inventions that fit the description of a drone have a lengthy history of being utilised for surveillance and for carrying out deadly strikes on enemy targets. Almost 2000 years ago, a warlord in China...
employed kites fitted with explosives to attack the fortified city of his adversary.¹⁰⁷ There are even earlier sources of drones; in 425 BC, Archytas, an ancient Greek philosopher, supposedly constructed and designed a steam-powered ‘pigeon’, which reportedly flew 200 meters before running out of steam.¹⁰⁸ The development of drones is marked by the transformation from a tool of observation into a machine of destruction. It is essential to note that drones are not just flying machines but also weapons carrying payloads. The term ‘drone’ refers to both military and civilian drones. Military drones, also known as Unmanned Aerial Vehicles (UAVs),¹⁰⁹ Unmanned Combat Aerial Vehicles (UCAVs), Unmanned Aircraft (UA), Remotely Piloted Vehicles (RPVs), and Remotely Operated Aircraft (ROA) are included.¹¹⁰

As drones are becoming an increasingly prevalent part of combat in armed conflict, so increases the need to analyse the potential novel or unprecedented uses of unmanned aerial vehicles. Drones as a means of warfare are not distinctly different from other weapon systems.¹¹¹ Under international humanitarian law:

‘[drones] are not expressly prohibited, nor are they considered to be inherently indiscriminate or perfidious. In this respect, they are no different from weapons launched from manned aircraft such as helicopters or other combat aircraft. It is important to emphasise, however, that while drones are not unlawful in themselves, their use is subject to international law’.¹¹²


¹⁰⁸ ibid.


¹¹⁰ Sehrawat (n 105).


From a legal perspective, drones should be regarded as any other weapon system and subjected to the various laws concerning weapons. Consequently, when a drone functions as a ‘weapons platform’, the type of ordnance carried by the drone is still subject to other particular areas of weapons law. For instance, if a drone carries chemical weapons, the relevant law would be the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and their Destruction.113 Conversely, if it carries ‘conventional’ munitions, then the general law of targeting would apply, be it customary international law, treaty law or both. The use of drones in conventional military operations is, therefore, regulated rather unambiguously through the relevant IHL framework.114

The battlespace in which drones operate has unique characteristics. The distance between the drone operator and the target forms a distinct and radically asymmetrical relationship. In effect, drone operators, through distance, enjoy a degree of effective invulnerability from physical attacks by their target. Even so, the distance between the drone operator and the target is reduced not materially but perceptually through the drone’s ability to surveil and interact with the target over long periods of time. This perceptual closeness is one of the aspects which fundamentally sets drones apart from other long-distance weapon systems. Conceptually, the relationship between the drone operator and the target displays a degree of ‘distant intimacy’115 that simultaneously stretches and compresses the battlespace.


114 See, for example, ICRC Study (n 29) Rule 16; AP I (n 19) art 57(2)(a): ‘[W]ith respect to attacks, the following precautions shall be taken: Those who plan or decide upon an attack shall: i) do everything feasible to verify that the objectives to be attacked are neither civilians nor civilian objects and are not subject to special protection but are military objectives within the meaning of paragraph 2 of Article 52 and that it is not prohibited by the provisions of this Protocol to attack them’.

115 John Williams, “Distant Intimacy: Space, Drones, and Just War” (2015) 29 Ethics & International Affairs 93 <http://dx.doi.org/10.1017/s0892679414000793>.
Furthermore, the technological capabilities of drones can vary greatly. However, three main functions are relevant for drone-enabled surrender. Firstly, a typical drone that is either purpose-built for military use or commercially remodelled is made out of lightweight materials to enable high manoeuvrability. Because of their relatively small size and high manoeuvrability, drones can operate at lower altitudes and in obstacle-ridden terrains such as forests or urban environments. Secondly, drones have the ability to hover or loiter for extended periods of time. Thirdly, drones are often equipped with high-definition cameras that are able to provide real-time video streams, with more advanced drones also being able to record and stream sound back to the operator or even transmit sound to the ground through speakers. These technological capabilities offer significant practical advantages compared to manned aircraft in enabling surrender.

3.2 Ukraine And The ‘I Want To Live’ Project

In the IAC between the Russian Federation and Ukraine, many aspects of the means and methods of warfare in the conflict look familiar to other conflicts over the last fifty years. Russian troops utilise tanks, warplanes, amphibious craft, warships and attack helicopters, while Ukrainian forces respond with anti-tank weapons, grenade launchers, and anti-aircraft missiles. This represents much of the fighting on the ground. However, there is another aspect to the conflict - an ultra-modern battlefield where drones are essential for surveillance, reconnaissance, and military operations. The armed conflict in Ukraine has seen a drastic increase in the use of drones, and drones have become more accessible with the increased use of militarised commercial drones. Furthermore, Ukraine has escalated the experimentation of drones and has, throughout the conflict, produced a multitude of inexpensive crafts that vary in size, shape and capability. The wide array of experimental drones employed range from midsize fixed-wing drones to small plastic crafts with four rotors now jury-
rigged to be capable of dropping military ordnance such as grenades and other munitions. Ukraine also employs advanced military drones purpose-built for surveillance and attack. However, the majority of its ‘drone fleet’ used along the front line consists of either hand-build or commercial products that have been adapted to drop anti-tank munitions or grenades.

The Russian Federation and Ukraine have, throughout the IAC, used a range of communication channels, such as leaflets, social media posts, radio appeals, text messages, and TV commercials to encourage the other side to surrender. To strengthen its efforts, Ukraine launched the ‘I Want to Live’ Project in September 2022, aimed at facilitating the surrender of Russian military personnel to the Ukrainian armed forces. The project, importantly, has also utilised drones to assist Russian soldiers in surrendering by guiding them to safe and secure locations. There are also reported incidents of Russian soldiers surrendering directly to drones on the battlefield.

The Ukrainian initiative ‘I Want To Live’ was developed by the Coordinating Headquarters for the Treatment of Prisoners of War. To provide assistance and guidance to Russian soldiers who wish to surrender voluntarily. For that purpose, the project’s website provides links to contact forums that can be used for negotiating surrender through chatbot, telegram-bot or telephone. The website provides additional instructions on how to surrender, both in written form and through an instructional YouTube video. The YouTube video contains instructions on how to safely surrender to a Ukrainian drone and shows that a Russian soldier can surrender by following

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119 ibid.

120 ibid.


122 Проект «Хочу жить» (Project «I Want to Live»), ‘Как Сдаться в Плен Квадрокоптеру (How to Surrender To a Quadracopter)’ <https://www.youtube.com/watch?v=FGFTt-SzN2I&t=128s>
specific guidelines provided by the project’s hotline. The soldier is expected to go to a prearranged
location and then contact Ukrainian representatives or wait for a quadcopter to arrive. Once the
drone arrives, the Russian soldier must maintain visual contact with it while raising both hands. The
Ukrainian operator will then acknowledge the surrender by moving the drone up and down. The
drone will then begin flying in a clear direction, which the Russian soldier will follow until reaching
nearby Ukrainian soldiers.123

The Ukrainian Ministry of Defence has stated that the ‘I Want To Live Program’ has
received over one million inquiries through the designated channels since September 2022.124 It has
also been reported in March 2023 that nearly ten thousand mobilised Russian military personnel had
contacted the program with appeals of surrender since its launch.125 Nevertheless, it is unclear how
many Russian soldiers have effectively surrendered through the ‘I Want To Live’ program. In
November 2022, Ukraine’s Ministry of Defence posted a video, taken from the vantage point of a
drone depicting a Russian soldier who allegedly surrendered to the drone, walking slowly with his
hands raised towards waiting Ukrainian soldiers.126 More recently, more footage depicting a
Russian soldier surrendering to a drone surfaced.127 The video, which originated from Ukraine’s
92nd Separate Mechanised Brigade operating near Bakhmut depicts a Russian soldier in a dug-out

123 ibid.

124 Biggerstaff and Chiaramonte (n 118).

125 See: ‘Almost 10,000 People from Russia Have Already Applied to the ‘I Want to Live’
Project” (Coordinating Headquarters for the Treatment of Prisoners of War) <https://koordshtab.gov.ua/
archive/1117> accessed April 20, 2023; Nick Mordowanec, ‘Ukraine Reveals How Many Russians Have
Called the ‘I Want to Live’ Hotline’ Newsweek (March 3, 2023) <https://www.newsweek.com/number-
russians-calling-i-want-live-hotline-ukraine-1785469> accessed May 24, 2023; Laura King, ‘Lots of Russian
Soldiers Want to Surrender. Ukraine Makes It Easier with a High-Tech Hotline’ Los Angeles Times (March 7,

1593710982790107138?cxt=HHwWhMC-vb3s_50sAAAA> accessed April 20, 2023; David Axe, “Russian
Soldiers Are Surrendering To Ukrainian Drones. This Has Happened Before.” Forbes (November 18, 2022)
<https://www.forbes.com/sites/davidaxe/2022/11/18/russian-soldiers-are-surrendering-to-ukrainian-drones-
this-has-happened-before/> accessed April 20, 2023.

127 The Times and The Sunday Times, ‘Russian Soldier Surrenders to Ukrainian Drone Outside Bakhmut’
<https://www.youtube.com/watch?v=HemDhCzCRQw >.
trench who appears to have discarded his weapon and is trying to communicate with the drone. The footage shows the soldier pleading with the drone not to bomb him. Further on in the video, the Russian soldier seems to be fictively ripping the insignia from his shoulder and making various other hand signals to display his intention to surrender. The drone, loitering above the soldier, drops a white package containing a note telling him to surrender and follow the drone. The Russian soldier seemingly accepts and opts to follow the drone, and whilst making his way to the receiving Ukrainian soldiers, he is fired upon from Russian positions. Ultimately the Russian soldier, with his hands clearly raised above his head, reaches the waiting Ukrainian soldiers.

The spokesperson for the ‘I Want To Live’ program, Vitaliy Matvienko confirmed that the Russian soldier is now a prisoner of war and that the surrender was not pre-arranged through the program’s communications channels but instead was an instance of battlefield surrender.

3.3 What Are The Legal Challenges Of Surrendering To Drones?

The legal and practical challenges of cross-domain surrender are easily transferable to drone-enabled surrender, as many of the same issues stem from the interaction of military forces in two wholly different domains. Before proceeding, it is crucial to acknowledge that I have identified three distinct scenarios for drone-enabled surrender. The first scenario involves surrendering on the battlefield directly to a drone operating in proximity to and with the support of ground forces. The second scenario involves surrendering on the battlefield directly to a drone without any support from ground forces. The third scenario pertains to the utilisation of drones to facilitate pre-arranged

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128 ibid
129 ibid
surrenders. The third scenario will be discussed separately due to the unique challenges it presents in that specific context.

3.3.1 A Drone’s Ability To Recognise A Legally Effective Act Of Surrender

The first issue with drone-enabled surrender in a direct battlefield scenario relates to the drone operator’s ability to perceive the concrete positive acts that unequivocally demonstrate a combatant or fighter’s intention to cease direct participation in hostilities.

Understanding, interpreting and acknowledging genuine offers to surrender requires the ability to recognise the enemy soldier’s positive act manifesting his genuine intention to surrender. The optical capabilities of drones would, in normal circumstances, allow the operator to visually confirm if the soldier on the ground has ‘laid down his weapons and raised his hands’ or performed any similar acts indicating surrender. As evidenced by the footage of the Russian soldier surrendering to a drone in Bakhmut, other acts, such as hand signals, can, in the right circumstances, communicate an intention to surrender. In the same footage, the drone can be seen using flight patterns to communicate with the Russian soldier. As this footage demonstrates, a drone’s technological capabilities enable its operator to both perceive and acknowledge acts of surrender. Nonetheless, as stated before, for an act of surrender to be legally effective, the offer of surrender must be made under circumstances where it is feasible for the enemy to reasonably accept. The legal exchange of surrender constitutes an unconditional offer by the surrendering party and the ability to accept on the part of his opponent. A drone operator may not refuse an offer of surrender when it has been manifested clearly, but that manifestation must be made at a time and

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131 AP I (n 19) art 41(2).

132 Drone footage (n 122).

133 The US Law of War Manual (n 58) 238; Oslo Manual (n 34) Rule 104.
under circumstances in which it can reasonably be received and properly acted upon.\textsuperscript{134} Fundamentally, the crucial aspect to consider is that even if a legitimate offer of surrender is made in accordance with international humanitarian law, if it cannot be reasonably perceived in the given circumstances, the opposing force may still view the enemy as a threat. In such a circumstance, the principle of military necessity may continue to justify their direct targeting.\textsuperscript{135} Consequently, the distance not only between the operator and the enemy soldier but also between the drone and the enemy soldier, together with the one-sided human interaction between man and machine, may impede the efforts to clearly and unequivocally express an intention to surrender. However, discerning a genuine intention to surrender in conventional land warfare can be equally challenging. Indeed, the distance between the drone operator and the person offering to surrender also serves as a protective barrier that can shield the operator from immediate danger. In such circumstances, it may be easier for a drone operator to interpret and evaluate an offer of surrender from the relative safety that the distance provides.

In the context of the Ukrainian ‘I Want to Live’ project and instances of ‘pre-arranged’ surrender, the initial expression of an intent to surrender is communicated through a website, over the phone or on communication apps. In contrast to the direct battlefield surrender to drones or conventional scenarios of surrender where the manifestation of intent and the subsequent physical act of surrender occur in close proximity both temporally and spatially, the ‘I Want to Live’ project involves a coordinated arrangement for the actual physical surrender to take place at a later designated time and location.\textsuperscript{136} The fundamental issue with pre-arranged surrender is the precise moment a Russian soldier who has communicated his intent to surrender becomes hors de combat.


\textsuperscript{135} Buchan (n 1) 24.

The initial communication of intent to surrender would not immediately render the Russian soldier *hors de combat* considering that a significant amount of time may pass between the initial offer and the actual physical surrender. Instead, it is the moment when the Russian soldier goes to the pre-arranged location, encounters the drone, and effectively displays the intention to surrender by performing a positive act such as laying down his weapon and raising his hands and submits himself to the control of the drone. From that point onward, if the Russian soldier refrains from any hostile acts or attempts to escape, it would be reasonable to state that they are *hors de combat* until the actual physical capture by Ukrainian forces takes place.\(^{137}\)

Moreover, it is of utmost importance to actively mitigate any potential risks regarding the pre-arranged surrender to drones, particularly to ensure that such actions do not fall under the classification of perfidy.\(^{138}\) Consequently, when soldiers engage in pre-arranged surrender, careful consideration must be given to selecting a safe and secure time and location for the actual act of surrender to the drone. Considering that any targeting or hostile action directed towards a soldier en route to the designated surrender location could be perceived as an act of perfidy, as it would indicate a breach of trust and abuse of the assurance of safe surrender. Hence, proactive measures should be taken to safeguard the integrity of pre-arranged surrender and to prevent any misinterpretation or violation of the principles of international humanitarian law.

### 3.3.2 Legally Effective Acts Of Surrender Vis-a-vis A Drone

The technical capabilities of drones enable its operator, in certain battlefield scenarios, to recognise and acknowledge the concrete positive acts that demonstrate a person’s offer to cease direct participation in hostilities which manifests the intention to surrender. However, it is equally

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\(^{137}\) ibid.

\(^{138}\) Perfidy (n 19).
important to determine when such an act would constitute a legally effective act of surrender, rendering that person *hors de combat*. The fundamental issue is if a legally effective act of surrender is conditioned upon the feasibility of taking persons who have displayed an intention to surrender into physical custody. In conventional terms, a person who is rendered *hors de combat* by an effective offer of surrender would, in the normal course of events, immediately be physically captured by the opposing party.\(^{139}\) Evidently, this requirement presents similar issues for drones as it does for the more conventional examples of cross-domain surrender to aircraft. Recalling the approaches suggested by the *Oslo Manual*, one such approach outright precludes ground forces from gaining *hors de combat* status vis-a-vis any aerial vehicle because of its inability to take persons into physical custody.\(^{140}\) The contrasting approach suggested that the protection against attack derives from the genuine intention to surrender, and it commences as soon as that intention has clearly and unequivocally been communicated to the adversary’s aircraft.\(^{141}\) However, adopting either approach to drones would be problematic and add another layer of complexity to accurately discerning the intentions of the surrendering party. For example, suppose the enemy is aware that drones are unable to take them as prisoners. In that case, they may choose to surrender to a drone, understanding that it would grant them protection from attack in the immediate context of the armed conflict without impacting their long-term participation. Additionally, if there are no nearby ground units to assist with physically capturing them, they would be well within their rights to resume their involvement in the conflict after a reasonable period of time has passed. However, the recognition of this possibility might lead the conflicting parties to regard any surrender gestures made towards

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\(^{139}\) To ensure clarity, it is important to emphasise that the legal obligation imposed by the rule of surrender is that the opposing forces are prohibited from directly targeting individuals who have surrendered by virtue of them being *hors de combat*. It is essential to note that the rule of surrender does not require the opposing force to detain surrendered individuals as prisoners of war, although they have the option to do so and it is the normal consequence of a combatant surrendering to the opposing party in a international armed conflict.

\(^{140}\) *Oslo Manual* (n 34) at para 3 of commentary to rule 104; HPCR Manual (n 90) at para 8 of commentary to rule 15(b).

\(^{141}\) ibid.
drones as perfidious, which would have severe consequences. If one holds the belief that surrender is only legally effective when there is a unit capable of accepting the surrender and assuming effective control of the surrendered forces, then it is highly likely that surrendering to a drone that operates without the support of ground forces would be deemed impossible. Therefore, it would be more reasonable to adopt a case-by-case approach that recognises that there may be circumstances in which it is feasible for ground forces to effectively surrender to drones, even if the drone itself lacks the capacity to take persons into physical custody. Moreover, the unique capabilities of drones empower the operator, despite being physically distant, to exert a degree of constructive, if not physical, control over surrendering soldiers that would be compatible with traditional means of accepting surrender. This level of control is made possible despite the physical separation because of the drone’s ability to surveil and interact cross-dimensionally with individuals on the ground. Consequently, the capabilities of drones establish a unique situation of ‘distant intimacy’ that bridges the physical gap and enables a degree of effective communication and control over surrendering soldiers. Therefore, an intermediate case-by-case approach would be consistent with the notion that the legal bedrock of surrender is based upon a balance of military necessity and humanity, and a case-by-case approach would also be consistent with and reflect the fact that Russian soldiers in Ukraine have successfully surrendered to drones.\textsuperscript{142}

3.3.3 To What Extent Can Drones Exercise Control Over Those Who Have Surrendered

Furthermore, if one operates within the premise that the surrender to drones is not legally ineffective \textit{per se}, a crucial question is if a drone, without support from ground forces, has the capability to exercise a sufficient degree of control over those purporting to surrender for them to be

\textsuperscript{142} Drone footage (n 122).
considered to have ‘fallen into the power of the enemy’ within its meaning under Article 4(a) of the Third Geneva Convention (GCIII).

Article 4(a) of GCIII and Article 44 of AP I state that prisoners of war (POW) are those members of the armed forces who have ‘fallen into the power’ of the enemy. The Third Convention seemingly use ‘fallen into the power of’ and ‘fallen into the hands of’ interchangeably. Furthermore, it should be noted that the two expressions in question also display a certain level of inconsistency when translated between the equally valid French and English versions of the document. The variation in these expressions should not be read as inferring a different meaning on the provisions. The use of the phrase ‘fallen into the power of the enemy’ in GC III does not appear to be intended as an exclusive or restrictive provision. Instead, the drafters of Article 4(a) GCIII chose to replace the term ‘capture’ with the phrase ‘fallen into the power of the enemy’ in order to address certain issues and developments observed in previous agreements governing the treatment of prisoners of war. The phrase ‘fallen into the power of the enemy’ encompasses various situations where individuals come under the control or authority of the enemy, regardless of the circumstances leading to their detention, captivity, or enemy control. Whether

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143 GC III (n 42) art 4(a).

144 ibid.

145 ibid; AP I (n 19) art 44.

146 For example, GCIII (n 42) Articles 4 and 5(1) refer to persons who have ‘fallen into the power of the enemy’, whereas Article 5(2) refers to persons ‘having fallen into the hands of the enemy’.

147 For example, ibid art 12, the English version refers to individuals as being ‘in the hands of the enemy’, while the French version utilises the phrase ‘au pouvoir de la Puissance ennemie’, which translates to ‘in the power of the enemy Power’.


149 The 1899 and 1907 Hague Regulations and the 1929 Geneva Convention on Prisoners of War referred to persons ‘captured’ by the enemy.
through surrender, unexpected capture, desertion,\textsuperscript{150} or being overwhelmed by active force, members of the groups defined in Article 4 are considered POWs once they come under the control of enemy forces.\textsuperscript{151} The phrase recognises the broad range of situations in which individuals can become subject to the power and authority of the enemy during armed conflict. On the other hand, the distinction of ‘being in’ the power of an adverse party within the meaning of Article 41(a) of API and having ‘fallen into the power’ of the enemy within the meaning of Article 4 (A) GCIII and Article 44 API presents a subtle but profound difference. The latter expression describing a person who has ‘fallen’ into the power of the enemy suggests that the person in question is in the physical custody of the opposing party. Whereas ‘being in’ in the power of an adverse party does not require a person to be physically apprehended.\textsuperscript{152}

This understanding is based upon the rationale for the slight modification of AP I’s Article 41(2)(a)’s operative phrase of being ‘in the power of’. According to the commentary, the purpose of this modification was to encompass individuals who are defenceless, as exemplified by an aircraft ‘which can certainly have enemy troops in its power without being able, or wishing, to take them into custody or accept a surrender’.\textsuperscript{153} However, many experts have criticised this and similar interpretations as overly broad. For instance, the majority of experts involved in drafting the Harvard Air and Missile Warfare Manual decided against retaining the separate category mentioned in Article 41(2)(a) of AP I, which pertains to individuals ‘in the power of an adverse party,’ due to its perceived lack of relevance in the context of aerial warfare.\textsuperscript{154} A more accurate interpretation of

\textsuperscript{150} The matter of the status and treatment of deserters remains a topic of ongoing debate and uncertainty among scholars. One specific area of concern revolves around the safety of deserters, considering the stipulation that prisoners of war POWs should be held together in collective detention with other POWs. See generally Marco Sassòli, ‘The Status, Treatment and Repatriation of Deserters under International Humanitarian Law’, International Institute of Humanitarian Law, Yearbook (1985) 9.

\textsuperscript{151} Sean Watts ‘Who is a Prisoner of War?’ in Andrew Clapham, Paola Gaeta and Marco Sassòli (eds), The 1949 Geneva Conventions: A Commentary, Oxford University Press, 2015, 889–910.

\textsuperscript{152} ICRC Commentary to AP I (n 56) art 41(a) para 1612.

\textsuperscript{153} ibid.

\textsuperscript{154} HPCR Manual (n 90) at para 8 of commentary to rule 15(b).
Article 41(2)(a) is that the modification aimed to clarify that the concept of hors de combat included civilians, who are afforded various protections under the 1949 Fourth Geneva Convention (GCIV). This is supported by the use of the term ‘person’ throughout Article 41. As stated previously, civilians can directly participate in hostilities, and they become targetable for the duration of their involvement. In the view of the ICRC, these civilians should be within the purview of the GCIV. Correspondingly, it was necessary to address their protection concerning their status as hors de combat. Hence, Article 41 utilises the phrase ‘in the power’, which closely mirrors the scope provision of GCIV. Schmitt notes that Article 41(2)(a) was intended to protect individuals covered by both the Third and Fourth Geneva Conventions. Furthermore, the inclusion of a reference in Common Article 3 of the four 1949 Geneva Conventions to individuals who are rendered hors de combat through ‘detention’ reinforces this interpretation. This reference reflects the intention of the drafters to guarantee that the protection extends to anyone who is detained by a party involved in the conflict. Similar to the wording in GCIII, Article 41(2)(a) of AP I does not introduce any substantive changes to the existing rule. Instead, it serves to provide clarification. Thus the phrase ‘in the power of’ should also be read as referring to individuals who have been captured or detained. The central issue at hand is determining the moment when an individual purporting to surrender to a drone can be considered ‘captured’. Importantly, it was recognised in the ICRCs Commentary to Article 4(A) that there can be certain circumstances in which it is possible that individuals may have effectively surrendered, rendering themselves hors de combat, yet they have not ‘fallen into the power of the enemy’, thereby precluding their classification as

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155 From a detailed standpoint, it is possible that certain civilians who directly participate in hostilities may not fall within the purview of the Fourth Geneva Convention until they have actually been physically captured. However, this specific detail does not impact the analysis I am conducting.

156 GCIV (n 46) art 4.


158 ibid
prisoners of war. As Schmitt prudently notes, capture or detention does not always necessitate physically taking the fighter or combatant into custody. There are situations where an individual can be effectively captured without any explicit action from either the captor or the prisoner. The fundamental consideration lies in determining whether an individual is unequivocally under the captor’s control, to the extent that they pose no risk to the captor or whether taking physical custody of the individual would be operationally feasible given the circumstances at hand.

Consequently, it can reasonably be construed that combatants who are rendered hors de combat by their legally effective surrender to a drone would, in effect, be under a degree of control that could be equated with physical capture. The fact that the drone operator exercises control over that combatant through a drone and over a distance should not affect the assessment of whether that person is unequivocally under the drone operator’s control. Accordingly, it is reasonable to consider that drones can exercise a degree of control that would be equivalent to physical capture over those who have surrendered for them to be considered to have ‘fallen into the power of the enemy’ within its meaning under Article 4 (a) GCIII. Moreover, while the determination if a combatant has ‘fallen into the power of the enemy’ by surrendering to a drone does not impact the legal effectiveness of the act of surrender itself, it does present profound legal and practical challenges. Considering that Article 4(a) of GCIII and Article 44 of AP I state that prisoners of war are those members of the armed forces who have ‘fallen into the power’ of the enemy and that the application of GCIII begins from the ‘moment a person belonging to any of the categories listen in Article 4 falls into the power of the enemy’.

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159 ICRC Commentary to GCIII (n 148) art 41 para 962. To ensure clarity it should be noted that this issue does not relate to the protection afforded by the hors de combat status. AP I (n 19) art 41 prohibits attacks on persons’ hors de combat from the moment they are rendered hors de combat, there is no attached time-limit. This provision also protects a prisoner of war whose protection and security are outlined in GCIII. In this way, the enemy hors de combat is protected at whatever moment he is considered to have ‘fallen into the power’ of his adversary. This legal overlap between Article 41 and GCIII was purposefully made to avoid any gap in protection. ICRC Commentary to AP I (n 56) art 41 para 1602

160 Schmitt (n 157)

161 Schmitt (n 157)
of the enemy'\textsuperscript{162} the protective provisions of GCIII would in such circumstances apply to combatants who have surrendered to drones. There is, to that effect, a sequential transition that first transforms an active combatant into a person placed \textit{hors de combat}; that individual is thereafter a disarmed captive who has ‘fallen into the power of the enemy’ and is thus a prisoner of war and would without any formal action or decision be entitled to the full protections and safeguards of the Convention.\textsuperscript{163} ICRCs Commentary to Article 12 GCIII explains that ‘pursuant to Article 12(1), prisoners of war are to be considered as under the control of the Power into whose hands they have fallen, and not of the individuals or units that captured them’.\textsuperscript{164} Thus it is probable that the obligations within GCIII would require the ‘Detaining Power’\textsuperscript{165} to treat those who have ‘fallen into the hands of the enemy’ by surrendering to drones in accordance with the provisions of GCIII and, for example, provide them food, clothing and medical treatment.\textsuperscript{166} It would undoubtedly be difficult to uphold the obligations of GCIII exclusively with drones, however, these practical difficulties would not impact the legal effectiveness of the act of surrender itself.\textsuperscript{167}

4. Conclusions

In conclusion, this thesis has examined the feasibility of performing a legally effective act of surrender to a drone under the existing international humanitarian law regime. By exploring the historical development and legal framework surrounding surrender, it has become apparent that the

\textsuperscript{162} CRC Commentary to GCIII (n 148) art 5 para 1100

\textsuperscript{163} Howard S Levie, ‘Prisoners of War in International Armed Conflict’ (1977) 59 International Law Studies U.S. Naval War College 99.

\textsuperscript{164} ICRC Commentary to GCIII (n 148) art 12 para 1510

\textsuperscript{165} GCIII (n 42) use the term ‘Detaining Power’

\textsuperscript{166} GCIII (n 42) Articles 26, 27, 30

\textsuperscript{167} The practical challenges of, for example, air-dropping food, clothes and medical supplies to those who have surrendered to drones and the obligations regarding the treatment of prisoners of war, intriguing as they may be fall outside the scope of this thesis.
clarification of what constitutes a legally effective act of surrender is of utmost importance. Drawing from the interpretation of customary international humanitarian law, a three-pronged assessment has been proposed, stipulating that a legally effective act of surrender requires concrete positive acts demonstrating the intention to cease directly participating in hostilities, recognition of the surrender offer by the opposing force based on reasonable circumstances, and the absence of hostile acts with submission to the captor.

Furthermore, the inherent challenges of cross-domain surrender primarily stem from the physical and material distance between the parties involved. The distance can, to an extent, be overcome through the unique capabilities of drones. Drones enable a distinctive relationship between the operator and the person purporting to surrender, characterised by a sense of ‘distant intimacy’ that both expands and compresses the battlespace. The capabilities of drones allow their operator to exert control over surrendering combatants despite physical distance, this would suggest that combatants who are rendered *hors de combat* by their legally effective surrender to a drone would, in effect, be under a degree of control that could be equated with physical capture and compatible with traditional means of accepting surrender.

Surrender is the epitome of a legal regime that aims to balance the imperatives of military necessity and humanity. To ensure its continued effectiveness, it is paramount that the surrender regime embraces a unified and normalised framework providing combatants with the assurance that their acts of surrender will be recognised and respected. Only through this unified approach can the institution of surrender fulfil its crucial role in promoting the protection of human life and dignity amidst the ravages of war.
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