Know Your Enemy: Implications of Technology for Intelligence Standards in Targeting under International Humanitarian Law

by

Emma Jane Marchant

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Birmingham Law School
College of Arts and Law
University of Birmingham
Birmingham B15 2TT
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Abstract

The law governing the methods and means of conflict was largely codified in 1977. Since that time the technology available for intelligence, surveillance and reconnaissance has advanced considerably. This research aims to establish how these technological developments have altered the intelligence standards expected for target verification. The three principles of distinction, proportionality and precautions in attack are at the heart of this work and military doctrine has been investigated to further analyse state practice. In order to understand how different states approach the problem, the US, the UK and Germany have been used to compare and contrast approaches.

Due to the highly secretive nature of targeting protocols, this project analyses several incidents of mistaken targeting from recent conflicts to establish how these have been investigated, what standards have been applied, and by whom. Through this process it has been possible to establish that there are disparities in how the standards are viewed by various groups which could create variation in understanding. I suggest that increased transparency in certain aspects of the rules governing forces in conflict would aid the development of customary law and provide better protection for civilians.

For Winnie and Christine, who proudly served

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Chapter One

Introduction, Methodology and Background

1.1 Introduction

This thesis aims to analyse and assess whether there has been a development in the requirement to verify targets within armed conflict. It is a comparative study of the United States, the United Kingdom and Germany to develop a position that points towards an asymmetrical application of International Humanitarian Law (IHL). I demonstrate that the asymmetrical development of technology, due to competing state demands, has created a complex system for both operators and those caught up in conflict. I argue that the development of technology has led to the development of a tighter normative intelligence standard that has developed over the past two decades. However, this position is far from clear and arguably has not progressed into a clear standard that each state is able to comply with, despite developments meaning that operations are increasingly carried out by coalitions with access to the most advanced technology in modern warfare.

This research was far from simple given the significant secrecy surrounding targeting protocols operated by every state. The difficulty with undertaking analysis of incidents during conflict has been recognised by the International Committee of the Red Cross (ICRC) who state that: "It is rarely straightforward because the facts known to the commander at the time of the attack are not made public and because the rules governing the conduct of hostilities are formulated in a general and often flexible way to adapt to all situations."[1] This work has further been complicated by the disciplines of intelligence, warfare, politics and law frequently operating in their own vacuum, all of which play a role in this research.

To make a difficult prospect more complicated, the research in this project has also uncovered the different manner in which states approach transparency, therefore differing

[1] Laurent Gisel, *The principle of proportionality in the rules governing the conduct of hostilities under international humanitarian law* (ICRC International Expert Meeting Quebec 22-23 June 2016) 5. https://www.icrc.org/en/document/international-expert-meeting-report-principle-proportionality accessed 5 August 2019.

levels of information are available depending on several factors. By far, among the states studied in this project, the UK takes the most secretive approach to its military and intelligence operations. However, Germany demonstrates an approach that, as will be seen, for political reasons, must appear to be transparent in its overseas military operations. This has resulted in a number of court cases in which the analysis and application of IHL has been central to the topic on point.

The US currently takes what I would consider to be a pragmatic approach to transparency. Given their own historic context the US presently operates an approach that engages with the media and public opinion by releasing investigation reports in a redacted format. Furthermore, the US's Freedom of Information Act (FOIA)[2] and more recent Executive Order 13392 (2007) has compelled the various government agencies to provide greater transparency. This has resulted in the creation of electronic FOIA reading rooms which enable researchers from all over the world to access released files online.[3] Nevertheless, the level of transparency that is afforded remains difficult to judge given that it is not possible to know with any certainty how much information remains classified.

1.2 Methodology

In light of the difficulty of accessing classified documents the research has been conducted in depth into several incidents in order to try and establish if a pattern is emerging in the approach to targeting mistakes. It is recognised that a substantial amount of information will be classified, and furthermore this, in and of itself, could present issues with the development of customary international law.[4] The creation of customary law requires two elements: state practice and a belief that such practice is required, prohibited or allowed as

[2] 1966, Title 5, s 552. Amended in 1996 to mandate publicly accessible "electronic reading rooms".
[3] For this study the relevant sites are: Central Intelligence Agency, https://www.cia.gov/library/readingroom/ accessed 01 April 2019. The National Security Agency, https://www.nsa.gov/resources/everyone/foia/reading-room/ accessed 01 April 2019. The Defence Intelligence Agency, https://www.dia.mil/FOIA/FOIA-Electronic-Reading-Room/ accessed 01 April 2019.
[4] 1.3.8.

a matter of law.[5] Thus, an analysis of state practice, and the belief underlying such, is vital for the development of further customary law.

The limited transparency afforded by states has also presented problems in the development of a comparative study, in that the US and UK are so deeply linked in their military campaigns that it has been very difficult to extrapolate one state from another within coalition operations. The so-called 'special relationship' of intelligence finds its origins in World War II, and the following Cold War.[6] This has resulted in a complex and secretive web of arrangements, agreements and arguable dominance in the field of surveillance. The close relationship of the two states has meant that since the end of the 20th Century[7] there are minimal examples of conflicts that the UK is a party to without the US. The only clear example is the Falklands War of 1982, but even here the UK benefitted considerably from their relationship with the US. They were able to obtain intelligence information that Argentina did not have access to.[8] However, there are limited examples of civilian casualties in this conflict that can be analysed to assess the UK's approach to targeting.

The converse position is less clear with the US having engaged in several conflicts without the UK during the same period. For example, in the 1980s the US engaged in operations in Lebanon, Grenada, and Panama[9] without military support from the UK. However, the lack of explicit military support is arguably an overly simplistic benchmark when referring to the special intelligence relationship. The Vietnam war is a good example of the difficulties

[5] Statute of the International Court of Justice (ICJ Statute 1945) Art. 38(1)(b).
[6] 1.3.8.
[7] Prior to the Falkland Conflict in 1982 the UK was involved in a number of conflicts without US involvement as a result of decolonisation, a notable example being Kenya (1942-1960) for more see: Ian Cobain, Ewan MacAskill and Katy Stoddard, 'Britain's 100 years of conflict' (11 February 2014) *The Guardian* https://www.theguardian.com/uk-news/ng-interactive/2014/feb/11/britain-100-years-of-conflict accessed 10 October 2019.
[8] John Keegan, *Intelligence in War* (Pimlico 2004) 353-360.
[9] CRS Report, *US Periods of War and Dates of Recent Conflicts* (27 August 2019) Congressional Research Service https://fas.org/sgp/crs/natsec/RS21405.pdf accessed 10 October 2019. It should be noted that the UK politically supported the US in its invasion of Panama, and vetoed the UN Security Council resolution condemning the action, see Paul Lewis, 'Fighting in Panama: United Nations; Security Council Condemnation of Invasion Vetoed' (24 December 1989) *The New York Times* https://www.nytimes.com/1989/12/24/world/fighting-panama-united-nations-security-council-condemnation-invasion-vetoed.html accessed 10 October 2019.

presented by the covert nature of state intelligence relationships. The UK were not officially involved in the conflict but documents released recently indicate how the US benefitted considerably from information provided by MI6 in Hanoi.[10] As Consul-General Liudzius commented in 1971: "…the post [to Hanoi] provides just about the only window which the Western world has on events in North Vietnam."[11]

Therefore, although it is important not to overlook the significant political, cultural and technological disparities between these two states, when it comes to targeting in armed conflict, and the intelligence gathering operations to support them, it can be difficult to extricate one state from another. Where this has been possible it has been done within this work, as the differences are, in some circumstances, significant.[12]

The choice of conflicts in this research project have been driven by the information available and the nature of targeting mistakes that 'speak to' the core issue on point; intelligence standards for verification. Thus, the main conflicts covered are the Kosovan air campaign of 1999[13] and the post-2001 war in Afghanistan.[14] Issues that are relevant from other conflicts have also been included, such as incidents from the Iraq war of 2003, the Gaza conflict of 2014, and the current Syrian conflict.

The methodology is driven by the incidents that give the greatest insight into the modern interpretation and implementation of the precautionary principle under IHL, rather than the specific conflicts themselves. The actors are largely similar in each conflict, with the UK, US

[10] Nikita Wolf, '"This Secret Town": British Intelligence, the Special Relationship, and the Vietnam War' (2017) 39:2 The International History Review 338. Also see Marc Tiley, 'Britain, Vietnam and the Special Relationship' (12 December 2013) 63:12 History Today https://www.historytoday.com/archive/britain-vietnam-and-special-relationship accessed 10 October 2019.
[11] Liudzius (Hanoi) to Tomlinson (London), 'Some Reflections on a Year in Hanoi' (October 1971) TNA FCO 15/1474.
[12] For example, see the approach to war-sustaining objects being legitimate military targets. For more on this see Michael Schmitt, 'Targeting Narco-insurgents in Afghanistan: The limits of international humanitarian law' (2009) 12 Yearbook of International Humanitarian Law 301-320.
[13] Known as Operation Allied Force (OAF).
[14] Known variously as Operation Enduring Freedom (OEF), then later as NATO's UN Security Council authorised mission International Security Assistance Force (ISAF). Then from January 2015 as NATO Resolute Support Mission (RSM).

and Germany being involved, to a lesser or greater extent, in each.[15] Therefore, this research piece investigates the period since the reunification of Germany through to the present day. It does not claim to cover every instance of mistaken targeting, nor every technological development during this period but merely to gain insight into those which are both significant and readily accessible. The aim in this work is to use operational practice to cast light on a possible 'intelligence standard' as developed by states during armed conflict.

Although this research is focused on the development of military technology it does not tackle the thorny issue of autonomous weapons systems' potential compliance with IHL. It is arguable that the continuing development of intelligence gathering systems could, in turn, lead to autonomous weapons systems having greater scope for operation. However, this is not the subject that this research project intends to address.

The significant point for the research is founded on the hypothesis that without greater clarity within targeting protocols and the standards required for verification it will not be possible to programme a system to comply with International Humanitarian Law. Thus, although the research does not directly involve autonomous systems it is intended to clarify the current position to aid in future technological development. Furthermore, this research does not involve detailed discussion of the various weapons systems available for compliance with the precautionary principle under IHL. However, it is inescapable that weaponry will be a part of the discussion as there have been valuable scholarly discussions and research into this area. Therefore, where weaponry is discussed it is primarily for founding demonstrable arguments for intelligence and verification standards.

The term 'intelligence standard' is postulated by the author in an effort to separate the existing legal standards of feasible precautions and verification from the developments this project intends to uncover. The work is divided into five chapters, outlined as follows, with the aim that each chapter provides some enlightenment on how states understand their

[15] Except for German involvement in the Iraq war. Further, the Gazan Conflict of 2014 does not directly involve any of these states, however, it is instructive in the way the international community has responded to civilian casualty incidents and technological asymmetry.

obligations under law, and whether this has developed in light of new technology. Chapter two provides a legal analysis of the presently understood state of art for the primary law established as part of Hague law. This includes a discussion of what could be called 'soft law' provisions that are created by states to guide and govern the conduct of their operations. This chapter provides a background to the pertinent areas of law for the discussion on verification as it is understood by law. The third chapter applies this to a specific incident that involved the German Bundeswehr in Kunduz, Afghanistan during 2009. The incident is explored from as many sources as were reasonably available to establish if the verification standard has been developed in practice.

Chapter four explores the development of technology for intelligence, surveillance and reconnaissance. Through the largely agreed upon scholarly discussions on precision-guided munitions, this examination establishes a position from which to understand the role of technology in modern warfare. It provides a platform to discuss asymmetry and how this can operate cross-coalition, challenging whether intelligence in coalitions should be shared in order to comply with law. From here chapter five moves on to discuss how an over reliance on technology can become a dangerous position for intelligence operations. It highlights several incidents which have been directly, or indirectly, a result of the apparent over reliance on advanced technology to inform and then target individuals. The final chapter discusses one of the main problems faced within this project, which is transparency. It outlines the varied approaches taken by the three states primarily covered in this work. The understanding of the requirement to conduct investigations into civilian casualties is outlined from an IHL perspective. It also provides an exploration of the role different bodies make to the development of IHL.

1.3 Background

The background to this research is embedded in the legal principles of International Humanitarian Law (IHL)[16] as well as the doctrine of military intelligence. Neither of these can be, or have been, developed in isolation from global politics or history.[17] The relationship between these disciplines is complex with them developing at times in parallel and at times symbiotically. For this research it is important to understand that neither law nor practice develops in a vacuum. Thus, the historical development of intelligence, technology and law is worth understanding to place this work in context, which we will see, is vital.

1.3.1 Legal Background

In modern warfare, armed conflict is regulated by IHL which has developed to embody the principles and precautions required to manage the methods and means of warfare to minimise civilian casualties, known as the *jus in bello.*[18] It is my contention, that, despite the intrinsically linked and deeply significant role that intelligence plays in warfare, the role is not defined or delineated within IHL. Intelligence, or an intelligence standard per se, does not find mention within the treaties or customs establishing IHL. Therefore, to determine what intelligence is required to conduct warfare lawfully it is necessary to look at the body of IHL governing the methods and means of armed conflict. I have used the term 'intelligence standard' to distinguish my notion from those that already exist within IHL.

My proposition is that the lack of definition for the quality and quantity of intelligence has, in turn, led to intelligence standards being altered with their purpose changing significantly

[16] There are a number of terms used for this branch of law, they include IHL but also the Law of Armed Conflict and the Law of War. The choice to use IHL has no bearing on this author's opinions on which should be used when, it is purely to chosen to retain consistency throughout the work.
[17] See for example Geoffrey Best, *War and Law since 1945* (OUP 1994).
[18] The partner to this is the *jus ad bellum*, which is the law concerning the resort to armed conflict. This has now been widely argued as having fallen into disuse due to the modern requirements that are provided by the Charter of the United Nations (24 October 1945) Art. 2(4) and Art. 51 https://www.un.org/en/sections/un-charter/chapter-i/index.html accessed 15 August 2019. These permit war only after declaration from the UN Security Council or in the case of collective or individual self-defence. Also see Ingrid Detter, *The Law of War* (CUP 2000).

in modern times. Today the presumption is made that they are designed to protect the civilian population, whereas they were originally constructed to search and destroy the military objective. It could be argued that this is purely a case of semantics and if you locate one then you can protect the other; however, given the restricted resources available to any military, it would suggest that choices must be made in the relative priority given to each objective. Therefore, the difference in the legal framework is significant. It is my suggestion that, without understanding the current role of intelligence and the legal framework that guides it in IHL, it is not possible to determine what impact it has on the methods and means of modern warfare.

Furthermore, there is evidence that the nature of war has been changing,[19] with an increase in the number of non-international armed conflicts and the means and methods subsequently altering. The law of Non-International Armed Conflict is governed separately and as such it needs to be established whether the required intelligence standard is identical.

1.3.2 Restriction on War

The primary purpose of IHL is to limit warfare, as the Australian Defence Manual succinctly states: "While it is the military objective of all commanders to win in battle, there must be limits to the means and methods which may be used."[20] The most well-recognised initial effort at codifying the law is the Lieber Code of 1863.[21] It is an early example of how the law has tried to manage a balance of military necessity and humanity. While Art. 15 states: "Military necessity admits of all direct destruction of life or limb of 'armed' enemies, and of other persons whose destruction is incidentally 'unavoidable' in the armed contests of the war" the humanitarian limitation is placed immediately afterward in Art. 16. Here it states that, "military necessity does not admit of cruelty." This Code was written by an academic and adopted as an official US War Department publication. It was designed to operate

[19] Mary Kaldor, *New & Old Wars* (2nd edn, Stanford University Press 2007).
[20] Australian Defence Force, *Law of Armed Conflict Manual* (Australian Defence Force 1996) ADFP 37, 551.
[21] Instructions for the Government of Armies of the United States in the Field [Lieber Code] 1863.

during the American Civil War and has been accepted as a reliable account of what was considered customary law at that time.[22] It demonstrates not only the premise of military necessity but also early formulations of the principle of distinction.[23]

The earliest international agreements and treaties to limit the conduct of hostilities are the Hague Conventions.[24] This, so-called 'Hague Law', is the body of law that primarily limited the means and methods of warfare prior to the Geneva Conventions and their Additional Protocols in 1977.[25] Nevertheless, this early body of treaties did not explicitly provide a principle of distinction, with Article 25 providing: "The attack or bombardment, by whatever means, of towns, villages, dwellings, or buildings which are undefended is prohibited."[26] As such, Hague Law did not explicitly protect civilians as a group and this was developed through the later Geneva Law.

The protection of civilians is found primarily in the Geneva Conventions of 1949,[27] which are mainly concerned with identifying certain protected individuals and defining the protections they are afforded. The most significant treaties concerning methods and means of the conduct of hostilities are Additional Protocols I and II of 1977 (API and APII). [28] These Protocols significantly codified the law at that point and are now, in certain respects,[29] considered a reflection of customary law. API provides a definition of a military objective,[30]

[22] William H Boothby, *The law of targeting* (OUP 2012) 14.
[23] Lieber Code (n 21) Art. 22.
[24] Comprising the range of treaties and declarations adopted in The Hague at two international peace conferences in 1890 and 1907.
[25] Geneva Convention for the Ameliorations of the Condition of the Wounded and Sick in Armed Forces in the Field [First Geneva Convention] [GCI] (12 August 1949) 75 UNTS 31; Geneva Convention for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea [Second Geneva Convention][GCII] (12 August 1949) 75 UNTS 85; Geneva Convention Relative to the Treatment of Prisoners of War [Third Geneva Convention][GCIII] (12 August 1949) 75 UNTS 135; Geneva Convention Relative to the Protection of Civilian Persons in Time of War [GCIV] [Fourth Geneva Convention] (12 August 1949) 75 UNTS 287; Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I) of 8 June 1977; Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of Non-international Armed Conflicts (Protocol II) of 8 June 1977.
[26] Hague Convention (IV) respecting the Laws and Customs of War on Land and its annex: Regulations concerning the Laws and Customs of War on Land. The Hague, 18 October 1907.
[27] GCI, GCII, GCIII, GCIV (n 25).
[28] API, APII (n 25).
[29] the status of certain provisions held within the Protocols are still the subject of discussion.
[30] API Art. 52; although this is not without controversy, see 5.8.

prohibits indiscriminate attacks[31], and provides for general rules to protect civilians. Significantly it also provides a definition of what precautions should be taken prior to, and during, an attack by both attackers and defenders.[32]

The primary issue with the Additional Protocols as a source of binding treaty law is their applicability only to signatory states. Unlike the Geneva Conventions and The Hague Regulations there are significant gaps in ratification which enjoin the international community to rely on customary law and practice. Further, the Protocols are employable in either International Armed Conflict (IAC)[33] or Non-International Armed Conflict (NIAC).[34] With the significant increase in NIAC, the somewhat weaker and less defined, certainly less codified, law of NIAC is increasingly being challenged.[35] For the principles provided for in API to be generally applicable to the conduct of operations, they need to be established as customary.

Therefore, the codification that has been achieved in IHL only provides one source of IHL, and customary law could almost be described as the meat on the bones of the, largely skeletal, framework of treaty law. Rogers aptly reflects that: "the great principles of customary law, from which all else stems, are those of military necessity, humanity, distinction and proportionality."[36] That customary law is permitted to develop the law in this way is due, in large part, to the so-called Martens Clause. Found in the preamble to Hague Convention II of 1899, it states that in cases where the current regulations aren't sufficient then belligerents "remain under the protection and the rule of the principles of the law of nations."[37] Thus, to establish an intelligence standard one must understand what those principles are and what the legal framework is that governs the methods and means of warfare relevant to targeting.

The most significant principles for targeting are those of distinction, proportionality and precautions. These three principles as defined in API determine the balance that must be

[31] API Art. 51; 2.2.2.
[32] API Art. 57 and Art. 58; 2.3.
[33] APIl.
[34] APII.
[35] See for example David Turns, 'At the "Vanishing Point" of International Humanitarian Law: Methods and Means of Warfare in Non-international Armed Conflicts' (2002) German YB Int'l Law .
[36] APV Rogers, *Law on the battlefield* (Manchester University Press 2012) 3.
[37] It can also be found in the Geneva Conventions of 1949, API and the Weapons Convention of 1981.

struck between military necessity and humanity. They combine to limit operations such that these may only be conducted against military objectives.[38] Any collateral damage must not be *excessive* in relation to the direct and concrete advantage expected by the targeting of the military objective.[39] Further, the commander, or individual planning or executing the attack must take all practical steps and do everything practically possible to ensure that the attack remains lawful before and during the attack.[40]

In order to comply with these three fundamental principles at the heart of IHL, the maintenance of a sufficient level of knowledge about the area of battle is crucial. It is only through intelligence that it is possible for armed forces to determine who, or what, is qualified as a legitimate military objective.[41] This intelligence is then the only means by which a commander can make the decision as to whether an attack is likely to remain proportionate, and thus not be considered indiscriminate.[42] It is also the continuing monitoring of this situation that will enable the attack to be suspended or cancelled.[43] Therefore, I contend that the level of intelligence required by IHL is substantial and given the development of technology in the intervening decades, it is important to establish if it has evolved.

1.3.3 The Significance of Intelligence

Intelligence operations are extremely sensitive and are approached at strategic, tactical and operational levels. This research study is primarily concerned with the tactical and operational types of intelligence collection and analysis as this is the part of the operation that is significant from a final targeting position. Furthermore, the intelligence machinery of states is frequently segregated between civilian and military operations. This complexity is highlighted by a review of the spending figures of the states in question.

[38] API Art. 48; 2.2.1.
[39] API Art 51(5)(b); 2.2.2.
[40] API Art. 57; 2.3.
[41] API Art 52(2); 2.2.1.2.
[42] API Art 51(4)(a); 2.2.
[43] API Art 57(2)(b); 2.3.

Since 2007, the US has published the budget figures for intelligence collection, both for their National Intelligence Program and Military Intelligence Programs.[44] This transparency enables us to see that in 2018 the US spent $22.1bn on military intelligence programmes, a rise from $18.4bn in 2017. To put this into context, the total US defence budget for 2017 was $609bn, with total intelligence spending of $73bn. The ability to be able to assess defence spending in the US is indicative of the level of transparency afforded by the state. It also indicates the significant amount of money that the US invest in their intelligence 'machine' and the technological developments thereof.

In comparison the UK takes a much less transparent approach to its intelligence spending. The three main intelligence services of MI5, SIS (also known as MI6) and GCHQ are funded from the Single Intelligence Account, which does release its accounts every year.[45] However, the individual budgets of each of these services are kept secret for purposes of national security. Furthermore, the organisations can obtain funding from other sources such as the Conflict, Stability and Security Fund (CSSF)[46] thus undermining any realistic method to obtain accurate figures. For the latest set of accounts which are 2017-2018, the Single Intelligence Account is reported to have had a budget of £3m. The Defence Intelligence (DI) Service, which is significant for the discussion on military spending, is a separate body and of the four major intelligence services is the most transparent. However, as it forms part of the larger MOD budgets, it can still be difficult to ascertain exactly what spending relates to military intelligence.[47] Therefore, for the discussion of technology within military operations it would be overly simplistic to take these figures in isolation. The lack of transparency, and opaque manner in which the UK provides them indicates the level of secrecy common

[44] This was a recommendation from the 9/11 Committee and enacted in 2007 by section 601 of the Implementing Recommendations of the 9/11 Commission Act (Public Law 110-53) see https://www.dni.gov/index.php/what-we-do/ic-budget accessed 10 August 2019.
[45] UK Cabinet Office, *Security and intelligence agencies financial statement 2017 to 2018* (6 September 2018) https://www.gov.uk/government/publications/security-and-intelligence-agencies-financial-statement-2017-to-2018 accessed 1 April 2019.
[46] UK Government, *Conflict, Stability and Security Fund* (last updated, 10 May 2018) https://www.gov.uk/government/publications/conflict-stability-and-security-fund-cssf/conflict-stability-and-security-fund-an-overview accessed 1 April 2019.
[47] For more on the difficulties presented by a lack of transparency in the figures see Megan Karlshoej-Pedersen, 'The Cost of Intelligence Sharing and the Value of Transparency' (12 July 2018) Oxford Research Group https://www.oxfordresearchgroup.org.uk/blog/the-cost-of-intelligence-sharing-and-the-value-of-transparency accessed 1 April 2019.

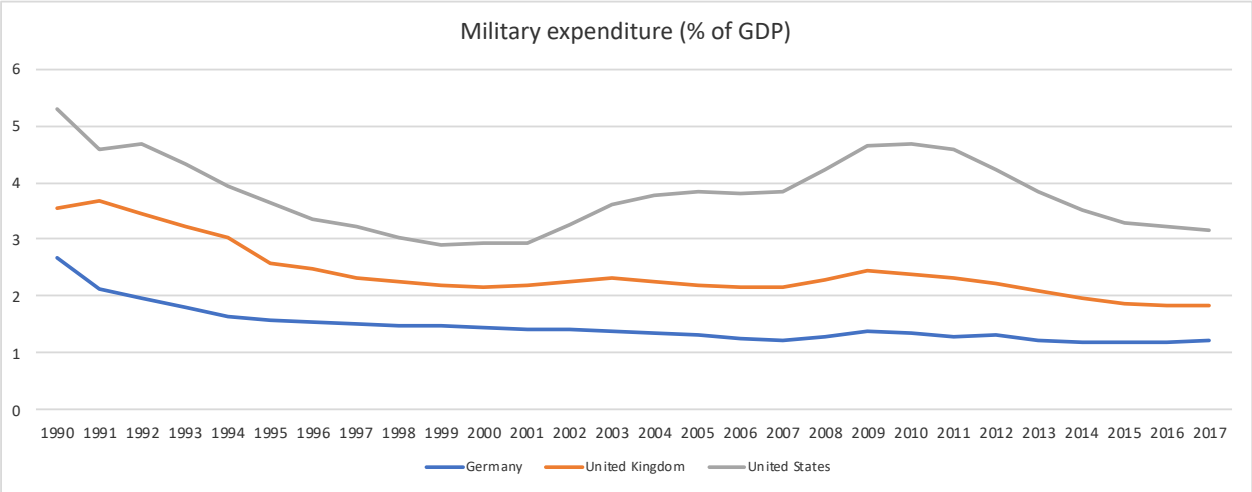
within the UK. It is difficult to determine with any certainty how much funding is given to the intelligence services, and thus it can be difficult to ascertain the 'value' placed on this. Nevertheless, as will be seen, the close relationship held between the US and UK indicates that there is a substantial resource available to military planners, which is significant for the development of the precautionary principle in IHL.

It is perhaps better to compare the overall defence budget of the nations in question, which are readily available and comparable. In 2016, the US had the world's largest defence budget at $604.5bn, the UK was fifth in the world spending $52.5bn. The other state of particular interest to this comparison is Germany, who, in 2016, spent $38.3bn.[48] Contextually, NATO expects its members to spend 2% of GDP on defence each year, with Germany frequently falling behind in this expectation.[49] As can be seen from the following figures (see Fig. 1) the US has consistently spent more than this expected amount, with the UK only dropping below this level in the last few years. Germany, however, dropped below this target in 1992 and has not demonstrated any increase since this time. It is perhaps not surprising that there is reluctance to spend heavily on defence in Germany, nor that this drop happened just after reunification; however, the cumulative effects of the difference in spending power translate to differences in battlefield technology.

[48] Ministry of Defence, *UK Defence in Numbers* (September 2017) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/652915/UK_Defence_in_Numbers_2017_-_Update_17_Oct.pdf accessed 4 May 2019.

[49] Deutsche Welle 'Germany defensive on NATO, points to existing spending plans' (4 April 2019) https://www.dw.com/en/germany-defensive-on-nato-points-to-existing-spending-plans/a-48200726 accessed 4 May 2019. Further, Robin Emmott, 'NATO edges towards Trump's spending demands, Germany lags' (14 March 2019) *Reuters World News* https://uk.reuters.com/article/uk-nato-spending/nato-edges-towards-trumps-spending-demands-germany-lags-idUKKCN1QV1FF accessed 4 May 2019.

Fig. 1



1.3.4 A Definition of Intelligence

In any research project it is important to define what approach has been taken and utilise a definitional term. As stated, this work is concerned to establish what, if any, intelligence standard has been developed within military operations for modern warfare. Intelligence however can hold a myriad of meanings. The Oxford English Dictionary gives two useful definitions: "the ability to acquire and apply knowledge and skills" and "the collection of information of military or political value."[50] Both of these are relevant for this particular study but intelligence is much more than mere information gathering.[51] It is reasonable to expect that a research project of this nature in 2019 would interact with the field of artificial intelligence and so the description created by Lenat and Feigenbaum is particularly apt. ""Intelligence is the power to rapidly find an adequate solution in what appears *a priori* to be an immense search space."[52] Defining intelligence is difficult and contextual, as Warner

[50] Oxford English Dictionary online https://www.lexico.com/en/definition/intelligence accessed 10 August 2019.
[51] The UK and US have a different understanding of what the 'product' of intelligence is, for more on this see Philip Davies, 'Ideas of Intelligence: Divergent national concepts and institutions' in Christopher Andrew, Richard Aldrich and Wesley Wark (eds.) *Secret Intelligence: A Reader* (Routledge 2009) 12-18.
[52] D. Lenat and E. Feigenbaum, 'On the thresholds of knowledge' (1991) 47 Artificial Intelligence 185.

remarks: "… so far no one has succeeded in crafting a theory of intelligence… if you cannot define a term of art, then you need to rethink something."[53]

For this research, it should be understood as the product of the intelligence cycle, rather than the source data or information. The term 'intelligence standard' is used by the author to describe the amount of knowledge that is legally required in the verification of a target throughout the targeting cycle. It has been used specifically as it is not purely the moment of attack that is critical to verification but also the processes prior to, during, and following an attack that are argued to be intrinsic to meeting the legal standards under IHL. Furthermore, the intelligence processes are not purely military, and are much more holistic than the battlefield decisions that can frequently be associated with verification.

Intelligence as information is collected by a number of agencies throughout each state, with the majority of them formally civilian.[54] The creation of a new phraseology also enables an exploration of what this means to combatants/operatives without automatically linking it to the legal standard of target verification.[55] This is significant because studies of intelligence rarely touch upon the legal standards for warfare, therefore the two notions need to be extricated from one another to ensure clarity in the analysis. It should be noted however that this research is fundamentally concerned with the legal application of an intelligence standard during armed conflict, rather than as a strategic foreign policy issue, or within the context of issues such as counter-terrorism and transnational criminal law.

The two primary sources of intelligence are, as they have always been, human intelligence sources (HUMINT) and technical intelligence collection (TECHINT). Technical intelligence refers to a range of sources and techniques using advanced technology, as opposed to human agents, to collect and analyse intelligence data. Although this description may appear to be rooted in such technologies as unmanned aerial vehicles (UAVs) and military satellites, the origins of technical intelligence are far older, with this title being a catch-all for the many sources that lie beneath. The history of intelligence collection is intricately

[53] Michael Warner, 'Wanted: A definition of intelligence' in Christopher Andrew, Richard Aldrich and Wesley Wark (eds.) *Secret Intelligence: A Reader* (Routledge 2009) 3.
[54] Examples for this research project include the USA – CIA, NSA; UK – GCHQ, SIS; and, Germany - BND.
[55] Jean-Marie Henckaerts & Louise Doswald-Beck, *Customary International Humanitarian Law* (CUP 2005) [CIHL] Vol. 1 Rules 55, Rule 16.

linked to the development of technology more widely. It could be said that as soon as a new form of technology is created it is instantly turned to military application, thus each and every source of intelligence has been, at the very least, influenced heavily by technology. The developments of technology and intelligence sources are interwoven as will be seen. The significance of these developments is pertinent to the ability of IHL to govern modern conduct, with the existing principles being codified without any real ability to foresee the modern abilities now available to gather information.

1.3.5 Eyes in the Sky: The Development of Photographic Intelligence (IMINT/PHOTINT)

Imagery intelligence (IMINT) involves the use of long-range photography to obtain intelligence (PHOTINT), this includes optical, infrared, radar and multi-spectral imagery. It is described by the US Naval War College as including "representations of objects reproduced electronically or by optical means on film, electronic display devices, or other media. Imagery can be derived from visual photography, radar sensors, infrared sensors, lasers and electro-optics."[56] This form of technological intelligence collection was born almost as early as aviation itself.[57]

The technological development that has been needed to provide quality and useful imagery intelligence is multi-dimensional. Camera equipment needed to be fast, reliable and light, to be capable of taking accurate and valuable pictures. Meanwhile, the platform (aircraft) needed to be able to fly high and fast enough to avoid being an easy target, with range becoming an increasing consideration. These compromises and challenges have continued to this day, with each new development attempting to better the efforts of the opposing force. For example, by the time of the Korean War aircraft were being developed specifically for photoreconnaissance. The RF-80 (the R signifying reconnaissance) was a variant of the F-

[56] US Naval War College, 'Intelligence Studies: Imagery/Geospatial Intelligence (IMINT/GEOINT)' https://usnwc.libguides.com/c.php?g=494120&p=3381562 accessed 11 April 2019.

[57] Even before this point balloons had been used as aerial observation posts, notably by the French Republic in 1794, and later by the Union army in the American Civil War. Neither achieved a great success and both armies later disbanded their fledgling 'air forces'. See William E Burrows, *Deep Black: Space Espionage and National Security* (Random House 1987) 26-28.

80 Shooting Star Fighter/Bomber. As Brig. Gen. George W. Goddard, an early pioneer of aerial reconnaissance, said: "Korea not only presented a different kind of war for military planners and politicians, it also presented a different kind of place for aerial reconnaissance to prove itself."[58]

So far, the examples presented have all been from active wartime, this is no coincidence. In wartime the military demands for conducting this kind of aerial photography are much higher, whilst the political ramifications are far fewer. Therefore, it could be thought that following the end of WWII the demand for photoreconnaissance would have diminished.

However, the difficulties the US faced in collecting human intelligence information against the Soviet Union, and into the Cold War, led to increased interest in more strategic intelligence operations. As Gartoff says: "Imagery intelligence (IMINT) was crucial to US evaluation and understanding of Soviet military developments and capabilities (for example, assessments of Soviet strategic missile capabilities were critically dependent on satellite PHOTINT and the monitoring of telemetry emitted during missile tests)."[59] These requirements encouraged a significant part of the early space programmes including the development of surveillance satellites and specialist land, air and sea based intelligence platforms.[60]

The US and UK continued to develop strategic platforms such as the U-2 and the SR-71 (Blackbird) aircraft. These aircraft were specifically developed as reconnaissance platforms and were extremely capable. The U-2 first entered service in 1955 and was still in active service during Operation Iraqi Freedom in 2003.[61] The Blackbird was specifically developed as a long-range strategic reconnaissance aircraft and was, and perhaps arguably remains, one of the most capable photoreconnaissance platforms ever to fly. It had in-air refuelling

[58] The National Museum of the US Air Force at https://www.nationalmuseum.af.mil/Visit/Museum-Exhibits/Fact-Sheets/Display/Article/196084/reconnaissance/ accessed 11 April 2019.
[59] Raymond Gartoff, 'Foreign Intelligence and the Historiography of the Cold War' (2004) 6:2 Journal of Cold War Studies 30.
[60] AN Shulsky and GJ Schmitt, *Silent Warfare: Understanding the World of Intelligence* (Potomac Books Inc. 2002) 25.
[61] Air Force Technology, 'U-2 High Altitude Reconnaissance Aircraft' https://www.airforce-technology.com/projects/u2/ accessed 13 April 2019.

capabilities and excellent optical equipment enabling it to be an incredibly valuable intelligence platform.[62] The close relationship of the UK and the US in the development of these platforms is indicative of their joint approach to intelligence gathering. It is significant for the purposes of developing norms in IHL as, although these states have ratified different IHL treaties,[63] they have frequently operated in coalitions together. Any normative development of the precautionary principle would thus need to consider the relevance of this.[64]

As has been noted a number of these aerial reconnaissance platforms remained in service long after the Cold War, and presented the basis for considerable future development, serving in many of our modern conflicts. Perhaps, aside from significant developments in satellite technology, the other major introduction was that of the so-called drone, or more accurately the unmanned aerial vehicle (UAV). These first saw significant use during the Balkan conflict in the mid-late 1990s performing as effective Intelligence, Surveillance and Reconnaissance (ISR) platforms. By this time cameras had been replaced by electro-optical sensors[65] and UAVs were able to provide real-time downlink of video to battlefield commanders. Furthermore, the development of synthetic aperture radar (SAR) imagery now allowed surveillance to be carried out at night and through cloud cover. As these platforms have developed, so has the scope of their role, in that they are no longer expected to provide purely imagery (IMINT), but also engage in obtaining other data such as geolocation intelligence (GEOINT), signals intelligence (SIGINT), communications intelligence (COMINT) and a variety of other intelligence information.

1.3.6 Big Brother is Listening: SIGINT, COMINT, ELINT and the Myriad Signals of Change

Signals Intelligence (SIGINT) is explained as "intelligence gained by exploiting an adversary's use of the electromagnetic spectrum with the aim of gaining undetected first hand

[62] For more see Lockheed SR-71 Blackbird at https://www.sr-71.org/blackbird/sr-71/ accessed 13 April 2019.
[63] Although the US has signed the Additional Protocols it has not, as yet, ratified them into law, for more see 2.4.
[64] 4.7.
[65] Similar to those found in modern digital cameras.

intelligence on the adversary's intentions, dispositions, capabilities and limitations."[66] It is comprised of three different, but interrelated fields, that include "communications intelligence (COMINT), electronic intelligence (ELINT), and foreign instrumentation signals intelligence (FISINT), however transmitted; or more simply as intelligence derived from communications, electronic, and foreign instrumentation signals."[67] It is best understood as the intelligence that can be obtained through the interception, processing and analysis of differing forms of electro-magnetic waves in order to understand foreign operations, whether that be of a strategic, tactical or operational nature.

Today the collection of signals intelligence is the remit of organisations such as the NSA[68] and GCHQ,[69] with organisations such as the Bundesnachrichtendienst (BND) being responsible for this in Germany. The vast amount of data that is collected by these organisations may imply that signals intelligence is a modern phenomenon, however, much like aerial photoreconnaissance it has a long history.[70] Although the British made significant inroads into the development of signals intelligence during WWI, it was WWII that was where it demonstrated its true value. In combination with cryptanalysis,[71] signals intelligence was arguably "more important than any other source of intelligence for the major powers, both in peace and in war."[72]

The extent of the German and Axis successes are less well understood. Even before the end of the war the allies had formed the TICOM[73] project which was designed to investigate and exploit German cryptologic organisations, operations, installations and personnel as soon as possible after the fall of the German armed forces.[74] As the synopsis of their lengthy report

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[66] US Marine Corps, Marine Corps Warfighting Publication (MCWP) 2-15.2, *Signals Intelligence* (June 1999) 1-1.
[67] US Dept of Defence, *Dictionary of Military & Associated Terms* https://usnwc.libguides.com/c.php?g=494120&p=3381559 accessed 14 April 2019.
[68] National Security Agency, USA.
[69] Government Communication Headquarters, UK.
[70] GCHQ, 'A short history of sigint in Scarborough' (9 April 2016) https://www.gchq.gov.uk/information/short-history-sigint-scarborough accessed 11 August 2019.
[71] Such as that famously carried out at Bletchley Park, UK.
[72] Shulsky and Schmitt, *Silent Warfare* (n 60) 27.
[73] Target Intelligence Committee.
[74] Army Security Agency, *European Axis Signal Intelligence in World War II as revealed by 'TICOM' investigations and by other prisoner of war interrogations and captured material, principally German'* (1 May 1946) Declassified by the NSA on 6 January 2009 https://www.nsa.gov/news-features/declassified-documents/european-axis-sigint/ accessed 16 April 2019.

affirms, TICOM efforts were impressive, they obtained "..approximately 4,000 separate German documents were captured. This material weighed five tons…. One hundred and ninety-six reports, based on interrogation of German signal intelligence personnel."[75] At this point in history it is clear that Germany possessed technical capabilities equal, if not superior in certain aspects, to those possessed by the Allied forces of the US and UK.

The extent of signals intelligence operations in WWII was such that the British historian, Christopher Andrew says: "No history of the Second World War nowadays fails to mention the role of the Anglo-American codebreakers in hastening victory over Germany and Japan. By contrast, most histories of the Cold War make no reference to Sigint at all."[76] The division of Germany and the subsequent Cold War played a significant role in how technological military intelligence capabilities are shaped today. This differential development is important for the analysis of the application of IHL in today's modern, coalition, conflicts.

1.3.7 Germany: Civilian Power Constraints

The conflict in the Balkans of the 1990s was particularly significant for Germany as it was their first military operation since the reunification process, and thus since the end of WWII. The decision to enter this conflict was far from simple for the formerly 'civilian power'. Germany had been extremely reluctant to become involved in the first Gulf War (Operation Desert Storm) but the "… humiliating experience of standing by while German hostages were taken as a human shield and Iraqi Scud missiles hit Israel not only left a moral void; it also contributed to a sober reappraisal of the 'culture of restraint.'"[77]

During the 1990s Germany underwent a widening of their international role, described by Philippi as something akin to 'salami tactics' – removing slice after slice of Germany's

[75] Ibid, Synopsis 4.
[76] Christopher Andrew, 'Conclusion: An Agenda for Future Research' (1997) 12:1 Intelligence and National Security 228.
[77] Dieter Dettke, *Germany Says "No": The Iraq War and the Future of German Foreign and Security Policy* (John Hopkins University Press 2009) 75.

hesitancy one mission at a time.[78] Furthermore, the leadership of Chancellor Schröder and Foreign Minister Fischer took the opportunity to reinterpret German post-war history, as a means by which to take greater responsibility within the international community. As Miskimmon comments: "Fischer's reframing of the guiding principle of German foreign policy not as 'never again war,' but as 'never again genocide or Auschwitz' was a call for human rights to be given priority as a chief responsibility of foreign policy."[79] Thus, this rhetoric enabled an increasing role in the Balkan conflict, justified as a peacekeeping mission to prevent the atrocities that were becoming an intrinsic part of the conflict.[80]

In July 1994 the German Federal Constitutional Court issued a significant decision in interpreting the Basic Law (*Grundgesetz*). The decision determined that the Bundeswehr may take part "… in a deployment taking place in the framework of operations of NATO and the Western European Union (WEU) intended to implement decision of the UN Security Council."[81] Therefore, pursuant to Art. 24(2) of the Basic Law the state can enter into a system of mutual collective security to maintain peace, and thus limit its sovereign powers. This extends such that: "German soldiers may also be integrated into NATO forces that are deployed as part of a UN operation."[82] However, any deployment still obliges the Government to request approval for deployments from the Bundestag. As will be demonstrated by the analysis of the Kunduz *Fuel Tankers* case,[83] the role of the domestic legal system in Germany is significant for the application and development of the precautionary principle of IHL.[84]

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[78] Nina Philippi, *Bundeswehr-Auslandseinsätze als außen- und sicherheitspolitisches Problem des geeinten Deutschland, Europäische Hochschulschriften*, ser. 31, 'Politikwissenschaft', no. 318 (Frankfurt am Main: Peter Lang 1997).
[79] Alister Miskimmon, 'Falling into line? Kosovo and the course of German foreign policy' (2009) 85:3 International Affairs 561, 563.
[80] Spencer Kimball, 'The Balkan Dilemma: Germany returns to military action' (28 December 2010) *DW* https://www.dw.com/en/the-balkan-dilemma-germany-returns-to-military-action/a-6309598 accessed 7 August 2019.
[81] *Bundesverfassungsgericht*, 'Statement by the Press Office of the Federal Constitutional Court' (12 July 1994) Press Release No. 29/1994 https://www.bundesverfassungsgericht.de/SharedDocs/Pressemitteilungen/EN/1994/bvg94-029.html accessed 30 April 2019.
[82] Ibid.
[83] 3.1.
[84] API Art. 57; 2.3.

Germany had been involved in providing intelligence information for the Balkans since the early 1990s and is reported to have established a joint intelligence centre in Austria. This joint centre, established by the Bundesnachrichtendienst (BND),[85] the CIA and the NSA, was based in Augsburg (Germany) and combined signals intelligence with human intelligence gathered from the Balkans. By 1995, Wiebes reports that the BND were flying "daily SIGINT missions with a Brequet Atlantique aircraft over the Adriatic."[86] This relationship led to a valuable tripartite intelligence sharing agreement between the American, German and French Air Forces in which the German Luftwaffe were tasked with conducting signals intelligence operations over the Adriatic in support of ground operations in Bosnia, the French provided the same over the Mediterranean. The three agreed to share intelligence which was then distributed through the headquarters of the NSA/CSS Europe in Stuttgart.[87] These intelligence agreements are wide-spread and are generally developed for different situations according to need. Therefore, this demonstrates that there can be disparity in the information available to different states within a conflict and raises challenges to IHL in the form of coalition operations. This could imply that states are treated differently by IHL, despite it traditionally being framed as a symmetric body of law.[88]

1.3.8 Untying the US and UK

Since the end of WWII, the US and UK have maintained a close relationship regarding signals intelligence. The UKUSA agreement that was created in June 1948, which also included Australia, Canada and New Zealand[89] has become known as the 'five-eyes' alliance. This treaty was long believed to be the linchpin of Anglo-American dominance over the realm of signals intelligence, but it is not a sole treaty, and it was not concerned only with signals

[85] The Federal Intelligence Service of Germany, primarily responsible for gathering SIGINT formed on 1 April 1956 and reporting to the Federal Chancellor. For more information see https://www.bnd.bund.de/EN/Home/home_node.html accessed 01 May 2019.
[86] Cees Wiebes, *Intelligence and the War in Bosnia 1992-1995* (LIT Verlag, Münster 2003) 237.
[87] Ibid 238.
[88] Mark McMahon, 'Laws of War' in Samantha Besson, and John Tasioulas (eds.) *The Philosophy of International Law* (OUP 2010).
[89] Jason Hanna, 'What is the Five Eyes intelligence pact?' (26 May 2017) *CNN* https://edition.cnn.com/2017/05/25/world/uk-us-five-eyes-intelligence-explainer/index.html accessed 10 August 2019.

intelligence. As Aldrich comments: "It is, rather, a sigint and security network. Security agreements on physical control of the sigint product and on protecting the security of communications were perhaps the most important aspects of the UKUSA network."[90] Nevertheless, despite the actual detail of the agreements remaining one of the most highly classified secrets, and so hard to assess these agreements did result in the sharing of "more secrets than any two independent powers had ever shared before."[91] Therefore, the natural consequence of these agreements is one which has considerable alignment in the quality and quantity of intelligence available for military forces making them difficult to extricate for analysis.

However, despite these intelligence sharing agreements, that are reportedly still effective today,[92] the differences between these two major powers in their approach to intelligence is probably far more telling. The creation of the two comparable intelligence agencies, the CIA (Central Intelligence Agency) and SIS (Secret Intelligence Service, also known as MI6) provides an interesting insight into the approaches of the two nations.

The CIA was the first foreign-intelligence agency in any major power to be created publicly by legislative act.[93] This was well received by Congress given the fresh memories of Pearl Harbour and World War II. Representative Ralph Edwin Church (R, Illinois) said: "…it is somewhat reassuring to have this emphasis placed on intelligence as part of our national security."[94] The open disclosure and debate upon the very forming of the CIA is diametrically opposed to the approach taken in Britain, where the very existence of the SIS was not publicly confirmed until the early 1990s.[95] The secret intelligence services in the UK

[90] Richard Aldrich, *GCHQ: The uncensored story of Britain's most secret intelligence agency* (Harper Press 2010) 90.
[91] Christopher Andrew, *The Secret World: A history of intelligence* (Penguin 2018) 671.
[92] This is a reasonable presumption based on the work of Aldrich, GCHQ (n 90) 89.
[93] It was created in 1947 by President Harry S Truman with the signing of the National Security Act. See the Central Intelligence Agency Act of 1949, Public Law 81-110 https://www.intelligence.senate.gov/sites/default/files/laws/ciaact1949.pdf accessed 10 August 2019.
[94] Quoted in Andrew, The Secret World (n 91) 677.
[95] See Tom Whitehead, 'The long walk out of the shadows for Britain's spy agencies' (11 October 2014) *The Telegraph* https://www.telegraph.co.uk/news/11155357/The-long-walk-out-of-the-shadows-for-Britains-spy-agencies.html accessed 10 August 2019.

trace their history back to 1909, where concerns over Germany's imperial ambitions led to Prime Minister, Herbert Asquith ordering the Committee of Imperial Defence to investigate. In response they created a secret service bureau which was soon split into home and foreign sections, and thus was the genesis for today's MI5 and MI6, and later GCHQ.[96]

It is quite clear then that the UK and US take fundamentally different approaches to the level of transparency they afford to intelligence and security services domestically. These political and cultural differences are prevalent in the way in which their militaries operate, and what level of transparency is thus available for the analysis of incidents during conflict. Nevertheless, despite difficulties in the intervening years[97] the intelligence alliance of the 'five-eyes' nations remain prevalent in military coalitions.[98] Therefore, it is not simple to separate them easily within military operations, however where this is possible and significant it has been done.

1.4 Conclusion

This background has demonstrated that the development of both IHL and intelligence operations owes a great deal to the end of WWII. The complex field of military intelligence, replete with a myriad of acronyms, has advanced considerably over the intervening decades. This has led to types of technology that could not have been foreseen by the drafters of the IHL treaties. Furthermore, the political concerns and constraints over peacetime security have led to a considerable number of security threats being considered to be from insurgency groups and non-state actors rather than all-out war.[99] The considerable leaps in technological abilities have led to a position of persistent surveillance

[96] For the official history of the SIS, see their own website at https://www.sis.gov.uk/our-history.html accessed 10 August 2019.
[97] See for example the discussions in Wiebes (n 86) 234.
[98] Authors discussions in October 2018 under Chatham House rules.
[99] Whether this will change in the near future with escalating tensions between western states and Iran and Russia remains to be seen. In time, and with the benefit of hindsight it may be possible to conclude that these intervening decades were part of a larger cycle of international relations. However, that is out with the scope of this thesis.

being possible across much of the globe by advanced states such as the US. Therefore, how this has developed the law, if at all, is significant.

The law itself is likely to only advance through customary developments[100] and general understandings of treaty provisions developed by courts, human rights bodies, international organisations and declarations. To establish the existence of customary law "it is necessary to ascertain whether there is a general practice among the states concerned that is accepted by them as law (*opinio juris*) among themselves."[101] Therefore, to be able to establish if the law concerning verification has changed as a result of the considerable development in technology for intelligence, surveillance and reconnaissance it is essential to understand state practice and commentaries during modern warfare. To be able to do so it is initially important to establish what legal principles and doctrine govern the methods and means of warfare.

[100] The agreement of international treaties is an extremely long and arduous task. It is possible that additional protocols to various treaties may be agreed upon, notably for the subject of lethal autonomous weapons. The high Contracting Parties to the Convention on the Prohibition or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to be Excessively Injurious or to Have Indiscriminate Effects (CCW) held a meeting in March 2019 to discuss lethal autonomous weapons systems and their implications and regulation, see https://www.giplatform.org/events/group-governmental-experts-lethal-autonomous-weapons-systems-gge-laws accessed 10 August 2019.

[101] United Nations, *Draft conclusions on identification of customary international law with commentaries* (2018) Yearbook of the International Law Commission, Vol. II, Part Two, conclusion 16(2) http://legal.un.org/ilc/texts/instruments/english/commentaries/1_13_2018.pdf accessed 8 August 2019.

Chapter Two

Intelligence Standards: The Invisible and Unwritten Pillar of International Humanitarian Law

2.1 Introduction

In order to understand the extent to which any intelligence standard is defined by IHL it is important to establish the aspects of law that govern targeting during armed conflict. This chapter will address the discussions surrounding aspects of IHL for targeting, as well as investigating any rules other than law that have been developed for guiding operational targeting.

The principles of IHL that are most relevant for the discussion on targeting practices are found in Hague law[102] provisions and the later Additional Protocols to the Geneva Conventions.[103] It is in these treaties that we find the legal parameters that govern the methods and means of warfare, which are intrinsic to targeting. Targeting is, at its heart, "…all about the requirements to distinguish between combatants and civilians who do not participate in the hostilities, and between objects that can lawfully be made the object of attack and civilian objects."[104] Therefore, it is through targeting that we find the direct relationship between IHL and intelligence gathering operations.

[102] This includes, Hague Convention (II) on the Laws and Customs of War on Land, 1899; Hague Convention (IV) on War on Land and its Annexed Regulations, 1907; Hague Convention (IX) on Bombardment by Naval Force, 1907. For more see ICRC, *Hague Conventions* https://casebook.icrc.org/glossary/hague-conventions accessed 10 August 2019.

[103] 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 [API]; 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 [APII] https://www.icrc.org/en/doc/resources/documents/misc/additional-protocols-1977.htm accessed 11 August 2019.

[104] William Boothby, *The Law of Targeting* (OUP 2012) 7.

During warfare it is prohibited to conduct attacks without information about the target and the surrounding area,[105] and so targeting needs to be based on some form of information or intelligence. Today the area bombing campaigns of World War II would be prohibited under IHL, even they were enacted with some form of knowledge, requiring what the military refer to as 'situational awareness'. The rationale behind the bombing campaigns conducted by the British RAF with the US Air Force, and by the German Luftwaffe, was to undermine morale and support for the war effort by targeting civilian cities. Whether or not these campaigns worked in practice is a discussion best left to historians, nonetheless they were based on gathered intelligence.[106]

In order to understand the current developments for targeting in IHL, and what standard is already established, this chapter will discuss the primary law that has been developed through treaty and custom. It should be noted that aside from consideration of spies and espionage there is no explicit mention of intelligence within the treaties establishing IHL.[107] The three IHL pillars of distinction, proportionality and precautions are fundamental to any discussion on targeting and have been developed and understood by militaries around the world.

To understand how they have been applied in practice, it is important to look at operational doctrine which converts these IHL principles into workable standards for military practitioners. The primary source for these operational guidelines is the rules of engagement. Like the vast majority of targeting practice by states, rules of engagement are classified and so it is only possible to look at those aspects that have over time been declassified or have emerged in military manuals or through the media.[108]

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[105] API Art. 51(4). The quantity and quality of information may vary dependent on the type of targeting operation, for example situations of immediate self-defence would likely require less information than a pre-planned aerial bombardment of a military target.

[106] For a discussion of the area bombing campaigns see Dominic Selwood, 'Dresden was a civilian town with no military significance. Why did we burn its people?' (13 February 2015) *The Telegraph* https://www.telegraph.co.uk/history/world-war-two/11410633/Dresden-was-a-civilian-town-with-no-military-significance.-Why-did-we-burn-its-people.html accessed 10 August 2019 .

[107] Hague Regulations 1907, Art. 29; API 46(2).

[108] Defence Command Denmark, *Military Manual on international law relevant to Danish armed forces in international operations* (Danish Ministry of Defence, September 2016) 7.3.

Finally, the chapter will look at a specific aspect of military doctrine, known as positive identification or PID. This is important as it is the final aspect of the link between targeting law and information gathering operations so it is able to provide the best insight into what could realistically be seen as a state's understanding of the verification standard under IHL, or an intelligence standard.

2.2 Three Pillars of IHL

At its heart IHL is concerned with establishing a balance between military necessity and humanity. The concept of 'limited warfare' is understood to require "every belligerent to strike a balance between the conflicting concerns of humanity and military necessity."[109] Thus, the principles of IHL affirm and define the limitations of military operations. The prohibition on targeting the civilian population is "well-established in customary International law and is based on the principles of distinction, precaution and protection… The principle of protection ensures that the civilian population and individual civilians enjoy general protection against dangers arising from military operations. Together these three principles form the foundation of international humanitarian law."[110] In addition to these I would suggest that the principle of proportionality is also a fundamental precept of IHL; providing the legal guidance for the balance between military necessity and humanity.[111] Therefore, through the principles of distinction, proportionality and precautions it should be possible to establish the lawful limits on military operations.

2.2.1 The Principle of Distinction

In order to be able to protect the civilian population during armed conflict the first step that IHL takes is in the form of the principle of distinction. The significance of the principle is outlined by Dinstein who states that it "constitutes the underpinning of international humanitarian law (IHL) in the sense that, if you were to remove it, the entire legal edifice

[109] Stefan Oeter, 'Methods and Means of Combat' in Dieter Fleck (ed.) *The Handbook of International Humanitarian Law* (3rd edn. OUP 2013) 122.
[110] *Prosecutor v Milošević (D)* (Trial Judgment) ICTY-98-29/1-T (12 December 2007) 941.
[111] Yoram Dinstein, 'Direct Participation in Hostilities' (2013) 18 Tilburg Law Review 3, 5.

might collapse."[112] The OED defines distinction as "the action of distinguishing or discriminating; the perceiving, noting or making a difference between things."[113] Therefore, the principle of distinction as established under IHL determines that a difference must be established between combatants and non-combatants (civilians). It is now reflected in Art. 48 of API, which states that: "the parties to the conflict shall at all times *distinguish* between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives."[114] (emphasis added)

The reliance on the principle of distinction is found throughout IHL. During the late 1960s and early 1970s, prior to the enactment of the Additional Protocols, the UN General Assembly held that "in the conduct of military operations during armed conflict, a distinction must be made at all times between persons actively taking part in the hostilities and civilian populations."[115] The customary nature of the principle of distinction was affirmed by the International Court of Justice in its Advisory Opinion of 1996 on *The Legality of the Threat or Use of Nuclear Weapons,*[116] in which it stated that this was one of the "cardinal principles contained in the texts constituting the fabric of humanitarian law" and one of the "intransgressible principles of international customary law."[117]

The customary nature of the principle of distinction was affirmed by the ICTY stating that warring parties are obliged to "distinguish *at all times* between the civilian population and combatants, between civilian objects and military objectives and accordingly to direct military operations only against military objectives."[118] Therefore, irrespective of the type of conflict all parties to an armed conflict are irrefutably required to maintain distinction in the conduct of hostilities. As such it is imperative to understand what IHL determines as a

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[112] Ibid 3.
[113] Oxford English Dictionary Online https://www.oed.com/view/Entry/55674?redirectedFrom=distinction#eid accessed 10 July 2020
[114] API Art. Art 48; further evidenced in the draft of AP II at Art. 24(1) which was later dropped prior to ratification.
[115] UN General Assembly Res. 2675 [XXV] 1970 at 2, also see UN General Assembly Res. 2444 (1968), UNGA Res. 2675 (1970), UNGA Res. 2673 (1970), UNGA Res. 2674 (1970).
[116] *Advisory Opinion on Legality of the Threat or Use of Nuclear Weapons* (International Court of Justice) 1996.
[117] ibid at 78-79.
[118] *Prosecutor v Kordić and Čerkez* (Appeals Judgment) ICTY-95-14/2-A (17 December 2004) 54. Affirmed *Prosecutor v Galić* (Appeals Judgment) ICTY-98-29-A (30 November 2006) 190.

civilian object. As Sassòli eloquently states: "the principle of distinction is practically worthless without a definition of at least one of the categories between which the attacker must distinguish."[119] The two main categories are military objectives and those which are civilian or hold protected status under IHL.[120]

2.2.1.1 Civilians, Organised Armed Groups and Direct Participation in Hostilities

The Geneva Conventions provide some guidance as to certain groups of protected individuals. The first Geneva Convention is concerned with the protection of the sick and wounded on land. Art. 12 states, "members of the armed forces and other persons…. who are wounded or sick, shall be respected and protected in all circumstances."[121] This is a clear protection for a defined group of individuals and is complemented by the second Convention which protects the wounded, sick and shipwrecked at sea. The third Convention details the protections entitled to prisoners of war and the fourth extends protection to civilian persons in time of war. Additionally, Common Art. 3 provides protection during NIAC extending coverage to "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'…"[122]

Although it may have been simpler to continue to provide a definition of what is not subject to legitimate attack, IHL has taken the approach of gradually attempting to define what constitutes a military objective. This is likely as a result of the definition of civilians and civilian objects in the negative, such that all objects which aren't military are to be considered civilian.[123] The 1987 Commentary to the Additional Protocols remarks: "In other words, apart from members of the armed forces, everybody physically present in a territory is a civilian."[124] However, this remark should be viewed in the context of an IAC due to the

[119] Marco Sassòli, *Military Objectives* (Max Planck Encyclopedia of Public International Law, Oxford Public International Law 2015) https://opil.ouplaw.com/view/10.1093/law:epil/9780199231690/law-9780199231690-e334 accessed 20 August 2019.
[120] API Art. 52(2); 2.2.1.2.
[121] Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field of 12 August 1949, Art. 12.
[122] Geneva Convention Relative to the Treatment of Prisoners of War of 12 August 1949, Art. 3.
[123] API Art. 50.
[124] Yves Sandos et al. (eds.) *Commentary on the Additional Protocols to the Geneva Conventions* (ICRC 1987) 1917.

fact that during a NIAC there are likely to be a broader group of individuals involved in the conflict than merely the 'members of armed forces.' The ICTY reflect this nuance in *Galić* where the court states that civilians are "defined negatively as anyone who is not a member of the armed forces or of an organized military group belonging to a party to the conflict. It is a matter of evidence in each particular case to determine whether an individual has the status of civilian."[125]

Therefore, it is important to establish what groups are qualified to be members of the armed forces, or organised military groups belonging to a party to the conflict. These groups are considered to be lawful combatants, as the Danish Military Manual explains: "Combatants have the right to participate directly in hostilities. If they fall into the power of the adverse Party, they are entitled to the status of prisoners of war."[126] The definition of armed forces of a party to the conflict is considered by API as comprising "all organised armed forces, groups and units which are under a command responsible to that Party for the conduct of its subordinates…"[127] Whereas in an IAC the members of armed forces are likely to be drawn directly from state militaries, national liberation organisations and voluntary corps,[128] a NIAC will be comprised, at least on one side, by organised armed groups.

The definition of organised armed groups is significant for targeting in that membership of these groups grants the members the right to directly participate in hostilities, and as such they can be targeted by enemy forces at any time. These organised armed groups are described within APII's scope of application in a narrow manner, stating that they must be "under responsible command, [and] exercise such control over a part of [a state's] territory as to enable them to carry out sustained and concerted military operations and to implement this Protocol."[129] However, whilst some NIACs will certainly be covered by APII a large number may not, and as such are governed by customary law and CA3, which provides

[125] *Prosecutor v Galić* (Trial Judgment) ICTY-98-29-T (5 December 2003) 47.
[126] Defence Command Denmark, *Military Manual on international law relevant to Danish armed forces in international operations* (Danish Ministry of Defence, September 2016) 5.2, 163. This reflects the provisions of API Art. 43(2) and API Art. 44(1), also CIHL Rule 3.
[127] API Art. 43(1).
[128] Danish Military Manual (n 25) 161.
[129] APII Art. 1(1).

no territorial control element.[130]

The difficulties with defining organised armed groups in the abstract are perhaps best explained with reference to the notion of organisation. Although it is largely accepted that a party must show a certain degree of organisation[131] "the difficulty arises not in stating that it must exist, but rather in determining the necessary level [of organisation]."[132] This is hindered further by a perceived lack of understanding of the level of organisation within armed groups. Sivakumaran reflects that "the element of organisation and the workings of armed groups are only just starting to be understood… [because] …insufficient attention has been paid to armed groups, their structure and workings."[133] This has thus raised a number of cases exploring the applied limits of organised armed groups.

The ICTY addressed the concept in *Boskoski and Tarculovski*[134] where they determined that terrorist acts as part of a protracted campaign could form a pattern amounting to an armed conflict.[135] The Court determined that the group's ability to undertake sustained attacks provided evidence of a "high level of planning and a coordinated command structure."[136] They maintain this level of flexibility in interpretation when addressing the issue of whether the Kosovo Liberation Army (KLA) constituted an organised armed group in *Limaj.*[137] Despite weaknesses and disparities presented by the evidence,[138] the court took a pragmatic approach to the problem. They stated that the KLA was "effectively an underground organisation, operating in conditions of secrecy out of concern to preserve its leadership."[139] It was therefore unsurprising that "the organisational structure and the

[130] J Ohlin, 'The Duty to Capture' (2013) 97:4 Minnesota Law Review 1268, 1279; Michael Schmitt, 'Unmanned combat aircraft systems and International Humanitarian Law: simplifying the oft benighted debate' (2012) 30:2 Boston Univ Int Law J 595, 604-606; A Paulus and M Vashakmadze, 'Asymmetrical war and the notion of armed conflict – a tentative conceptualization' (2009) 91:873 IRRC 95, 117.
[131] Tilman Rodenhäuser, *Organizing Rebellion: Non-State Armed Groups under International Humanitarian Law, Human Rights Law, and International Criminal Law* (OUP 2018) 15; Yoram Dinstein, *Non-International Armed Conflicts in International Law* (CUP 2014) 95; ICRC 2008, 5.
[132] Lindsay Moir, *The Law of Internal Armed Conflict* (CUP 2002) 36.
[133] Sandesh Sivakumaran, *The Law of Non-International Armed Conflicts* (OUP 2012) 210.
[134] *Prosecutor v Boskoski & Tarculovski* (Trial Judgment) ICTY-04-82-T (10 July 2008) 183-206.
[135] Ibid 185.
[136] Ibid 204.
[137] *Prosecutor v Limaj* (Trial Judgment) ICTY-03-66-T (30 November 2005)
[138] Ibid 113, 116, 131.
[139] Ibid 132; D Bryman and M Waxman, 'Kosovo and the great air power debate' (2000) 24:4 Int Secur 5, 25 & 28.

hierarchy of the KLA was confusing."[140]

Elsewhere the Inter-American Commission on Human Rights in *Abella v Argentina*[141] noted that NIACs could involve "confrontations between *relatively* organised armed forces."[142] (emphasis added). The court found it sufficient that the rebels' attack was "carefully planned, coordinated and executed."[143] This presents a complex situation for individuals involved in targeting, as the principle of distinction requires a decision to made as to the civilian status of an individual in a complex battlespace. However, it will often be sufficient to take the individual approach of direct participation in hostilities (DPH) rather than the membership view prescribed by organised armed groups.

Nevertheless, the concept of direct participation in hostilities is arguably just as complex and nuanced as that of organised armed groups, and the various aspects are frequently contested. Although civilians are afforded protection during armed conflict, this protection can be lost "for such time as they take a direct participation in hostilities."[144] This then raises the issue as to what is considered 'direct participation' and further it requires a definition of the temporal scope of 'for such time'. Herein lies the rub; in the abstract the term 'direct' can seem relatively straightforward, however once one starts to apply this to military and combat operations it becomes far more contestable. As the ICRC Commentary reflects "outside the few uncontested examples…, in particular use of weapons or other means to commit acts of violence against human or material enemy forces, a clear and uniform definition of direct participation in hostilities has not been developed in State practice."[145]

The approach of military manuals and court judgements has generally been taken on a case-by-case basis. In *Tadić* the Trial Chamber stated that: "It is unnecessary to define exactly the

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[140] Ibid 132.
[141] IACmHR, *Abella v Argentina (La Tablada)* (18 November 1997) Case No. 11.137, Report No. 55/97.
[142] Ibid 152.
[143] Ibid 155. It should be noted that the ICTR set a higher standard in *Prosecutor v Akayesu* but this has not been generally accepted, see Robin Geiß, 'Armed violence in fragile states: low-intensity conflicts, spill over conflicts, and sporadic law enforcement operations by third parties' (2009) 91:873 IRRC 127, 136.
[144] API Art. 51(3); APII Art. 13(3); CA3 GCI-IV uses the phrasing "persons taking no *active* part in the hostilities…" but the two terms have widely been considered to be synonymous, see *Prosecutor v Akayesu* (Trial Judgment) ICTR-96-4-T (2 September 1998) 629. Also, Dinstein, 'Direct Participation in Hostilities' (n 10) 7.
[145] Jean-Marie Henckaerts & Louise Doswald-Beck, *Customary International Humanitarian Law* (CUP 2005) [CIHL] Vol. 1 Rules, Rule 23.

line dividing those taking an active part in hostilities and those who are not so involved. It is sufficient to examine the relevant facts of each victim and to ascertain whether, in each individual's circumstances, that person was actively involved in hostilities at the relevant time."[146] This approach was subsequently followed by the Appeal Chamber in *Strugar* where the court provided a non-exhaustive list of examples of direct and indirect[147] participation in hostilities.[148] They concluded that "an enquiry must be undertaken on a case-by-case basis"[149] and recognised that "an individual's participation in hostilities can be intermittent and discontinuous,"[150] thus active participation depended on the "nexus between the victim's activities… and any acts of war…"[151]

The Israeli Supreme Court also took the case-by-case approach in the *Targeted Killings* case, listing a number of examples of activities that would be considered to be direct or indirect participation.[152] These cases demonstrate that the courts made the decision to approach the issue in light of the cases presented before them. Academic treatment of the definition also took this approach, as Dinstein highlights: "The adjective 'direct' does not shed much light on the extent of participation required. For instance, a driver delivering ammunition to combatants and a person who gathers military intelligence in enemy-controlled territory are commonly acknowledged to be actively taking part in hostilities."[153] Further, Christensen states that: "The notion of direct is situational and must be judged on a case-by-case basis."[154] This case by case, 'know it when you see it' approach does however create issues of clarity for decision makers.

Nevertheless, it is possible to determine some guidance on the issue, albeit limited. For example, the ICRC Commentary states that for an action to be considered 'direct' it must

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[146] *Prosecutor v Tadić* (Opinion and Judgment) ICTY-94-1-T (7 May 1997) 616.
[147] GCIV Art. 15 draws a distinction between taking part in hostilities and performing 'work of a military character.' See also, *Commentary API*, 1945 "There should be a clear distinction between direct participation in hostilities and participation in the war effort… Without such a distinction the efforts made to reaffirm and develop international humanitarian law could become meaningless.".
[148] *Prosecutor v Strugar* (Appeals Judgment) ICTY-01-42-A (17 July 2008) 177.
[149] Ibid 178.
[150] Ibid.
[151] Ibid.
[152] HCJ, *Public Commission Against Torture in Israel v Gov't of Israel (Targeted Killings)* [2005] 769/02, 35.
[153] Yoram Dinstein, *The Conduct of Hostilities under the Law of International Armed Conflict* (OUP 2004) 27-28.
[154] Eric Christensen, 'The Dilemma of Direct Participation in Hostilities' (2010) 19 J Transnat'l L & Pol'y 281, 288.

have a "direct causal relationship between the activity engaged in and the harm done to the enemy at the time and place where the activity takes place."[155] Therefore, this creates a form of 'but for' causation between the act and the resulting harm, which excludes activities that would be too remote.[156] This approach was taken by the ICTY in *Strugar*[157] who determined that direct, or active, participations are "acts of war which by their nature or purpose are intended to cause *actual* harm to the personnel or equipment of the enemy's armed forces."[158] (emphasis added) This reflects the ICRC Interpretive Guidance[159] which requires that there is direct causation between the act and the expected harm.[160]

It is important to note that the Interpretive Guidance on Direct Participation in Hostilities issued by the ICRC[161] was intended to be the agreed upon result of the discussions of a group of experts convened in 2004. However, they could not agree and, although a tentative compromise was reached, the report the ICRC decided to publish in 2009 was not a full reflection of this. As such a large number of the experts disassociated themselves from the work.[162] The result of this is that there remain fundamental disagreements on how the standard should be interpreted in practice. Therefore, any understanding advocated by the ICRC Interpretive Guidance should be considered in light of this disagreement and analysed by reference to wider sources.

It is perhaps understandable that given the courts' case-by-case approach to direct participation in hostilities the group of experts started their discussions through reference to specific acts.[163] Consensus was quickly reached for certain activities that qualified, such as conducting attacks, damaging communication lines, or seizing military equipment or

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[155] Yves Sandos et al. (eds.) *Commentary on the Additional Protocols to the Geneva Conventions* (ICRC 1987) 1942.
[156] Michael Schmitt, 'Direct Participation in Hostilities and 21st Century Armed Conflict' in Herausgegeben von Horst Fischer, Ulrike Froissart, Wolff Heintschel von Heinegg & Christian Raap (eds.) *Kriesensicherung und humanitärer Schutz – Crisis management and humanitarian protection: Fectschrift für Dieter Fleck* (Berlin BWV 2004) 508.
[157] *Strugar* (n 47).
[158] Ibid 178; Affirming *Tadić* (n 45) 616; *Prosecutor v Galić* (5 December 2003) IT-98-29-T, Trial Judgment, 48.
[159] Nils Melzer, *Interpretive Guidance on the Notion of Direct Participation in Hostilities under International Humanitarian Law* (ICRC 2009) [hereafter ICRC Interpretive Guidance].
[160] Ibid 46.
[161] Ibid.
[162] Dinstein, 'Direct Participation in Hostilities' (n 10) 7.
[163] Michael Schmitt, 'Deconstructing Direct Participation in Hostilities' (2010) 42 NYU Journal of Int'l L and Politics 697, 709.

personnel,[164] as well as those that did not; working in canteens or in munitions factories.[165] However, there equally emerged examples that caused considerable differences of opinion. An exceptionally good example of the problem of direct participation is highlighted by the case of 'Bob the driver'.

This example concerns a civilian munitions truck driver, who en route to his destination stops at a rest area. The experts agreed that targeting the truck itself was lawful, as a munitions truck is considered a military objective,[166] and had Bob been killed or injured as a result of an attack on the truck this would have been lawful collateral damage.[167] However, the issue arose as to whether it was lawful to target Bob whilst out of the truck.

On one side of the argument were those who contended that Bob retained his civilian protection unless he was driving the munitions truck.[168] Therefore, whilst away from the truck only the truck could be targeted, not Bob individually. The opposite view is that he would remain a direct participant in hostilities and could be targeted whether he was in the truck or outside of it.[169] This is the view furthered in *United States v Hamdan* in which they stated that "…the accused directly participated in those hostilities by driving a vehicle containing two surface-to-air missiles in both temporal and spatial proximity to both ongoing combat operations."[170] The significant comment here is the proximal requirement to the ongoing hostilities. As Dinstein, who had initially forwarded the view Bob remained directly participating even whilst out of the truck, later says of the issue, "It all depends on geography, i.e. where the driving by Bob is done… The test, as we see it, is whether the driving is connected to actual hostilities."[171] I would argue that the issue of proximity is critical to the ascribing of direct participation in hostilities and would further contest that this encompasses more than geography. Thus, I concur with Schmitt, [172] that it is, in

[164] Ibid 710; ICRC Interpretive Guidance (n 58) 48.
[165] Ibid.
[166] See Schmitt (n 62) 710.
[167] In concurrence with the proportionality principle, API Art. 51(5)(b); 2.2.2.
[168] APV Rogers, 'Direct Participation in Hostilities: Some Personal Reflections' (2009) 48 Mil L & L War Rev 143, 152.
[169] This concurs with the *Targeted Killings* case (n 51) 35.
[170] US Military Commission, *United States v Hamdan,* On Reconsideration: Ruling on Motion to Dismiss for Lack of Jurisdiction (AE084), (19 December 2007) 6, https://perma.cc/WVA2-HDZ6 accessed 10 November 2019. For more see JC Dehn, 'The *Hamdan* Case and the Application of a Municipal Offence' (2009) 7 JICJ 63, fn. 8.
[171] Dinstein, 'Direct Participation' (n 10) 9.
[172] Schmitt (n 62) 710.

application, a 'but for' test, and supported by the ICRC Interpretive Guidance: "The requirement of *direct causation* refers to a degree of causal proximity, which should not be confused with the merely indicative elements of temporal or geographic proximity."[173] As such, in the case of Bob I would argue that the true test of direct participation would be: 'but for' Bob's driving, the munitions would not provide "direct… support for units engaged directly in battle."[174] This accounts for the geographic and temporal proximity of Bob's actions and it would also encompass the concept of acts preparatory to attack.[175]

The significance of the concept of direct participation in hostilities is critical for targeting, as the decision on civilian status will need to be made by the commander prior to launching an attack. As this discussion has demonstrated it can be a complex decision to make and relate to a number of relevant factors. However, what is also clear is that the decision should be made on a case-by-case basis and will then rely upon the intelligence information that the commander has available.[176]

It is established that civilians are protected from being the object of attack unless they are taking a direct part in hostilities or are members of an organised armed group which prevents them from being considered as civilians for the purpose of targeting. As shown civilians are defined in the negative and although this could be viewed as lacking in clarity, especially concerning the notion of direct participation in hostilities, there remains a substantial advantage to this binary approach. Despite the difficulties faced in definition I suggest that it is still the most effective measure to ensure that there can be no unsubstantiated middle ground. However, this approach is reliant upon an adequate definition of military objectives, against which the civilian is determined, to provide the basis for characterisation.[177]

[173] ICRC Interpretive Guidance (n 58) 55.
[174] Michael Bothe, KJ Partsch and A Solf, *New Rules for Victims of Armed Conflict* (Martinus Nijhoff 1982) 252.
[175] William Boothby, 'And for Such Time as: The Time Dimension to Direct Participation in Hostilities' (2010) 42 NYU J Int'l L & Pol 741; ICRC *Interpretive Guidance* (n 58) 65-67.
[176] API Art. 57; 2.3.
[177] Michael Schmitt, 'The Law of Targeting' in Elisabeth Wilmshurst and Susan Breau (eds.) *Perspectives on the ICRC Study on Customary International Law* (CUP 2007) 145.

2.2.1.2 Military Objectives

As early as 1907, there were attempts at the definition of military objectives, which allow for the bombardment of "military works, military or naval establishments, depots of arms or war *matériel,* workshops or plant which could be utilised for the needs of the hostile fleet or army, and the ships of war in the harbour..."[178] Unhelpfully in the pursuit of a clear definition, we find that although referencing a 'military objective' the Geneva Conventions themselves are somewhat silent on what the nature and scope of this might be.

Insofar as objects are concerned, API provides some codification at Art. 52(2), where "military objectives are limited to those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralisation, in the circumstances ruling at the time, offers a definite military advantage."[179] Although this forms part of API, it is considered to be a definition "generally accepted as part of customary law."[180] Nevertheless, Dinstein found the definition "regrettable" as "the wording is abstract and generic, and no list of specific military objectives is provided."[181] He further argued that as a component referenced directly by the precautionary principle[182] it does "not produce a workable acid test for such verification."[183] Cassese was even more dissatisfied with the description stating that "this definition is so sweeping that it can cover practically anything."[184]

Although Oeter recognises the advantage of the flexibility provided by the preservation of the "abstraction of the formula,"[185] the problem that he identifies with this approach is particularly relevant for the discussion on intelligence standards. He highlights that "… an

[178] Hague Convention (IX) [1907] Art. 2.
[179] API 52(2); This is also reflected in the identical definitions of Art. 2(4) Protocol II to the 1980 Convention on Certain Conventional Weapons 1980; Art. 2(6) Amended Protocol II to the Convention on Certain Conventional Weapons 1996; Art. 1(3) Protocol III to the Convention on Certain Conventional Weapons 1980; It is also found at Art. 1(f) Second Protocol to the Hague Convention for the Protection of Cultural Property 1999 .
[180] ICTY, *Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia* (14 June 2000).
[181] Yoram Dinstein, *The Conduct of Hostilities under the Law of International Armed Conflict* (2nd edn. CUP 2010) 90.
[182] See 2.2.1.
[183] Dinstein (n 10) 91.
[184] Antonio Cassese, *International Law* (OUP 2001) 339.
[185] Stefan Oeter, 'Methods and Means of Combat' in Dieter Fleck (ed.) *The Handbook of International Humanitarian Law* (3rd edn. OUP 2013) 170.

officer, in determining whether a specific target is a lawful military objective, requires precise information as to the exact nature, purpose, and use of the objective concerned."[186] He continues that: "… exact reconnaissance and the procurement of precise information by military intelligence services become key factors of lawful warfare."[187] He is therefore supporting the view that the abstract formula of a two-pronged test[188] is establishing a higher standard for intelligence than would be created by a list-based approach. To a certain extent I concur with this argument, but this is contextual and needs further analysis in relation to the two parts of the test.

The first 'prong' is an objective test which requires that the 'nature, location, purpose or use' of a potential target must be believed to be military and provide an 'effective contribution to military action'. Nature is understood to comprise all objects that are directly used by the armed forces, thus by their very nature they are military objectives, for example weapons, transport, military buildings and depots.[189] Location is designed to comprise objects that are not necessarily military but by virtue of their location they make an effective contribution to military activities, a good example of this is bridges.[190] The final options of purpose and use are functional determinants, based on the present use or a future purpose. An example of this could be a hotel or school, whereby they are clearly civilian objects, but should they be believed to be accommodating troops or munitions then they can become a military objective.[191] Therefore, I would concur with Oeter's argument that this formula creates a higher standard of information to be obtained than a list would. The objects that are by their very nature military objectives would likely be covered in any list-based approach and thus I would contend that the information required is similar.

However, the location, purpose and use, requirements increase the amount of information that a commander needs to have prior to launching an attack. In particular, to ascertain if an objective has a purpose or use that transforms an otherwise civilian object into a lawfully targetable objective a substantial amount of information may be required. This is a criterion

[186] Ibid 171.
[187] Ibid 171.
[188] Ian Henderson, *The contemporary law of targeting : military objectives, proportionality and precautions in attack under Additional Protocol I* (International Humanitarian Law Series, vol. 25, 2009) 51-52.
[189] ICRC Commentary (n 23) 2020.
[190] ICRC Commentary (n 23) 2021.
[191] ICRC Commentary (n 23) 2022.

that will be considered as part of the precautionary principle later in this chapter.[192] Furthermore, to appreciate the 'effective contribution' that an objective makes to military action it is necessary to have a level of information that wouldn't be required for objectives on a list. Overall, I agree that this formulaic approach, although granting a level of flexibility that is of considerable value in military operations, does increase the standard of information that is needed in meeting the legal requirements.

The second 'prong' is subjective, and should provide a 'definite military advantage' as determined by the commander.[193] The complexity of this issue is illustrated by US policy advances which state that the concrete and definite military advantage can be cumulative, and indeed be a future advantage.[194] The ICRC Commentary on Art. 52 recognises that many States understand the military advantage anticipated to be considered as a *whole* and not from isolated or individual attacks.[195] The main legal concurrence with this view is found in the Rome Statute of the ICC that uses the expression: "… the concrete and direct *overall* military advantage anticipated."[196] The difficulty in relying upon the ICC Statute is that this is designed to establish individual criminal responsibility for war crimes, rather than defining activities that breach IHL. However, for the purpose of establishing customary law state declarations would affirm that the military advantage anticipated is a cumulative assessment rather than limited to a specific attack.[197]

The ICRC Commentary further defines military advantage by asserting that it should be "substantial and relatively close, and that advantages which are hardly perceptible and those which would only appear in the long term should be disregarded."[198] In contrast Henderson argues, "while the anticipated military advantage must be concrete and direct, it may nonetheless include more than the immediate tactical gain from the attack looked at in

[192] API Art. 57; 2.3.
[193] William Fenrick, 'Targeting and Proportionality during the NATO Bombing Campaign against Yugoslavia' (2001) 12 EJIL .
[194] Jason D Wright, '"Excessive" ambiguity: analysing and refining the proportionality standard' (2012) 94:886 IRRC 819, 823.
[195] These States include Australia, Canada, France, Germany, Italy, New Zealand, Spain and the United States.
[196] Rome Statute of the International Criminal Court (17 July 1998) [ICC Statute] Art. 8(2)(b) IV.
[197] Michael Bothe, KJ Partsch and WA Solf, *New Rules for Victims of Armed Conflicts: Commentary on the Two 1977 Protocols Additional to the Geneva Conventions of 1949* (Martinus Nijhoff 1982) 311.
[198] Jean Pictet et al, *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949* (Martinus Nijhoff 1987) 2209.

isolation, it may be calculated in light of other related actions, and it may arise in the future."[199] This then indicates a further complexity in determining the legitimacy of an objective under IHL.

I would contest that the combination of the formulaic approach allowing the future use of objectives to be considered in determining status, and the ability to consider the future overall military advantage anticipated, creates a requirement for a substantially increased level of intelligence. Schmitt raises the point succinctly: "In some cases, future use is self-evident… But in many others, the enemy's future plans may be less evident."[200] Therefore, an understanding of the level of knowledge that is required prior to deciding upon launching an attack is critical. On this experts have contrasting opinions. Dinstein suggests that "purpose is predicated on intentions known to guide the adversary, and not on those figured out hypothetically in contingency plans based on a 'worst-case scenario.'"[201] On the other hand, others have contested that there is a requirement of actual knowledge, construing the requirement to be one of a "reasonable reaction to reasonably reliable evidence of enemy intentions."[202] The requirement of adequate knowledge is one that is further expanded by the provisions surrounding precautions, discussed below. Nevertheless, it is evident that the principle of distinction, and its provisions for determining a classification as either a civilian or military objective, requires a certain level of intelligence information before a decision can be made. The distinction requirement is further substantiated and developed by the principle of proportionality, giving further scope and understanding of the concept of 'effective military contribution.'

2.2.2 Proportionality

The principle of proportionality can be found throughout international law; however, in the context of IHL, its purpose is to attempt to balance the competing demands of military

[199] Henderson (n 87) 71.
[200] Michael Schmitt, 'The Law of Targeting' in Elizabeth Wilmshurst and Susan Breau (eds.) *Perspectives on the ICRC Study on Customary International Humanitarian Law* (CUP 2007) 147.
[201] Dinstein, *The Conduct of Hostilities* (n 52) 89 & 92.
[202] Schmitt, 'Law of Targeting' (n 99) 148; also see Michael Schmitt 'Fault Lines in the Law of Attack' in Susan Breau and A Jachec-Neale (eds.) *Testing the Boundaries of International Humanitarian Law* (British Institute of International and Comparative Law 2006) 277 & 280.

necessity and humanity. As Doswald-Beck states: "The principle of proportionality in attack (that the foreseeable harm caused to non-combatants be outweighed by the benefit expected to be achieved by the military action itself) is an excellent example of compromise between military and humanitarian needs…"[203] Therefore, it endeavours to reduce the casualties suffered during military action and has been described as "the nub of the law of armed conflict, which may itself be regarded as a development of the rule."[204] The grandiosity of this claim should, however, be considered in light of the fact that the principle was not codified in IHL until API, and even then it was not done explicitly.

An early example of a proportionality rule is found in the draft Hague Rules of Aerial Warfare (HAW).[205] At Chapter IV these draft rules indicate that the bombardment of civilian areas may be legitimate as long as "there exists a reasonable presumption that the military concentration is sufficiently important to justify such bombardment, having regard to the danger thus caused to the civilian population."[206] Therefore, although failing to explicitly mention proportionality the draft establishes that a balance be struck between military advantage and the danger created for the civilian population.

Prior to 1977, proportionality relied on definitions fabricated in the abstract. In 1976, Brown wrote that: "the idea that military means should be proportionate to their anticipated ends is widely recognised as a basic norm of the law of warfare."[207] A comprehensive definition of proportionality prior to 1977 is, however, unclear and Rogers reflects that "it probably prohibited military acts that were grossly disproportionate to the object to be obtained."[208]

Even in API there exists no separate article determining a proportionality principle, with the word 'proportionality' absent from the treaty. Nonetheless, Bothe et al regard Art. 51(5)(b)

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[203] Louise Doswald-Beck, 'Implementation of International Humanitarian Law in Future Wars' (1999) 52:1 Naval War College Review 24, 28.
[204] D Johnson, 'The legality of modern forms of aerial warfare' (1968) Royal Aeronautical Society Journal .
[205] Hague Rules of Aerial Warfare 1923, draft reprinted in full in Adam Roberts & Richard Guelff, *Documents on the Laws of War* (3rd edn. 2000 OUP) 139-154.
[206] Ibid Art. 24(4).
[207] Bernard Brown, 'The Proportionality Principle in the Humanitarian Law of Warfare: Recent Efforts at Codification' (1976-1977) 10 Cornell International Law Journal 136 https://scholarship.law.cornell.edu/cgi/viewcontent.cgi?article=1027&context=cilj accessed 1 August 2019; also see, Jean Pictet, *Humanitarian Law and the Protection of War Victims* (1975) 15:175 IRRC 16.
[208] APV Rogers, *Law on the Battlefield* (3rd edn. Manchester University Press 2012) 23; also see, WE Hall, *A Treatise on International Law* (Clarendon Press 1924) 635.

as the "first concrete codification of the principle of proportionality as it applies to collateral civilian casualties."[209] The article states that an attack is not to be launched, or should be cancelled, or suspended, if "the attack may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated."[210] Therefore, proportionality is said to exist when the attack does not cause collateral damage which is *excessive* in comparison to the *concrete* and *direct* military advantage.

IHL permits a certain level of collateral damage but "never permits a deliberate attack on civilians."[211] As such, attacks on military objectives are permitted even when there are likely to be inevitable civilian losses, but only when these are not *excessive* in relation to the *concrete* and *direct* military advantage anticipated. This was reflected by the ICTY who determined that customary IHL does "…not exclude the possibility of legitimate civilian casualties incidental to the conduct of military operations. However, those casualties must not be disproportionate to the concrete and direct military advantage anticipated before the attack (the principle of proportionality)."[212] However, the practical application of this standard is rarely straightforward, and has been infrequently engaged with in a detailed manner by the ICTY.[213]

The proportionality principle is framed such that it requires a balance of the competing interests of the overall military advantage and humanitarian concerns, which is extremely difficult to achieve in the abstract.[214] It has been noted that it is difficult to apply the principle to "a particular set of circumstances because the comparison is between unlike quantities and values."[215] These variables cannot be easily quantified and so the value of

[209] Bothe et al, *New Rules* (n 96) 309.
[210] It is also found in API Art. 57(2)(a)(iii) and (b).
[211] Joseph Holland, 'Military Objective and Collateral Damage: Their Relationship and Dynamics' (2004) 7 Yearbook of IHL 35, 46.
[212] ICTY, *Prosecutor v Galić* (30 November 2006) IT-98-29-A, Appeals Chamber, 190.
[213] Although proportionality is discussed in the cases of *Kupreškić, Galić, Strugar, Martić and Dragomir Milošević* it is not applied to the facts, nor in a balancing manner until the case of *Gotovina*, for more on this see, Rogier Bartels, 'Dealing with the Principle of Proportionality in Armed Conflict in Retrospect: The Application of the Principle in International Criminal Trials' (2013) 46:2 Israel Law Review 271.
[214] Doswald-Beck, Implementation (n 102) 28; Ian Henderson, *The Contemporary Law of Targeting: Military Objectives, Proportionality and Precautions in Attack under Additional Protocol I* (Martinus Nijhoff 2009) 197-220.
[215] ICTY, *Final Report to the Prosecutor by the Committee Establish to Review the NATO Bombing Campaign against the Federal Republic of Yugoslavia* (13 June 2000) [Final Report to the Prosecutor] 48.

'excessive' is one which is contested.[216] Wright suggests that, as unsatisfactory as it may be, there is no clear definition of what is considered excessive "because the variables in the proportionality standard are relative to each other. Commanders must consider each attack on a case-by-case basis, and for this reason, there can be no bright-line rule."[217] Kalshoven and Zegveld note that the standard lacks precision and thus commanders planning and executing attacks will apply the principle in different ways.[218] This difficulty is reflected by Dill's research in which she reflects that "[t]he legal rule seemingly bends to endorse diametrically opposed interpretations of the same attacks…"[219] Her empirical research highlights the problem with a standard that relies on the judgment of the 'reasonable commander'. She reports that: "[m]ost military commanders I have encountered over the years admitted that in other than atypical 'easy cases', two commanders with the same knowledge of fact and of law may reach diverging conclusions about the projected excessiveness of an attack."[220] Nevertheless, as with the principle of distinction, the development of rules based on circumstances presented at the time allows flexibility for commanders dealing with a changing battlespace.

I would suggest that, as was discussed in relation to determining whether an object was targetable as a military objective, this form of standard places the role of intelligence centrally to the lawful fulfilment of the obligation. Therefore, without adequate knowledge of the status of the objectives, the awareness of the surroundings and the likelihood of the extent of collateral damage, a reasonable commander is unable to make an adequate proportionality judgment.

The problems presented by the formation of the proportionality principle have recently been the subject of a meeting of international experts organised by the ICRC in order to provide further clarification on the key standards of excessive, and concrete and direct military advantage. They noted that: "As fighting increasingly takes place in populated

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[216] Jason Wright, '"Excessive" ambiguity: analysing and refining the proportionality standard (2012) 94:886 IRRC 819 .
[217] Ibid 853.
[218] Frits Kalshoven and Liesbeth Zegveld, *Constraints on the Waging of War: An Introduction to International Humanitarian Law* (Geneva: ICRC 2001) 46 .
[219] Janina Dill, 'Assessing Proportionality: An Unreasonable Demand on the Reasonable Commander' (11 October 2016) *Intercross: 2016 Joint Series on International Law and Armed Conflict* https://intercrossblog.icrc.org/blog/r19aesa7v1kylcc5a4hbcwvfx8imus accessed 8 April 2018.
[220] Ibid.

areas, where incidental harm is likely to occur due to the co-location and intermingling of lawful targets and protected persons and objects, the principle of proportionality is becoming ever more crucial in current armed conflicts. "[221] The significance of the role of the proportionality principle is therefore clear for the protection of civilians caught up in conflict. This reflects the statements made by the ICTY in *Galić* that "the basic obligation to spare civilians and civilian objects as much as possible must guide the attacking party when considering the proportionality of an attack."[222]

For the understanding of any intelligence requirement that is created under IHL the principle of proportionality creates obligations for a commander to ensure that an attack is anticipated to remain proportionate. To be able to do so effectively and in accordance with IHL it requires a commander or planner of an attack to have knowledge of the likely, or anticipated, civilian damage that may occur as a result of the attack intended. As such, it provides guidance as to the amount of information that may be required for the undertaking of an action during conflict. This understanding is further developed by the precautionary principle.

2.2.3 Precautions in Attack

The precautionary standard as found at API Art. 57, could be said to bring operational life to the fundamental principles of distinction and proportionality. This is the core of the intelligence guidance in IHL and it states that attackers must "take all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects."[223] In order, therefore, to make a lawful attack one must obey the principles of distinction and proportionality and do so by taking 'all feasible precautions' in determining the method and means of targeting. Thus, it appears that the intelligence standard, such as

[221] Laurent Gisel, *The principle of proportionality in the rules governing the conduct of hostilities under international humanitarian law* (ICRC International Expert Meeting Quebec 22-23 June 2016) 5 https://www.icrc.org/en/document/international-expert-meeting-report-principle-proportionality accessed 5 August 2019.
[222] ICTY, *Prosecutor v Galić* (5 December 2003) IT-98-29-T, Trial Judgement, 58 9.
[223] API Art. 57.

it is, is located within, or as a derivation of, this article and its counterpart in Art. 58. As such, it requires detailed scrutiny to understand how the law is framed in this context.

Prior to 1977, much like the details for distinction and proportionality, there was limited guidance on precautions in attack. It largely derived from the 1907 Hague Convention[224] which established that the commander of a naval force "shall take *all due measures* in order that the town may suffer as little harm as possible."[225] (emphasis added) This also reflects the manner in which proportionality interacts with precautions, such that the measures prescribed relate directly to minimising the harm to the civilian population.

Many experts of the period believed that no precautionary standard as such existed prior to API,[226] arguably backed up by state conduct witnessed during the wars in the intervening years. Therefore, making the argument that it is a customary rule becomes more difficult without reference to the basic premise that it is required to fulfil the other enshrined principles of IHL. This was the view taken by the ICRC in their report to the Conference of Government Experts in 1971, in which they said that, the need for precautions in attack "has been affirmed by publicists for a long time, but without being expressed in a very precise manner in the provision on international law in force."[227] It is, however, widely accepted that prior to API precautionary standards could only be inferred from the rules on warnings, which had largely fallen into disuse.[228]

Given that API is not universally ratified and is only written to be applicable to IAC, it is important to establish the status of the provision as customary law, and whether it is accepted as customary purely for IAC or whether that encompasses NIAC. Initially it will be instructive to establish what the provisions of Art. 57[229] require, how they frame precautions in attack and how these have been interpreted.

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[224] Hague Convention (IX) 1907.
[225] Ibid Art. 2(3).
[226] Rogers (n 107) 135.
[227] ICRC, *Conference of Government Experts on the Reaffirmation and Development of International Humanitarian Law applicable in Armed Conflicts* (24 May – 12 June 1971) https://www.loc.gov/rr/frd/Military_Law/pdf/RC-conference_Vol-3.pdf accessed 1 August 2019.
[228] For example see, Dieter Fleck, 'Die rechtliche Garantien des Verbots von unmittelbaren Kampfhandlungen gegen Zivilpersonen' (1966) RDPMDM 81.
[229] API.

2.3 What is Legally Required?

To understand the full scope and application of the legal standard, each part will be reviewed in turn. The first section of Art. 57 states that: "in the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects."[230] This obligation is a natural consequence of the somewhat abstract principle of distinction and that could largely explain its positioning in this article.[231] Quéguiner comments that this initial section could be interpreted as a preamble to the later more detailed articles, leading to the false presumption that it is merely inspirational.[232] The ICRC Commentary reflects that the remaining provisions of the article are the practical application of the overriding principle stated in section 1.[233] Quéguiner argues that it is, in and of itself, a stand-alone legal obligation. Therefore, given that this statement provides for a broader application it could be interpreted as providing a 'catch-all' if the other, more specific, provisions are inadequate to deal with a situation on the ground. I would contend that this is the logical extrapolation of the above.[234]

I tend to agree with Quéguiner that section 1 is a mandatory legal provision; its usage of the word 'shall' indicates this and further, far from being aspirational, it codifies a pre-existing principle of IHL. Therefore, this would mean that the minimum standard to be maintained is one of '*constant care'.*[235] This would be a reasonable conclusion given that this is precisely how Protocol II approached the issue of precautions in attack in its draft stages. Although Protocol II in ratified form remains somewhat silent on the detail of precautions, the original draft contained the provision that: "Constant care shall be taken, when conducting military operations, to spare the civilian population, civilians and civilian objects. This rule shall, in

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[230] API Art. 57(1).
[231] Bothe et al, New Rules (n 96) 359.
[232] Jean-François Quéguiner, 'Precautions under the law governing the conduct of hostilities' (2006) 88:864 IRRC 793 .
[233] Jean-Marie Henckaerts & Louise Doswald-Beck, *Customary International Humanitarian Law* (CUP 2005) Vol. 2 Practice 680.
[234] This is substantiated by the ICRC, *Memorandum: Protection of Civilian Populations against the Dangers of Indiscriminate Warfare* (Geneva 19 May 1967)
which formulated it is an obligation to reduce the damage inflicted upon non-combatants to a minimum, see also Marco Sassòli, *Bedeutung einer Kodifikation für das allgemeine Völkerrecht mit besonderer Betrachtung der Regeln zum Schutze der Zivilbevölkerung vor den Auswirkungen von Feindseligkeiten* (Basel/Frankfurt: Helbing & Lichtenhahn, 1990) 458; William Boothby, *The Law of Targeting* (OUP 2012) 119 .
[235] See Emanuel Gillard, 'Protection of civilians in the conduct of hostilities' in Rain Liivoja and Tim LH McCormack, *Routledge handbook of the law of armed conflict* (Routledge 2016) 173.

particular, apply to the planning, deciding, or launching of an attack."[236] The customary nature of the standard of care to be taken is advanced by the statements of the ICTY in *Kupreškić.*[237] The court stated that the principles described by Arts. 57 and 58 are considered to be customary as they "specify and flesh out general pre-existing norms."[238] It furthered the view that although the standards delineated by Arts. 57 and 58 allowed a wide discretion to the attacking party, they "must be interpreted so as to construe as narrowly as possible the discretionary power to attack belligerents and, by the same token, so as to expand the protection accorded to civilians."[239] This supports the general principle established by the International Court of Justice (ICJ) in *Corfu Channel,*[240] *Nicaragua,*[241] and *Legality of the Threat or Use of Nuclear Weapons*[242] cases, such that 'elementary considerations of humanity' should be emphasised in the interpretation of broad legal rules.[243] As such, as a minimum in all types of conflict, whether NIAC or IAC, it would be reasonable to assert that the standard of *constant care* must be taken to protect the civilian population. To be able to appreciate the way this is developed into a more detailed provision it is important to explore and analyse the remaining provisions of Art. 57.

[236] Draft APII Art 24(2).
[237] ICTY, *Prosecutor v Kupreškić* (14 January 2000) IT-95-16-T.
[238] Ibid 524.
[239] Ibid 525.
[240] *United Kingdom v Albania (Corfu Channel Case)* [1949] ICJ GL No 1; [1949] ICJ Rep 4, ICGJ 199 (ICJ 1949) 9 April 1949.
[241] *Republic of Nicaragua v United States (Nicaragua Case)* [1986] ICJ 14, 27 April 1986.
[242] *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion (Nuclear Weapons Case)* [1996] ICJ Reports, 8 July 1996 .
[243] It is further substantiated and supported by the Martens Clause from the preamble of the 1899 Hague Convention concerning the Laws or customs of War on Land, which states: "Until a more complete code of the laws of war is issued, the High Contracting Parties think it right to declare that in cases not included in the Regulations adopted by them, populations and belligerents remain under the protection and empire of the principles of international law, as they result from the usages established between civilised nations, from the laws of humanity, and the requirements of the public conscience.".

2.3.1 All Feasible Precautions

The second provision of Art. 57 reads as follows:

"With respect to attacks, the following precautions shall be taken:

a) 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 Art. 52 and that it is not prohibited by the provisions of this Protocol to attack them;
   ii) take all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects;
   iii) refrain from deciding to launch any attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated;

b) an attack shall be cancelled or suspended if it becomes apparent that the objective is not a military one or is subject to special protection or that the attack may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated;

c) effective advance warning shall be given of attacks which may affect the civilian population, unless circumstances do not permit."[244]

The first point to note is the opening statement, "with respect to attacks…" That this should apply to attackers places the duty on those carrying out the attack to meet this standard.

[244] API Art. 57(2).

The standard for defenders is found at Art. 58. An attack is defined by API as: "acts of violence against the adversary, whether in offense or in defense."[245] The ICTY have substantiated this and said that an attack is "a course of conduct involving the commission of acts of violence."[246] They defined an attack as "combat action"[247] and later stated that "an 'attack' is a technical term relating to a specific military operation limited in time and place…"[248] These definitions require that the attack comprises an act of violence which *a priori* requires physical force,[249] thus activities such as propaganda, embargoes or other non-physical methods of psychological or economic warfare would not, by this definition, constitute an attack.[250]

The development of technology since the drafting of API has presented several challenges for the understanding of attacks being based on physical force, due to the potential for harm caused by cyber-attacks. The contention here is the extent to which these cyber operations should be considered to be an attack. Dinstein takes the view that for a cyber-attack to be considered an attack under IHL then the action must "engender violence through their effects."[251] He uses the examples that shutting down a life-supporting system or bringing about serious damage to property would amount to an attack, whereas a mere firewall breach or virus dissemination would be insufficient.[252] Melzer on the other hand argues that the provisions of distinction and proportionality should remain in application to the overall operation. Thus, "the applicability of the restraints imposed by IHL on the conduct of hostilities to cyber operations depends not on whether the operations in question qualify as 'attacks'… but on whether they constitute part of 'hostilities' within the meaning of IHL."[253] These disparate approaches taken by leading scholars demonstrate how the development of technology has led to complexity in the fundamental understandings of

[245] API Art. 49(1) .
[246] ICTY, *Prosecutor v Galić* (5 December 2003) IT-98-29-T, Trial Judgment, 52 & 141.
[247] ICTY, *Prosecutor v Strugar* (31 January 2005) IT-01-42-T, Trial Judgment .
[248] ICTY, *Prosecutor v Milošević (D)* (12 December 2007) IT-98-29/1-T, Trial Judgment, 943; *Prosecutor v Galić* (5 December 2003) IT-98-29-T, Trial Judgment, 52.
[249] Bothe et al, New Rules (n. 96) 289; Also, API Commentary 1880.
[250] Heather Dinniss, *Cyber Warfare and the Laws of War* (CUP 2012) 197.
[251] Yoram Dinstein (n 52) 2.
[252] Ibid.
[253] Nils Melzer, *Cyberwarfare and International* Law (2011) UN Institute for Disarmament Research 26 http://unidir.org/files/publications/pdfs/cyberwarfare-and-international-law-382.pdf accessed 3 August 2019.

IHL, indicating how significant analysis of the law remains. Furthermore, it shows that even since the decisions and developments of law established by the ICTY, these disparate understandings lead to the ongoing importance of legal clarification.

To develop an understanding of the standard applied for precautions the remainder of the article needs examining. The article provides that 'all feasible precautions' shall be taken to both verify the objective and in the 'choice of means and methods'. The French text of the Protocol reads: '*faire tout ce qui est pratiquement possible pour verifier que les objectifs à attacquer sont… des objectifs militaires'* meaning everything practically possible for verification. This is, therefore, more than the reasonableness standard one might encounter elsewhere in legal doctrine. The OED definition of feasible is "capable of being done, accomplished or carried out; possible, practicable."[254] So then, the French and English versions would concur that the standard requires that which is possible or practically possible to be done or known prior to deciding upon or carrying out an attack.[255]

A number of delegates at the Conference of Government Experts[256] elaborated on the feasibility standard, by expressing that their understanding was judged to be in the circumstances prevailing at the time.[257] The UK made a statement upon ratification, formulating their understanding of the term 'feasible' as that "which is practicable or practically possible, taking into account all circumstances ruling at the time, including humanitarian and military considerations."[258] This interpretation is thus the operational standard to which the UK is bound,[259] but it is the view asserted by numerous states[260] and the ICRC has recognised this as being customary.[261] The ICRC Commentary on the

[254] Oxford English Dictionary online, http://www.oed.com/view/Entry/68798?redirectedFrom=feasible#eid accessed 31 March 2017.
[255] This was confirmed by The Report of Committee III, CDDH/SR. 42, para 41 .
[256] ICRC (n 126).
[257] Turkey, USA, UK, Italy.
[258] Adam Roberts and Richard Guelff, *Documents on the Laws of War* (3rd edn. OUP 2000) 510.
[259] In accordance with the Vienna Convention on the Law of Treaties (23 May 1969, entered into force 27 January 1980) Art. 21.
[260] See the practice of Algeria, Australia, Austria, Belgium, Canada, Ecuador, Egypt, Germany, Ireland, Italy, Netherlands, New Zealand, Spain, UK and the USA, available at https://ihl-databases.icrc.org/customary-ihl/eng/docs/v2_rul_rule15 accessed 10 November 2019.
[261] Customary International Humanitarian Law, *Rule 15 – Principle of Precautions in Attack* (ICRC) available at https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule15 last accessed 21 August 2019.

precautionary standard comments that the interpretation must "be a matter of common sense and good faith. The person launching an offensive must take the necessary identification measures in good time in order to spare the population as far as possible."[262]

During the Conference it was clear that states were concerned not to unduly risk the operational abilities of their military personnel and did not wish to place them in the position of being prosecuted for war crimes for attacks that had been carried out based on imperfect information.[263] During armed conflict states recognise that their commanders must make decisions based purely on the information available to them at the time, and within the so-called 'fog of war'.[264] In reflection of this some of the delegates understood 'everything feasible' to mean: "everything that was practicable or practically possible, taking into account all the circumstances at the time of the attack*, including those relevant to the success of military operations*."[265] (emphasis added) The ICRC disagreed with this further elaboration of the concept. They believed that including the success of military operations created a position that was too broad and would risk the humanitarian objectives.

I would argue that the critical determinant here is the relevance of the *success* of the military operations. I tend to agree with the ICRC that the broadening of the standard in this manner would risk placing the balance too far in favour of military success, rather than the more appropriate military necessity. It could also create a difficulty for the proportionality standard and *ex post* considerations of military actions, as it would imply that the success of an attack was a factor when considering the likelihood of excessive civilian harm. This is misleading, as IHL creates no obligation of result, as will be shown.

To understand how far a commander must go to obtain information for verification the commentary goes so far as to state that: "in case of doubt, even if there is only slight doubt, they must call for additional information…"[266] Obradovic seems to take this even further

[262] ICRC Commentary (n 23) 2198.
[263] Roberts and Guelff (n 156) 420.
[264] Carl von Clausewitz, *On War* (Hardpress Publishing 2016).
[265] ICRC Commentary (n 23) 2198.
[266] Ibid 2195.

and states: "*le devoir d'être absolument sûr qu'il s'agit d'un objectif militaire*."[267] *(the duty to be absolutely sure that it is a military objective)* I would dispute that the standard reaches the level of absolute certainty as it would not be practically possible or feasible for a member of the military to be absolutely certain of the object of their attack. This would place an impossible burden upon them.[268] A standard of this severity would place the balance too far towards that of humanitarian aims to the detriment of the balanced interest of military necessity and would effectively tie the hands of the military.

Dinstein suggests that: "Palpably, no absolute certainty can be guaranteed in the process of ascertaining the military character of an objective selected for attack, but there is an obligation of due diligence and acting in good faith."[269] This reflects the statements made in military manuals, with the UK taking the position that those "responsible for planning, deciding upon, or executing attacks necessarily have to reach decisions on the basis of their assessment of the information from all sources which is reasonably available to them at the relevant time."[270] This approach supports the statement made by the Committee of Experts in their Final Report to the Prosecutors following the NATO bombing campaign over the former Yugoslavia. They stated that: "… the obligation to do everything feasible is high but not absolute. A military commander must set up an effective intelligence gathering system to collect and evaluate information concerning potential targets."[271] Thus, the standard is one of reasonable endeavours within the context of the ongoing conflict, rather than absolute certainty.

This understanding of practical measures to gain information for precautions has been supported by Cryer who in reviewing action within the Afghanistan conflict, states that although "… attacks occurred before intelligence gatherers were deployed in the field [this] does not necessarily mean that all practicable steps were not taken. What is practicable is limited by the circumstances…"[272] Therefore, the standard developed by Art. 57 is

[267] Knuts Obradovic, 'La protection de la population civile dans les conflits armés internationaux' (1976) 1 Revue Belge de Droit International 154.
[268] See concurrence of this view, Rogers (n 107) 136.
[269] Dinstein (n 52).
[270] Roberts & Guelff (n 156) 510.
[271] Final Report (n 79) 29.
[272] Robert Cryer, 'The Fine Art of Friendship: *Jus in Bello* in Afghanistan' (2002) 7 J. Conflict & Sec. L. 37, 50.

contextual. A recent US Commander's Handbook affirms their understanding stating: "[i]n planning and conducting attacks, combatants must take feasible precautions to reduce the risk of incidental harm. What precautions are feasible depends greatly on the context, including operational considerations."[273] These statements thus confirm the requirement for assessments to be made based on the information that was available at the time, rather than based on hindsight. The Danish Military Manual follows the same approach and affirms, "[i]n the assessment of what can be considered to be reasonable in such a situation, factors such as time, intelligence resources, and protection of one's own troops are included."[274] Therefore, the amount of information that is required is based upon what is practically possible for a commander to obtain at the time, with Schmitt explaining that: "Decisional factors might include such matters as the time necessary to gather and process the additional information, the extent to which it would clarify any uncertainty, competing demands on the ISR [intelligence, surveillance, reconnaissance] system in question, and risk to it and its operators."[275] Quéguiner concurs, furthering that there is no obligation of result, only that the commander must, in cases of doubt, seek further information.[276] This understanding is particularly significant for the development of an intelligence requirement under IHL, as it provides the caveat that any analysis should consider the information *available at the time* to the *reasonable* commander. Furthermore, it requires that, in cases of doubt, the commander should seek additional information, this is particularly relevant in investigating the *Fuel Tankers* case in Kunduz in the next chapter.[277]

The standard as created by Art. 57 is such that the commander must do *everything practically possible* based on *reasonably available* information at the time of the planning, deciding or executing of an attack. However, it is important to establish *who* is understood to be responsible for meeting this IHL standard. Targeting operations can take place at a strategic level whereby a considerable amount of time and intelligence can be employed by the higher echelons of the command structure, reaching right to, for example, the

[273] US Department of the Army, *The Commander's Handbook on the Law of Land Warfare, FM 6-27, MCTP 11-10C* (August 2019) 2.82.
[274] Danish Military Manual (n 25) 72 .
[275] Michael Schmitt, 'Precision attack and international humanitarian law' (2005) 85:889 IRRC 445, 461.
[276] Quéguiner (n 130) 798.
[277] 3.5.

President.[278] Equally they can be decisions made at a tactical level by soldiers on the ground in contact with the enemy, on the frontline. As such, it is important to identify the scope of the principle for differing levels of the command structure.

The scope of the obligation was one of the primary issues faced by the delegates during the development of API. There was substantial debate as to who would be responsible for making the decision under the law. The concern was that the opening statement, 'those who plan or decide upon an attack' could place a heavy burden on subordinate officers who would be unlikely to be in a position to possess all the facts. This is particularly relevant when one considers that proportionality can be considered against the military objectives as a cumulative operation.[279] A junior officer or member of military personnel may not be able to determine whether or not their attack would comply given the overall military purpose.[280] The ICRC do not consider this to be a substantial issue and reflected that "the large majority… wished to cover all situations with a single provision, including those which may arise during close combat."[281] They go further and state that "it clearly follows that the high command of an army has the duty to instruct personnel adequately so that the latter, even if of low rank, can act correctly in the situations envisaged."[282]

However, this statement is not without its problems and the Swiss government made the following reservation upon ratification: "The provisions of Article 57, paragraph 2, create obligations only for commanding officers at the battalion or group level and above. The information available to the commanding officers at the time of their decision is determinative."[283] The UK did not view this to be the case and took the position that it "only extends to those who have the authority and practical possibility to cancel or suspend the

[278] General Wesley Clarke, *Waging Modern War: Bosnia, Kosovo, and the Future of Combat* (Perseus Books 2001) 224.
[279] See above 2.2.1.1.
[280] For an example see discussions concerning the RTS station in Kosovo, Nicholas Wheeler, 'The Kosovo bombing campaign' in Christian Reus-Smit (ed.) *The Politics of International Law* (CUP 2009).
[281] ICRC Commentary (n 23) 2197.
[282] ibid.
[283] Roberts and Guelff (n 156) 509. Austria made a similar reservation. The reservation made by Switzerland upon ratification was removed in 2005 and so now they are subject to the law as written in API and state practice on such.

attack."[284] This would appear to be a reasonable application of the provision provided for in law. It covers all situations, from the individual combatant faced with unexpected civilians, to the commander making a battlespace decision on advanced, technologically based intelligence.

This UK understanding of those who have the practical ability to alter the situation is supported by the provision of Art. 57(2)(b). This provides that a commander must cancel or suspend an attack when it is established that the attack would cause 'excessive damage' in relation to the 'direct or concrete military advantage' achieved. This is the restatement of the proportionality principle and provides a direct reference back to Art. 51. The ICRC considered that the phrase 'concrete and direct' should mean that the military advantage should be "substantial and relatively close."[285] More recently the Tallinn Manual 2.0 on the International Law applicable to Cyber Operations interprets this to "…remove mere speculation from the equation of military advantage… [and]… obliges decision makers to *anticipate* a *real and quantifiable benefit*."[286] (emphasis added) Therefore, this then raises the issue of the likelihood of actually achieving the military advantage.[287] The 2016 ICRC report on proportionality remarks that: "when the probability of achieving the intended military advantage is too low, it can hardly be considered 'anticipated.'"[288] These conclusions would be satisfactory and be in accordance with the ICTY jurisprudence from the *Gotovina* trial. In this the Prosecutor stated that: "the 'concrete and direct advantage anticipated' is not the value of the target wholly in the abstract but rather its abstract value relative to the likelihood of in fact neutralizing or destroying the object."[289] This standard is

[284] Ibid 511.
[285] ICRC Commentary (n 23) 2209, Bothe interprets 'concrete' as specific and perceptible to the senses while 'direct is taken to mean without necessitating any intervening agency; Bothe et al (n. 96) 365.
[286] Michael Schmitt (ed.) *Tallinn Manual 2.0 on the International Law Applicable to Cyber Operations* (CUP 2017) Prepared by the International Group of Experts at the invitation of the NATO Cooperative Cyber Defence Centre of Excellence, 473.
[287] For more on this see Janina Dill, 'Interpretive Complexity and the International Humanitarian Law Principle of Proportionality?' (2014) Proceedings of the Annual Meeting, American Society of International Law 108, 87; Robert D Sloane, 'Puzzles of Proportion and the "Reasonable Military Commander:" Reflections on the Law, Ethics and Geopolitics of Proportionality' (2015) 6:2 Harvard National Security Journal 299 .
[288] Gisel (n 120) 12.
[289] *Prosecutor v Ante Gotovina et al* (Prosecution's Public Redacted Final Trial Brief) ICTY-06-90-T (2 August 2010) 549 .

therefore considered to be one that is not merely hypothetical nor taken out of context to the overall operation.

In Art. 57 the provision is linked to the previous one that prohibits making civilians the subject of attack. Therefore, it extends the temporal scope of the precautionary principle to attacks which are already underway or certainly past the 'planning' stage. As such, it places responsibility at all levels of the command chain; this is certainly significant for an intelligence standard as it extends the obligation to operate on intelligence at every moment of the attack, including the requirement to cancel or suspend attacks in altered circumstances.[290]

2.3.2 The Choice of Objective

The article provides more guidance for commanders and states that: "When a choice is possible between several military objectives for obtaining a similar military advantage, the objective to be selected shall be that the attack on which may be expected to cause the least danger to civilian lives and to civilian objects."[291] This provision was already present in the 1956 New Delhi Draft Rules[292] and became a legally binding obligation in this article. It is relatively uncontroversial,[293] in that, although obliging states to choose the least hazardous target for civilian casualties, the likelihood of two objectives having an equal military advantage is somewhat limited.[294]

The requirement already exists that both objectives must be, *a priori,* military objectives. Therefore, the situation is most likely to arise in the situation of communication

[290] For an example of this see APV Rogers, 'Zero-casualty warfare' (2000) 82:837 IRRC 165; William Fenrick, 'Applying IHL Targeting Rules to Practical Situations: Proportionality and Military Objectives' (2009) 27 Windsor YB Access Just. 271.
[291] API Art. 57(3).
[292] ICRC, Draft Rules for the Limitation of the Dangers incurred by the Civilian Population in Time of War, 1956 [Delhi Rules] Art. 8(a)(2) https://ihl-databases.icrc.org/ihl/INTRO/420?OpenDocument accessed 1 July 2019.
[293] Although it is worth noting that the US stated that the obligation to choose between military objectives was 'not absolute,' which the ICRC considered covered by the Protocol in that it defines it as 'when a choice is possible'; Michael Schmitt, 'The Law of Targeting' in Elizabeth Wilmshurst and Susan Breau (eds.) *Perspectives on the ICRC study on Customary International Humanitarian Law* (CUP 2007) 167.
[294] Kalshoven and Zegveld (n 117) 109.

infrastructures.[295] Given that technological developments are moving away from central transmitters the relevance of this provision will likely degrade further, showing that technology can move the pressure points in IHL in ways that would not have been predicted at their drafting.[296] However, it is worth querying the obligation of this provision for an intelligence standard, and establishing if it places an equality of intelligence on each potential objective.

It would logically follow that given the standard of 'all feasible precautions' to be taken prior to the planning, executing and carrying-out of an attack then the standard of intelligence should be that which is 'reasonably available' at the time. As such, in order to provide a value judgment between two equally significant objectives, the quantity and quality of intelligence data should also be considered as part of the equation. In that case, I would argue that this would not necessarily equate to an obligation to provide the same type of intelligence, so for example satellite footage for all objectives or an equality of human intelligence. But more importantly, the value and reliability of the intelligence information should be balanced to ensure that the commander has the information reasonably available at the time to make an adequate judgment between the various objectives. Although Dill expresses her concerns over placing the prime responsibility to the 'reasonable commander,'[297] by framing the precautionary principle with this balanced approach, I contend that this allows for the symbiotic relationship of precautions and proportionality enabling them to be judged as a whole, in light of the available information, rather than separately.

2.3.3 The Responsibility of those Subject to an Attack

So far, the obligations created by API have primarily focussed on the responsibility of the party conducting the attack. This is mirrored by the obligations of Art. 58 that details the

[295] See Quéguiner (n 130) 805.
[296] This reasoning is shown by Eric David concerning the Serb radio and television towers during the Kosovan war; Eric David, 'Respect for the principle of distinction in the Kosovo War' (2000) 3 YIHL 90-1.
[297] Dill, Assessing Proportionality (n 118) .

precautions which must be taken by all parties to the attack, so this, by definition, includes both those conducting the attacks and those subject to an attack.[298] Although this is largely overlooked from a targeting perspective it holds some significance for an intelligence position. Intelligence is gathered by all parties to a conflict and therefore the standards remain of interest in this context. The primary piece of legislation that considers this is Art. 58, with subsection (c) of most interest here. It states that: "The parties to the conflict shall, to the maximum extent feasible: take the other necessary precautions to protect the civilian population, individual civilians and civilian objects under their control against the dangers resulting from military operations."

This provision is a logical extension of the provision of distinction and places an obligation on all states engaged in conflict to protect civilians. In practice, Quéguiner reflects that this would largely require the construction of shelters and the "installation of systems to alert and evacuate the civilian population."[299] Given that the standard established is to the 'maximum extent feasible', it mirrors the obligations established in Art. 57 and so would logically be argued that there is an equal and opposite intelligence obligation placed on the party subject to the attack.

The notable difference in the provisions is the use of the phrase 'maximum extent', which could be argued to present a greater standard of clarity than that required by 'all feasible precautions'. However, this is caveated by the detail of the article which states that the parties shall "*endeavour* to remove the civilian population"[300] (emphasis added) and then "*avoid* locating military objectives within or near densely populated areas."[301] (emphasis added) This therefore potentially weakens the strength of the precautions provided by Art. 58. However, it would be incorrect to assume that these obligations are only applicable to the defenders of a population as unlike Art. 57, Art. 58 applies to all parties to the conflict and thus the obligations for attackers are not only more detailed, but they are also bound by Art. 58. Boothby states that "the two sets of obligations… are essentially

[298] Boothby (n 132) 130; Emanuela-Chiara Gillard, 'Protection of Civilians in the Conduct of Hostilities' in Rain Liivoja and Tim McCormack (eds.) *Routledge Handbook of the Law of Armed Conflict* (Routledge 2016) 179 .
[299] ibid 819.
[300] API Art. 58(a).
[301] API Art. 58(b).

complementary." He continues, saying "the obligations are of equal importance in producing the desired protection of those entitled at law to receive it."[302] Nonetheless, I would contend that given a defender is one who has control over the territory in which the conflict is taking place[303] it is inescapable that the phrasing 'maximum extent feasible' could be interpreted as creating a greater obligation on intelligence, even if it is not possible to *avoid* placing civilians at risk. In order to comply with these defenders' obligations, it may require a higher standard of care in protecting one's own civilian population, but this, in theory, could be easier to achieve given, for example, the likelihood of pre-existing knowledge of the infrastructure.

For API's precautionary principle to be relevant to conflict other than IAC, and for it to apply to non-signatory states, such as the US, then this standard would need to be reflected by customary law. It is therefore vital to understand to what extent Art. 57 is considered customary, and how this affects the development of an intelligence standard for targeting.

2.4 Customary Law and Non-International Armed Conflict

The significance of API's status as customary law is significant for extrapolation to military conduct. Despite API being widely ratified there are notable exceptions to this, including India, Sri Lanka, Pakistan, Nepal, Myanmar, Iran, Iraq, Turkey, Israel, Indonesia, Malaysia, Singapore, Morocco and by no means least, the USA. [304] The lack of ratification by these states would imply, in and of itself, that not all of the provisions codified by API hold customary status. Therefore, although some of the principles within API may have reached

[302] Boothby (n 132) 118.
[303] W. Hays Parks, 'Air War and the Law of War' (1990) 32 AF L Rev 1, 153-54; Samuel Estreicher, 'Privileging Asymmetric Warfare? Part I: Defender Duties under International Humanitarian Law' (2011) 11:2 Chicago Journal of International Law 425.
[304] For a full list of signatories see ICRC at https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/States.xsp?xp_viewStates=XPages_NORMStatesParties&xp_treatySelected=470 accessed 31 March 2017; also see, George Aldrich, 'Prospects for United States Ratification of Additional Protocol I to the 1949 Geneva Conventions' (1991) 85:1 AJIL 1; Guy Roberts, 'The New Rules for Waging War: The Case Against Ratification of Additional Protocol I' (1985-1986) 26 Va. J. Int'l 109; Hans-Peter Gasser, 'An Appeal for Ratification by the United States' (1987) 81:4 AJIL 912; Theodor Meron, 'The Time has come for the United States to Ratify Geneva Protocol I' (1994) 88:4 AJIL 678; Michael Bothe, 'Customary International Humanitarian Law: Some Reflections on the ICRC Study' (2005) 8 YIHL 143.

the status of customary law this would not automatically apply the whole of API to non-parties. Furthermore, even if an individual rule is established as customary then the persistent objector principle[305] may mean that not every state is bound by this customary rule.[306] The USA have frequently promoted this principle, writing to the ICRC in 2006 to reaffirm their belief in its validity.[307] They have relied on persistent objections in several domestic and international cases to prevent application of a customary law, which has furthered their assertions as to its continuing validity.[308]

Nonetheless, the ICRC considers that the rule governing precautions in attack is held as a "norm of customary international law applicable in both international and non-international armed conflicts."[309] This requires that "constant care must be taken to spare the civilian population…"[310] This basic premise is based on the customary principles of distinction and proportionality and so as a general principle this remains so.[311] Nevertheless, there remain issues when a general principle is codified into a detailed rule and as Meron comments, it "has the character of customary law, but it was possible that the 'rule as codified by the diplomatic conference slightly develops the generally agreed concept,' mostly on the drafting level."[312] So then, although the general principles are to be considered declaratory

[305] The rule within International Law that enables a state to persistently object to a newly emerging norm of customary international law to the extent that they would then be exempt from the obligations of this new rule. For more see James A Green, *The Persistent Objector Rule in International Law,* (OUP 2016).
[306] For more on this see CG Guldahl, 'The Role of Persistent Objection in International Humanitarian Law' (2008) 77 Nordic Journal of International Law 51.
[307] See the US Government's letter to the International Committee of the Red Cross (3 November 2006), fn. 38.
[308] See P Dumberry, 'Incoherent and Ineffective: The Concept of Persistent Objector Revisited' (2010) 59:3 ICLQ 779.
[309] ICRC, Customary International Humanitarian Law, *Rule 15 – Principle of Precautions in Attack* (ICRC) available at https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule15 last accessed 21 August 2019.
[310] ibid .
[311] The customary nature of distinction is unchallenged for both NIAC and IAC. As early as 1938 the Assembly of the League of Nations stated that "the intentional bombing of civilian populations is illegal." League of Nations Assembly, Resolution adopted 30 September 1938. This was in response to the atrocities seen in the aerial bombing of Guernica during the Spanish Civil War. Over a period of just three hours Nazi aircraft razed the city of 5,000 residents to the ground, which was self-evidently a civilian area. Ishann Tharoor, 'Eighty years later, the Nazi war crime in Guernica still matters' (27 April 2017) *The Independent*, https://www.independent.co.uk/news/long_reads/nazi-war-crime-guernica-80-anniversary-bombing-spain-picasso-hitler-franco-a7704916.html accessed 10 July 2020. There is a body of state practice and jurisprudence from the ICTY and the ICC that confirm this view. See IHL Database, Practice, Rule 1 https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule1 accessed 21 August 2019; For further discussion on this see, Christopher Ward, 'Distinction: The Application of the Additional Protocols in the Theatre of War' (2006) 2 APYIHL 36.
[312] Theodor Meron, *Human rights and humanitarian norms as customary law* (OUP 1989) 65.

of customary law, the status of the fine detail of the provisions remains unclear.

The ICRC consider that "each party to the conflict must do everything feasible to verify that targets are military objectives"[313] and thus the 'everything feasible' standard is declared as customary. In order to substantiate this, it is useful to review the state practice on point, particularly from non-signatory states. For example, reference can be made to state working documents as found in the US Military Manual. This states that: "Parties to a conflict must take feasible precautions to reduce the risk of harm to the civilian population and other protected persons and objects."[314] Furthermore, it is possible to see statements made to this effect prior to the ratification of the Additional Protocols. In 1970, the UN General Assembly considered this point and stated that "in the conduct of military operations, every effort should be made to spare civilian populations from the ravages of war, and all necessary precautions should be taken to avoid injury, loss or damage to civilian populations."[315] Thus, prior to the ratification of API the UNGA utilised the phrasing 'all necessary precautions', which can be said to reach a similar standard to the later 'all feasible precautions'.[316]

Nevertheless, in any reference to the ICRC's Customary Study on IHL it is important to note the not insignificant reservations about its assertions. Customary IHL presents a double-edged sword for the ICRC, in that whilst treaty rules are clear and agreed upon by states, customary law can be somewhat vague. This was clearly articulated by Judge Koroma of the International Court of Justice who stated that "Written rules cannot be vague or open to divergent interpretations. Customary international law, while being notorious for its imprecision, may be no less useful than treaty law, and may in fact actually have certain advantages over it."[317] McCormack reflects that this 'notorious imprecision' can leave many

[313] ICRC, Customary International Humanitarian Law, *Rule 16 – Target Verification* (ICRC) available at https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule16 accessed 21 August 2019 .
[314] US Department of Defense, *Law of War Manual* (June 2015, updated December 2016) 188 at 5.3.3, available at https://dod.defense.gov/Portals/1/Documents/pubs/DoD%20Law%20of%20War%20Manual%20-%20June%202015%20Updated%20Dec%202016.pdf?ver=2016-12-13-172036-190 accessed 20 August 2019.
[315] UN General Assembly Res. 2675 (1970).
[316] The lack of identical phrasing could in some respects be considered a semantic difference and thus insignificant. However, given the great lengths gone to in order to establish the extent to which 'all feasible precautions' applies the difference could be more than just semantic phrasing.
[317] Judge Koroma, 'Foreword' in Jean-Marie Henckaerts and Louise Doswald-Beck (eds.) *Customary International Law, Volume I: Rules* (CUP 2005) xviii.

academic lawyers dissatisfied but provides confidence to government legal advisors, as the ambiguity provides "elasticity at the edges of the specific detail of a rule."[318] The role of customary law has been argued to have little effect on state behaviour as this is primarily governed by national interest and international relations considerations.[319] Whilst it is not possible to engage fully in this discussion here it is important to appreciate the wider context, and potential for sources of criticism, to which the Customary IHL Study was faced.[320]

A good example of the types of critique made of the Study is from Hays Parks who, through the perspective of weapons regulation, raises the point that: "Although the Customary Law Study acknowledges the importance of state practice, it focuses on statements to the exclusion of acts and relies only on a government's words rather than deeds."[321] Kalshoven and Zegveld also reflect on the evidentiary standard relied upon saying, "It may be commented again that in particular with respect to internal armed conflict not all of these rules may rest on the type of actual field practice traditionally required of rules of customary law."[322] Thus, whilst the Study was undeniably valuable and a massive undertaking on the part of the ICRC[323] it has raised criticisms based on methodology,[324] declarations and substance.[325]

An overarching critique was proposed by Bethlehem who has misgivings about the absolute nature of the rules established by the ICRC, which generally constructs the rules with the

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[318] Timothy McCormack, 'An Australian Perspective on the ICRC Customary International Humanitarian Law Study' in Anthony M Helm (ed.) *The Law of War in the 21st Century: Volume 82* (International Law Studies 2006) 88 .

[319] For leading commentary on this see Jack L Goldsmith and Eric A Posner, 'A Theory of Customary International Law' (1999) 66 University of Chicago Law Review 1113.

[320] For more on this discussion, see Michael Byers, 'Introduction: Power, Obligation and Customary International Law' (2001) 11 Duke Journal of Comparative and International Law 81; Mark A Chinen, 'Game Theory and Customary International Law: A Response to Professors Goldsmith and Posner' (2001) 23 Michigan Journal of International Law 143.

[321] W Hays Parks, 'The ICRC Customary Law Study: A Preliminary Assessment' (2005) 99 Am Soc'y Int'l L Proc 208, 210.

[322] Frits Kalshoven and Lisbeth Zegveld (n 117) 5 .

[323] For a positive response and assessment of the ICRC Study see, Malcolm MacLaren and Felix Schwendimann, 'An Exercise in the Development of International Law: The New ICRC Study on Customary International Humanitarian Law' (2005) 6:9 German Law Journal 1217; Also see preliminary comments in McCormack, An Australian Perspective (n 217).

[324] For example, John B Bellinger III and William J Haynes II, 'A US government response to the International Committee of the Red Cross study *Customary International Humanitarian Law*' (2007) 89:866 IRRC 443 .

[325] For example, Hays Parks (n 220).

phrasing 'state practice establishes this rule as a norm of customary IHL'. He states that "There are occasions in which this affirmation is followed by a statement noting ambiguity or controversy in respect of some element of the rule, but the affirmation of customary status stands fast."[326] The issue he presents for the validity of the declarations of the ICRC study is that there is a maintenance of a norm that has been established as custom based on state practice but then with the same breath caveats it with reference to conflicting state practice. However, I would dispute that this presents a determinative blow for the validity of the project as a whole, as it is demonstrable that variations in customary law can apply between states, as they do with treaty.[327] Nonetheless, it is important to note that customary rules reflect the activities of more than one or two states and result from general and consistent practice.

Criticism has also been directed at the Customary Study on a more detailed level, with scholars providing challenges to specific rules as developed by the ICRC.[328] Most significantly for the review of precautionary measures Bothe reviews the rules concerning distinction, indiscriminate attacks and proportionality that had been codified by the Additional Protocols. In recognising that these rules are customary obligations he raises the issue that, although excluding controversy over the general rule, they raise questions of interpretation, such as "… the yardstick of proportionality [and] the scope of measures of precaution."[329] Therefore, the substance of the precautionary principle is considered to be customary, as the general rule is purely the application of the fundamental principle of distinction and the respect for humanity. Any restrictions in its application would be presented by specific reservations. Nevertheless, I would contend that Art. 57 has gained the status of custom for IHL and thus can be used as the yardstick for measuring the practical application of the

[326] Daniel Bethlehem, *The ICRC Customary Law Study: An Assessment,* paper presented to the Seminar on the Law of Armed Conflict: Problems and Prospects (April 2005) Chatham House, London.
[327] Alexander Orakhelashvili, *Akehurst's Modern Introduction to International Law* (8th edn. Routledge 2019) 34.
[328] See for example on weapons: Hays Park (n 220), David Turns 'Weapons in the ICRC Study on Customary International Humanitarian Law' (2006) 11:2 J. Con. Sec'y L. 201; on sick, wounded and shipwrecked, James P Benoit, 'Mistreatment of the Wounded, Sick and Shipwrecked by the ICRC Study on Customary International Humanitarian Law' (2008) 11 YIHL 175; on compliance and enforcement, Dieter Fleck, 'International Accountability for Violations of the *jus in bello*: The Impact of the ICRC Study on Customary International Humanitarian Law' (2006) 11:2 J. Con. Sec'y L. 179.
[329] Bothe, New Rules (n 96) 167.

precautionary principle.[330]

In addition to API's status as customary law reference can also be made to APII, which is constructed specifically to be applicable to NIAC. However, APII is considerably less detailed than its partner due to the difficulty presented during the negotiations where a significant number of provisions were removed and its survival at times was in question. The Protocol that remains has limited rules on methods and means of conduct and Meron argues that this would "have to be tempered through the advancement of customary law alone."[331] The closest provision made by APII is Article 13 which states "the civilian population and individual civilians shall enjoy general protection against the dangers arising from military operations."[332] I would argue that it is almost impossible for states to observe this rule without taking precautions in attack. Nonetheless, there is a notable paucity in the provisions established specifically for NIAC and Turns considers the irony of this given that the birth of the codification of laws of war was from the Lieber Code which arose from a civil war.[333]

Nevertheless, in conducting the Customary Law Study the ICRC engaged with the different application of rules to IAC and NIAC and determined their status accordingly. They referred to the judgments and statutes forming the international tribunals as a major source of guidance, most notably from the ICC and the ICTY.[334] Thus, it is important to assess the extent to which the API principles, as outlined, have been considered to be customary in NIAC.

The most significant case on the issue of the application of wider IHL principles to NIAC is widely regarded to be that of *Tadić,*[335] which took substantial steps in the development of jurisprudence for the ICTY.[336] The court, having established that the conflict they were

[330] Leslie C Green, *The Contemporary Law of Armed Conflict* (3rd edn. Manchester University Press 2008) 186.
[331] Lindsay Moir, *The law of internal armed conflict* (CUP 2002) 134.
[332] APII Art. 13(1).
[333] David Turns, 'At the "Vanishing Point" of International Humanitarian Law: Methods and Means of Warfare in Non-international Armed Conflicts' (2002) 45 German YB Int'l L. 116.
[334] Robert Cryer, 'Of Custom, Treaties, Scholars and the Gavel: The Influence of the International Criminal Tribunals on the ICRC Customary Law Study' (2006) 11:2 J. Con & Sec'y L 239.
[335] *Prosecutor v Dudko Tadić* (Appeals Judgment) ICTY-94-1 (15 July 1999).
[336] Mia Swart, 'Tadić Revisited: Some Critical Comments on the Legacy and the Legitimacy of the ICTY' (2011) 3 Goettinghen J Int'l L 985.

concerned with was one of an internal nature,[337] set out what it considered to be customary law for NIAC. Notably this was "protection of civilians from hostilities, in particular from indiscriminate attacks, protection of civilian objects, in particular cultural property, protection of all those who do not (or no longer) take active part in hostilities, as well as prohibition of means of warfare proscribed in international armed conflicts and ban of certain methods of conducting hostilities."[338] The most significant part of this for the purposes of assessing precautions in attack is that it extends the scope of the prohibition of indiscriminate attack to NIAC. However, this in no way furthers the pursuit of definition nor does it specify a standard such as 'all feasible precautions' as evidenced in API.

The ICTY gave the opinion that "there exists a *corpus* of general principles and norms on internal armed conflict embracing common article 3 [of the 1949 Conventions] but having a much greater scope."[339] Furthermore, far from clarifying this expansive statement, their concluding remarks obfuscate the issue by stating that "only a number of rules and principles governing international armed conflicts have gradually been extended to apply to internal conflicts; and… this extension has not taken place in the form of a full and mechanical transplant of those rules to internal conflicts; rather the general essence of those rules, and not the detailed regulation they may contain, has become applicable to internal conflicts."[340] Therefore, the *Tadić* judgment, albeit significant, doesn't impose the application of a detailed standard which intelligence, or perhaps even more pertinently the precautionary principle, should meet.

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[337] However, it should be noted that there remains discussion over the rationale in the *Tadić* case due, in part, to its own legitimacy and its apparent conflict with the ICJ Judgment in *Nicaragua.* For more see Mutcheld Boot, *Genocide, Crimes against Humanity, War Crimes: Nullum Crimen Sine Lege and the Subject Matter Jurisdiction of the International Criminal Court* (Intersentia 2002) 554; Anthony Cullen, 'The Parameters of Internal Armed Conflict in International Humanitarian Law' (2004) 12 U. Miami Int'l & Comp L Rev. 189, 228 -9; James G Stewart, 'Towards a single definition of armed conflict in international humanitarian law: A critique of internationalised armed conflict' (2003) 85:850 IRRC 313, 324-26; Rachel Kerr, *The International Criminal Tribunal for the Former Yugoslavia: An exercise in Law, Politics and Diplomacy* (2004 OUP) 80-81; Marco , Sassòli & Laura M. Olson, 'The Judgement of the ICTY Appeals Chamber on the Merits in the Tadić Case' (2000) 839 IRRC 733, 739; Robert Hayden, 'Biased "Justice": Human Rightsism and the International Criminal Tribunal for the Former Yugoslavia' (1999) 47 Clev St L Rev 549, 564-68; Arturo Carrillo-Suarez, '*Hors de Logique*: Contemporary Issues in International Humanitarian Law as Applied to Internal Armed Conflict' (1999) 15 Am. U. Int'l L Rev. 1; David B Tyner, 'Internationalization of War Crimes Prosecutions: Correcting the International Criminal Tribunal for the Former Yugoslavia's Folly in Tadić' (2006) 18 Fla J Int'l L 843.
[338] ICTY, *Prosecutor v Dudko Tadić* (Decision on The Defence Motion For Interlocutory Appeal on Jurisdiction) ICTY-94-1 (2 October 1995) 127.
[339] Ibid 514.
[340] Ibid 519.

Subsequently the ICTY continued to define certain provisions as having general application. In *Prosecutor v Kordić and Čerkez*[341] they dealt with the issue of indiscriminate attacks during NIAC and held that: "It is indisputable that the general prohibition of attacks against the civilian population and the prohibition of indiscriminate attacks or attacks on civilian objects are generally accepted obligations."[342] They further this by stating that: "..there is no possible doubt as to the customary status of these specific provisions as they reflect core principles of humanitarian law that can be considered as applying to *all* armed conflicts."[343] (emphasis added) Thus, some form of precautions need to be taken to ensure that indiscriminate attacks are avoided. This is further evidence of a customary law of distinction but does not, in and of itself, extend the 'feasible precautions' standard to NIAC.

However, in *Galić* the court determined that "a person shall not be made the object of attack when it is not reasonable to believe, in the circumstances of the person contemplating the attack, including the information available to the latter, that the potential target is a combatant."[344] Further, they held that in cases of doubt a person should be considered a civilian for "as long as there is doubt as to his or her real status."[345] Thus, the court have upheld a standard of reasonable belief in the lawful nature of the target, and one which is judged on the information available at the time. This would concur with the principle of precaution as found in Art. 57, and although not advancing the detail further than the treaty, the court did provide further guidance suggesting factors which could be considered in ascertaining military or civilian status including clothing, activity, age or gender.[346] As such I would argue that the overwhelming body of evidence presented by the jurisprudence of the ICTY, the customary nature as deemed by the ICRC and the inability of compliance with the principle of distinction without precautions, have created a widely accepted customary principle of precautions, in line with the requirements as established by

[341] *Prosecutor v Kordić and Čerkez* (Decision on the Joint Defence Motion to Dismiss the Amended Indictment for Lack of Jurisdiction based on the limited Jurisdictional Reach of Articles 2 and 3) ICTY-95-14/22 (2 March 1999).
[342] Ibid 33.
[343] ibid 33.
[344] *Prosecutor v Stanislav Galić* (Trial Judgment) ICTY-98-29-T (5 December 2003) 50. This standard is applied to civilian objects in the subsequent paragraph.
[345] Ibid 50.
[346] Ibid 50.

Art. 57. Therefore, the development of an 'intelligence standard' would have to consider the application of precautions by states to appreciate whether this could amount to customary law, or merely 'soft law' principles.

2.5 Rules Other Than Law

In addition to the body of IHL as presented by treaty and custom, there exists a *corpus* of rules, regulations and doctrine created by militaries to govern their operations. Although these do not always amount to legally binding doctrine that can be applied for customary development[347] they are significant in their ability to govern military operations. The governance of this conduct is, in itself, a valuable method with which to judge state practice and as Hays Parks reflects, "war is the ultimate test of law."[348] Furthermore, it is through these that it may be possible to establish developments in the understanding of legal principles, the scope to which certain principles and their inherent 'balancing acts' apply, and finally the manner in which they may be applied.

As has been demonstrated the law on precautions, and proportionality, is lacking in definitions of quality and quantity. Therefore, to be able to understand whether an intelligence standard has been clarified as a result of state practice, and to what extent this has been influenced by the development of technologies for intelligence, surveillance and reconnaissance, it is important to assess the military doctrine relevant for targeting. One of the most significant areas of doctrine other than law for governing armed conflict is the rules of engagement (ROE).

2.5.1 Rules of Engagement (ROE)

Rules of engagement govern military operations and tactics to achieve the overall aims of the mission. Rowe describes them as "…instructions actually issued to soldiers (usually in

[347] For discussion on this see, Orakhelashvili (n 226) 33-45.
[348] Hays Parks (n 220) .

the form of a card) clearly defining who and what may be attacked in the context of an international armed conflict, as well as other relevant details such as the appropriate treatment of any prisoners."[349] Therefore, these are the operational enactment of the legal provisions of IHL and are routinely classified for current conflicts. NATO define them as "…directives to military forces (including individuals) that define the circumstances, conditions, degree, and manner in which force, or actions which might be construed as provocative, may be applied."[350]

These rules are far from new. One of the early sources of modern rules of engagement is the much cited statement from Bunker Hill in 1775, in which it is said that a general[351] ordered his rebels, "Don't shoot until you see the whites of their eyes."[352] This phrase provides a simple demonstration of the relationship between use of force and IHL. This order is formulated such that the use of force should be restrained until the identity, or perhaps location, of the opposition is confirmed. The rationale behind this order could be for numerous reasons, however, putting this into modern IHL the basic rule of engagement would be such that it would exceed the dictates of law and be more akin to policy. It is in this nuance that the difficulty with reliance on rules of engagement for understanding state practice for normative development of custom lies. It is clear that states do not consider rules of engagement to be international law.[353] The UK Army Field Manual defines them as: "commanders' directives - in other words policy and guidance - sitting within the legal framework rather than law themselves."[354] These rules then, are developed from IHL, but there are other factors that are relevant.

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[349] Peter Rowe, 'The Rules of Engagement in Occupied Territories' (2007) 8 Melbourne Journal of International Law 2.

[350] NATO MC 362/1, quoted by Nicolas Lange, 'Rules of Engagement' (undated) training slides for *Defensie* la Défense, Belgium. https://www.ismllw-be.org/session/2015-05-05-LANGE%20N.pdf accessed 12 August 2019.

[351] Some attribute this quote to Col. William Prescott, including Gary D Solis, *The Law of Armed Conflict: International Humanitarian Law in War* (CUP 2010) 490. Others have attributed it to Col. Israel Putnam from Parson Weems' accounts, see Jill Lepore, *The Whites of Their Eyes: The Tea Party's Revolution and the Battle over American History* (Princeton University Press 2010) 103.

[352] This quote is found in numerous sources, including Solis, (n 250) 490. However, it is widely disputed as a fiction, see Tony Horwitz, 'The True Story of the Battle of Bunker Hill' (2013) *The Smithsonian*, https://www.smithsonianmag.com/history/the-true-story-of-the-battle-of-bunker-hill-36721984/ accessed 10 July 2020.

[353] See the clear statement on this in the Danish Military Manual (n 25) 140.

[354] Ministry of Defence, *UK Army, Land Operations* (Army Doctrine Publication AC71940, March 2017) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/605298/Army_Field_Manual__AFM__A5_Master_ADP_Interactive_Gov_Web.pdf accessed 21 March 2018.

It is understood that rules of engagement are based upon three pillars: national policy; operational requirements and law.[355] As such they "…must be fully consistent with the political objectives of our national policy, the dictates of the law, and the safety and survival of our forces during the prompt and effective accomplishment of their mission."[356] This definition of their role and purpose clearly demonstrates the various purposes and concerns placed upon their development. Boothby highlights that they are the "practical means whereby the legal constraints [of IHL] will be translated into tactical instructions for subordinate commanders…"[357] The Danish Military Manual explains that restrictions on applicable law vary and "… may be imposed because of a desire to show some restraint in the use of force… [or] other concerns make it advisable to restrain the authorised use of force."[358] The complexity of demands facing military commanders during armed conflict are designed to be alleviated by well drafted rules of engagement, and although not forming IHL they are considered to be a military order.[359]

Despite rules of engagement not being law themselves, rules of engagement can never be more permissive than IHL provisions. As Dinstein remarks: "… under no circumstances can a Belligerent Party – through Rules of Engagement or otherwise – authorise its armed forces to commit acts which are incompatible with international obligations imposed by LOIAC [law of international armed conflict]."[360] On the other hand Ashley Roach reflects a US perspective in that the judge advocate "performs a valuable service when he or she recommends that the ROE not be more restrictive that the law requires unless for clearly articulated operational, political or diplomatic reasons."[361] As such, these rules are a

[355] Geoffrey Corn, 'The Law of Operational Targeting: Viewing the LOAC through an Operational Lens' (2012) 47:2 Texas International Law Journal 337, 341.
[356] Richard J. Grunawalt, 'The JCS Standing Rules of Engagement: A Judge Advocate's Primer' 44 A.F.L. REV 245, 246-7 (1997). See also, International Institute of Humanitarian Law, Rules of Engagement Handbook 1, 6 (2009) [hereinafter San Remo RULES OF ENGAGEMENT Handbook] ("In addition to *self-defence*, RULES OF ENGAGEMENT will therefore generally reflect multiple components, including political guidance from higher authorities, the tactical considerations of the specific mission, and LOAC. Succinct and unambiguous rules are essential.").
[357] William Boothby, *The Law of Targeting* (OUP 2012) 461.
[358] Danish Military Manual (n 25) 140.
[359] Ibid 139.
[360] Yoram Dinstein (n 52) 30.
[361] J Ashley Roach, 'Rules of Engagement' (1983) 36:1 Naval War College Review 46, 47.

reflection of the understanding of legal principles whilst also considering the policy and overarching national objectives covered in the relevant conflict. They therefore alter between conflicts,[362] between services[363] and between nations.[364]

The Danish Military Manual provides some interesting examples of the changes in rules of engagement from recent conflicts. One of these examples is from Afghanistan in 2009 where the commander-in-chief of the International Security Assistance Force (ISAF)[365] imposed restrictions on the use of force. This alteration was made in order to reduce collateral damage to the civilian population to alleviate pressure for the Afghan President Karzai.[366] This restricted military operations beyond the level required by IHL and is a good example of how other conditions and policy considerations can result in a tightening of rules. Therefore, it would be incorrect to assume by this alteration that the parties to the conflict have developed a new position on the provisions of IHL, and thus it demonstrates that using rules of engagement to presume state practice is hazardous. However, I would argue that as state practice is a key aspect of the development of customary law, then progressive rule tightening in practice, without any state explicitly denying a legal obligation, could start to indicate normative development in law. Nevertheless, it is important to note that this progression is demonstrated by a limited number of states, so the quantity of practice becomes significant for customary development.[367]

Rules of engagement are the operational interpretation of IHL principles and thus can, with care, provide insight into the understanding and development of state guidance for their forces. These documents are routinely classified and, when obtainable, are riddled with

[362] 2.5.2.
[363] Land, Sea, Air.
[364] See more on this in Geoffrey Corn, 'The Law of Operational Targeting: Viewing the LOAC through an Operational Lens' (2012) 47:2 Texas International Law Journal 337; also see Boothby (n 132) 461.
[365] ISAF was the NATO coalition mandated by the UN to support Afghanistan's security forces, see NATO, 'ISAF's mission in Afghanistan (2001-2014) (Archived)' (1 September 2015) https://www.nato.int/cps/en/natohq/topics_69366.htm accessed 10 November 2019.
[366] Danish Military Manual (n 25) 140.
[367] For more on the inherent weaknesses in customary development for IHL see: R Cryer, 'Of Custom, Scholars and the Gavel: The Influence of the International Tribunals in the ICRC Customary Law Study' (2006) 11 JCSL 241; and, D Turns, 'Weapons in the ICRC Study on Customary Internatioanl Humanitarian Law' (2006) 11 JCSL 202.

acronyms which can even cause confusion between the same national forces.[368] Since the late 1980s the US have used the phrase 'positive identification' to describe target verification for compliance with their rules of engagement.[369] This phrasing has also been present in Israeli doctrine, and given the significant impact the US have on conflict operations, and thus IHL, it is instructive to establish what this means in practice for intelligence gathering and the precautionary principle.

2.5.2 Positive Identification (PID)

Within military doctrine, the notion of Positive Identification, or PID, has been increasingly used as a turn of phrase to describe when it is permitted to undertake a strike. It is therefore a critical standard created by doctrine to comply with the precautionary principle under IHL. The problems of identification and deception are inherent in these circumstances as the so-called 'fog of war' prevails. However, the processes and procedures are developed as a method to provide consistency and clarity in approach during operations. In order to establish what standard of intelligence is normatively required, rather than, on the face of things, legally required, the Find, Fix, Track, Target, Execute, Assess (F2T2EA) cycle as developed within military doctrine[370] includes a significant phase for legal understanding of the precautionary principle.[371] The second step of this cycle is the 'Fix' phase which is the point where the targeter is required to acquire positive identification of the target to a pre-determined standard. Understanding what this standard means does, however, present a number of difficulties.

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[368] See Solis (n 250) 491.

[369] See US Joint Advocate General Corps. *Formal Investigation into the Circumstances Surrounding the Downing of Iran Air Flight 655 on 3 July 1988* (19 August 1988) https://www.jag.navy.mil/library/investigations/VINCENNES%20INV.pdf accessed 22 July 2019.

[370] Find, Fix, Track, Target, Execute, Assess. For more see US Department of Defense, *Dynamic Targeting and the Tasking Process, Annex JSP3-60* Targeting (15 March 2019) https://www.doctrine.af.mil/Portals/61/documents/Annex_3-60/3-60-D17-Target-Dynamic-Task.pdf accessed 1 July 2019.

[371] It is not within the scope of this piece to discuss each of the stages of this process, for some practical applications of this principle see John Sauter, Robert Matthews, Joshua Robinson, John Moody and Stephanie Riddle, 'Swarming Unmanned Air and Ground Systems for Surveillance and Base Protection' (2009) AIAA Aerospace Conference Paper https://doi.org/10.2514/6.2009-1850 accessed 10 November 2019.

Positive identification is defined by the US Department of Defense as "the reasonable certainty that a functionally and geospatially defined object of attack is a legitimate military target in accordance with the Law of War and applicable ROE [rules of engagement]."[372] Therefore, positive identification is considered to be a standard of 'reasonable certainty' that the object or individual is a legitimate target. Adams and Goodman consider this standard to be "capacious enough to require a standard of proof like clear and convincing evidence or a standard more closely approximating beyond a reasonable doubt."[373] The notion of reasonable certainty has also been used by Israel during the 2014 Gaza Conflict. Their report on the conflict states that: "Israel undertook to attack objects only when there was a *reasonable certainty* – based on reliable intelligence – that they constituted military objectives in accordance with the Law of Armed Conflict"[374] (emphasis added) They also used this standard for directing attacks at individuals, who they only attacked when there was a reasonable certainty that they were members of an organised armed group, or a civilian directly participating in the hostilities.

Despite the usage of the phrase it still reveals a level of opacity and is not a term that has origins in IHL. The IHL principles of distinction and proportionality, which the positive identification requirement is trying to replicate, are balanced by the precautionary principle. These three principles operate concurrently and provide a contextual standard, almost on a sliding scale. The standard of positive identification appears to prescribe a definitive standard, a benchmark, that needs to be met. The dictionary definition of positive is: "certain and without doubt"[375] which would appear to create a level of knowledge that exceeds the IHL standard of 'everything feasible.' This understanding is confirmed by the comments of Warren who said that it appears to describe "a degree of precision impossible to attain as a matter of course, at least for conventional forces."[376]

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[372] Chairman of the Joint Chiefs of Staff Instruction, *No-Strike and the Collateral Damage Estimation Methodology* (13 February 2009) US Department of Defense, Enclosure A, J.1.
[373] Michael Adams and Ryan Goodman, '"Reasonable Certainty" vs "Near Certainty" in Military Targeting – What the law requires' (15 February 2018) *Just Security* https://www.justsecurity.org/52343/reasonable-certainty-vs-near-certainty-military-targeting-what-law-requires/ .
[374] State of Israel, *The 2014 Gaza Conflict: Factual and Legal Aspects* (May 2015) 43 https://mfa.gov.il/ProtectiveEdge/Documents/2014GazaConflictFullReport.pdf accessed 4 June 2018.
[375] Cambridge Dictionary, Online, available at https://dictionary.cambridge.org/dictionary/english/positive .
[376] Marc Warren, 'The Fog of Law: The Law of Armed Conflict in Operation Iraqi Freedom' in Raul Pedrozo (ed.) *The War in Iraq: A Legal Analysis* (US Naval War College 2014) 170.

The problem of this standard is compounded when the definition of 'reasonable certainty' is considered. The usage of 'reasonable' is reminiscent of the standard required by IHL, where feasibility is qualified as that which is reasonable or practicably possible. However, by connecting this with 'certainty' it takes on "the character of *quantum."*[377] This leads to the impression that positive identification requires a specific level of certainty to be achieved. The dictionary definition of certainty is "the state of being completely confident or having no doubt about something."[378] Thus, the qualified standard could be interpreted as being one of reasonable confidence or having less than reasonable doubt. This makes for a sensible interpretation in light of IHL principles but maintains the notion that there is a distinct level at which positive identification is achieved. Within IHL there is no prescribed quantity or quality of intelligence or information obliged prior to, or indeed during an attack. IHL only requires that 'all feasible precautions' are taken, so the development of a 'reasonable certainty' standard could be demonstrable of a higher normative requirement developed by states.

The standard of positive identification is assessed by Schmitt and Schauss who have concerns of the use of the word 'positive' saying that: "… the word 'positive' unartfully expresses the principle of distinction's situational character and suggests the existence of a fixed threshold of requisite certainty. This can cause misunderstanding as to the attacker's IHL obligations."[379] Therefore, far from providing clarity in the intelligence standard and verification requirements, positive identification appears to have confused the issue further.

[377] John Merriam, 'Affirmative Target Identification: Operationalizing the Principle of Distinction for U.S. Warfighters' (2016) 56 VA J Int'l L 83, 135.
[378] Cambridge Dictionary Online, available at https://dictionary.cambridge.org/dictionary/english/certainty accessed 20 July 2019.
[379] Michael Schmitt and Maj. Michal Schauss, 'Uncertainty in the Law of Targeting: Towards a Cognitive Framework' (2019) 10 Harvard National Security Journal 148, 160.

2.5.3 The Relationship of Positive Identification and Rules of Engagement

Boddens Hosang connects the level of identification to the rules of engagement operational at the time, with them providing "a specific form that establishes the rules on target acquisition and positive identification."[380] Thus, it would be reasonable to expect that the rules of engagement would detail the expected level of intelligence required to establish positive identification. However, in 2003 the Combined Forces Land Component Commander (Iraq) rules of engagement card provided: "Positive identification (PID) is required prior to engagement. PID [positive identification] is a reasonable certainty that the proposed target is a legitimate military target. If no PID [positive identification] contact your next higher commander for decision."[381] This rule of engagement card only provided that positive identification must be established and reiterates the reasonable certainty standard. Maybe though, the principle stated by Boddens Hosang is best understood when referring to the different qualifications that can be attributed to positive identification.

In 2013, the US maintained a different standard for positive identification outside of the US and beyond the active battlefield; for targeted attacks in places such as Yemen and Somalia. The positive identification that needed to be achieved in these counterterrorism strikes was dictated by the Obama White House as "Near-certainty that the terrorist target is present... [and] … Near certainty that non-combatants will not be injured or killed."[382] Therefore, positive identification can be a variable standard that depends on the policy directives present at the time of the attack. This is not uncommon in the policy driven aspects of operational conduct. Rules of engagement operationalise the legal principles of IHL but "they do not stand alone; non-legal issues, such as political objectives and military mission limitations, also are essential to the construction and application of [rules of engagement] ROE."[383] Thus, during Operation KFOR in Kosovo in 1999 the rules of engagement card that

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[380] Hans Boddens Hosang, 'Rules of Engagement and Targeting' in Paul AL Ducheine, Michael N Schmitt and Frans PB Osinga (eds.) *Targeting: The Challenges of Modern Warfare* (TMC Asser Press 2016) 166.
[381] Quoted in Michael Schmitt, 'Precision attack and international humanitarian law' (2005) 87 IRRC 445, 450.
[382] White House, *Fact Sheet: U.S. Policy Standards and Procedures for the Use of Force in Counterterrorism Operations Outside the United States and in Areas of Active Hostilities* (23 May 2013) https://perma.cc/L54B-VY5F accessed 20 July 2019.
[383] Chairman of the Joint Chiefs of Staff Instruction 3121.01B, 'Standing Rules of Engagement (SROE)/Standing Rules for the Use of Force (SRUF) for US Forces' (13 June 2005) 75 http://www.loc.gov/rr/frd/Military_Law/pdf/operational-law-handbook_2013.pdf accessed 20 July 2019.

was provided to soldiers states: "You may open fire only if you, friendly forces or persons or property under your protection are threatened with deadly force."[384] This is more akin to a law enforcement standard for use of force rather than that which is expected by IHL.[385]

The law enforcement standard is designed such that it protects the international human right of a right to life.[386] The three principles governing the use of force from a human rights perspective were outlined as necessity, proportionality and precaution by the Human Rights Council.[387] These norms developed by the HRC are binding on all states as general principles of law.[388] It is deemed that necessity and proportionality are conjoined and so a "failure to respect either principle will usually mean that a victim's human rights have been violated by the state."[389] However, as similar as the principles appear to the IHL standards these should not be confused.

For law enforcement, necessity limits the use of force to only those circumstances when it is strictly necessary,[390] thus this usage is exceptional and can imply that an official should wait for more appropriate resources to arrive.[391] The necessity requirement for law enforcement is much more rigid than that established in IHL, reflecting the different levels of control and considerably altered circumstances of conflict. However, they are not so dissimilar, in that the Council of Europe's European Code of Police Ethics requires that the use of force may be used "only to the extent required to obtain a legitimate objective."[392] This phrasing could

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[384] International and Operational Law Department, '*Soldiers Card, KFOR Rules of Engagement for use in Kosovo, 1999'* in Operational Law Handbook. [KFOR Operational Manual] (The Judge Advocate General's Legal Center & School: Virginia 2013) 100 http://www.loc.gov/rr/frd/Military_Law/pdf/operational-law-handbook_2013.pdf accessed 20 July 2019.

[385] See for example, UN Human Rights Office of the High Commissioner, *Basic Principles on the Use of Force and Firearms by Law Enforcement Officials* (27 August – 7 September 1990) https://www.ohchr.org/en/professionalinterest/pages/useofforceandfirearms.aspx accessed 1 July 2019.

[386] Article 6, International Covenant on Civil and Political Rights; Article 2, European Convention on Human Rights; Article 4, American Convention on Human Rights. For more see *McCann and Others v United Kingdom* (1995) 21 EHRR 97.

[387] Report of the Special Rapporteur on extrajudicial, summary or arbitrary executions, Christof Heyns, A/HRC/26/36, 1 April 2014, 59-73.

[388] S. Casey-Maslen and S. Connolly, *Police Use of Force under International Law* (CUP 2017) Ch. 3.

[389] Geneva Academy of International Humanitarian Law and Human Rights, *Use of Force in Law Enforcement and the Right to Life: The Role of the Human Rights Council* (Academy in-brief 6, Geneva, November 2016) 6.

[390] Art. 3 1979 Code of Conduct.

[391] See for e.g. ECtHR, *Shchiborshch and Kuzmina v Russia* (16 January 2014) First Section, Judgment .

[392] European Code of Police Ethics, adopted by the Committee of Ministers of the Council of Europe on 19 September 2001, 37.

easily appear to be lifted from IHL but two things should be noted. Firstly, this is a European document and thus only binds European states, therefore the US, for example, would not be bound by this Code. Secondly, the 'legitimate objective' which is the subject of the requirement could be substantially different in Kabul than in London. This could be said to be governed by the proportionality requirement. This requires officers to "act in proportion to the seriousness of the offence and legitimate objective to be achieved."[393] Unlike the proportionality principle of IHL, within Law Enforcement, it is said that proportionality "sets a maximum on the force that might be used to achieve a specific legitimate objective."[394] Therefore, the law enforcement use of force is framed in a substantially different manner to that of IHL.

Nevertheless, there have been a number of developments which demonstrate just how close these standards have become in non-international armed conflicts.[395] One only has to compare the Obama White House's 'near certainty' statement with those of the UK's college of policing. Obama's White House made the statement that: "Lethal force will be used only to prevent or stop attacks… and even then, only when capture is not feasible and no other reasonable alternatives exist to address the threat effectively."[396] This compares to the domestic policing requirements as described by the UK College of Policing, in their 'Ten Key Principles' that states: "Police officers shall, as far as possible, apply non-violent methods before resorting to any use of force. They should use force only when other methods have proved ineffective, or when it is honestly and reasonably judged that there is no realistic prospect of achieving the lawful objective identified without force."[397] Therefore, it is demonstrable that these statements both require there to be an assessment

[393] 1990 Basic Principle 5.
[394] Report of the Special Rapporteur on extrajudicial, summary or arbitrary executions, Christof Heyns, A/HRC/26/36, 1 April 2014, 66; For an application of this see, ECtHR, *Nachova v Bulgaria*, Grand Chamber, Judgment, 6 July 2005, 95.
[395] D Kretzner, A Ben-Yehuda and M Furth, '"Thou Shall Not Kill": The Use of Lethal Force in Non-International Armed Conflicts' (2014) 47:2 Isr L Rev 191, 224.
[396] White House Fact Sheet, May 2013, provides for five considerations the third of which is "an assessment that capture is not feasible at the time of the operation" https://obamawhitehouse.archives.gov/the-press-office/2013/05/23/fact-sheet-us-policy-standards-and-procedures-use-force-counterterrorism accessed 5 November 2019.
[397] The College of Policing, *Ten Key Principles Governing the Use of Force by the Police Service* (HMIC 2011) 3. http://library.college.police.uk/docs/APPref/use-of-force-principles.pdf accessed 1 December 2019.

of any means, short of the use of force, to achieve their objective.[398] It is perhaps though unsurprising that there has been a convergence of these principles, given the jurisprudence on the different legal principles to be applied in situations of non-international and international armed conflicts.[399]

During an international armed conflict the principles of IHL are considered *lex specialis* which takes primacy over international human rights law, this relationship is complementary and means that where the principles conflict then IHL will take primacy.[400] However, during a non-international armed conflict there has been some evidence that a human rights derived approach could be considered first.[401] This was demonstrated by the UN Human Rights Committee during the *Guerrero* case. In this situation they criticised the lack of a warning, a lack of opportunity for surrender and that that action did not pursue a legitimate aim. They therefore had applied the law enforcement concept to an individual who was considered to be a member of an organised armed group.[402] Perhaps more tellingly the Israeli Supreme Court concluded that if "a terrorist taking a direct part in hostilities can be arrested, interrogated, and tried, those are the means which should be employed."[403] This is the application of a 'least harmful means' standard, more akin to international human rights than the principles enshrined in IHL.

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[398] The College of Policing, 'Police use of Force' (2013) http://www.app.college.police.uk/app-content/public-order/core-principles-and-legislation/police-use-of-force/ accessed 15 August 2016. Describes that officers must question if there are any means, short of the use of force, capable of attaining the lawful objective identified.

[399] It is out with the scope of this work to discuss the increasing convergence of military and law enforcement missions however for more on this see, Dale Stephens, 'Military Involvement in Law Enforcement' (2010) 92:878 IRRC 453; Gabriella Blum and Philip Heymann, 'Law and Policy of Targeted Killing' (2010) 1 Harv Nat'l Sec J 145; Kenneth Watkin, 'Controlling the Use of Force: A Role for Human Rights Norms in Contemporary Armed Conflict' (2004) 98:1 AJIL 1.

[400] *Legality of the Threat or Use of Nuclear Weapons* (Advisory Opinion) ICJ 1996. https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-00-EN.pdf ; see also *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory* (Advisory Opinion) [2004] ICJ Rep 136; Also see Peter Rowe, *The Impact of Human Rights Law on Armed Forces* (CUP 2006); and Cordula Droege, 'The Interplay between International Humanitarian Law and International Human Rights Law in Situations of Armed Conflict' (2007) 40:2 Isr. L. Rev. 310.

[401] the Inter-American Commission on Human Rights being an important exception as they largely consider IHL as *lex specialis* see *Abella v Argentina ("la Tablada")* [1997] IACommHR, also *Third Report on the Human Rights Situation in Colombia,* Chapter IV, 26 February 1999 OEA/Ser.L/V/II.102.

[402] HRC, *Camargo and Suarez de Guerrero v Colombia* (1982) UN Doc. CCPR/C/15/D/45/1979.

[403] *The Public Committee against Torture in Israel and others v. The Government of Israel and others ("The Targeted Killings Case")* [2005] HCJ 769/02 at 40.

The 'least harmful means' standard is also provided for in US rules of engagement as a process known as 'Escalation of Force' (EOF). This process is designed to provide for a proportional application of force in self-defence situations,[404] and was originally designed for situations where there were no 'declared hostile forces.'[405] It has been developed during the wars in Iraq and Afghanistan in response to the difficulties presented by identifying insurgents among a civilian population.[406] Previously known as graduated force measures the US DoD states that: "When time and circumstances permit, Soldiers should attempt to use lesser means of force."[407] This approach to escalating force, in accordance with the circumstances presented to the soldier, is developed slightly differently by the ICRC, as a capture rather than kill principle. In addressing the challenges presented by contemporary armed conflicts, the ICRC state that: "Persons posing a threat must be captured rather than killed, unless it is necessary to protect persons against the imminent threat of death or serious injury or to prevent the perpetration of a particularly serious crime involving grave threat to life, and this objective cannot be addressed through means less harmful than the use of lethal force."[408] As such, it appears to be the case that the 'least harmful means' approach has been promoted from the perspective of protecting civilians within conflict, the humanity approach, as well as the military necessity approach taken by the US Department of Defense.

The level of certainty that is required to conduct an attack is instructive for any normative development of the precautionary principle, and the way this has been applied in recent conflicts could indicate the opinion of the states concerned. However, as has been explained any comparison should appreciate the wider context of rules of engagement and the standards provided therein. To compare the 'near certainty' understanding that is applied to positive identification in 2013 and the self-defence standard given in Kosovo in 1999, it is important to understand the contextual basis for these rules. Most significantly the 'near

[404] Center for Army Lessons Learned, Pub 07-21, Escalation of Force Handbook (July 2007).
[405] The Judge Advocate General's Legal Ctr. & Sch. Standard Training Package, *Standing Rules of Engagement* (20 November 2006).
[406] Randall Bagwell, 'The Threat Assessment Process (TAP): The Evolution of Escalation of Force' (2008) 4 Army Law 5, 7.
[407] International and Operational Law Department, *Operational Law Handbook.* (The Judge Advocate General's Legal Center & School: Virginia 2013) 83.
[408] ICRC, 'International humanitarian law and the challenges of contemporary armed conflicts' (2015) Report of the 32nd International Conference of the Red Cross and Red Crescent 32IC/15/11 34.

certainty' requirement was primarily for air-to-ground combat operations; airstrikes from unmanned aerial vehicles and aircraft. By contrast in Kosovo the soldiers' card was designed for ground troops as part of a peacekeeping mission. It is natural that air operations are less likely to need confirmation of self-defence principles, but they are also less likely to have visibility of the target. In real terms then, both of these requirements tighten the IHL standard of verification, and thus the precautionary principle, for aircraft to 'near certainty' and for ground troops to something akin to self-defence.

However, a reading of the rule of engagement cards from Kosovo and Albania in 1999, through Operation Iraqi Freedom in 2003, and later in 2005 does not indicate a continuous trend. In Albania during April 1999, necessary force up to and including deadly force was only permitted "in response to an immediate threat."[409] This was similar to the later, June 1999 Kosovo standard, which was set as a "minimum force necessary"[410] and restricted forces from opening fire unless "…you, friendly forces or persons or property under your protection are threatened with deadly force."[411] In Operation Iraqi Freedom the requirements are built upon the positive identification standard and the reasonable certainty that a target is a legitimate military target. In 2003 these rules of engagement ordered that all enemy military and paramilitary forces were declared as hostile, and thus considered to be military targets.[412] In 2005 the rules of engagement removed the blanket declaration of all enemy forces as hostile. This was changed to base engagement on their conduct, so that persons who were "committing hostile acts" or "exhibiting hostile intent"[413] were considered to be hostile. These rules of engagement also introduced the escalation of force measures to enable forces to establish if there was a hostile act or intent to base their decision upon. Furthermore, these rules of engagement reiterate the self-defence provisions as outlined in the Kosovo rules in 1999.[414]

[409] KFOR Operational Manual (n 283) 99.
[410] Ibid 100.
[411] Ibid 101.
[412] Ibid 103.
[413] Ibid 104.
[414] Self-Defence is not problematic within this context as it is also provided for in the Law Enforcement Paradigm as demonstrated by the UK Police College's doctrine. For a further discussion of this see, Gloria Gaggioli, 'Soldier Self-Defense Symposium: Self-Defense in Armed Conflicts – The Babel Tower Phenomenon' (3 May 2019) *OpinioJuris* http://opiniojuris.org/2019/05/03/soldier-self-defense-symposium-self-defense-in-armed-conflicts-the-babel-tower-phenomenon/ accessed 21 July 2019 .

The outlier in these four sets of documents then is the 2003 rules of engagement for Operation Iraqi Freedom. This is understood when the context of the operations is considered. The 2003 force was involved in a major combat operation, in what would be considered to be an IAC rather than as part of 'peace enforcement' or 'stability operations,' which would be classified, in these cases, as a NIAC. Furthermore, these documents are drafted to suit the operational environment: the various factors that may be strategic, operational or tactical in order to achieve the results desired. It can therefore be argued that positive identification is not intending to be an application of a legal principle rather a reflection of overarching policy considerations. However, as much as rules of engagement and tactical directives are not intended to create legal precedent,[415] the continued tightening of the required verification standard, or intelligence standard, will make it harder to retreat to a more simplistic application, particularly with respect to NIAC.

This is reflected by Mariam, who says: "The danger of conflating law and policy is that U.S. practice may solidify over time into a position that, while not quite representing a statement on customary international law, is nonetheless extraordinarily difficult to walk back."[416] When this is considered in conjunction with the increased level of technology available in intelligence, surveillance and reconnaissance it would also imply that the standard is considered to be higher. The evidence from the review of the rules of engagement would indicate that the context of operations is significant for state practice. Operations that are officially for stability or peace enforcement missions require the application of 'least harmful means' standard, with the law enforcement approach to use of force being demonstrable during the last few decades. This has also been reflected in the positive identification qualification that, although varying in its understanding, has developed in doctrine and practice. Therefore, state practice indicates a different approach to the application of IHL, depending upon context and classification. This appears to alter the demands on certainty in intelligence in relation to the overarching categorisation and policy considerations.

[415] 3.8.
[416] John J Mariam, 'Affirmative Target Identification: Operationalizing the Principle of Distinction for US Warfighters' (2016) 56:1 Virginia Journal of International Law 82, 138.

2.6 Conclusion

That precautions should be taken in attack appears to be, at the very least, a customary principle of IHL. Without taking adequate precautions it is not possible to comply with the well-established doctrines of distinction and proportionality, therefore by extrapolation a principle of precautions to be taken must exist. However, to establish what intelligence standard this dictates is far from simple. It would not be outlandish to state that this, at the very minimum, is one of 'constant care' as established in both additional Protocols. That this should also apply to NIAC and be considered developed customary law would follow from the judgments made in *Tadić* and subsequent cases. From here though it becomes increasingly complex and perhaps the most accurate way to establish what intelligence standard is accepted under IHL is by reviewing case studies and state practice.

It could be argued that different standards exist during NIAC and IAC, with a greater degree of care and accuracy required during a NIAC. This would certainly be a logical extrapolation of the 'maximum extent feasible' for defenders and could be argued given an 'effective control' criteria.[417] Therefore, it can be argued that intelligence standards are not explicitly detailed within law. They sit at the interstices of necessity and humanity, and the development of law throughout the 20th Century has led to the adaptation of these principles. Since the Geneva Conventions of 1949, there has been an increasing focus on humanitarian aims with a drive toward the primacy of these in IHL.

The codification of principles in the Additional Protocols lends greater clarity to the legal standard for precautions but still leaves considerable room for interpretation. During this same period the rapid development of technologies has led to greater expectations of accuracy. This has been shown in the understanding of 'attacks' and the challenge cyber warfare presents for this definition.

[417] *Prosecutor v Dudko Tadić*; The Republic of Nicaragua v The United States of America (1986) ICJ and Article 28 of The Rome Statute of the International Criminal Court 1998.

The continued development of standards through rules of engagement and the term 'positive identification' demonstrate that even states that are not parties to the additional protocols are applying these standards in practice. That these standards are being developed to a position that requires 'reasonable certainty' or 'near certainty' as policy obligations makes it even more pertinent to establish if there is an intelligence standard created as a result of practice and technological advancement. That an intelligence standard or requirement has been developed in the understanding of 'all feasible precautions' is further supported by a number of commentaries outside of the US. Examples include the position NATO and the ICRC took on the Kunduz incident in 2009,[418] the wider adoption of API principles as a standard,[419] and more recently the UN's criticism of Israel during the Gaza conflict labelled Operation Protective Edge in the summer of 2014.[420] All of these will be explored in further detail in the following chapters.

[418] 3.3.2.
[419] 3.4.
[420] 5.5.

Chapter Three

Insufficient Knowledge in Kunduz and the Precautionary Principle

3.1 Introduction

This chapter is primarily concerned with the practical and operational application of the precautionary principle under IHL that has been discussed. It attempts to establish how much knowledge is considered sufficient to undertake an attack lawfully during modern armed conflict. To understand if a standard has developed with the increase in Intelligence, Surveillance and Reconnaissance (ISR) technology, this chapter uses the framework of an investigation into an incident in Kunduz, Afghanistan, in 2009.

I argue that the Kunduz tankers case demonstrates the failings inherent in the application and practical use of the precautionary principle outlined by IHL. The case relies primarily on the principles of distinction and precaution and so provides an indication of the current accepted state practice. I will show that this incident exposes the wider issue with target identification and verification in complex battlespaces such as Afghanistan.

I investigate the interrelated issues raised by the Rules of Engagement and Tactical Directives, as well as the problems surrounding the clarity of intelligence available. It highlights the differential standards expected by NATO and the *Bundesgerichtshof* (German Federal Court of Justice), and the manner in which these can be evaluated through the principles of proportionality, distinction and precautions in attack.

I explore the difficulties of obtaining information post-incident, and contend that the lack of transparency afforded in, and after, investigations of this nature prevent objective analysis and so the development of IHL can be obfuscated. I conclude that the lack of information following incidents of this kind confuses any intelligence standard that exists under IHL. Further, the lack of clarity in the intelligence standard due to the symbiotic relationship of IHL and other rules leads to confusion amongst allies, which can lead to errors that could be overcome by present technology.

The situation in this chapter that is used as a framework to discuss the practical application of the precautionary principle occurred in Kunduz, Afghanistan. In the early hours of 4 September 2009, US F-15E fighter jets dropped two 500lb bombs on a sandbank in the Kunduz region of Afghanistan. The target was two tanker trucks that had earlier been hijacked from ISAF[1] control. It was estimated that there were around 70 individuals with the trucks, believed to be insurgents. However, it later became apparent that many of the individuals were civilians from a local village. Although it was US jets that dropped the bombs, the instructions originated with German military forces as part of the PRT,[2] ultimately with Colonel Klein. The implications of this one targeting decision have been far-reaching, to the extent that conflicting opinions appear to have arisen out of the official reports made. Despite the numerous legal and political questions raised by this particular incident, this chapter will focus primarily on the standard of intelligence required by IHL.

3.2 Scarcity of Information

One of the main issues with undertaking legal analysis of this, and other military instances of mistaken targeting, is a paucity of accurate information.[3] Large swathes of evidence and reports remain classified and are therefore inaccessible for legal analysis of the facts. This case is no different, excepting that the political furore in Germany has led to a number of documents being leaked or released, presenting an opportunity to delve more deeply into the issues. However, as Heintschel von Heinegg remarks: "Still, in view of the ill-founded allegations of war crimes and the needs of the German armed forces in Afghanistan for legal clarity and legal security, a more timely publication would have been most helpful."[4]

[1] International Security Assistance Force see https://www.nato.int/cps/en/natohq/topics_69366.htm accessed 10 March 2019.
[2] Provincial Reconstruction Team.
[3] 1.2.
[4] von Heinegg Wolff and Dreist Peter, 'The 2009 Kunduz Air Attack: The Decision of the Federal Prosecutor-General on the Dismissal of Criminal Proceedings against Members of the German Armed Forces' (2010) 53 German YB Int'l Law 833, 866.

Indeed, in this case there were a number of investigations conducted including those led by ISAF, NATO,[5] the ICRC, German Parliament, German Military Police and Amnesty International. It should be noted that despite, or perhaps as a result of, the variety of investigative commissions and the court cases in Germany the details surrounding the circumstances of the attack remain contested.[6] Nonetheless, the attack itself is without question and it is possible to view the leaked footage of the incident taken by one of the US jets preceding and during the attack. This footage, as reported by the Washington Post, shows "only a handful of people running away after the explosion."[7] The factual details of the air attack, as publicly available, can be brought together from a range of both official and journalistic sources.

3.2.1 Media Bias

It should be noted that the primary problem with conducting legal analysis from journalistic sources is one of bias. There is an overwhelming predilection for discussion of the casualty numbers and the German papers particularly were concerned with the political impact.[8] The concern for the casualty numbers and the humanitarian perspective are particularly pertinent for Germany, given their culture of restraint.[9] Furthermore, maybe the most valuable information, that of the NATO report, can only be viewed in snippets from Der Spiegel who obtained a leaked copy.[10] It is clear then that without access to the full report the legal analysis can rely only on the quotes made by the papers, which could have been taken out of context. Full investigatory reports can run to many thousands of pages, with substantially reduced and redacted versions routinely published, most notably by the US

[5] North Atlantic Treaty Organisation.
[6] Elisabeth V Henn E, 'The Development of German Jurisprudence on Individual Compensation for Victims of Armed Conflicts: The Kunduz Case' (2014) 12 Journal of International Criminal Justice 615, 616.
[7] Rajiv Chandrasekaran, 'NATO Orders Probe of Afghan Airstrike Alleged to Have Killed Many Civilians' (4 September 2009) *Washington Post Foreign Service* http://www.washingtonpost.com/wp-dyn/content/article/2009/09/04/AR2009090400543.html accessed 13 November 2017.
[8] John Goetz, Konstantin von Hammerstein and Holder Stark, 'Kunduz Affair puts German Defense Minister Under Pressure' (19 January 2010) *Spiegel Online* http://www.spiegel.de/international/germany/nato-s-secret-findings-kunduz-affair-report-puts-german-defense-minister-under-pressure-a-672468.html accessed 7 March 2018.
[9] 1.3.7.
[10] Ibid.

Military. An example of this is the report of the US into the *Médecins Sans Frontières* hospital incident of 3 October 2015. As a hospital this should be clearly protected by IHL, and thus this incident should be considered extremely seriously.[11] The original classified version is reputed to have over 3,000 pages of documentary evidence[12] whilst the unclassified public version comprises just 126 pages.[13] This release of reports in an unclassified form is welcome and the US are by far the leaders in this field.[14] Although these are substantially reduced, they allow a far greater detail for analysis against the provisions of IHL and have more reliability than documents that have been leaked.[15] Irrespective then of whether Der Spiegel had access to the full classified version or a reduced summary, a few sentences gleaned from the conclusion[16] has the significant potential to be de-contextualised, as much by omission as by intent.

The problem of media reporting and the potential for bias is well-documented.[17] As Edgar comments: "Journalism cannot be objective, for that presupposes that an inviolable interpretation of the event as action exists prior to the report."[18] Any journalistic account of an incident is merely an interpretation within the pragmatic requirements of journalism, so "a news report does not grasp the event definitively, but within a given horizon."[19] In the context of international coverage concerns have been raised over western bias in reporting of incidents in Russia and China.[20] The journalistic reporting of war became particularly

[11] GCI Art. 19; GCIV Art. 18; API Art. 12.
[12] Reuters, 'Report: Combination of errors led to US bombing of MSF hospital in Afghanistan' (24 November 2015) *Newsweek* https://www.newsweek.com/report-combination-errors-led-us-bombing-msf-hospital-afghanistan-398120 accessed 7 January 2019.
[13] Press Release, 'April 29: CENTCOM releases investigation into airstrike on Doctors Without Borders trauma center' (29 April 2016) *US Central Command* http://www.centcom.mil/MEDIA/PRESS-RELEASES/Press-Release-View/Article/904574/april-29-centcom-releases-investigation-into-airstrike-on-doctors-without-borde/ accessed 7 January 2019.
[14] Government organisations provide FOIA (Freedom of Information Act) reading rooms allowing access to a myriad of sources that have been redacted and released to the general public. The UK in contrast has a far more restricted view on what can be released to the National Archives. For more on this 6.6.
[15] There is no easy way of establishing the reliability of a document published, for example, by WikiLeaks.
[16] Der Spiegel (n 8) 21.
[17] For an overview of this well-recognised concept see, David Niven, *Tilt? The Search for Media Bias* (Greenwood Publishing Group 2002).
[18] Andrew Edgar, 'Objectivity, bias and truth' in Andrew Belsey & Ruth Chadwick (eds.) *Ethical Issues in Journalism and the Media* (Routledge 1992) 120.
[19] Ibid 118.
[20] New East Network Expert Panel, 'Is western media coverage of the Ukraine crisis anti-Russian' (4 August 2014) *The Guardian* https://www.theguardian.com/world/2014/aug/04/western-media-coverage-ukraine-crisis-russia accessed 4 August 2019; Piers Robinson, 'Russian news may be biased – but so is much western

significant during the Vietnam war, where images sent directly back to the US were highly inflammatory, earning the conflict the label of the first 'television war'.[21] This has continued, but much like warfare has evolved over time as a result of technology, policy and cultures.

The media coverage of the Iraq war during the early 2000s was analysed by Kolmer and Semetko. They comment that "the reporting of the war was conditioned by the national contexts in which it was produced… [raising] …serious questions about the credibility and impartiality of TV news in the reporting of war."[22] This study provides evidence of a significant divergence in the approaches taken by the US and German media outlets, indicative of the cultural differences. Within Germany for example there was significant debate over whether the media should be embedded with military forces. This stemmed from experiences during the first Gulf War in 1991, where journalists felt they had become "caught between the propaganda machines of the opposing countries (Iraq and the US)."[23] This was a non-issue for the US who primarily just wanted news from the front line. Furthermore, it has been highlighted that certain media have demonstrated a propensity to report on military achievement at the expense of information about death and destruction, thus undermining a truly independent narrative.[24]

Nonetheless, it is possible to establish the basic facts of the Kunduz situation through the media coverage available and the German Court ruling which was, in part, made public. As this ruling has yet to be translated into English, scholarly articles analysing the case remain a key source of information. The dominance of English as the lingua franca in international law, and the potential for that to undermine the concept of universality of the law, is highlighted by Anthea Roberts.[25] To appreciate the significance of this she uses the example

media' (2 August 2016) *The Guardian* https://www.theguardian.com/commentisfree/2016/aug/02/russian-propaganda-western-media-manipulation accessed 4 August 2019.

[21] Tony Maniaty, 'From Vietnam to Iraq: Negative Trends in Television War Reporting' (2008) 14:2 Pacific Journalism Review 89; Jacob Hillesheim, 'How the media shapes public opinion of war' (4 August 2017) *Rewire* https://www.rewire.org/pbs/vietnam-war-media-shapes-public-opinion/ accessed 11 August 2019.

[22] Christian Kolmer and Holli A Semetko, 'Framing the Iraq War: Perspectives from American, UK, Czech, German, South African, and Al-Jazeera News' (2009) 52:5 American Behavioural Scientist 643, 654 https://journals.sagepub.com/doi/pdf/10.1177/0002764208326513 accessed 4 August 2019.

[23] Ibid 646.

[24] John Robertson, 'People's Watchdogs or Government Poodles? Scotland's National Broadsheets and the Second Iraq War' (2004) 19:4 European Journal of Communication 457 .

[25] Anthea Roberts, *Is International Law International?* (OUP 2017).

of the response of Western international lawyers and their Russian counterparts to the Crimea annexation or reunification in 2014. "These two groups spoke in different languages, assumed different accounts of the facts, had different understandings of the content of international law, and reached diametrically opposed conclusions."[26] The reasons and rationale for this are out with the scope of this work; however, the overriding argument is particularly pertinent given the scarcity of information in this area, and the fact that this incident occurred as part of a multi-national allied force.

3.2.2 Anglophonic Dominance

Perhaps equally important for this discussion on the intelligence required under IHL, is the dominance of English within the intelligence and military operations of multi-state allied forces. There may be no better example than that of the so-called 'five-eyes' intelligence alliance of the anglophone states; US, UK, Canada, Australia and New Zealand. This alliance was created by the UKUSA agreement[27] which has been in existence since the end of World War II, although details of it were classified until 2010.[28] The extent of intelligence information available to these states is therefore vastly superior to others. Despite agreements being enacted for specific and limited situations, it is reported that during joint operations it was routine for several briefings to be given so that intelligence could be 'filtered' to forces of different nations.[29] Furthermore, where this intelligence is exchanged between nations it has a higher likelihood of being transmitted in English. The problem has been demonstrated by the different phrasing used by the official English and French versions of API.[30] In this case, although the translations are said to create the same legal standard the wording is different; this demonstrates how linguistic challenges can present issues for understanding within conflict.[31]

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[26] Ibid 7.
[27] Giving the classification of 'UKUSA Eyes Only' and earning the term 'five eyes' or FVEY.
[28] Andrew Christopher, *The Secret World: A History of Intelligence* (Penguin Random House 2018) 670-1.
[29] Adam Maisel, 'NATO at the Tactical Level' (15 September 2015) *War on the Rocks* https://warontherocks.com/2015/09/nato-at-the-tactical-level/ accessed 10 January 2019.
[30] 2.2.3.
[31] It is beyond the scope of this work to assess the linguistic challenges presented by conflict and there is a considerable body of work undertaken by Linguistic Scholars, some of these include: Mona Baker, 'Interpreters and Translators in the War Zone' (2010) 16 The Translator 197; Claire Kramsch, 'Post 9/11: Foreign Languages

The combined effect of the dominance of English,[32] a need to inform the work from media accounts, and the different cultural understandings of the law lead to a difficult analytical position. With respect to IHL, although the vast body of law is applicable to all states,[33] the interpretation and application of these rules can vary. A good example of this in the specific area of targeting is concerning the US position on economic targets. Their position is such that objectives which are considered war-sustaining make an effective contribution to the military force and thus can be considered lawful objectives.[34] However, it is recognised that this is a controversial position[35] even by their NATO allies.[36] This can challenge forces' interoperability but does not prevent engagement in a coalition with "[s]tates that do not share its obligations under the law of international armed conflict although those other States might engage in activities prohibited for the first state."[37]

Although it does not prevent states from working in coalitions, it is not only the treaty obligations of states that are at issue, moreover it is the *understanding* of these obligations under IHL that can become problematic. This may appear to be a semantic difference, but it is significant. The importance of this was highlighted during the Diplomatic Conference to codify longstanding civilian protections that led to the enactment of the additional protocols in 1977.[38] Although there was general consensus that the principles of distinction and civilian protection were part of IHL, "there was no accord about what that actually entailed; delegates could not agree on what discrimination meant or whether proportionality was a

between Knowledge and Power' (2005) 26:4 Applied Linguistics 545; Richard Oliver Collin, 'Words of War: The Iraqi Tower of Babel' (2009) 10:3 International Studies Perspective 245.

[32] And, of course, the fact that this author is a native speaker and so the vast majority of sources within this work are taken from English versions of accounts, or from English media outlets and informed, inescapably, by English academic discourse.

[33] The most notable exceptions being the signatories to API, as well as weapons treaties, including the Convention on Cluster Munitions 2008 and the Convention on the Prohibition of the Use, Stockpiling and Transfer of Anti-Personnel Mines and on their Destruction 1997. The US is not a party to any of these whereas NATO allies, France, Germany and the UK are parties to all of them.

[34] Stephen W. Preston, *Department of Defense Law of War Manual* (United States Office of General Counsel Department of Defense 2015) 5.7.6.2.

[35] William Boothby, *The Law of Targeting* (OUP 2012) 106.

[36] Marten Zwanenberg, 'International Humanitarian Law Interoperability in Multinational Operations' (2013) 95 IRRC 681, 692-3.

[37] Program on Humanitarian Policy and Conflict Research, 'Commentary on the HPCR Manual on International Law Applicable to Air and Missile Warfare' (March 2010) 164.

[38] ICRC, Diplomatic Conference on the Reaffirmation and Development of International Law Applicable in Armed Conflicts 1974.

useful concept."[39] The imprecision in the additional protocols was a constant source of concern by states and resulted in compromises in the drafting.[40] There remain highly contested concepts within IHL, including, but by no means limited to: the nature of military objectives,[41] the notion of direct participation in hostilities,[42] the principle of precautions and who is responsible for this,[43] the scope and balance of proportionality,[44] and recently the ability of technology to meet the legal standards as created by IHL.[45]

In an attempt to confirm and clarify the growing body of customary law provisions under IHL the ICRC commenced a study in 1996 to research and collate state practice. This was published in 2005, using the definition that customary law is unwritten but "derives from a general practice accepted as law,"[46] but even this was not without issue.[47] The US particularly was dissatisfied with the conclusions and pertinently for this work, stated: "[T]he study places too much emphasis on written materials, such as military manuals and other guidelines published by States, as opposed to actual operational practice by States during armed conflict."[48] This statement by the US is a criticism of the methodology employed by the ICRC in their building of the customary database. It is interesting to note the value they place on operational practice, considering the firm stance made by states in the reluctance for operational guidelines, such as rules of engagement, to be considered indicative of state practice.[49] Bethlehem is equally cautious of the study and suggests that

[39] Amanda Alexander, 'International Humanitarian Law, Postcolonialism and the 1977 Geneva Protocol I' (2016) 17 Melb. J. Int'l L. 15, 30.
[40] Ibid 36.
[41] For more on the discussion of war-sustaining objectives see Henry Shue, 'Laws of War' in Samantha Besson & John Tasioulas (eds.) *The Philosophy of International Law* (OUP 2010) 511.
[42] 2.2.1.1.
[43] 2.3.
[44] 2.2.2; Alexander (n 39) 31-32.
[45] For more on the discussion of autonomous systems and the battlefield see the ICRC, 'New Technologies and the modern battlefield: Humanitarian Perspectives' (undated) e-brief http://e-brief.icrc.org/issue/new-technologies-and-the-modern-battlefield-humanitarian-perspectives/introduction/ accessed 11 August 2019; Human Rights Watch, 'Killer Robots and the concept of Meaningful Human Control' (11 April 2016) *Human Rights Watch Memorandum* https://www.hrw.org/news/2016/04/11/killer-robots-and-concept-meaningful-human-control accessed 11 August 2019.
[46] ICRC, 'Customary international humanitarian law' (29 October 2010) available at https://www.icrc.org/en/document/customary-international-humanitarian-law-0 accessed 11 August 2019.
[47] 2.4.
[48] John Bellinger III & William Haynes II, 'A US government response to the International Committee of the Red Cross study Customary International Humanitarian Law' (2007) 89:866 IRRC 443, 445 .
[49] 3.7.

rather than it being read as the last word on custom, it should be "the appropriate starting point in a review of state practice and *opinio juris* relevant to the crystallisation of custom."[50]

The US further their criticism of the customary study by saying that: "Although manuals may provide important indications of state behaviour and *opinio juris*, they cannot be a replacement for a meaningful assessment of operational state practice in connection with actual military operations."[51] Therefore, these statements would imply that the US would welcome the type of approach to discerning customary law as I have taken throughout this work. However, this approach would present the ICRC with similar challenges to those mentioned here concerning transparency, media bias and access to classified information. If the US truly want objective analysis of their practice, and of course of other states' practice, to build customary law then more access would need to be granted to bodies such as the ICRC, as well as scholars pursuing such similar aims.

Given all of these considerations it could be viewed as unwise to take the view that IHL is universal in application, however it should be recalled that IHL is designed to be symmetrical and applied equally by states.[52] Nonetheless, it is shown that there are variations in understanding, with information for analysis not only scarce, but also limited by language, classification, and by and from states. Furthermore, information is also potentially biased by the reporting of newspapers. None of this is unusual but it should not mean that investigations are avoided, merely qualified by these factors. In order to attempt to establish any developments in applied standards to meet the 'feasible precautions' requirements, and thus establish what intelligence standard is required, it is vital to conduct this form of analysis, despite the difficulties presented.

[50] Daniel Bethlehem, 'The methodological framework of the Study' in Elizabeth Wilmshurst & Susan Breau (eds.) *Perspectives on the ICRC Study on Customary International Humanitarian Law* (CUP 2007) 14.
[51] Bellinger & Haynes (n 48) 445.
[52] 1.3.7.

3.3 Kunduz 2009: The *Fuel Tankers case*

The *Fuel Tankers* case of 2009 presents an illustrative example of how a multi-national force operates during conflict. This case study has been specifically chosen as a framework for analysis as it relates to an instance of mistaken targeting during conflict, by a multi-national coalition with different cultural and technological approaches. Furthermore, due to the case involving German troops it reached the German courts and so there is a considerable amount of information available, which would often not be the case. The German media have gained access to some of the classified documents and these indicate that NATO were dissatisfied with the intelligence information relied upon by the commanders. This presents a useful indicator for the development of any intelligence standard under IHL.

During the evening of 3 September 2009, the German Military Intelligence Officer on duty at Kunduz, Afghanistan, was contacted by Afghan security forces on the ground to inform him that two NATO fuel tankers had been hijacked in the Aliabad region by insurgent forces. The intelligence unit contacted the regional commander and aerial reconnaissance was requested from NATO headquarters in Kabul to locate the missing trucks. An American B1-B long range bomber was in the vicinity and was tasked with searching for the trucks. They were located around an hour later by the bomber, and this was confirmed shortly afterwards by an intelligence source on the ground.[53] The reconnaissance bomber and the ground informant both confirmed that there were no civilians in the area.

In order to further the operation, the German military command led by Klein, needed to maintain air support and this they requested. At the time they were advised that air support "would only be possible in a situation of 'troops in contact'."[54] According to the European Centre for Constitutional and Human Rights (ECCHR) the NATO Rules of Engagement at this time required close air support only in cases where the German troops were endangered.[55]

[53] Williams Michael J., *The good war : NATO and the liberal conscience in Afghanistan* (Palgrave Macmillan 2011) viii.
[54] von Heinegg Wolff and Dreist (n 3) 838.
[55] European Center for Constitutional and Human Rights [ECCHR], *German Air Strike near Kunduz – A Year After* (Berlin, 30 August 2010) 3 http://www.adh-geneve.ch/RULAC/news/ECCHR-Kunduz-A-Year-After.pdf accessed 5 March 2018.

As it was, Klein determined that, given the proximity of the Taliban fighters and two trucks to his base, they posed an 'imminent threat'.[56] The two ISAF F15 jets arrived at the scene and, using infrared cameras, filmed the activity below. The decision was made to use two 500 pound bombs and target only the sandbank, "in order to definitively exclude the possibility of collateral damage in the neighbouring villages."[57] There appears to have been some discussion between the USAF crew and the German troops concerning the quantity of bombs as well as the requirement to carry out a low fly past.[58] Ultimately, Klein ordered the bombs be dropped some seven hours after the tankers were located on the sandbank.[59]

3.3.1 Knowledge at the Time

The exact level of intelligence available to Klein at the time of the incident remains classified and therefore it is only possible to surmise from the information that is available.[60] Although it is possible to ascertain a broad overview of the targeting doctrine that is used by military forces,[61] this merely shows a broad process that is followed. It is designed to work in conjunction with Rules of Engagement, Commanders' Operational Plans (OPLAN), specific legal guidance, Tactical Directives and a myriad of other documentation and procedures at the operational level. All of these documents that form the basis of targeting protocols are routinely classified at very high levels and so it is virtually impossible to ascertain exactly what information or obligations Klein was working with at the time of this incident.

However, from the sources that are publicly available, it is apparent that Klein had access to three different sources of intelligence upon which he based his decision: the first ISAF B1-B

[56] von Heinegg Wolff and Driest (n 3) 838.
[57] Holder Stark, 'German Colonel Wanted to Destroy Insurgents' *(*29 December 2009) *Speigel Online* http://www.spiegel.de/international/germany/kunduz-bombing-affair-german-colonel-wanted-to-destroy-insurgents-a-669444.html accessed 11 January 2018.
[58] Carla Bleiker, 'Questions remain as Kunduz trial continues' (31 October 2013) *DW* https://www.dw.com/en/questions-remain-as-kunduz-trial-continues/a-17196492 accessed 7 March 2018.
[59] For full details see, *Der Generalbundesanwalt beim Bundesgerichtshof*, s. B IV.
[60] Primarily from media sources that have obtained access to the secret reports.
[61] Michael Schmitt, Jeffrey Biller et al, 'Joint and Combined Targeting: Structure and Process' in Jens David Ohlin, Larry May and Claire Finkelstein (eds.) *Weighing Lives in War* (OUP 2017) 298.

bomber, the latter two ISAF F-15E fighters and the human source (HUMINT).[62] Initially, he had intelligence obtained from the B-1B bomber which had located the tankers. This aerial footage was such that the aircraft could: "positively identify that many of the individuals were carrying small arms and rocket-propelled grenades."[63] They were also able to identify two trucks and two smaller vehicles on the sandbank. The number of individuals on the sandbank at this time was reported by those in the Tactical Operational Centre to be around 70.[64] After around 30 minutes, the B1-B aircraft had to leave the area due to a shortage of fuel.

Around 20 minutes after the bomber departed, two ISAF F-15E fighters flown by the USAF reported to the German JTAC[65] to co-ordinate targeting and weaponeering. These aircraft were able to provide infrared images of the scene on the sandbank, footage of which was made available to the German court.[66] This grainy footage shows the tankers on the sandbank as well as a number of people. It is not possible to determine whether or not the individuals are holding weapons from this source.[67]

The final intelligence source that Klein relied on was an individual on the ground who was reportedly able to see the sandbank. This informant was reportedly contacted by Klein seven times during the night[68] to confirm that there were no civilians present on the sandbank. On each occasion, Klein was informed that the people were insurgents and there were no civilians present. The informant did not speak English and so the intelligence came through an interpreter.[69]

[62] Human Intelligence.
[63] von Heinegg Wolff and Driest (n 3) 837.
[64] Ibid.
[65] Joint Tactical Air Controller.
[66] It was also leaked to the newspaper BILD and is now available at https://www.youtube.com/watch?v=NyArX92T9as accessed 8 January 2017.
[67] It should be noted that footage of this type can be deliberately degraded before release.
[68] Carla Bleiker, 'Appeal by Kunduz airstrike victims' families fails' (30 April 2015) *DW* https://www.dw.com/en/appeal-by-kunduz-airstrike-victims-families-fails/a-18420262 accessed 5 May 2018.
[69] Although, note that English would not be Klein's native language either.

Based on these three sources of intelligence, Klein commanded the deployment of two 500-pound GBU-38 bombs[70] thus destroying the tankers and anyone in the immediate vicinity of the sandbank. So, given the number of civilian casualties caused by the bombing, with estimates varying,[71] the question is whether Klein, or any others, acted unlawfully. In other words, had Klein successfully applied and adhered to an intelligence standard as prescribed by IHL.

3.3.2 The Official Reports

The German position was made clear at the *Bundesgerichtshof*, where the Federal Prosecutor General concluded that Klein did not breach any rules of IHL applicable and so he could not be held liable for the casualties.[72] On the other hand, it is disclosed that the NATO report, written following their investigation and remaining classified, highlights that Klein had been dependent on one human source which was "inadequate to evaluate the various conditions and factors in such a difficult and complex target area."[73] This statement was made with consideration of the aerial imagery that was made available to Klein at the time of the incident.

To further complicate the issue, the ECCHR states that the NATO report "found a number of violations of the NATO Rules of Engagement."[74] They continued to say that the ICRC had conducted their own investigation into breaches of IHL and "came to the conclusion that the attack had been unlawful."[75] None of these reports is publicly available; however, these

[70] It should be noted that this type of bomb is guided with Global Positioning System technology, see Rajiv Chandrasekaran, 'NATO Orders Probe of Afghan Airstrike Alleged to Have Killed Many Civilians' (5 September 2009) *Washington Post Online* http://www.washingtonpost.com/wp-dyn/content/article/2009/09/04/AR2009090400543.html??noredirect=on accessed 8 May 2018.
[71] The German early reports indicated around 50 civilian deaths, whilst locals claimed 72 civilian deaths, ibid. Later accounts increase the number further with the German army stating a figure of 91 civilian deaths, whilst lawyers for the families say 137 people were killed. See BBC World News, 'Afghanistan Kunduz victim families file Germany claim' (28 December 2012) *BBC* News, https://www.bbc.co.uk/news/world-europe-20859920 accessed 10 July 2020.
[72] 3 BJs 6/10-4 *Bundesgerichtshof*, 16 April 2010.
[73] Goetz, von Hammerstein and Stark (n 8) .
[74] ECCHR (n 55) 3.
[75] Ibid.

statements raise concerns about the differing view of the level of information that is required prior to, and during, the conduct of an attack. The arguments may well turn on different aspects of the rules to be applied during armed conflict, including IHL, Rules of Engagement and Tactical Directives. Their legal status is significantly different; accordingly, a different intelligence standard may be applied by each. The value of this is two-fold; firstly, increasing restrictions or permissions, of whatever form, within state practice could be indicative of a developing norm and thus custom. Secondly, given states have differing treaty obligations, and differ on cultural and policy approaches to the law, the adoption of similar 'rules' may indicate *opinio juris* in specific areas. It is important to note, however, that the soft law provisions of Rules of Engagement and Tactical Directives are not intended to create law, merely to be operational tools to comply with the overall mission parameters.[76]

Nevertheless, to attempt to establish if there is a standard of intelligence that has developed in modern conflict, the provisions guiding forces, and the interpretation of the law are key. However, it is apparent that there remains a lack of transparency in the reports leading to disparity in the decisions. Therefore, it is difficult to ascertain if it can be said that there is a clear intelligence standard. Furthermore, the question should be asked as to whether any others involved in the attack would be responsible under law.[77] To be able to analyse this further we need to establish what law is applicable, and consequently what standard of intelligence Klein was required to have.

3.4 Intelligence Standard? The Law

Any intelligence standard would need to be devolved from the law concerning methods and means of attack, primarily the precautions in attack. These can be said to derive from the fundamental principles of proportionality and distinction.[78] Both Germany and Afghanistan

[76] Peter Rowe, 'The Rules of Engagement in Occupied Territory: Should they be published?' (2007) 8 Melbourne Journal of International Law.
[77] For example, the F-15E pilots.
[78] API Art. 57; 2.3.

are parties to API; however, the United States have not ratified it. Furthermore, API is concerned with international armed conflicts (IAC)[79] with Additional Protocol II (APII)[80] being relevant to non-international armed conflict (NIAC). As the ICRC explains: "It was necessary to differentiate between the two situations, as states were not prepared to grant the same degree of legal protection in both cases."[81]

At the time of the attack in question, the conflict in Afghanistan was non-international in nature and so API cannot be applied directly. Therefore, in order to establish what law is applicable it needs to be determined what aspects of the law are considered customary. Furthermore, even if these aspects of law are deemed customary, it does not mean that they can be directly transplanted into a non-international conflict. As declared in *Tadić* concerning the development of customary law from treaties, "…this extension has not taken place in the form of a full and mechanical transplant of those rules to internal conflicts; rather, the general essence of those rules, and not the detailed regulation they may contain, has become applicable to internal conflicts."[82]

The ICRC considers that the rules for precautions in attack are customary. They state that "constant care must be taken to spare the civilian population" and develop this by aligning custom with the standard in API. Rule 16 of the ICRC's customary law study[83] thus states: "each party to the conflict must do everything feasible to verify that targets are military objectives." This is based on what is considered state practice and reiterated by the San Remo manual relating to NIAC which states that: "All feasible precautions must be taken by all parties to minimise both injuries to civilians and damage to civilian objects."[84] It should

[79] API Art. 1.
[80] to the Geneva Conventions of 1949, 1977.
[81] 'Protocols I and II additional to the Geneva Conventions' (01 January 2009) *ICRC* https://www.icrc.org/eng/resources/documents/misc/additional-protocols-1977.htm accessed 10 January 2018; Howard S Levie (ed.) *The Law of Non-International Armed Conflict: Protocol II to the 1949 Geneva Convention* (Martinus Nijhoff 1987); Gabor Rona, 'Is There a Way Out of the Non-International Detention Dilemma?' (2015) 91 Int'l L Stud 32; ICRC, *II-A Final Report of the Diplomatic Conference of Geneva of 1949* (Federal Political Department Berne 1951); .
[82] *Prosecutor v Dudko Tadić* [1999] ICTY IT-94-1-A, 126 .
[83] Jean-Marie Henckaerts & Louise Doswald-Beck, *Customary International Humanitarian Law* (CUP 2005) Vol. 2 Practice 680.
[84] Michael Schmitt, Charles Garraway and Yoram Dinstein, *San Remo Manual to Non-International Armed Conflicts* (San Remo, International Institute of Humanitarian Law 2006) 2.1.2 (a) .

be recalled that the San Remo manual is not a legally binding IHL instrument, however these types of documents can form the basis of custom.[85] In this case I would argue that this is declaratory of state practice and the customary standard that is already accepted.

However, US concerns over the development of customary rules should be noted when considering the application of API in a NIAC. In response to the ICRC study, the US responded with a lengthy statement questioning the rigours of the methodology and the development of *opinio juris*.[86] That aside, the US recognises that all but one of their NATO partners have ratified API[87] and so detailed work has been undertaken to ensure the success of coalition operations. To achieve this, the US applies many of the provisions of API as a matter of policy[88] and states the military need for "common rules to govern allied operations and a… need for common principles to demonstrate our mutual commitment to humanitarian values."[89] In 1987 the US stated they would not be a party to API but recognised that "certain provisions of Protocol I reflect customary international law or are positive new developments, which should in time become part of the law."[90] By the Iraq war of 2003, it is arguable that the precautions in attack standard applied by all states complied with API.[91] Furthermore, the application of API standards in targeting was consistent for all states involved in the coalition in Afghanistan as a matter of practice.[92] This would therefore lend credence to the assertion that the precautionary principle is now deemed as *opinio juris.*

Therefore, Klein was required to do 'everything feasible' to ensure that he was targeting a military objective and minimising injuries to civilians. As Oeter states: "The command

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[85] 2.4.
[86] John Bellinger & William Haynes, 'A US government response to the International Committee of the Red Cross study *Customary International Humanitarian Law*' (2007) 89 IRRC 443.
[87] The exception being Turkey.
[88] Tracey Begley, 'Is it Time to Ratify Additional Protocol I?' (6 July 2015) *Intercross US* http://intercrossblog.icrc.org/blog/d9r104eqyjzqgma49vlapmk6a9l67i accessed 7 January 2019.
[89] Dupuis MP, Heywood JQ & Sarko MYF, 'The Sixth Annual American Red Cross Washington College of Law Conference on International Humanitarian Law: A Workshop on Customary International Law and the 1977 Protocols Additional to the 1949 Geneva Conventions' (1987) 2 American University International Law Review 415, 421.
[90] Ibid 422.
[91] Neil Brown, 'Issues Arising from Coalition Operations: An Operational Lawyer's Perspective' (2008) 84 International Law Studies 225, 227.
[92] Alan Cole, 'Legal Issues in Forming the Coalition' (2009) 85 International Law Studies 141, 147.

authorities responsible for planning and deciding upon an attack must employ all means of reconnaissance and intelligence available to them unless and until there is sufficient certainty of the military nature of the objective of an attack."[93] Consequently, Klein must be established as the commander responsible for 'planning and deciding' upon the attack. In this scenario, it is apparent that Klein, as the commanding officer of Task Force 47 present at PRT Kunduz, was the commander responsible. The Court also considered the role of the Joint Tactical Air Controller (JTAC), a sergeant who was responsible for providing the information the Colonel required to make his decisions. In the situation of 3 September 2009, Klein was viewed by the *Bundesgerichtshof* to be the 'command authority' and so meeting the legal standard for precautions was his responsibility.

The next criterion that needs to be met is whether or not the tankers themselves constituted a military objective targetable under IHL. The current law definition of this is established at Art. 52(2) of API which creates a criterion that is two-fold and cumulative. It states that military objectives are objects "which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage."[94] Therefore, Klein had to ensure that his targets provided an 'effective contribution' to the adversary's military action and the targeting of such would offer a 'definite' military advantage 'in the circumstances ruling at the time'.

Klein judged that the tankers stranded on the sandbank were those that had been hijacked earlier that day which by their purpose contributed to the military action.[95] It is reported that he believed the fuel from those tankers would be used to fuel the insurgents' campaign, and he feared that attacks would be brought against the base near Kunduz.[96]

[93] Stefan Oeter, 'Methods and Means of Combat' in Dieter Fleck (ed.) *The Handbook of International Humanitarian Law* (3rd edn, OUP 2013) 200.
[94] API 52(2); 2.2.1.2.
[95] *Der Generalbundesanwalt beim Bundesgerichtshof* (n 59) 49.
[96] Paulina Starski, 'The Kunduz Affair and the German State Liability Regime – The Federal Court of Justice's Turn to Anachronism' (5 December 2016) *Blog of the European Journal of International Law* https://www.ejiltalk.org/the-kunduz-affair-and-the-german-state-liability-regime-the-federal-court-of-justices-turn-to-anachronism/ accessed 22 March 2018.

These understandings led to the conclusion that the destruction, capture or neutralisation of the tankers would offer a 'definite' military advantage.

Moreover, to better understand the 'circumstances ruling at the time', this particular incident should not be taken in isolation. Since April 2009, the Kunduz camp had faced daily attacks and in July 2009 they had been warned of a complex attack against them. This intelligence indicated that two vehicles would be used, one as a bomb, in combination with suicide bombers infiltrating the camp.[97] Thus, Klein was convinced that the tanker trucks would soon be used in an attack against the camp and he was "determined to neutralise"[98] them. Therefore, he was sufficiently certain that they were a military object targetable under IHL. This also highlights the significance of reliable intelligence to develop greater strategic situational awareness to operate in concert with more time-sensitive targeting data.

3.5 Proportionality

A further issue at point is whether Klein was required to observe the law of proportionality if it is established that he did not believe there were any civilians present.[99] It is here that I contend that the *Bundesgerichtshof* was notably awry in their analysis of the law. They determined that: "there was no duty for the commander of the PRT to take all feasible precautions in the choice of means and methods to spare civilians as far as possible..."[100]

The *Bundesgerichtshof* judged that Klein had carried out 'everything feasible' to verify that the people present on the sandbank were not civilians; thus, he had exhausted his requirements under law. However, several criticisms can be raised against this argument.

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[97] von Heinegg Wolff and Driest (n 3) 839.
[98] Ibid.
[99] It is reported that he was aware that at least one of the tanker drivers was still alive and so this would indicate that not all of the individuals present were insurgents, see Charles Hawley, 'Germany Confronts the Meaning of War' (4 February 2010) *Spiegel Online* http://www.spiegel.de/international/germany/letter-from-berlin-germany-confronts-the-meaning-of-war-a-675890.html accessed 28 March 2018.
[100] Elisabeth Henn, 'The Development of German Jurisprudence on Individual Compensation for Victims of Armed Conflicts: The Kunduz Case' (2014) 12 JICJ 615 at 629.

Oeter's explanation of Art 57(2)(iii) is perhaps enlightening in that he says: "Command authorities and planning staff must ensure that operations remain within the bounds of proportionality, that is that they do not cause collateral damage which is excessive in relation to the expected military advantage."[101] Consequently, it is imposed upon them to 'ensure that operations *remain* within the bounds of proportionality' (emphasis added). In his commentary to the additional protocols, Bothe states: "The obligation to do everything feasible to verify that the target of attack are military objectives, as prescribed in subpara. 2(a)(i), involves a continuing obligation to assign a high priority to the collection, collation, evaluation and dissemination of timely target intelligence."[102] The duty to cancel or suspend an attack is held to be customary, clearly stated by the San Remo manual: "An attack must be cancelled or suspended if it becomes apparent that the target is not a fighter or military objective…"[103]

The obligation to cancel or suspend an attack can lie with any personnel who have the ability to do so.[104] The evidence of the continuing temporal scope of the precautionary principle was demonstrated during the 1999 NATO air campaign over Kosovo. The ICTY[105] position on point is exemplified by the attack on a convoy at Djakovica on 14 April 1999. The parallels that can be drawn between the details of this attack some ten years earlier and the Kunduz incident are quite striking. In 1999, pilots carrying out the attack on the convoy became concerned that the situation did not conform to previously encountered convoys. As such, a slower A-10 aircraft was dispatched to gather more intelligence and further attacks were suspended. Following the reports that the convoy contained both military and civilian vehicles all attacks were cancelled.[106] Thus, both incidents concern air to ground targeting and confused intelligence potentially leading to an impression of military objectives rather than civilians.

[101] Oeter (n 93) 202.
[102] Michael Bothe, KJ Partsch and WA Solf, *New Rules for Victims of Armed Conflicts: Commentary on the Two 1977 Protocols Additional to the Geneva Conventions of 1949* (Martinus Nijhoff 1982) 363.
[103] Schmitt, Garraway and Dinstein (n 83) 2.1.2(c).
[104] Nils Melzer, *Targeted Killing in International Law* (OUP 2008) 364.
[105] International Criminal Tribunal for the former Yugoslavia.
[106] APV Rogers, 'Zero Casualty Warfare' (2000) 82 IRRC 837.

It is important to note that the Final Report to the Prosecutor concludes that it was their opinion that, whilst the pilots may have benefited from more information, "neither the aircrew nor their commanders displayed the degree of recklessness in failing to take precautionary measures which would sustain criminal charges. The Committee also noted that the attack was suspended as soon as the presence of civilians in the convoy was suspected."[107] A point to note here was that during the Djakovica air strike it was not the commanders but the aircrew who initially questioned the status of the convoy and ceased strikes until further information was available. This is significant in that it could, potentially, question whether or not the USAF F15 fighter pilots over Kunduz should have further questioned their attack. It is noted that they were concerned about the target and the pilots requested permission to carry out a 'show of force';[108] this was declined, and they were told to "hide."[109] The redacted cockpit transcript clearly demonstrates the concerns of the two pilots. It details the second pilot talking to the first, saying, "… something doesn't feel right but I can't put my thumb on it…"[110] The pilots having had their requests for a show of force declined accepted that: "…the JTAC said imminent threat from what you told me. I would dig a little more but basically he might have some more information…"[111] Thus, accepting the command they carried out the strikes.

It is accepted practice that a JTAC has the best level of intelligence available, there is an assumption that the information held by them will be the most reliable given their proximity to the ground based activity.[112] Therefore, it follows that the pilots would believe that the JTAC had information unavailable to them. Furthermore, it is established that the imagery available to them within their cockpits was of an insufficient quality to ascertain whether the individuals were combatants or civilians.[113] Given that observations of proportionality

[107] 'Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia' (13 June 2000) [Final Report] 70 .
[108] A tactic used throughout Afghanistan to scatter the people surrounding targets.
[109] Peter Wall, 'Kunduz and 'seeing like a military'' (2 January 2014*) Geographical Imaginations* https://geographicalimaginations.com/2014/01/02/kunduz-and-seeing-like-a-military/ accessed 8 July 2018.
[110] Cockpit transcript of Kunduz incident obtained via Peter Wall. 3 September 2009, all times listed in Zulu http://dip21.bundestag.de/dip21/btactical directives/17/CD07400/Dokumente/Dokument%20060.pdf accessed 9 July 2018.
[111] Ibid 20:51:26.
[112] Discussions by the writer with operational staff under Chatham House Rules.
[113] Art 51(5)(b); 2.2.2.

are aligned to the overall military advantage,[114] the pilots would not have been in a position to make a decision of this nature. Although they also held the duty to take all 'feasible precautions' it is my contention that they acted upon their doubts and raised them to the JTAC and as such, having had them alleviated, continued with the attack.

That the Final Report to the Prosecutor following the Djakovica incident did not press for criminal investigations is perhaps not surprising. It should be noted though that the Final Report has been criticised precisely due to the conflation of state liability and individual criminal responsibility.[115] Benvenuti reflects that the Report "… does not explain the reason why, in addition to state responsibility … a parallel criminal responsibility does not arise for the individual persons acting wrongfully."[116] However, the standard frequently referred to is not that of simple mistake, but the act must have been "committed with intent and knowledge."[117] The International Criminal Court has furthered this and requires knowledge such that a "… person *means* to cause that consequence or *is aware* that it will occur in the ordinary course of events."[118]

Therefore, Klein was required to ensure that 'everything feasible' had been done to verify that the objective was a military one;[119] he had to take 'constant care' to protect civilians;[120] and he was required to 'cancel or suspend' the attack if civilian casualties were likely to be 'excessive' relative to the 'concrete and direct' military advantage anticipated.[121] This trifold of obligations relates directly to the intelligence that he could obtain, and the intelligence that those involved in the attack had; the intelligence standard. As such, I would conclude that Klein's obligations under IHL did not end at the point he determined there were no civilians on the sandbank. He was required to continue to carry out these 'feasible

[114] Emanuela-Chiara Gillard, *Proportionality in the Conduct of Hostilities: The incidental harm side of the assessment* (Chatham House 2018) 26 https://www.chathamhouse.org/sites/default/files/publications/research/2018-12-10-proportionality-conduct-hostilities-incidental-harm-gillard-final.pdf accessed 10 January 2019.
[115] Paolo Benvenuti, 'The ICTY Prosecutor and the Review of the NATO Bombing Campaign against the Federal Republic of Yugoslavia' (2001) 12(3) EJIL 503.
[116] Ibid 14.
[117] Rome Statute of the International Criminal Court (2002) [Rome Statute] Article 30(1).
[118] Ibid Art. 30(2)(b).
[119] API Art. 57(2)(a)i.
[120] API Art. 57(1).
[121] API Art. 57(2)(b).

precautions' throughout the attack. Thus, the reasoning of the German court can be called into question with their dismissal of the later obligations.

That said, the reality of the situation as presented does not indicate that Klein was aware of civilians at any point. Moreover, there is no indication from the footage of the F-15E fighters, nor from the human source, that intelligence became available of civilians involved or in the vicinity of the sandbank. Therefore, although the duty to 'cancel or suspend' the attack remained, it is likely that it had no real consequences in this case. The main concern with the German court developing this line of argument is for continuing demonstration of state practice. This case is already cited by the ICRC; demonstrating Germany's understanding of 'feasible precautions'.[122] This in turn could lead to a differential in the development of custom in NIAC. It is my contention that this understanding would not be deemed to be in accordance with the fundamental principles of proportionality[123] and distinction,[124] and thus would constitute an invalid argument. However, this type of misinterpretation can easily lead to confusion within operational situations and thus alter the application of law on the ground.

Therefore, it is significant to understand if the criticisms of the civilian casualty numbers are justified and if there was a breach of IHL, potentially constituting a war crime.[125] Significantly, was there a sufficiency of intelligence for Klein to base his decision upon to launch the attack in the first instance. In order to understand these queries, it is crucial to establish how much intelligence, or information, is required and therein lies the heart of the issue.

[122] ICRC, *Practice relating to Rule 15 - the Principle of Precautions in Attack* https://ihl-databases.icrc.org/customary-ihl/eng/docs/v2_rul_rule15 accessed 9 February 2018.
[123] API Art 51(5)(b).
[124] API Art 48.
[125] Rome Statute, Art. 8.

3.6 Precautionary Principle

In order to fulfil the requirements of the precautionary principle, it is important to understand the limits and boundaries of this standard. The standard is viewed as an internal one "in the sense that in judging the commander's actions one must look at the situation as he saw it and in the light of the information that was available to him."[126] The UK statement furthers this, requiring that decisions should be made "on the basis of their assessment of the information from all sources which is reasonably available to them at the relevant time."[127] Although the term 'reasonably' is not stated within the original treaty, and is not widely used, Schmitt argues that it would likely be held as customary law would not dictate that the standard is one of 'great effort'.[128] He furthers that the standard "essentially mandates a 'reasonable war-fighter' inquiry. Feasibility determinations would consequently consider, for example, the nature and availability of weapons systems; survival of attacking forces; ISR; asset capabilities and availability; and competing demands for the systems in question."[129] Thus, the standard is relative and dependent upon the circumstances prevailing at the time.[130]

However, whilst the precautionary principle is not absolute, it is held that: "A military commander must set up an effective intelligence gathering system to collect and evaluate information concerning potential targets. The commander must also direct his forces to use available technical means to properly identify targets during operations."[131] If a commander is unable to access sufficient information to provide for subjective certainty and doubt remains then, to remain lawful, he must refrain from attack.[132] I would argue that the standard of intelligence required remains contextual, and so any doubt should also be framed in this manner.

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[126] APV Rogers, *Law on the Battlefield* (3rd edn. Manchester University Press 2012) 150.
[127] Jean-Marie Henckaerts, Louise Doswald-Beck and Carolin Alvermann, *Customary International Humanitarian Law: Part 2 Practice,* (CUP 2006) 205, UK Statement on Ratification, para (c).
[128] Michael Schmitt, 'The Law of Targeting' in Elizabeth Wilmshurst and Susan Breau (eds) *Perspectives on the ICRC Study on Customary International Humanitarian Law* (2007 CUP) 163.
[129] Ibid.
[130] 2.3.
[131] Final Report to the Prosecutor (n 106) 29; 2.3.
[132] Oeter (n 93) 201.

Therefore, Klein was required to do 'everything feasible' to establish whether there were civilians present.[133] As stated, Klein had three different sources of information, albeit the images from the F-15E fighters could be said to provide little value in establishing whether the people were civilians or insurgents. The initial source, the B1-B bomber, indicated that the individuals were carrying weapons, and the human source said that the individuals 'were all involved'. It is not clear if there were other sources of information available to Klein, but certainly these were the only sources that were indicated in the journalistic articles and referenced by the *Bundesgerichtshof*. Therefore, initial investigation should focus on these areas before further reaching into the realms of what could also have been available to him.

The human source appears to be the most contested; on quality, reliability and sufficiency. The German reports, state that Klein "made the order at least seven times that the human source should be contacted in order to verify whether the situation remain unchanged."[134] The frequency of this was highlighted within the case to question Klein's belief that there were no civilians present; however it was argued he was simply trying to gain all the information available. In contrast to this, Grigo claims that the human intelligence "should have made him think twice: according to McChrystal's report, the man called every 15 to 20 minutes, hinting at the Taliban stealing gasoline."[135] There is no indication that the informant at any point told Klein that any civilians were involved. Nonetheless, reports indicate that the informant did not speak English and so the direct contact was with an interpreter. The reliability of the information received from this source has been criticised based on the terms used to discuss the individuals on the sandbank. It is claimed that the use of the word 'insurgent' could be misleading and that, in fact, the translator merely stated that the individuals were 'all involved'.[136] Furthermore, it should be noted that English would not be Klein's native tongue and as such the nuances of language could be

[133] API Art. 57; 2.3.
[134] von Heinegg Wolff and Driest (n 3) 838.
[135] Andreas Grigo, 'The accidental victims' (20 March 2013) *Deutsche Welle* http://www.dw.com/en/the-accidental-victims/a-16681586 accessed on 10 November 2017.
[136] Thom Ruttig, 'The incident at Coordinate 42S VF 8934 5219: German court rejects claim from Kunduz air strike victims' (15 December 2013) *Afghanistan Analysts Network* https://www.afghanistan-analysts.org/the-incident-at-coordinate-42s-vf-8934-5219-german-court-rejects-claim-from-kunduz-air-strike-victims/ accessed 22 August 2019.

significantly lost in these communications.[137] Nonetheless, the use of local sources is common in Afghanistan[138] and consequently the simple dismissal of this intelligence purely on this basis is somewhat disingenuous. It seems clear that the phrase 'all involved' could easily be interpreted to mean that the people were all involved in taking the fuel, rather than anything more sinister.

Finally, and most significantly, the reliance on the human source was criticised by the NATO report for being a sole source of intelligence.[139] However, there is no requirement under law that states the quantity or quality of intelligence that must be obtained prior to launching an attack. As Dinstein states: "Palpably, no absolute certainty can be guaranteed in the process of ascertaining the military character of an objective selected for attack, but there is an obligation of due diligence and acting in good faith."[140] Quéguiner concurs, agreeing that there is no obligation of result, only that the commander must, in cases of doubt, seek further information.[141] Therefore, based on the information available, Klein had established through two sources that there were no civilians indicated on the sandbank. It can be argued that he had, at this point, met the intelligence standard as required under IHL.

3.7 Other Intelligence Sources

Upon this straightforward application of IHL, Klein could be said to have fulfilled the requirements of the precautionary principle, and so, in concurrence with the *Bundesgerichtshof*, there was no breach of IHL.[142] However, a more nuanced approach could imply that Klein was required to gain more information than the single human source

[137] 3.2.2.
[138] Robert Winnett, 'Wikileaks Afghanistan: Taliban hunting down informants' (30 July 2010) *The Telegraph* http://www.telegraph.co.uk/news/worldnews/asia/afghanistan/7917955/Wikileaks-Afghanistan-Taliban-hunting-down-informants.html?ref=patrick.net accessed 29 January 2018.
[139]Goetz, von Hammerstein and Stark (n 8) .
[140] Yoram Dinstein, 'Protection of civilians and civilian objects from attack', *The conduct of hostilities under the law of international armed conflict* (CUP 2016) 126.
[141] Jean Quéguiner, 'Precautions under the law governing the conduct of hostilities' (2006) 864 IRRC 798.
[142] Which could have resulted in individual criminal liability for war crimes, see Rome Statute Art. 25, Art. 28; For a discussion of this see Robert Cryer, Håkan Friman, Darryl Robinson and Elizabeth Wilmshurst, *An Introduction to International Criminal Law and Procedure* (2nd edn. CUP 2011) Part E.

he used. As Boothby asserts: "All of the circumstances pertaining at the time must be considered in order to determine what precautions are feasible. The important point is that the taking of verification precautions should be considered, and a positive decision should be made as to their feasibility…"[143] Therefore, it could be questioned what further information may have been available to Klein in the circumstances at the time and whether he had made a 'positive decision' to exclude further investigation. Given the broad range of intelligence assets at the disposal of the US-led coalition it would be reasonable to hope that more than one human source and the poor footage of F15 fighters could be deployed.

In work focusing on Network Enabled Operations Topolski argues that Klein operated in a binary manner, "visible from his [Klein's] choices to limit intelligence to his J3 [informant]; not to request further validation from other partners in the network-enabled operation; to consider the Americans at the command centre as unsupportive; and choosing to falsify information rather than be open and allow for deliberation."[144] Given the timescales in which Klein was operating, it would be difficult to argue that these tankers posed an 'imminent threat', particularly as he had them under surveillance and could react should they move from the sandbank. It is established that there were seven hours in which Klein could have sought further information from either NGOs or troops on the ground. Further, it is reported that Klein was in command of a task force consisting of members of the *Kommando Spezialkräfte* (German Special Forces).[145] What role these Special Forces played in the attack remains classified, but it could indicate that Klein had more resources available than the one human source may indicate.

It is also possible that more assistance could have come from the air. The cockpit transcript of the F15 fighters indicates that during this short period they also encountered an A-10 shortly before they arrived at the target area. This was the same kind of aircraft used to evaluate targets in the Djakovica convoy incident in 1999 and so one wonders if this could

[143] Boothby (n 35) 173.
[144] Anya Topolski, 'Relationality: An Ethical Response to the Tensions of Network-Enabled Operations in the Kunduz Air Strikes' (2014) 13:2 Journal of Military Ethics 158, 167.
[145] '*KSK unterstützte Oberst Klein in der Bombennacht*' (10 December 2009) *Spiegel Online* http://www.spiegel.de/politik/ausland/eliteeinheit-in-kunduz-ksk-unterstuetzte-oberst-klein-in-der-bombennacht-a-666249.html accessed 10 April 2018.

have been employed. In addition to this, not long after the F15 fighters released the bombs, they were in communication with an ISR platform. They provided information to this platform that responded with: "… we're not here in support of a TIC[146], we're just looking to deconflict airspace with you… if you do need us for some help we'll see if we can get retasked to you."[147] These platforms have far more sophisticated equipment for surveillance and reconnaissance and would have been able to provide greater intelligence detail prior to a strike. That Klein never requested such is concerning. Based on the premise that Klein is obliged to undertake all practicable steps to verify the nature of the objects that are to be targeted, it would follow that he should have used all the information sources available to him. It is perfectly reasonable to expect that these resources may not have been available to him; however, I would contend he was under a duty to, at least, request such assistance. In consideration of the time scales and intensity of the battlespace, in the circumstances facing Klein on 3 September 2009, he had sufficient time and space to make the request and await a response.

It could be argued that Klein was never under the impression that there would be zero civilian casualties from the strike as he was aware that one of the original drivers of the tankers was still with them. IHL is established to balance in favour of the civilian in cases of doubt as is detailed at Art 50 API that states clearly, "In case of doubt whether a person is a civilian, that person shall be considered to be a civilian."[148] Therefore, if Klein, or any other individual, was in any doubt at all about the status of the people on the sandbank then he should presume they were civilians until such point as he could be reasonably certain that they were targetable. In this case the pilots asked the same question and the response from the base was, "… if the driver's still alive down there he's willing to sacrifice that."[149] It is likely, that given the overall military advantage offered by the destruction of the tankers, the collateral damage of one individual would be considered proportionate.

[146] Troops in contact.
[147] Cockpit transcript (n 110) 21:38:05.
[148] API Art. 50(1).
[149] Cockpit transcript (n 110) 21:01:30.

3.8 Rules other than Law

The NATO report, albeit classified, is critical of Klein's actions in this incident and this perhaps gives us the greatest clue that something is amiss within the understanding and application of the precautionary principle. That IHL does not require absolute certainty is well-established so on what basis have NATO reached the conclusion that Klein's actions were incorrect? Without access to the document one can only use the information that has been leaked, and in this we find an indication of the expectations of NATO. It is stated that, "it was not clear what ROE (rules of engagement) was applied during the airstrike"[150] and a lack of understanding led to "actions and decisions inconsistent with ISAF procedures and directives."[151] Therefore, it appears that NATO are basing their criticism on other sources of instruction rather than the pure basis of IHL.

The Rules of Engagement and Tactical Directives referred to here are the methods by which IHL is transcribed and operated upon by military personnel; they are not a direct translation of that law.[152] Due to their status as operational guidance it would be incorrect to assume that any breach of the Rules of Engagement and/or Tactical Directives would automatically lead to activity that is a breach of IHL. With respect to the Kunduz case, von Heinegg states: "Rules of Engagement are especially restrictive insofar as they do not allow armed forces to make use of the entire spectrum of measures that are lawful under IHL."[153] The restriction placed on forces by Rules of Engagement has, however, at times been overinflated by the popular media[154] and it is interesting to note that Sandvik blames the introduction of too permissive Rules of Engagement for the failings at Kunduz.[155]

Sandvik's criticism of the new rules of engagement of July 2009 as being too permissive is in direct conflict with the other sources listed here. In fact, it is widely asserted that the rules

[150] Goetz, von Hammerstein and Stark (n 8).
[151] Ibid.
[152] 2.5.1.
[153] von Heinegg Wolff and Driest (n 3) 850.
[154] Laurie Blank, 'Rules of Engagement: Law Strategy and Leadership' (2012) Emory Public Law Research Paper 11-168 .
[155] Kristin Bergtora Sandvik, 'Regulating War in the Shadow of Law: Toward a Re-Articulation of RULES OF ENGAGEMENT' (2014) 13:2 Journal of Military Ethics 118.

of engagement (and the accompanying Tactical Directives) established in early July 2009 were actually more restrictive than previously used. Muhammedally reports that: "... some subordinate-level US commanders were critical of the 2009 directive, interpreting it as more restrictive than was required."[156] Furthermore, he continues that some of the troops and commanders were concerned that it was compromising their right to self-defence.[157] Without access to the Rules of Engagement it is not possible to accurately determine the facts but this problem is one that Sandvik is likely to have also faced. Irrespective then of whether personal perceptions have played a part, it is true that Rules of Engagement can never be less restrictive than the law on which they are based.[158]

Perhaps though the relationship between Rules of Engagement and IHL is more intricate than initially observed. Rowe maintains that: "As a form of military order, which the soldier is required to obey, their legal status cannot be independent of, or supplant, national or international law binding in or on the state concerned."[159] The legal status of Rules of Engagement is not designed to supplant IHL, as is demonstrated by *R v Clegg*, concerning an incident in Northern Ireland in which the court said, as an aside, that: "…it is not suggested that the yellow card[160] has any legal force."[161] The position in Canada and Australia is similar but it should be noted that in 1996 it was accepted that Rules of Engagement could form a basis of military duty and as such could lead to a breach of that duty.[162] Thus, Rules of Engagement are not intended to form binding law and nor are they intended to demonstrate state practice for the purposes of developing customary law.

Despite the reluctance of states to recognise any legal obligations created as a result of rules of engagement the role they play should not be underestimated. It is the method by

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[156] Sahr Muhammedally, 'Minimizing civilian harm in populated areas: Lessons from examining ISAF and MISOM policies' (2016) 98:1 IRRC 225, 235.
[157] David Zucchino, 'As US Deaths in Afghanistan Rise, Military Families Grow Critical' (2 September 2010) *Los Angeles Times* http://articles.latimes.com/2010/sep/02/nation/la-na-casualties-20100902 accessed 8 July 2018.
[158] 2.5.1.
[159] Rowe (n 76) .
[160] Rules of Engagement are frequently given to soldiers on cards, referred to as yellow cards in Northern Ireland and generally now as 'card alpha' see UK, *Parliamentary Debates*, House of Lords (31 October 2006) vol 686, 211.
[161] [1995] 1 AC 482, 491.
[162] *R v Brocklebank* (1996) 134 DLR (4th) 377, 397-8.

which conflict is conducted and as such will continue to play a role in how IHL is interpreted. An example of this is shown by Bothe who discusses the detail that Rules of Engagement should develop for IHL. In commentary on the adoption of API Art 50, discussing the loss of the phrase: "immediate vicinity of military objectives" from the draft provisions, Bothe reflects that: "This action indicates a recognition that it is not possible to regulate all of the infinite variables which may affect military operations… These matters should be regulated in detail by the Rules of Engagement and technical instructions issued by the Parties."[163] Thus, if Rules of Engagement are expected to provide the depth and detail to the provisions established by IHL it should stand to reason that this relationship is more symbiotic than perhaps is initially expected. However, this relationship remains driven by the dictates of IHL which must always guide rules of engagement.

The primary issue with rules of engagement as a basis for state practice is the fact that the majority of them are secret, for operational reasons. The UK policy on this is quite clear: "we do not comment on the detail of rules of engagement and it would not be appropriate to comment on the national caveats that may have been imposed by other nations."[164] Again the Commonwealth states of the UK, Canada and Australia have very similar approaches to the publication of rules of engagement.[165] On the other hand, the United States do publish rules of engagement whilst retaining classified details of operational planning, but this is frequently only following the conclusion of the operation to which the rules of engagement relate.

Rowe argues that rules of engagement should be more widely published. Whilst conceding that there are operational details that should remain classified for mission security and success, he states that the publication of Rules of Engagement "would tell an enemy nothing about the legal obligations … although he may be pleasantly surprised to note that the US also accepts at least one rule of customary international law in these Rules of

[163] Bothe (n 102) 364.
[164] Defence Committee, 'The UK Deployment to Afghanistan: Government Response to the Committee's Fifth Report of Session 2005-06' https://publications.parliament.uk/pa/cm200506/cmselect/cmdfence/1211/1211.pdf accessed 6 July 2018.
[165] 2.5.1.

Engagement."[166] This increased transparency would also aid legal evaluation of intended state practice and provide more detail for cases such as the Kunduz incident of 2009. Any development of customary law derives from state practice and, much like the US adoption of API principles, can be seen in its infancy through military operations.

3.9 The Classified NATO Report

Therefore, returning to the NATO report, it could provide the final piece of the puzzle to the events of 3 September 2009 but, as previously stated, this report remains classified. However, in this case there are some indications as to the content of the report gained by media outlets, which enables a greater analysis of normative changes in the interpretation of IHL by military organisations. In order to establish whether the precautionary standard has developed, and expectations are now exceeding that which were previously established, it would be valuable to understand this report. The report levels criticism about a failure to clearly follow Rules of Engagement and the Tactical Directives in place, and further concludes that the "intelligence summaries and specific intelligence provided by HUMINT (human intelligence) did not identify a specific threat to the camp in Kunduz that night."[167]

The nature of a specific threat was significant for NATO as it could indicate that the attack was not carried out in accordance with the Tactical Directives put in place by General McChrystal in July 2009. It applied to both ISAF and USFOR-A (United States Forces - Afghanistan), altering their approach to targeting by giving a primary focus on reducing civilian casualties and avoiding alienation of the local population. In part the Tactical Directives remained classified for operational security reasons, but the de-classified version demonstrates the approach to close air support that is significant for the incident under discussion. It states that commanders should limit the use of approaches such as close air support and they "must weigh the gain of using CAS (close air support) against the cost of

[166] Rowe (n 76) IV .
[167] Ibid.

civilian casualties..."[168] Further, it states that: "The use of air-to-ground munitions and indirect fires against residential compounds is only authorized under very limited and prescribed conditions."[169] The relevant conditions though are not included in the declassified version of the Tactical Directives. Therefore, the unclassified provisions made by the Tactical Directives do not appear to place any heavier a burden on the forces operating in Afghanistan than IHL had already placed on them at this point. The significant aspect of it appears to be a restatement of the importance of maintaining a 'hearts and minds' approach to battling the insurgency in Afghanistan at the time. The requirement to weigh civilian casualties is already provided for in the principle of proportionality and the statement that residential compounds not be targeted would follow the principle of distinction. As such, it is hard to argue that Klein had breached these rules, at least at the unclassified level.

However, given the specifics of the Tactical Directives are not detailed, and a reading of this only outlines well established principles of IHL, it is once again only possible to infer from commentary the significance of the new Tactical Directives. In this case, the impression would be that there is a requirement to have troops in contact, endangered or face imminent threat, prior to close air support being available. Reuters reported that: "Under orders he [General McChrystal] issued in July, aircraft are not supposed to fire unless they are sure there is *no chance* civilians can be hurt or are responding to an immediate threat."[170] (emphasis added) This standard is beyond that required by IHL and more akin to an international human rights approach to use of force. Thus, Klein's actions in launching the attack could be called into question as he had not established beyond doubt that there was *no chance* that civilians could be hurt. That is a higher standard than IHL requires, but for NATO their concern is likely broader than purely legal responsibility. Nevertheless, without access to the report it becomes difficult to clarify the real issues found by NATO and appreciate their rationale. Therefore, fully understanding the precautionary principle as

[168] NATO/ISAF UNCLASS, 'Tactical Directive 6 July 2009' https://www.nato.int/isaf/docu/official_texts/Tactical_Directive_090706.pdf accessed 12 December 2017.
[169] Ibid.
[170] Fraidoun Elham, 'NATO strikes fuel tankers in Afghanistan' (4 September 2009) *Reuters* https://www.reuters.com/article/oukwd-uk-afghanistan-idAFISL45305720090904 accessed 1 December 2017.

NATO presumes it to be, and how it is approached by states involved in modern warfare, is mired in secrecy.

3.10 Conclusion

That a significant number of civilians were injured or lost their lives as a direct result of Commander Klein's decision on that day in September 2009 is without doubt. I have argued that in the seven-hour window available to Klein he could have done more to clarify the status of the individuals on the sandbank. Although a single source of HUMINT is not in obvious contradiction to IHL, given the increasing availability of technology and resources in modern warfare, as well as the timeframe in which this happened, it seems reasonable to expect that an 'everything feasible' standard would have demanded more. That the transcripts indicate other more sophisticated platforms were in the vicinity and potentially able to assist is critical evidence. It is arguable that the restrictive Rules of Engagement in place at the time presented Klein with a dilemma as to gaining further information and the F15 fighters that were despatched to him provided no advantage in terms of intelligence. Further, the constantly shifting dimensions of Rules of Engagement and limited provision for intelligence standards had further complicated his decision-making process, causing distrust and a lack of openness cross-allies. This was evident from the concerns shown by the two pilots and the critique levelled by NATO.

It is my contention that Klein failed to carry out 'everything feasible' to assess the situation and as such acted unlawfully. The apparent disregard for the opinions of the pilots and lack of further requests for support from headquarters indicates that, irrespective of the result, he did not carry out what would be expected from a 'reasonable war-fighter'. The great tragedy of this, aside from the civilian casualties, is that the *Bundesgerichsthof*, when presented with an opportunity to clarify the law, have avoided this in favour of viewing the standards individually, thereby creating further confusion. I believe that they overlooked some crucial aspects of this incident in their judgment: most notably the legal requirement to maintain constant awareness of proportionality and the obligation to cancel or suspend attacks where necessary. There is also a failure to address what role the individuals were

playing on the sandbank and whether Klein had made a ‘positive decision’ to exclude any further investigations. Moreover, they have not clearly assessed what actions Klein could have taken to gain better intelligence given the timeframe he had available.

Aside from the issues this has presented for the specific case the implications are far broader. The development of the precautionary principle under modern warfare is likely to be conducted through incremental change. The lack of transparency restricts objective analysis which can create divergence and further undermines clarity that would aid in legal development. It is important to understand how the varied understanding of IHL provisions across states can be managed and mitigated across coalition partners. The symbiotic relationship of Rules of Engagement and other policy directives with the development of custom needs further investigation, specifically in the area of precautions that have been significantly altered by technological innovation.

Chapter Four

Asymmetrical Technology: The Precautionary Principle and Coalition Operations

4.1 Introduction

The asymmetry of belligerents in an armed conflict is well documented, whether that be as a result of technology, force size, resilience or terrain. In 2008 Schmitt stated that asymmetry had "become the catch-phrase *du jour,*"[1] but argued this was not a new phenomenon with warfare being naturally controlled to exploit the adversary's weaknesses or, of course, leverage one's own strengths. That said, International Humanitarian Law (IHL), in theory, should be universal and operate equally on all parties involved in a conflict.[2] Over the past few decades technology has developed considerably, altering the methods and means of warfare available to states. There has been considerable study on questions such as the requirement to use precision-guided munitions (PGMs) to minimise civilian casualties and perceived contention about the balance of risk in favour of armed forces.[3] This chapter, by using discussions over these previously highlighted areas of development, is concerned with establishing what legal development has taken place in the context of persistent surveillance.

I will use the US, UK and Germany as comparator states to discuss how asymmetrical application may have developed. These are useful states for a number of reasons. The US and UK, due to their longstanding intelligence agreements, have access to the most sophisticated and largest network of intelligence data in the world. They have operated as close allies in several recent conflicts and thus are difficult to separate for the purposes of analysis, plus the value of this would be limited. Germany, as members of NATO, have also

[1] Michael N Schmitt, 'Asymmetrical Warfare and International Humanitarian Law' (2008) 62 A.F. L. Rev. 1, 11.
[2] The theory behind what and how International Humanitarian Law is framed and operates is itself an interesting field. For more on this see Thomas Forster, 'International Humanitarian Law's old questions and new perspectives: On what law has got to do with armed conflict' (2016) 98(3) IRRC 995.
[3] This discussion was particularly prevalent in the air campaign over Kosovo, discussed later in this piece. Also see APV Rogers, 'Zero-casualty warfare' (2000) 82 IRRC 166.

operated in coalition with these partners most notably in the Balkans and more recently in Afghanistan. However, due to their different cultural and political history since World War II they have a notably different approach to modern conflict. Despite their substantial economic power, they have not invested as heavily in military technology and so they lag behind their US and UK partners. Therefore, they make an interesting state to use as a comparison for the development of IHL principles.

4.2 The Dimensions of Asymmetry

"The conventional army loses if it does not win. The guerrilla wins if he does not lose."[4]

The concept of asymmetrical warfare is far from new, even if the term of art is a later American notion.[5] As Sudhir comments, "It [asymmetric war] can be taken as fresh jargon to distinguish the modern variant from traditional partisan and guerrilla war conducted by irregular bands using unconventional methods."[6] Although largely driven by the revolution in military affairs,[7] and thus the development of superior technology, this is an oversimplification of the role asymmetry plays in military activity. The US, who coined the phrase, define asymmetric warfare as "…something done to military forces to undermine their conventional military strength."[8] Therefore, in their view this is driven not only by technological innovation but also by the methods and means used by states to derive their military strength. I would argue that this is an oversimplification of the role asymmetry plays in warfare with it being presented by more than technology. Asymmetry is defined as having a "lack of equality or equivalence between parts or aspects of something."[9] In warfare this

[4] Henry Kissinger, 'The Viet Nam Negotiations' (1969) 11:2 Foreign Affairs 38.
[5] Steven Metz and Douglas Johnson II, 'Asymmetry and US Military Strategy: Definition, Background, and Strategic Concepts' (2001) Strategic Studies Institute: US Army War College, 2.
[6] Colonel M R Sudhir, 'Asymmetric War: A Conceptual Understanding' (2008) CLAWS Journal 58, 58 https://www.claws.in/images/journals_doc/742067376_MBSushir.pdf accessed 1 May 2019.
[7] For a discussion on this see Elinor Sloan, *The Revolution in Military Affairs* (McGill-Queen's University Press 2002) .
[8] 1999 Joint Strategy Review, quoted in Wing Commander JG Eaton RAF, 'The beauty of asymmetry: An examination of the context and practice of asymmetric and unconventional warfare from a western/centrist perspective' (2002) 2:1 Defence Studies 51, 52.
[9] Lexico, The Online Dictionary powered by Oxford https://www.lexico.com/en/definition/asymmetry accessed 16 November 2019.

can be presented by either side, whether as a result of tactics, military technology, or overall military force. This is depicted by Osama bin Laden who is quoted as saying: "The difference between us and our adversaries in terms of military strength, manpower, and equipment is very huge. But, for the grace of God, the difference is also very huge in terms of psychological resources, faith, certainty, and reliance on the Almighty God. This difference between us and them is very, very huge and great."[10]

It is frequently the weaker side that resorts to non-conventional methods to undermine the greater military side in order to offset its disadvantage. This has been observed in several conflicts, not least of which is the use of IEDs[11] and suicide bombers during the protracted war in Afghanistan. In addition to the use of non-conventional techniques the development of technology has handed some innovations to the 'weaker side' by driving down costs and access to items like mobile phones[12] and remotely piloted 'drones'. The latter have been reported as being used by ISIS in both Iraq and Syria to conduct attacks with explosives, to collect intelligence and even for propaganda purposes.[13]

Therefore, asymmetrical warfare can operate both to the advantage and disadvantage of the powerful nations. Asymmetry can be observed in many aspects of conflict, with IHL largely reactive to the demands of the current conflict, rather than proactively looking to the next. Asymmetry has many dimensions and is cross-cutting throughout the entire spectrum of strategic, tactical and operational aspects of conflict. Within the strategic level issues are both political and military, with terrorism a good example of an asymmetrical

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[10] Foreign Broadcast Information System, *Al-Jazirah Airs 'Selected Portions' of Latest Al-Qa'ida Tape on 11 Sep Attacks, Doha Al-Jazirah Satellite Channel Television in Arabic 1835 GMT 18 Apr 02,* Compilation of Usama Bin Laden Statements 1994-January 2004 (Jan 2004) at 191, 194.

[11] Improvised explosive device. For more discussion on these in Afghanistan see, the United Nations Office for Disarmament Affairs, *Impact of IEDs* https://www.un.org/disarmament/convarms/impact-of-ieds/ accessed 10 May 2019. Also see, John Kester & Jana Winter, 'Pentagon Report: IED Casualties Surge in Afghanistan' (20 October 2017) Foreign Policy https://foreignpolicy.com/2017/10/20/pentagon-report-ied-casualties-surge-in-afghanistan/ accessed 10 May 2019.

[12] Frequently used in the construction of IEDs. Also, this technology has enabled greater communication, access to the internet, engagement with social media, and a wider presence than would have formerly been available.

[13] For more on this see The Meir Amit Intelligence and Terrorism Information Center, *ISIS's use of drones in Syria and Iraq and the threat of using them overseas to carry out terrorist attacks* (29 October 2018) https://www.terrorism-info.org.il/en/isiss-use-drones-syria-iraq-threat-using-overseas-carry-terrorist-attacks/ accessed 11 May 2019.

strategy that has been used militarily.[14] Although asymmetry is more easily observed between adversaries, e.g. the US and the Afghan insurgents, I contend that it can also play a substantial role amongst allies. This is particularly notable within intelligence collection and analysis which can create disparity in knowledge during conflicts.[15] Operationally technological advantages such as real time surveillance and reconnaissance[16] assets provide a greater advantage in locating, tracking and understanding of an enemy. This enables faster reaction to enemy actions and greater, more accurate decision-making skills.

Therefore, asymmetry is more than just greater weaponry and technical abilities. It can be present in doctrinal approaches to methods of warfare, for example terrorism as a method of war,[17] with the US Air Force now adopting asymmetry itself as a doctrine.[18] In recognition of the commonplace nature of asymmetrical warfare, as well as the overarching benefits for speed, cost and efficacy, the USAF-developed strategy is commonly referred to as asymmetric force strategy. This approach "… leverages sophisticated military capabilities to rapidly achieve objectives. Asymmetric warfare pits our strengths against the adversary's weaknesses and maximizes our capabilities while minimizing those of our enemy to achieve rapid, decisive effects."[19] Away from doctrine and technology, asymmetry can be normatively present when differing policy or legal norms govern the belligerents. However, customary IHL[20] is generally established to operate symmetrically[21] such that all states are bound by the stated requirements of distinction,[22] proportionality[23] and precautions.[24] Therefore, any normative difference created at the national level may place greater limits

[14] It should be noted that this is unlawful under IHL but nonetheless can be seen in a number of former conflicts. .
[15] 3.4; 3.10.
[16] C4ISR: Command, Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance .
[17] Discussion on this is made by Caleb Carr, 'Terrorism as Warfare: The Lessons of Military History' (1996/1997) 13:4 World Policy Journal 1.
[18] United States Air Force, *Operations and Organization: Air Force Doctrine Document 2* (3 April 2007) https://fas.org/irp/doddir/usaf/afdd2.pdf accessed 10 May 2019.
[19] Ibid 11.
[20] The primary treaties comprising IHL are obligations on the states that are signatories to them. Although the main four Geneva Conventions have almost universal ratification the additional protocols have rather less comprehensive status; 2.4.
[21] 3.2.2.
[22] API Art. 48; 2.2.1.
[23] API Art 51(5)(b); 2.2.2.
[24] API Art. 57; 2.3.

on operations than is required by IHL, but could also lead to restriction in development of further custom.

This normative asymmetry is also present between coalition allies, due to the differing cultural norms, history, political rhetoric and foreign policy aims. This in turn leads to asymmetry in the manner that IHL is applied and interpreted. Furthermore, it may lead to restrictions on methods and means of warfare beyond the dictates of IHL. These can be demonstrated through the rules of engagement, tactical directives, operation plans, and other instruments in place during a conflict. Furthermore, the nature of coalition operations gives rise to instruments such as vetoes, red cards and state-specific caveats.[25] As such, asymmetric operations are significant for the discussion of intelligence standards under IHL, both for the position of members of a coalition and for the IHL requirements.

It is demonstrable that technology has brought advantage to the United States, and the advanced states such as the UK, Australia, Germany and France. Modern battlefields are no longer divided by the forward edge of the battle but have become multi-dimensional, to the extent that they are now referred to as 'battlespaces.' As Schmitt reflects on Operation Iraqi Freedom: "Indeed, the first blow of the war was not the crossing of the Iraqi border by an invasion force, but rather an attack by Tomahawk cruise missiles and F-117s designed to kill Saddam Hussein."[26] This level of technological superiority is the critical point for the discussion on the development of an intelligence standard, and whether it has in turn increased the standard that must be achieved in verification. Whether or not asymmetry is actually growing between parties to a conflict is not a subject for discussion here, but what is significant is the differences in technology held by coalition partners within a conflict.

[25] NATO, *NATO Standard AJP-3.9: Allied Joint Doctrine for Joint Targeting* (2016 April) Edition A Version 1, Chapter 3 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/628215/20160505-nato_targeting_ajp_3_9.pdf accessed 24 April 2017.
[26] Schmitt (n 1) 7.

4.3 Technology on the Battlefield

The US is perhaps the biggest advocate of the use of technology for intelligence collection. This is reflected in their defence budget which results in them having the largest funding in the world. In comparison the UK spends less than a tenth of the US, with Germany lagging further behind at ninth in the world.[27] As a result the US remains the most technologically advanced state in the world.

During the 1991 Gulf War the US highlighted the significance of their technology to modern warfare by precision weapons and stealth.[28] Prior to the launch of Operation Desert Storm commentators were reticent about the chances of a US success in a war in Iraq. On the eve of the war, a group of experts writing for the US Army War College gave the view that the Iraqi military were: "fully capable of keeping pace with the latest innovations in weapons technology."[29] They continued: "We should ask ourselves whether we are prepared for [war in Iraq] in our view we are not... to perform competently, our forces must be reconfigured, retrained and re-equipped."[30] These comments likely reflected the prevailing view that over-reliance on technology was misplaced. It was argued that the reliability of systems could not be assured, and they were very expensive. On the other hand, defence traditionalists maintained the view that a continued focus on advanced technology would allow the US to maintain superiority on the battlefield. This is exemplified by the successes demonstrated using precision-guided munitions (PGMs) during the war.

Nevertheless, although the 'smart bomb' was hailed as the invention that shaped the war,[31] English estimates that 90% of the munitions deployed during the war were 'dumb' and

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[27] UK Ministry of Defence, *UK Defence in Numbers* (September 2017) Ministry of Defence UK https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/652915/UK_Defence_in_Numbers_2017_-_Update_17_Oct.pdf accessed 4 May 2019 .

[28] Thomas Mahnken, *Technology and the American Way of War* (Columbia University Press 2008) Chapter 5.

[29] Stephen C Pelletiere, Douglas V Johnson II, and Lief R Rosenberger, *Iraqi Power and US Security in the Middle East* (Carlisle Barracks, PA: US Army War College Strategic Studies institute 1990) ix.

[30] Ibid, xi.

[31] Malcolm Browne, 'Invention that Shaped the Gulf War: the Laser-Guided Bomb' (26 February 1991) *The New York Times* https://www.nytimes.com/1991/02/26/science/invention-that-shaped-the-gulf-war-the-laser-guided-bomb.html?pagewanted=all accessed 20 April 2019.

"were lucky to get within half a kilometre of their target."[32] The consternation expressed by the US Army War College is clearer when it is appreciated that much of the technology had never been tested, and actually proved to be less successful than anticipated.[33] Furthermore, the efficacy of precision-guided munitions was undermined by a lack of intelligence and thus the significance of this and the developments in this field are crucial.

PGMs[34] had been used extensively during the Vietnam war some twenty years earlier. Best attributes part of their limited efficacy to a lack of accurate intelligence. In 1995, he writes that: "Often lacking during the Vietnam conflict, accurate locating data on some targets can now be obtained by a combination of satellite and manned and unmanned aircraft and communicated to tactical commanders and to pilots virtually in real-time."[35] Perhaps in recognition of the value of real-time intelligence, the US pressed into service the E-8 Joint Surveillance Target Attack Radar System (JSTARS) which was still in development. Desperate for accurate targeting information, CENTCOM (US Central Command) was hopeful that the multi-platform system would enable accurate tracking of targets. In retrospect the system achieved great success; "JSTARS flew 49 consecutive, successful missions, mostly at night, tracking and targeting fixed and mobile enemy forces and Scud missile launchers for coalition forces."[36] Best suggests that the availability of this intelligence and the ability to communicate it swiftly, is what underlay the Allies' successful campaign in the Gulf, and went on to transform the US Intelligence community.[37]

Perhaps one of the most significant developments during the war was the use of GPS satellite surveillance systems. Although the US DoD had been developing this system since the 1960s, Operation Desert Storm was the first noted military use. The rush to use this

[32] Robert English, former adviser to military on national security, quoted in Jackie Mansky, 'Operation Desert Storm was not Won by Smart Weaponry Alone' (20 January 2016) *Smithsonian.com* https://www.smithsonianmag.com/history/operation-desert-storm-was-not-won-smart-weaponry-alone-180957879/ accessed 4 November 2019.
[33] Browne (n 31).
[34] Variously known as Laser Guided Bombs (LGB); Electro-Optical Guided Bombs (EOGB); .
[35] Richard A Best Jr., *Intelligence Implication of the Military Technical Revolution,* CRS Report for Congress (The Library of Congress 1995) 3.
[36] Lori Tagg, 'JSTARS plays critical role in Operation Desert Storm' (16 January 2015) *US Army* https://www.army.mil/article/141322/jstars_plays_critical_role_in_operation_desert_storm accessed 15 April 2019.
[37] Best (n 35) 2.

system meant that the US had not prepared sufficient receivers, and it was reported that there were as few as two units per 100 vehicles.[38] The value of GPS in the featureless landscape of the Gulf States was invaluable, and was the means by which the ground forces were able to locate Iraqi forces and assess bomb damage. The JSTARS, U-2 aircraft and reconnaissance satellites all relied on GPS data, but the technology was far from perfect. As Gregory observed these systems were easily fooled by the decoys, camouflage and the digging in of troops that was used by the Iraqis.[39] Thus, the significant development of technology was in part 'fooled' by simple methods of deception. Furthermore, it should be noted that the use of PGMs was quite limited overall, with 90% of ordnance used throughout the conflict being 'dumb'.[40] As such, although the PGM is cited as being the "invention that shaped the Gulf War,"[41] its use was quantifiably no more than during the Vietnam War.

Nevertheless, the perceived wisdom that the use of precision weapons resulted in fewer civilian casualties led to considerable discussion as to the requirement for their use in mitigating civilian casualties. As Ivan Oelrich, a strategic weapons analyst at the Federation of American Scientists, states: "…during World War II in general it was thought to be a legitimate action to send B17s in fleets to bomb German cities. If we had done that in Baghdad, it would have been widely condemned as a war crime. Because *we can do better.*"[42] (emphasis added) This understanding demonstrates how the contribution of technology directly affects developments in IHL, adjusting expectations to the current standards.

[38] The Science Museum, *GPS Navigation: From the Gulf War to Civvy Street* (2 November 2018) https://www.sciencemuseum.org.uk/objects-and-stories/gps-navigation-gulf-war-civvy-street accessed 20 April 2019.
[39] Robert Gregory, *Clean bombs and dirty wars: air power in Kosovo and Libya (*Potomac 2015) 21.
[40] Mansky (n 32).
[41] Malcolm Browne, 'Invention that Shaped the Gulf War: the Laser-Guided Bomb' (26 February 1991) *The New York Times* https://www.nytimes.com/1991/02/26/science/invention-that-shaped-the-gulf-war-the-laser-guided-bomb.html?pagewanted=all accessed 20 April 2019.
[42] Brian Handwerk, '"Smart Bombs" Change Face of Modern War' (18 February 2005) *The National Geographic* http://news.nationalgeographic.com/news/2005/02/0218_050218_tv_bombs.html accessed 14 August 2017.

The protection of civilians and civilian objects during armed conflict is a core principle of IHL, provided by the trifactor of the principles of distinction, proportionality and precautions.[43] Thus, the argument runs that if there is a more discriminate and accurate way to damage an adversary's military advantage that results in fewer civilian casualties, or collateral damage, then this should be used. There are several arguments to counter this, some legal and some technical, which should be explored before applying this to the intelligence standard required.[44]

4.4 Precision Weaponry and the Law

As stated PGMs played a significant role in the success of Operation Desert Storm during the early 1990s. It is said that: "The PGMs had an accuracy rate of 90%, while the conventional 'dumb' bomb accuracy rate was 25%."[45] They are expensive but accurate and can destroy a target with one weapon if the targeting information is correct, has been properly programmed into the system and they are all functioning properly.[46] These caveats are significant. The widely reported claims of 'one bomb one target' and the overwhelming accuracy of the system was disputed after the conflict.[47] The US General Accounting Office review in June 1997, analysing the Air Campaign, reports that the "F-117 bomb hit rate ranged between 41 and 60 percent – which is still considered to be highly effective, but is still less than the 80 percent reported after the war by the DoD, the Air Force, and the primary contractor."[48] Nonetheless, it is indisputable that the PGMs offered significant improvement in accuracy than had been achieved during the Vietnam war. According to a former Secretary of the Air Force, "In World War II it could take 9,000 bombs to hit a target

[43] 2.2 .
[44] Maja Zehfuss, 'Targeting: Precision and the Production of Ethics' (2011) 17:3 European Journal of International Relations 543.
[45] Barton Gellman, 'US Bombs Missed 70% of Time' (16 March 1991) *The Washington Post.*
[46] Allen A Cocks, 'Smart Weapons – On Target (So Far)' (April 1991) *Marine Corps Gazette.*
[47] David Usborne, 'Smart bombs not so clever in Gulf War' (30 June 1990) *The Independent* https://www.independent.co.uk/news/world/smart-bombs-not-so-clever-in-gulf-war-1258850.html accessed 16 April 2019.
[48] Henry L Hinton Jr. *Operation Desert Storm: Evaluation of the Air Campaign* (June 1997) Report to the Ranking Minority Member, Committee on Commerce, House of Representatives, United States General Accounting Office https://www.gao.gov/assets/230/224366.pdf accessed 16 April 2019.

the size of an aircraft shelter. In Vietnam, 300. Today [May 1991] we can do it with one laser-guided munition from an F-117."[49]

In addition to PGMs which were deployed from suitable aircraft,[50] Desert Storm saw considerable use of the Tomahawk cruise missiles which were launched from Navy ships and submarines in the Persian Gulf. These naval weapons were "…packed with advanced electronics and several different guidance systems, they [were] essentially flying computers capable of sailing through the goalposts on a football field from a range of several hundred miles."[51] Once again, although proving their accuracy, Tomahawks[52] were extremely expensive, reportedly costing around $1.35m for each missile.[53] Nevertheless, during Desert Storm the execution of the campaign carefully considered the availability of aircraft and weapons to minimise civilian injuries. Speaking in January 1991, General H. Norman Schwarzkopf said: "I think we've stated all along that we're being absolutely as careful as we can not only in the way we are going about executing our air campaign, but in the type of armament we're using. We'ref using the appropriate weapons against the appropriate targets. We're being very, very careful in our direction of attacks to avoid damage of any kind to civilian installations."[54]

One of the biggest problems associated with the PGMs used during Desert Storm was their inability to work accurately with limited visibility, such as poor weather, smoke or dust.[55] Thus, combined with the accuracy of GPS, Boeing developed the product that is still used

[49] Statement contained in a summary of public quotes and comments about performance of the F-117A Stealth Fighter in Operation Desert Storm provided to the GAO by Lockheed Corporation in March 1993. See Report at 59.
[50] Not all aircraft involved in Operation Desert Storm were able to launch the Paveway laser-guided missiles. The US had the most comprehensive asset range, most notably the US F-117 Stealth aircraft and the F-111. The UK deployed Tornado GR-1s which did not have capability to 'self-designate' and so were variously assisted by US F-15s and later UK Buccaneers equipped with laser designator capabilities. For more on the RAF role in Desert Storm see, RAF, *Air Power Review: First Gulf War 25th Anniversary – Special Edition* (Summer 2016) https://www.raf.mod.uk/what-we-do/centre-for-air-and-space-power-studies/documents1/air-power-review-vol-19-no-2-first-gulf-war-25th-anniversary-special/ accessed 16 April 2019.
[51] Philip Elmer-De Witt, *Inside the High-Tech Arsenal* (4 February 1991) *TIME*, 46.
[52] Also known as TLAMs, Tomahawk Land Attack Missile.
[53] Browne (n 41).
[54] Excerpts from Remarks by General Schwarzkopf in Riyadh (28 January 1991) *New York Times.*
[55] Loren Thompson, 'JDAM: How Boeing's Low-Cost Smart Bomb revolutionized Strike Warfare' (29 August 2018) *Forbes* https://www.forbes.com/sites/lorenthompson/2018/08/29/jdam-how-boeings-low-cost-smart-bomb-revolutionized-strike-warfare/#19475bea2c7d accessed 15 April 2019.

widely in current operations. Known as JDAMs (Joint Direct Attack Munitions) these kits convert a standard weapon into a smart one, guided by precise GPS coordinates.[56] These first saw deployment in the Balkan conflict in 1999, and due to their accuracy, reliability and low cost remain in service to date.[57] Similarly, the Tomahawk naval-launched cruise missile remains a useful tool employed by the US and their allies, with the US reportedly launching 160 against Libya in 2011.[58]

Therefore, despite the arguably over-inflated claims of accuracy, Operation Desert Storm demonstrated the considerable utility of precision weapons and prompted the development of the GPS-guided systems now in widespread use during modern conflicts. This technological turning point was most noted during the Balkan conflict, specifically the NATO mission over Kosovo in 1999. The tactics adopted by Operation Allied Force in 1999 were a development of those from Desert Storm, designed to perfect the precise.

There is little doubt that the NATO air campaign was intended to be carried out strictly in accordance with IHL. This was made clear at the NATO press briefing in Spring 1999; Air Commodore David Wilbey is quoted as saying: "… our aim is to hit the target and not to cause collateral damage to any surrounding areas. You have seen the effects of the bombs that we have dropped and the missiles that we have launched."[59] This conflict was notable for its reliance on air power, as reported: "Never before has air power played such a central role in the conduct and outcome of an entire conflict."[60] Despite the development in precision weapons, and the exclusive use of them for targets in the capital Belgrade, there remained incidents of collateral damage. Through their independent investigation into the Air Campaign, Human Rights Watch reported that there were ninety separate incidents involving civilian deaths totalling some 500 Yugoslav citizens.[61]

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[56] At its most accurate the JDAM can provide accuracy in to a 5m circular probable error, dropping to 30m when GPS data is denied. See 'Joint Direct Attack Munition' *Military.com* https://www.military.com/equipment/joint-direct-attack-munition-jdam accessed 16 April 2019 .
[57] See Thompson (n 55) 'JDAM' for details of current production figures from Boeing.
[58] For deployment of Tomahawks by the US see, 'BGM-109 Tomahawk – Operational Use' *Global Security* https://www.globalsecurity.org/military/systems/munitions/bgm-109-operation.htm accessed 1 May 2019.
[59] APV Rogers, 'Zero-casualty warfare' (2000) 82 IRRC 165, 165.
[60] Nick Cook, 'Special report, War of Extremes' (9 July 1999) *Jane's Defence Weekly* 20.
[61] Human Rights Watch, *Civilian Deaths in the NATO Air Campaign* (2000) Vol. 12, 2.

It thus became important to establish, given the obvious advantages of precision weapons in protecting civilians and civilian objects, whether the law obliges a state to use these. Further, whether the law dictates in which circumstances they should be used, or if, in fact, the law is silent on this point. Through an understanding of how the law responded to the developments provided by the use of precision munitions it will be possible to investigate if there is a similar approach to the advances of technology for intelligence gathering.

4.5 The Obligations of Precision Munitions

The law concerning the methods and means of attack is codified by Additional Protocol I of 1977 (API).[62] The specific principles of distinction,[63] proportionality,[64] and precautions in attack[65] are the current iteration of the methods of warfare that are pertinent to the adoption of precision munitions as merely an option or obligation. In concert these three principles mean that attacks cannot be indiscriminate[66] such that the attack "may strike legitimate targets and civilians or civilian objects without distinction. They are prohibited. Indiscriminate attacks are… those which are not directed at a specific legitimate target."[67] This does not mean that civilians cannot (lawfully) become casualties;[68] however these need to be proportionate to the direct and concrete military advantage. Walters Belt uses the example that Scud missiles fired without guidance towards a city would violate this rule, whereas a guided missile towards a military asset in a city would not.[69] This follows the logical extrapolation of the legal rules, such that, should the military asset be considered to present a significant military advantage, and the collateral damage not be excessive, then the balance would be met. However, a non-guided missile would not be able to meet this

[62] To the Geneva Conventions.
[63] API Art. 48; 2.2.1.
[64] API Art. 51; 2.2.1.1 .
[65] API Art. 57; 2.3.
[66] API Art. 51(2), (4) & (5); 2.3.
[67] Canada, *The Law of Armed Conflict at the Operational Level and Tactical Levels,* Office of the Judge Advocate General (13 August 2001) ss. 416.1.a.
[68] Bothe et al, *New Rules for Victims of Armed Conflict: Commentary on the Two 1977 Protocols Additional to the Geneva Convention of 1949* (Martinus Nijhoff 2013) 304, 305.
[69] Stuart Walters Belt, 'Missiles over Kosovo: Emergence, Lex Lata, of a Customary Norm Requiring the Use of Precision Munitions in Urban Areas' (2000) 47 Naval L. Rev. 115, 148.

standard as the level of collateral damage would become excessive in comparison to the concrete military advantage.[70]

Article 57 of API creates the substance and gives the balance of meaning to the rules of proportion and distinction, providing that: "those who plan or decide upon an attack shall: take all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event minimising, incidental loss of civilian life, injury to civilians and damage to civilian objects."[71] Therefore, it could be argued that this provision would oblige parties to use precision munitions within built-up areas, as this would be a 'feasible precaution' to the loss of life or injury. Schmitt clarifies this, stating that "…if guided munitions would lessen the expected loss and damage without increasing the risk to the aircrew or decreasing the expected damage to the target, and the guided munitions are readily available, then the attacking force should employ them."[72] The significance of this statement is the number of conditions that need to be met, which is further supported by the ICRC Commentary on Article 57. Most notably, for the discussion on precision munitions, the Commentary states that one of the various factors that should be considered when assessing incidental damage includes: "… [the] accuracy of the weapons used (greater or lesser dispersion, depending on the trajectory, the range the ammunition used etc.)…"[73] However, this is all qualified by the overarching statement that this should be done wherever feasible.

The definition of 'all feasible' is in and of itself contentious. However, it is widely considered to mean everything that is "…practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations."[74] This

[70] 2.2.1.1.
[71] Art 57(a)(ii); 2.3.
[72] Michael N Schmitt, 'The Principle of Discrimination in 21 Century Warfare' (1999) 2 Yale Hum. Rts. & Dev. L.J. 143, 152.
[73] Yves Sandoz, Christophe Swinarksi & Bruno Zimmerman (eds.) *Jean Pictet et al. Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949* (Martinus Nijhoff 1987) 684.
[74] Declaration of the United Kingdom of Great Britain and Northern Ireland upon ratification of Additional Protocol I to the Geneva Conventions (2002 July 2) Reservations section b https://ihl-databases.icrc.org/ihl/NORM/0A9E03F0F2EE757CC1256402003FB6D2?OpenDocument accessed 18 June 2018. Similar declarations were made by Algeria, Belgium, Canada, France, Germany, Ireland, Italy, the Netherlands and Spain.

definition was also included in Article 2(3) of the 1980 Protocol III on incendiary weapons of the UN Weapons Convention.[75] Furthermore, it was relied upon by the ICTY Trial Chamber in the case of *Galić*.[76] The contrary argument to 'all feasible' is that this places too substantial a burden on parties who are capable of taking greater precautions due to greater investment in technology. Therefore, they argue that the customary law standard is only all that is 'reasonable' considering the prevailing circumstances.[77] I contend that the understanding of all feasible precautions has already been accepted and understood to mean all that is practical or practically possible in the circumstances at the time.[78] Therefore, I would be inclined to suggest that the introduction of a reasonableness test would obfuscate the issue further, and not add substantially to the law as established. IHL mandates the precautions to be taken[79] and, as such, obliges states to do all that is practical to ascertain the extent of the collateral damage that may occur. Furthermore, the choice to use precision weapons is already encompassed by the precautionary principle, such that all feasible precautions should be taken "in the choice of means and methods of attack."[80]

Article 3(10) of the 1996 Amended Mine Protocol of the UN Weapons Convention continues to provide for a standard of feasibility and presents many examples of what may be considered to be "circumstances ruling at the time." The UK Military Manual perhaps is the most complete and enlightening, stating that: "A commander should have regard to the following factors: a. the importance of the target and the urgency of the situation; b. intelligence about the proposed target – what it is being, or will be used for and when; c. the characteristics of the target itself, for example, whether it houses dangerous forces; d. what weapons are available, their range, accuracy, and radius of effect; e. conditions affecting the accuracy of targeting, such as terrain, weather, night or day; f. factors affecting incidental loss or damage, such as the proximity of civilians or civilian objects in the vicinity of the target or other protected objects or zones and whether they are inhabited, or the

[75] Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (10 October 1980) 1342 U.N.T.S. 171.
[76] ICTY, *Prosecutor v Stanislav Galić* (5 December 2003) IT-98-29-T, Trial Judgment, 58, footnote 105.
[77] Danielle L Infeld, 'Precision-Guided Munitions Demonstrated their pinpoint accuracy in Desert Storm: But is a country obligated to use precision technology to minimize collateral civilian injury and damage?' (1992-1993) 26 George Washington Journal of International and Comparative Law 109, 118.
[78] 2.2.3.
[79] API Art 57; 2.3.
[80] API Art 57(2)(a)ii; 2.3.

possible release of hazardous substances as a result of the attack; g. the risks to his own troops of the various options open to him."[81] Therefore, whilst these standards can be viewed to be objective there can only be subjective certainty required.[82]

In discussing whether or not a duty exists to use precision technology, Sassòli and Quintin contend that: "… the feasible standard is still rejected by some States and experts [as it] lies in the fact that it is perceived as creating a disproportionate burden on technologically-advanced States."[83] As such, these States reject the notion that they are obliged, as a party holding advanced technology, to use it. On the other hand, some authors and NGOs consider that those who hold precision munitions are required to use them in urban areas[84] and furthermore countries who hold large numbers of these munitions are compelled to use them all the time.[85]

Further insight lies in the Air and Missile Warfare Manual that says: "There is no specific obligation on Belligerent Parties to use precision-guided weapons. There may however be situations in which the prohibition of indiscriminate attacks, or the obligations to avoid – or, in any event, minimize – collateral damage, cannot be fulfilled without using precision-guided weapons."[86] I, in concurrence with Sassòli and Quintin,[87] contend that this is in fact the correct interpretation of the conflicting challenges facing military commanders.[88] To further the opposite view would engender the notion that IHL obliges a state to develop, train and have access to, advanced technology in line with the world leaders (arguably the US). This is an impractical and imprecise approach given the diversity in economies, cultures

[81] UK Ministry of Defence, *The Manual of the Law of Armed Conflict* (OUP 2004) [UK Manual] at 5.32.5.
[82] Stefan Oeter, 'Methods and Means of Combat' in Dieter Fleck (ed.) *The Handbook of Humanitarian Law in Armed Conflict* (OUP 2013) 200.
[83] Marco Sassòli and Anne Quintin, 'Active and Passive Precautions in Air and Missile Warfare' (2014) 44 Israel Yearbook on Human Rights 69, 80.
[84] Human Rights Watch, '"Smart" Bombs, "Dumb" Bombs, and Inaccurate Attacks on Targets in civilian Population Centers' in Human Rights Watch, *Needless Deaths in the Gulf War: Civilian Casualties During the Air Campaign and Violations of the Laws of War* (New York: Human Rights Watch 1991) http://www.hrw.reports/1991/gulfwar/ accessed 10 February 2017.
[85] See Infeld (n 77) 110-111. It should be noted that she is critical of this position.
[86] Program on Humanitarian Policy and Conflict Research at Harvard University (HPCR), *Manual on International Law Applicable to Air and Missile Warfare* (Bern: HPCR 2009) Rule 8 http://www.ihlresearch.org/amw/manual/ accessed 15 February 2017.
[87] Sassòli and Quintin (n 83) 81.
[88] Christopher Markham and Michael Schmitt, 'Precision Warfare and the Law of Armed Conflict' (2013) 89 Int'l L Stud 669.

and military preparedness of states within NATO, let alone further afield. As Trapp explores in her concept of 'diligent development': "States are faced with competing priorities. How they manage resources will depend to a large extent on domestic politics, and international law has very little to say about how States should prioritize resource allocation."[89] Schmitt furthers this discussion saying that: "Although there may be a moral obligation to purchase precision technology within a State's financial means, whether it does so is a matter of national policy."[90]

Therefore, Schmitt's assertion that the guided munitions would need to be 'readily available' means that this does not presuppose that all militaries have access, all of the time, to the same level and quality of precision munitions. As Boothby says, "…the different sorts of precision weapon may produce differing rates of civilian casualties."[91] Thus, not all munitions are created equal and the effects of weather, visibility, reliability, skill (training) and information will affect the results on the target. Furthermore, not all militaries will have access to the same quality and quantity of technology.

In reflecting on the Kosovo conflict, Lord Robertson comments that: "When you come to Kosovo and a decision, a conscious decision was taken to go for aerial bombardment, you find that the only aerial bombardment that is now relevant is precision bombing…"[92] During the 1999 conflict NATO insisted on its efforts to use the most precise weaponry available[93] which presented challenges for the coalition. The frustration of this was made clear by NATO's Joint Force Air Commander, Lieutenant General Michael Short who said "… those nations that failed to invest in precision guidance or night-time capabilities or beyond-visual-range systems were relegated to doing nothing but flying combat air patrol in the

[89] Kimberley Trapp, 'Great Resources Mean Great Responsibility: A Framework of Analysis for Assessing Compliance with API Obligations in the Information Age' in Dan Saxon (ed.), *International Humanitarian Law and the Changing Technology of War* (Koninklije Brill 2012) 163.
[90] Michael N Schmitt, 'Precision attack and international humanitarian law' (2005) 87 IRRC 445, 460.
[91] William Boothby, *The Law of Targeting* (OUP 2012) 80.
[92] Walters Belt (n 69) 165 quoting: Vago Muradin, 'Robertson: Europe Must Spend More Wisely to Achieve Gains' (8 December 1999) *Defence Daily* 6 .
[93] Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law* (CUP 2005) [ICRC Study] vol. II, ch.5, para. 314.

daytime; that's all they were capable of doing."[94] The US had, at the time, the greatest range of technology for conducting these precision attacks.

During Operation Allied Force all nineteen NATO forces contributed, to a greater or lesser extent, to the efforts over Kosovo. The disparity in technological capability was lamented by the UK's then Defence Minister who was reported as saying: "In the Cold War we trained for carpet-bombing but today that form of air strike is simply not acceptable. Despite the genocidal attacks carried out by the Serbs in Kosovo, the public did not want us to do random bombing but expected precision attacks. So, in terms of future procurement, nations will have to buy weapons that are relevant. A lot of what's still in inventories are bombs for yesterday's enemies."[95]

The air campaign comprised primarily aircraft from the US, France, the UK, Germany, Italy and the Netherlands. The significance of the disparity in technology can be seen in the percentage breakdown of the types of sorties flown by each state. Over the course of the conflict the US flew 65% of the strike operations, with France conducting around 10% and the UK following closely behind on around 8%.[96] Therefore, it is true that the vast majority of precision missions were conducted by the US, which is confirmed by the RAF who report that they were: "unable to raise the accuracy of laser-guided bombing since the Gulf War."[97] Despite this, the UK and France were the only two states, in addition to the US, who were capable of delivering PGMs, maybe thus indicating the relatively new nature of the munitions. As such, to assume that the deployment of PGMs had become *opinio juris* by the time of Operation Allied Force would seem somewhat disingenuous. Furthermore, I would contend that there remains no obligation to use such under IHL, confirmed by the German

[94] John Tirpak, *Short's View of the Air Campaign* (September 1999) *Air Force Mag* 43 http://www.airforcemag.com/MagazineArchive/Pages/1999/September%201999/0999watch.aspx accessed 19 April 2019.
[95] Michael Evans, 'NATO advised to spend more on hi-tech weapons' (23 September 1999) *The Times (London).*
[96] John Peters, Stuart Johnson, Nora Bensahel, Timothy Liston and Traci Williams, *European Contributions to Operation Allied Force* (RAND 2001) 30 .
[97] RAF, *Air Power Review: First Gulf War 25th Anniversary – Special Edition* (Summer 2016) 200 https://www.raf.mod.uk/what-we-do/centre-for-air-and-space-power-studies/documents1/air-power-review-vol-19-no-2-first-gulf-war-25th-anniversary-special/ accessed 16 April 2019.

Law of Armed Conflict Manual: "The Law of Armed Conflict (LOAC) contains no obligation to use precision-guided ammunition."[98]

However, it is important to note that the introduction and continued usage of these precision munitions can alter the method and means of warfare acceptable. As Trapp remarks: "… it does mean that parties to an armed conflict which *could* do more (account taken of their state of technological advancement and available resources) cannot get away with implementing the lowest common denominator of precautions simply because their adversaries are not in the same technologically privileged position as they are."[99] This view is supplemented by the statements made by the UK Manual which says that "…the employment of 'dumb' bombs has not been rendered unlawful by the advent of precision-guided or 'smart' bombs, but developing technology does bring with it a change in the standards affecting the choice of munitions when taking the precautions."[100] This is also the view adopted by the German Manual which confirms that: "There may … be situations in which the obligation to discriminate between military targets and civilians/civilian objects or the obligation to avoid or minimize collateral damage cannot be fulfilled without the use of such [precision] weapons."[101] Therefore, although an obligation to use precision munitions exclusively does not exist, the ownership of them can bring with it greater responsibility when assessing the decision-making process prior to attack. This then transmits the legal burden to the decision-maker, or in IHL parlance, 'those who decide upon or plan an attack.'[102]

[98] *Bundesministerium der Verteidigung*, *Joint Service Regulation (ZDv) 15/2: Law of Armed Conflict – Manual,* [German Manual] (May 2013) 1111.
[99] Trapp (n 89) 156.
[100] UK Manual (n 81) 12.51.
[101] German Manual (n 98) 1111.
[102] Art 57; 2.3.1.

4.6 Precautions, Intelligence and Technology

The standard of feasibility is crucial to the assessment surrounding proportionality[103] and distinction[104] in attack. Despite discussing the advancement in technology concerning precision munitions, there is a crucial decision-making process prior to deciding upon an attack. It is only possible to comply with the principles of IHL if the person(s) deciding upon the attack have knowledge of the situation on the ground at the relevant place. Schmitt outlines the link: "With regard to the specific precautionary obligations in attack, the feasibility of target verification depends on ISR [intelligence, surveillance, reconnaissance] assets, which are …. central to precision capabilities."[105] Therefore, it logically follows that at the heart of any discussions concerning technological developments, whether that be precision munitions or autonomous systems, the standard of the intelligence available to forces is significant. On this point Stephen Biddle said: "The problem now is not putting a weapon on the aim point, but it's figuring out the aim point… If you can tell me precisely that Osama bin Laden is at a certain longitude and latitude, we can put a lot of explosives on that point."[106] This provides a vital link between the development of greater technological capabilities, the precautionary principle and intelligence standards.

The issue then becomes how much technology is required for a state to be reasonably certain that the target is at the precise location at a specific time.[107] This is not a new problem and was demonstrated throughout World War II with the constant development of signals intelligence systems to meet the demands of the War.[108] Therefore, it is not only the collection of information that is significant but also the processing and analysis in a timely fashion. The difference in the development of intelligence collection assets with that of precision weaponry is the result of the Cold War. This is significant for the development of law and the capabilities presented by different states operating in coalitions.[109]

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[103] API Art 51(5)(b); 2.2.1.1.
[104] API Art. 48; 2.2.1.
[105] Schmitt, Precision Attack (n 90) 460.
[106] Stephen Biddle speaking to Brian Handwerk, quoted in Handwerk (n 42) 56.
[107] 2.5.2.
[108] For more on this see David Kahn, 'Codebreaking in World Wars I & II: The Major Successes and Failures, their Causes, and their Effects' (1980) 23:3 The Historical Journal 617 https://www.jstor.org/stable/2638994?seq=10#metadata_info_tab_contents accessed 5 May 2018.
[109] 3.10.

The Cold War was significant for development of technology as international actors were concerned with maintaining accurate information on activities and threats posed by the Soviet Union. This, in turn, led to the continual development of methods and means of collecting this type of strategic, region-specific information. Hence, the birth of satellite reconnaissance systems during the late 1950s and the development of high-altitude reconnaissance aircraft.[110] This is significant as the geographical position of states was instrumental in the methods and means employed to follow Soviet activity. In that regard, Germany was perfectly situated to monitor the Soviet Union and the new *Bundesnachrichtendienst (BND)* established in 1956,[111] was heavily influenced by the US.[112] This demonstrates that at an early point the German intelligence services were closely aligned with US interests. The German intelligence services during the Cold War provided valuable information from behind the Iron Curtain through human intelligence sources. They were able to interrogate tens of thousands of German prisoners returning from Soviet POW camps,[113] and ran a number of operatives in East Germany throughout the Cold War.[114]

In addition to the human intelligence sources they relied upon, Germany also developed a range of radio intercept listening stations which were able to collect and process valuable intelligence from the Soviet bloc.[115] The fixed stations of the BND were supplemented by support from the *Bundeswehr*[116] with mobile collection units that operated along the borders with East Germany and Czechoslovakia. It was not until the early 1970s that Germany had air platforms for intelligence collection, when the German Navy purchased 16 Breguet Atlantic planes with four being modified for Electronic Intelligence (ELINT) duties.

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[110] 1.3.5.
[111] Although this group could be seen as an extension of the formerly known '*Gehlen Organisation'* or the Org.
[112] See Wolfgang Krieger, 'Germany: An Intelligence Community with a Fraught History' in Bob de Graaff and James M Nyce (eds.) *The Handbook of European Intelligence Cultures* (Rowman & Littlefield 2016) 151.
[113] Erich Schmidt-Eenboom (translated by William Fairbanks) 'T*he Bundesnachrichtendienst, the Bundeswehr* and Sigint in the Cold War and After' (2001) 16:1 Intelligence & National Security 129, 130.
[114] Ibid.
[115] In 1957, this capability was represented by only two small staff units but over the next 30 years grew such that Department 2 (Technological Surveillance) had around 7,500 employees and a staff of 2,200, Schmidt-Eenboom (n 113) 133.
[116] German Armed Forces.

These were the same aircraft that Germany later used in their support of the NATO mission over the Balkans, indicating just how different their capabilities were to their US and UK counterparts.

In comparison by the 1990s the US were already operating an earlier version of the unmanned aerial vehicle known as the Reaper,[117] with the lengthy loiter and video capture facilities this provides. Satellite reconnaissance had been developed and improved during the Cold War, with the NSA having persistent surveillance capabilities across the globe. Meanwhile, the UK were able to deploy several E-3D Sentry aircraft and Nimrods to supply airborne early warning and reconnaissance information. These aircraft are still largely all operational, having extensive electronic equipment to gather intelligence data. Furthermore, in terms of intelligence and satellite support, the UK has had a close relationship with the US, and so has been in a stronger technical position than Germany.[118]

That said Germany did operate the CL-289 unmanned aerial vehicle for reconnaissance and surveillance during the Kosovo conflict with success.[119] However, the capabilities of this platform were not as advanced as the US equivalent and so they contributed far less by way of hours of information. As Peters et al remark: "This limited flight time prevented European unmanned systems from venturing deep into the area of operations, restricting the amount of reconnaissance and surveillance the UAVs and drones actually could perform."[120] In the years since then technology has continued to be developed, but the disparity between the states remains. Today, the US remains, arguably, the world leader in surveillance and reconnaissance technology with the deployment of a vast array of unmanned platforms, aerial observation aircraft, navy vessels and satellites to continuously monitor their military operations, and enemies abroad.

[117] For more on the 'Reaper' see RAF, 'About the MQ-9A Reaper' https://www.raf.mod.uk/aircraft/mq-9a-reaper/ accessed 20 June 2019.
[118] 1.3.8.
[119] EADS, '1,000th Flight of a German Reconnaissance Drone CL-289' (3 May 2001) Defense Aerospace http://www.defense-aerospace.com/article-view/release/5226/german-cl_289-uav-makes-1000th-flight-%28may-4%29.html accessed 2 May 2018.
[120] Peters et al (n 96) 31.

The UK, although not as satellite-rich as the US, has an extensive range of high quality intelligence, surveillance and reconnaissance assets, including operating their own equivalent unmanned aerial platforms, navy vessels and submarines, man-portable reconnaissance drones, and Airborne Warning and Control System (AWACS) aircraft such as the E3-Sentry.[121] The technology that is operated by the UK is, in large part, developed and delivered by the same manufacturers as is the US, providing comparable technology across the two states. The prime difference between them is therefore quantity rather than quality. In comparison Germany has lagged behind somewhat, and although having discussed their own satellite systems in collaboration with the French during the 1990s, the plans were dropped.[122] The German forces gained three unmanned aerial vehicles for use during the ISAF mission in Afghanistan. These 'Heron' drones were proven effective during their initial lease period and so this time was extended, but this in itself demonstrates a differential in the approach made by the different nations.[123] Therefore, the issue of intelligence collection and certainty concerning target verification does, much like precision weapons, vary from state to state.

This issue was raised as part of the Official Declarations concerning the adoption of API: "… one delegation remarked that the identification of objectives depended to a large extent on the technical means of detection available to the belligerents."[124] It continues by using the example that "…some belligerents might have information owing to modern reconnaissance devices, while other belligerents might not have this type of equipment."[125] Thus, the question is raised whether or not states who have 'lesser' reconnaissance capabilities are required to develop these, and also whether those states who have access to a broad range of intelligence, surveillance and reconnaissance assets are required to use them in full prior to attack. The Commentary on Additional Protocols, in addressing the definition of feasibility, goes some way to answering this. "Once again the interpretation will be a matter

[121] For more on this see RAF, 'About the E-3D' available at https://www.raf.mod.uk/aircraft/e-3d/ accessed 20 June 2019.
[122] Charles Grant, 'Intimate Relations: Can Britain play a leading role in European defence – and keep its special links to US Intelligence?' (2000) Centre for European Reform, Working Paper, 12.
[123] Christian Kahl, '*Neue Waffengeneration – und neue Fragen*' (5 October 2012) Bundeswehr Journal http://www.bundeswehr-journal.de/2012/neue-waffengeneration-und-neue-fragen/ accessed 2 January 2019.
[124] Commentary on the Additional Protocols (n 73) 2198.
[125] Ibid 2199.

of common sense and good faith. What is required of the person launching an offensive is to take the necessary identification measures in good time in order to spare the population as far as possible."[126] However, there are a number of issues with this common sense approach, as it does not provide guidance as to how it should govern coalition forces with disparate technologies. Further, given that this was the position made in 1987, it may not have appreciated the significant developments made in technology for surveillance, reconnaissance and intelligence gathering operations.

It is reasonable to expect, given the extensive technological development since 1987, that the standard of precautions now considered feasible is far in advance of what it was at that time. Schmitt reconciles this by viewing it not so much as a development of the standard of verification but more as the development of what is considered to be an indiscriminate attack.[127] These are prohibited by IHL and are considered to be: "those which are not directed at a specific military objective."[128] Therefore, attacks that are conducted with insufficient knowledge could be viewed as being indiscriminate as they are not directed at a *specific* objective. The ICTY's jurisprudence on this point is exemplified by the statements made in the case of *Martić* in which they determine that "… indiscriminate attacks, that is attacks which affect civilians or civilian objects and military objects without distinction, may also be qualified as direct attacks on civilians. In this regard, a direct attack against civilians can be inferred from the indiscriminate character of the weapon used."[129] The study of indiscriminate attacks has, in large part, been focused on the use of certain weapons.[130] However, any method or means of warfare that, through inadequate information and intelligence, targets either directly or indirectly civilians, would be considered to be indiscriminate. Therefore, the development of an intelligence standard could be viewed as either a progression of what is considered to be an indiscriminate attack, or a more rigorous application of the precautionary principle.

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[126] Ibid 2198.
[127] Schmitt, Precision Attack (n 90).
[128] API 51(4)(a).
[129] *Prosecutor v Milan Martić* (Trial Judgment) ICTY-95-11-T (12 June 2007) 69.
[130] For example, see the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to have Indiscriminate Effects, (10 October 1980). Also see Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, July 8 1996, ICJ Rep. 1996 https://www.icj-cij.org/files/case-related/95/095-19960708-ADV-01-00-EN.pdf accessed 10 May 2019.

Nevertheless, as demonstrated, there are inconsistent levels of intelligence information obtainable by different states. This disparity could lead to an asymmetrical development of IHL, with the feasible precautions potentially being rather diverse across coalition partners. That the level of intelligence will vary during the conduct of an operation is perfectly reasonable, and the subjective nature of the standard reflects this. It takes into account the very real differences faced in targeting objectives during the dynamic and fast-paced environment of conflict. However, if the standard is one of the best possible means available at the time, then it is important to understand how this operates within coalitions where actors may be asymmetrically represented by their technology, and thus information.

4.7 Coalition Operations

A reasonable place to start in the evaluation of technological impact during coalition operations is that of the 1999 Kosovo air campaign as there exists extensive post-conflict legal discussion which can provide a solid position from which to start the analysis. This conflict saw early uses of satellite reconnaissance, the introduction of the Reaper Unmanned Aerial Vehicle (UAV) and usage of advanced Airborne Warning and Control Systems (AWACS) platforms, as well as a reliance on precision munitions as already highlighted. The relatively short air campaign over Kosovo was a NATO bombing operation against the Federal Republic of Yugoslavia (FRY) conducted from 24 March to 9 June 1999. Although it was a NATO operation, conducted without a UN mandate, the main party to the coalition, and arguably the driving force behind it, was the US. Of the circa 1,055 aircraft involved in what was known as Operation Allied Force, 730 of these were provided by the US, the remainder were provided by European allies.

Although all the NATO states deployed forces during Operation Allied Force in spring 1999, the considerations by each state altered the role and position these military personnel found themselves operating within. Commenting on these problems Lieutenant General Michael Short (US Air Force), Commander of Allied Air Forces, Southern Europe, said: “We need to understand going in the limitations that our coalition partners will place upon

themselves and upon us. There are nations that will not attack targets that my nation will attack. There are nations that do not share with us a definition of what is a valid military target, and we need to know that up front…"[131] These differences created a number of difficulties during the conflict, driven by political and technological limitations.

4.7.1 Agreement on Targets

To demonstrate the extent of the coalition differences it is helpful to review one of the earliest decisions on the process of conducting an air campaign; agreeing on targets. This process was far from simple and General Clarke provides an insight into this during the Kosovo air campaign. "The processes of approving the targets, striking the targets, reading the results, and re-striking were confusing."[132] He laments that not only had Washington "introduced a target-by-target approval requirement"[133] but "…it was British law that targets struck by any aircraft based in the United Kingdom had to be approved by their lawyers, the French demanded greater insight into the targeting and strikes, and of course there had to be continuing consultation with NATO headquarters and with other countries too."[134] His insight includes recognition of the understanding to minimise civilian casualties (collateral damage), but it is clear that his interpretation of this was different to that of his political superiors in Washington, a similar problem likely present to all members of the coalition. Therefore, for each target adjustment, "every change meant a new target document and a new run through the approval process."[135]

In fact, the level of involvement of each of the states within Operation Allied Force's targeting decisions, has also been shown to influence US approaches to coalitions which "…led, in part, to the US decision to build a coalition of the willing *of its choice* for Operation

[131] Quoted in Amnesty International Report 'NATO/Federal Republic of Yugoslavia: "Collateral Damage" or Unlawful Killings?' (2000) AI Index: EUR 70/18/00, 14 https://www.amnesty.org/download/Documents/140000/eur700182000en.pdf accessed 10 May 2016.
[132] General Wesley Clarke, *Waging Modern War: Bosnia, Kosovo, and the Future of Combat* (Perseus Books 2001) 224.
[133] Ibid .
[134] Ibid.
[135] Ibid.

Enduring Freedom, rather than accept the NATO offer of involvement…"[136] It has been observed that during the Kosovo campaign there came to be two command structures operating in parallel; that of NATO and a separate US command structure.[137] This difficult scenario highlights the organisational barriers, and oversight, that restricted operators within this coalition. All of the targets decided upon within NATO during Operation Allied Force were subject to agreement by the North Atlantic Council, the highest political body of NATO. This takes place by consensus, and so forms part of the basis of the claims made during the *Varvarin Bridge* case[138] (as discussed below), that Germany had acted unlawfully as they did not utilise their veto to oppose the decision to add the target to the list.

The issue with applying an obligation on the state that provides intelligence information within a coalition overlooks certain major obstacles. It is by nature difficult to agree targets during conflict, whereby states with different political leaders may take differing views of the methods and means to be employed during the specific conflict.[139] For example, despite operating within a NATO-led coalition the forces deployed for the war in Afghanistan had very different remits, with Germany focussing on the state-building and police training mission and the US still approaching it as a conflict.[140] Furthermore, individual states may have a diverging view on the specific parameters created by IHL. A significant example of this is that the US maintains that military objectives include those which are classified as 'war-sustaining' whereas the vast majority of other states would dispute this.[141] Additionally, not all states within these coalitions may be bound by the same treaties, for example the US is not a party to API. This then develops a new layer of disparity amongst

[136] Michael Schmitt, 'Asymmetrical Warfare and International Humanitarian Law' (2008) 62 A.F. L. Rev. 1, 37.
[137] Patricia A Weitsman, 'Wartime Alliances versus Coalition Warfare' (2011) 3rd Quarter ASPJ Africa & Francophone 29, 40 https://www.airuniversity.af.edu/Portals/10/ASPJ_French/journals_E/Volume-02_Issue-3/weitsman_e.pdf accessed 10 May 2019.
[138] *Landericht Bonn*, 10 December 2003 (1 O 361/02), 525 *Neue Juristiche Wochenschrift* (2004); *Oberlandesgericht*, 28 July 2005 (7 U 8/04), 58 *Neue Juristiche Wochenschrift* (2005) 2860; *Bundesverfassungsgericht*, 13 August 2013, 2 BvR 2660/06 [Varvarin Bridge] www.bundesverfassungsgericht.de/entscheidungen/rk20130813_2bvr266006.html last accessed 22 March 2019.
[139] 2.5.1.
[140] Sebastian Merz, 'Still on the way to Afghanistan? Germany and its forces in the Hindu Kush' (2007) SIPRI Project Paper https://pdfs.semanticscholar.org/9a78/65dece093e184e645ea9db885cd3e7c14c4f.pdf accessed 3 January 2019.
[141] See discussion from Ryan Goodman, 'The Obama Administration and Targeting "war-sustaining" Objects in Non International Armed Conflicts' (2016) 110 American Journal of International Law 663.

the members of a coalition, and perhaps explains the nature of the difficulties faced in determining targets.[142]

During the 1999 air campaign the US were, as stated, the biggest contributors followed by France, with the UK following closely behind. The German forces primarily carried out suppression of enemy air defence operations as well as surveillance tasks. They deployed with reasonable success the CL-289 reconnaissance drones; these flew 237 sorties, "where manned aircraft were prohibited, below the cloud base, and provided the Allies with pre- and post-strike battle damage assessments and target acquisition data."[143] This vital intelligence, and the role of the German forces has become subject to legal scrutiny in the *Varvarin Bridge* case.[144] The role of intelligence sharing within coalitions is at the heart of the investigation of this incident assessed by the German courts. Therefore, it is valuable to review this to establish how they addressed the issue of precautionary standards during coalition operations.

4.8 Varvarin Bridge

On 30 May 1999, at around 1pm (local time), F-16 aircraft launched four missiles at a bridge over the Morava river near the village of Varvarin in central Serbia, around 200km north of Kosovo.[145] The state run news agency, Tanjug, said that at least 40 people were injured and it was later established that 11 civilians were killed in the attack, with around 30 suffering injuries.[146] NATO issued a statement following the incident, confirming that four aircraft had been involved in the attack on the bridge over the Velika Morava river, and they had used only precision-guided ordnance. They described the bridge as a: "designated and legitimate target" commenting that they were, "unable to confirm the Serbian report of casualties, but

[142] However, the customary standard is established for distinction, proportionality and precautions; 2.2.
[143] John Peters, Stuart Johnson, Nora Bensahel, Timothy Liston & Traci Williams, *European Contributions to Operation Allied Force: Implications for Transatlantic Cooperation* (2001 RAND) 21.
[144] Varvarin Bridge (n 138) .
[145] Stefan Kirchner and Katarzyna Geler-Noch, 'Compensation for Violations of the Laws of War – The Varvarin Case before German and International Courts' (2014) 62:3 *Početna* http://ojs.ius.bg.ac.rs/index.php/anali/article/view/29/66 accessed 10 January 2019.
[146] Ibid. See also BBC World News, 'Europe: NATO confirms bridge attack' (30 May 1999) *BBC News* http://news.bbc.co.uk/1/hi/world/europe/356580.stm accessed 11 January 2019.

never intentionally target[s] civilians."[147] This incident, although not one of the specific cases discussed by the Final Report to the Prosecutor for the ICTY,[148] is notable in that the families of the victims continued to fight for compensation for their loss. These individuals brought their claim through the German court system in cases which were not concluded until 2013.

There are various criticisms levelled at the Varvarin Bridge attack, including the timing of the attack, whether it was a legitimate military target and the sufficiency of the precautions taken prior to, and during, the attack. Furthermore, the legal challenge brought in the German courts was based on the concept that although the German Air Force were not responsible for the F-16s that launched the attack, they had, as part of the NATO coalition, been instrumental in providing intelligence information prior to the attack. The facts of the case have clear parallels with the attacks on the Grdelica railroad bridge on 12 April 1999 and the road bridge near Luzhanë on 1 May 1999, the first of which was subject to scrutiny in the Final Report to the Prosecutors. The rationale for the inclusion of the specific five incidents in the Final Report is stated as: "those which, in the opinion of the committee, were the most problematic."[149] Further, it should be noted that the committee did not find any incident during the course of their study which they thought required investigation by the Office for the Prosecutor (OTP).[150]

4.8.1 Parallels with Grdelica

The Grdelica railroad bridge was targeted as a: "re-supply route being used for Serb forces in Kosovo."[151] The attack was launched at around 11:40am on 12 April 1999, as part of the

[147] Ibid.
[148] ICTY, *Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign against the Federal Republic of Yugoslavia* (1999) [Final Report] http://www.icty.org/en/press/final-report-prosecutor-committee-established-review-nato-bombing-campaign-against-federal accessed 02 August 2018.
[149] Final Report (n 148) 57.
[150] However, see discussions on this report: Paolo Benvenuti, 'The ICTY Prosecutor and the Review of the NATO Bombing Campaign against the Federal Republic of Yugoslavia' (2001) 12:3 EJIL 503; Natalino Ronzitti, 'Is the Non Liquet of the Final Report by the Committee Established to Review the NATO Bombing Against the FRY Acceptable?' (2000) 840 IRRC 1020; APV Rogers, 'Zero-casualty warfare' (2000) 82:837 IRRC 165.
[151] Final Report (n 148) 58.

strategic targeting of supply routes, with the intention of weakening the military forces operating around Kosovo. At least ten people were killed, with a further fifteen injured, as a train had entered the bridge just as the first bomb was closing on the target. The aircraft then compounded the situation by circling and returning to fire a second missile at the other end of the bridge, which unfortunately also hit the moving train. In trying to explain why, after the first missile had hit the train, the aircraft circled for a second pass, General Clark said: "The mission was to take out the bridge. He [the pilot] realised when it had happened that he had not hit the bridge, but what he had hit was the train. He had another aim point on the bridge, it was a relatively long bridge and he believed he still had to accomplish his mission…"[152]

If it is presumed that the bridge was a legitimate target under IHL, and further that the initial missile was unable to be altered in its trajectory due to the speed with which the events unravelled, then there must remain questions over the firing of a second missile. Amnesty International succinctly made this point, with reference to Art 57 API saying that: "Unless NATO is justified in believing that destroying the bridge at that particular moment was of such military importance as to justify the number of civilian casualties likely to be caused by continuing the attack… the attack should have been stopped."[153] On this point, even the committee tasked by the ICTY appeared divided over, "whether there was an element of recklessness in the conduct of the pilot or WSO (weapons system operator)."[154] Nonetheless, they still decided that there was insufficient information meeting the criteria as established by the ICTY to launch an investigation.[155]

It is established that the standard for precautions is one that transcends command levels, such that the decision to cancel or suspend an attack, as could have been made prior to launching the second missile, "only extends to those who have the authority and *practical possibility* to cancel or suspend the attack."[156] (emphasis added) Thus, the aircrew certainly

[152] Final Report (n 148) para 59.
[153] Amnesty, NATO/FRY: Collateral Damage (n 131) 33.
[154] Final Report (n 148) 62.
[155] This term of reference is detailed in full at para. 5 in the Final Report (n 148).
[156] United Kingdom declaration of understanding on the adoption of Additional Protocol I https://ihl-databases.icrc.org/ihl/NORM/0A9E03F0F2EE757CC1256402003FB6D2?OpenDocument accessed 11 November 2018.

had the practical possibility to suspend the second missile launch but, if we take Clark's comments on-board that "… he [the pilot] believed he still had to accomplish his mission…"[157] it appears that they believed that the bridge should remain their primary concern. In determining whether the aircrew were under a legal obligation to cancel or suspend the attack, it should be noted that the UK view is not the final word on the subject. Kalshoven stated, that the provisions in the protocol: "are so intricate, both in language and in train of thought, that full implementation may probably be expected only at higher levels of command."[158] However, he continues that small units on patrol and other such units must be expected to respect the underlying principles such that, "…an attack is not carried out when no reasonable person could doubt the strictly limited military significance of the chosen target as compared to the severe damage the attack may be expected to cause among the civilian population."[159]

Therefore, it would raise the question of whether the aircrew had been made sufficiently aware of their legal obligations prior to undertaking this sortie. It would seem somewhat unusual for the aircrew not to be aware of these requirements given that pilots, unable to be sufficiently sure of their targets, had returned to base with a full weapons load during the 1991 Gulf War.[160] Perhaps then, the crucial aspect of the attack is the awareness of the aircrew to the unexpected situation, in this case the train on the rail bridge. As Rogers explains the unexpected factors would not have been taken into account by the planners of the attack, and thus should be evaluated by the person responsible for carrying out the attack.[161] If an attack is being conducted from a distance, then it is unlikely that those conducting the attack would be aware of the changing circumstances. In this situation Rogers states: "the change or new factors would not 'have become apparent' to them, [so] they would not be caught by Art. 57…"[162] As such, I would concur with the section of the Committee that suggested there may have been an element of recklessness in the

[157] Clarke (n 132).
[158] Frits Kalshoven & Lisbeth Zegveld, *Constraints on the Waging of War: An Introduction to International Humanitarian Law* (CUP 2011) 115.
[159] Ibid 115.
[160] United States Department of Defense, *Conduct of the Persian Gulf War,* (Washington, Department of Defense final report to Congress, April 1992) 612.
[161] APV Rogers, *Law on the Battlefield* (Manchester University Press 2012) 153.
[162] Ibid 153.

undertaking of this attack. The aircraft may have been some distance from the rail bridge; however, it is clear from the video evidence[163] that the aircrew would have been aware of the change in circumstances. Therefore, they were responsible for making this decision and should have suspended the attack until more information could be established to confirm the legality of the action.

The main argument in favour of continuing the attack would be if, despite the train, the casualties would still not be excessive in comparison to the overall 'concrete and direct military advantage' obtained by its destruction. This would ensure that the attack complied with the principle of proportionality.[164] This may not be something that the individual pilots were in a position to judge, given that the standard of military advantage is taken to be: "linked to the full context of a war strategy…"[165] Therefore, in as much as they were tasked with the destruction of the bridge, it is arguable that this was in the context of other attacks, not necessarily enacted concurrently. As Oeter explains: "Normally, such an action is directed towards a goal which lies outside the single action, as part of the complex mosaic of a bigger integrated operation conceived in a kind of division of labour, and thus depends in its purpose on the aggregate strategy of the party to the conflict."[166] Furthermore, as is evident in the *Varvarin Bridge* case, NATO operated a policy of 'need-to-know,' restricting information to an extent that could well have seen the pilots in this case operating without the necessary information to make the judgement. Without insight into what instruction they were given prior to the attack, and without access to the rules of engagement or targeting parameters, it is not possible to determine conclusively. However, it is my opinion that, given the changed circumstances from the point of attack to the arrival of the train on the bridge, the pilots' responsibility was to suspend the attack and seek further intelligence. This would be provided for by the obligation to suspend or cancel an attack "if it becomes apparent that the objective is not a military one."[167] This standard accepts that the

[163] Referred to in the Final Report (n 148) including the analysis provided by an independent German expert. The footage (at the speeded up rate as criticised by the expert) is presently https://www.youtube.com/watch?v=GIi2QDJYLwk accessed 10 May 2019.
[164] API Art. 51(5)(b); 2.2.1.1.
[165] United States, Department of Defense, *Final Report to Congress on the Conduct of the Persian Gulf War,* (10 April 1992) Appendix O, The Role of the Law of War, ILM, Vol, 31, 623.
[166] Stefan Oeter, 'Methods and Means of Combat' in Dieter Fleck (ed) *The Handbook of International Humanitarian Law* (3rd edn. OUP 2013) 175.
[167] API Art 57(2)(b); 2.3.

knowledge may be altered during an attack and so this situation could be described as a classic example of the situation envisioned in the drafting.[168] Therefore, if there was some doubt as to the military nature of the objective I would suggest that they couldn't have possibly known whether the attack was proportionate in the wider context. Therefore, they did not have the requisite knowledge to deem the attack lawful, as they had not taken all 'feasible precautions' as required by Art 57.[169]

Away from the direct liability and responsibilities of the pilots, the timing of the attack raises a question as to the rationale for targeting a rail bridge during the middle of the day, when delaying until night-time could have significantly reduced the risks to civilians. Altering the time of the attack does not appear, in this case, to reduce the military advantage as a bridge, as a static object is not subject to issues presented by moving targets such as tanks, military personnel or air defence measures. The value of altering the time of the attack, or at least reviewing this policy, was made clear almost six weeks later, when the Sunday lunchtime attack on the bridge near Varvarin took place. Therefore, this could raise the prospect that although there may not be individual liability for the attack, there remains the possibility that the state could be liable for the failure to comply with the IHL principles.[170]

4.8.2 The German Courts and Varvarin Bridge

Once again, the bridge was determined by NATO to be a legitimate military target, being a supply link and noted as the final remaining direct link from the north to the south-central region of Serbia.[171] In this case, the bridge was again targeted at lunchtime, and unfortunately this situation was compounded by the fact that it was market day as well as

[168] For more on the temporal scope of precautions see, Isabel Robinson and Ellen Nohle, 'Proportionality and Precautions in attack: The reverberating effects of using explosive weapons in populated areas' (2017) 98:901 IRRC 107.
[169] 2.3.
[170] As provided for by Art. 3 Hague Convention IV 1907; API Art. 91: states are responsible for "all acts committed by persons forming part of its armed forces.".
[171] World News: Europe, 'NATO confirms bridge attack' (10 May 1999) *BBC News* http://news.bbc.co.uk/1/hi/world/europe/356580.stm accessed 4 April 2019.

being the start of the Feast of the Trinity.[172] This meant that there were significant numbers of civilians in the vicinity of the bridge at the time of the attack; as one local said, it was "well known that Sunday is market day here and people are lined all along the street down to the bridge selling things."[173] It was estimated that around 2,000 people were in the vicinity of the bridge when it was targeted.[174] This raised the reasonable question that if this bridge was viewed as a legitimate target why could it not have been targeted at night? NATO's Jamie Shea responded to this on 31 May, stating that: "NATO pilots do take every precaution to avoid inflicting damage to civilians."[175] He continues that: "pilots know that if they see a risk of harm to civilians, then they don't strike at the target."[176] However, this doesn't clearly respond as to why the attacks couldn't be, or weren't, undertaken during the night. General Clarke makes a clearer response to the question: "It was a good question, especially since the bridge had indeed been a legitimate target. We subsequently moved bridge attacks to night-time."[177] This altered precautionary stance was confirmed by NATO altering its Rules of Engagement (ROE) to take account of the time of day and circumstances.[178]

Furthermore, the value of this target remains contested due to its size, which was reportedly too narrow to be able to accommodate large military vehicles.[179] Human Rights Watch report that: "Varvarin is located on a secondary road between the main E-75 Nis-Belgrade highway and Krusevac. The bridge that was destroyed was not the main link to the north (which was not bombed); it was only a local bridge."[180] The knowledge of the weight-bearing characteristics of the bridge, its usage, and therefore its value as a military supply route, would be considered to be an intelligence-led decision, and so should meet the

[172] Thomas Hüetlin, '*Die Brücke von Varvarin'* (2 June 2003) *Der Spiegel* https://www.spiegel.de/spiegel/print/d-27286865.html accessed 10 May 2019.
[173] Carlotta Gall, 'Day for church and market shattered by a day of war' (1 June 1999) *New York Times.*
[174] Yugoslav Government, *NATO Crimes in Yugoslavia, Documentary Evidence 25 April – 10 June 1999*, *Vol. II,* (Belgrade, Yugoslavia Ministry of Foreign Affairs 1999) .
[175] NATO Press Conference, 31 May 1999.
[176] Ibid.
[177] Clarke (n 132) 335 .
[178] Amnesty International, NATO/FRY Collateral damage (n 131) 69.
[179] Amnesty International, NATO/FRY Collateral damage (n 131) 67.
[180] Human Rights Watch, 'Civilian Deaths in the NATO Air Campaign: Appendix A: Incidents involving Civilian Deaths in Operation Allied Force' (2000) Human Rights Watch 81 https://www.hrw.org/reports/2000/nato/Natbm200-02.htm accessed 10 May 2019.

'feasible precautions' standard as established by IHL. It is on this basis that the families of the victims brought a claim within the German legal system for their loss and damages based on IHL and German public liability law (*Amtshaftungsrecht*).[181]

It was claimed that the bridge near Varvarin was added to a military list of targets following reconnaissance conducted by German ECR-tornado aircraft.[182] The *Oberlandesgericht* in Cologne (the Higher Regional Court) in the appeal hearing provided a detailed explanation as to why reparations could not be found under German public liability law. This law provides State liability for a wrongful act by a German public official, and in theory this extends to members of the armed forces, therefore the *Oberlandesgericht* found public liability law applicable.[183] However, in order for there to be state liability under public liability law there would have to be an attributable wrongful act, and in this case the *Oberlandesgericht* held that this was not the case. The final appeal against the decision was quashed by the *Bundesgerichtshof* (Federal Court of Justice) agreeing with the lower courts that: "neither customary nor treaty-based international law afforded a sufficient basis for individual claims against a foreign state with regard to a purported violation of the laws of war."[184]

In 2007, the claimants brought the case to the *Bundesverfassungsgericht* (German Federal Constitutional Court). In their judgement, the *Bundesverfassungsgericht* criticised the *Bundesgerichtshof* for deferring to the military's evaluation and choice of strategy in armed conflict. They held that targeting decisions and the legitimate military aim were a question of law, and therefore are subject to full judicial review as they would not be considered a political decision.[185] The court states: "The preparation of military target lists and the non-

[181] It should be noted that the one of the primary issues under discussion throughout the cases was the *locus standi* of individuals for situations under international law. This was a question that was ultimately left unanswered by the *Bundesverfassungsgericht* due to the fact that public liability law was judged to be applicable.
[182] Sigrid Mehring, 'The Judgment of the German *Bundesverfassungsgericht* concerning Reparations for the Victims of the Varvarin Bombing' (2015) 15 International Criminal Law Review 191, 193.
[183] *Oberlandesgericht*, 28 July 2005 (7 U 8/04), 58 *Neue Juristiche Wochenschrift* (2005) 2860, paras. 93-110.
[184] Klaus Ferdinand Garditz, 'Bridge of Varvarin' (2014) 108 Am. J. Int'l L. 86, 88.
[185] This follows the decision by a US circuit court in which damage caused by military operations did not fall under the political question doctrine. See *Koohi v United States* (9th Circuit. 1992) 976 F.2d 1328. Also see *Ramires de Arellan v. Weinberger* (D.C. Cir. 1984) 745 F.2d 1500.

invocation of a veto right against the inclusion of an object on those lists as a legitimate military target are not political decisions, which would be beyond judicial control."[186] In the previous investigation undertaken by the *Oberlandesgericht,* they established that the German forces had provided reconnaissance and airspace protection for the attack on the bridge. However, they did not have any combat aircraft in the immediate vicinity of the bridge at the time of the attack. Furthermore, the Court held that the German forces were only acting in a supportive role, and so could only be held liable for the action if they held 'positive knowledge' (*positive Kenntnis)* or at least 'negligent ignorance' (*fahrlässige Unkenntnis)*.[187] In discussing whether there had been a breach of API Art. 48, "…respect for and protection of the civilian population and civilian objects…" the Court determined that given the standard of 'need-to-know' operated within NATO during the campaign, it was unclear if the German personnel even knew the bridge was to be targeted that day.[188]

The final judgement of the *Bundesverfassungsgericht* concurs with the view that German forces did not breach IHL. They confirm that the significant fact is that the addition of the bridge to a possible targets list: "did not reflect a final military decision by NATO to attack those targets but a temporary and abstract assessment that they might be marked for attack should circumstances occur that would allow such action in conformity with international law."[189] Therefore, the decision was made by the Court that providing the bridge as a potential military target for inclusion on a targeting list, would not be in breach of IHL, and thus no liability could be found. However, as was asserted by the claimants, the German forces did have a power of veto to block any targets from being included on the list. Nonetheless, in the abstract, the inclusion of a bridge on a military targets list would present limited difficulty in principle. Therefore, it would be unreasonable to expect the German forces to veto this without prevailing legal concerns.[190]

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[186] *Bundesverfassungsgericht*, 13 August 2013, 2 BvR 2660/06, 55 www.bundesverfassungsgericht.de/entscheidungen/rk20130813_2bvr266006.html accessed 22 March 2019.
[187] *Oberlandesgericht*, 28 July 2005, 110-111 http://www.justiz.nrw.de/nrwe/olgs/koeln/j2005/7_U_8_04urteil20050728.html .
[188] Ibid 112.
[189] Garditz (n 184) 90.
[190] Schmitt (n 136) 37-38.

As highlighted earlier, it is clear that the timing of the attack was critical in the level of civilian casualties that occurred, and it is unclear whether this intelligence information was a part of the data that was present on the list. It also remains unclear whether it was German aircraft that were responsible for the addition of the bridge at Varvarin to the list. However, it would be overly simplistic to view this target list as simply a collection of possible targets without any supporting information.[191] The complexity of agreeing the targets during the conflict was highlighted by General Clarke,[192] and presents a much more complex targeting doctrine than is demonstrated by the approach taken by the German courts. This was compounded by the fact that the German judges appeared reluctant to provide a detailed explanation of the listing process; likely as a result of militarily restricted information.[193] Furthermore, it could be considered to be reasonable to expect that the bridge may be targeted during the daytime, as this had been the approach in the previous attacks at Grdelica and Luzhanë. On the other hand, this should always be viewed in context, and during the Kosovan air campaign 45[194] bridges were destroyed and there are only three which have raised concerns from a civilian casualty point of view. Nonetheless, the precautionary principle to take all feasible precautions still applies, so the question remains as to who is accountable for mistakes when one state within a coalition supplies intelligence that another relies upon.

4.9 Continuity of Precautions

The precautionary principle of IHL is designed to operate continuously throughout the targeting process. Thus, intelligence information should be obtained to identify and verify the target, then should be continuously monitored throughout the attack before again

[191] 5.4; 5.7.
[192] Clarke (n 132) .
[193] It is not possible to ascertain exactly why the information is not available in the judgements as it is not discussed. It is not substantial to the arguments made in the case, given the German forces played only a 'supportive role' in the attack.
[194] House of Commons, *Select Committee of Defence – Fourteenth Report: Part III. The Conduct of the Campaign* (23 October 2000) 119 https://publications.parliament.uk/pa/cm199900/cmselect/cmdfence/347/34713.htm accessed 30 April 2019.

being sought for battle damage assessment post-strike.[195] Therefore, in the context of the *Varvarin Bridge* listing situation, the addition of the bridge was only one aspect of fulfilling the precautionary principle.[196] Thereafter, the responsibility for meeting the precautionary principle would pass to the next group who were involved in the specific targeting event. The considerations for methods and means in attack, so the type of weaponry used, the time and date of the attack and other details would have been passed back to the command planners.[197] Therefore, the German argument that they had no information on the attack taking place that day is reasonable, and there would be responsibility for the final attack upon those pilots who carried it out. However, the fact remains that the initial intelligence gained by the German forces enabled the bridge to be considered for targeting in the first instance. As such, it is important to attempt to investigate whether coalition operations provide for a collective responsibility for a targeting mistake, or if this is attributed to the final actors in the sequence of events.

The potential difficulties in coalition operations were evaluated earlier through the Kunduz incident of 2009.[198] Here I argued that Klein should have requested further intelligence information from his allies, the US, due to the lack of information he had available at the time of the attack. In this example, the German unit led by Klein was not the force that carried out the attack, this was conducted by the US Air Force. Therefore, it would be overly simplistic to apportion responsibility solely to the final link in the chain. In terms of the investigation of targeting mistakes or incidents of civilian casualties[199] it would appear more appropriate to apportion responsibility to those: "who decide(s) upon or plan(s) an attack."[200] Thus, in the *Varvarin Bridge* case, although Germany provided the initial intelligence assessment they neither 'decided upon' nor 'planned' the attack. They merely provided initial intelligence for the coalition commanders and planners to form their strategy and tactical plans from. Additionally, as Germany were not a part of the final

[195] Sahr Muhammedally, 'Minimizing civilian harm in populated areas: Lessons from examining ISAF and AMISOM policies' (2016) 93:1 IRRC 225, 235.
[196] This initial step would only have complied with the first part of the precautionary principle at API Art 57(2)(a)i.
[197] This would be the step that provides for compliance with API Art 57(2)(a)ii.
[198] 3.10.
[199] CIVCAS.
[200] API Art. 57.

operation, they did not have the ability to 'cancel or suspend' the attack if it became "apparent that the target is not a military objective or that the attack may be expected to cause incidental loss of civilian life."[201] In coalition operations, IHL requirements of the precautionary principle are a responsibility held by all members of the force.[202] It is inevitable that mistakes of intelligence will occur during operations; however if all members of the coalition do that which is practicable or practically possible[203] then the principles of IHL will be maintained. However, the danger of the continuing 'passing of the baton' of the precautionary standard is demonstrated by a more recent incident during conflict.

In September 2016, during the conflict in Syria, airstrikes near Deir ez-Zor[204] mistakenly targeted what was referred to as: "forces aligned with the government of Syria."[205] This strike involved aircraft from Denmark, Australia, the UK and the US. Brigadier General Richard Coe for US Central Command conducted an investigation into the incident and concluded that: "confirmation bias stemming from that first misidentification coloured subsequent decisions made by others involved in the strike."[206] Coe described the complexity of the planning process saying that it had unfolded over several days with: "'multiple, multiple' shift changes 'in different parts of the globe' contributing to human error."[207]

The Australian Defence Department responded to the incident following the allegation that the RAAF was involved in the airstrikes. They confirmed that two RAAF Hornets dropped bombs in the incident and said that: "there will be improved information sharing among

[201] ICRC Customary Study, Rule 19 https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule19 accessed 29 August 2018.
[202] This is provided for by the determinations on state liability, such that a state is responsible for the actions of its armed forces, defined by First Geneva Convention 1949, Art. 51; Second Geneva Convention 1949, Art. 52; Third Geneva Convention, Art. 131; Fourth Geneva Convention, Art. 148.
[203] 2.3.
[204] Also written as *Dayr az Zawr*.
[205] Stephen Losey, 'Investigation: 'Confirmation bias,' mistakes led coalition to mistakenly bomb Syrian troops' (29 November 2016) *Air Force Times* https://www.airforcetimes.com/articles/dayr-az-zawr-bombing-investigation accessed 2 December 2018.
[206] Ibid 3.
[207] Spencer Ackerman, 'US military admits it mistakenly targeted and killed loyalist Syrian forces' (26 November 2016) *The Guardian* https://www.theguardian.com/world/2016/nov/29/us-military-airstrikes-mistake-syria-assad-deir-ez-zor accessed 2 December 2018.

coalition partners…. but no coalition personnel will be sanctioned."[208] It is clear from this incident then that the development of intelligence by multiple sources from several states can cause mistakes. These mistakes though should not immediately be viewed as breaching the precautionary principle of IHL. The standard is objective and is governed by the information that was available at the time.[209] Although the presence of a tank appears to have raised an alarm to at least one intelligence analyst[210] it actually: "convinced strike planners that they had located a major ISIS target, and what began as a deliberate strike expanded, blurring targeting procedures…"[211] Therefore, it appears that the blurring of targeting procedures, the confirmation bias created by the first misidentification, and subsequent misinformation of coordinates in discussion with the Russians, led to an inappropriate attack. Nonetheless, as soon as the US were informed by the Russians of the mistake the strike was aborted, saving a number of lives.[212] This incident demonstrates clearly how the complexity of targeting within a coalition can itself be a challenging environment for operations, and, without clarity of the standards required, mistakes may occur.

Although no individual criminal liability for grave breaches of IHL can result from a mere mistake[213] that does not necessarily rule out state liability. As Trapp states, if "…some part of the State apparatus is in possession of intelligence which conditions *expected* loss of civilian life, injury to civilians and damage to civilian objects so as to negatively impact the proportionality calculus. Such intelligence is broadly attributable to the State as a fictional single entity for the purposes of State responsibility…"[214] Therefore, if, for example the NSA were aware of intelligence which would have altered the proportionality criteria for an attack launched by the US in Afghanistan, the US could be found to be liable for this breach of IHL. This would be the position even though the individual commander may not have

[208] Andrew Greene, 'RAAF fighters dropped six bombs on government forces in botched air strikes in Syria' (29 November 2016) *ABC News,* https://www.abc.net.au/news/2016-11-30/syria-botched-air-strikes-australian-hornets/8077588 accessed 10 July 2020.
[209] William Boothby, *The Law of Targeting* (OUP 2012) Chapter 7, 126.
[210] Ackerman (n 207).
[211] Ibid.
[212] ibid.
[213] Silja Vöneky, 'Implementation and Enforcement of International Humanitarian Law' in Dieter Fleck (ed) *The Handbook of International Humanitarian Law* (OUP 2013) Chapter 14.
[214] Trapp (n 89) 169.

access to this information at the time of the attack. Therefore, one wonders whether this regime could be extrapolated to operate in a similar manner within a NATO operation.

It is arguable that the similar premise of a single entity should affect NATO operations given the long-standing status of this coalition operation. Furthermore, as NATO is deemed to hold legal personality as an international organisation,[215] it could be argued that this would be the case. However, NATO does not have its own independent intelligence network and only limited assets for the collection of such. Therefore, the challenge is for NATO to assimilate and process data from across their member states.[216] Therefore, the differences presented by each state's approach to the coalition create incredible difficulties with regard to the development of a joint and several liability scheme. This can be observed from the *Varvarin Bridge* case as discussed earlier in this piece. Nevertheless, even though the case itself did not find the German Bundeswehr to have acted in an unlawful manner under IHL, it did recognise the need to establish the facts of the military actions to make a decision for public liability. Therefore, coalition operations could present legal challenges for states who are not actually involved in the final attack. The nature of these legal challenges is likely to be different in each state due to the variety of domestic legal frameworks across the NATO states.

4.10 Conclusion

The development of technology for intelligence, surveillance and reconnaissance has increased real-time communication in conflict which can be shown to have created disparity among states. The advances of PGMs and the legal discussion thereafter presented the contention that states are not obliged to use the most advanced weaponry in attack but may not be able to carry it out without that technology. The argument then follows for intelligence and surveillance capabilities, in that although a state is not obliged to obtain

[215] Marten Zwanenburg, 'North Atlantic Treaty Organisation-led Operations' in André Nollkaemper & Illias Plakokefalos (eds.) *The Practice of Shared Responsibility in International Law* (CUP 2017) Chapter 25, 640.
[216] Artur Gruszczak, *NATO's Intelligence Adaptation Challenge* (2017) *Globsec Report* https://www.globsec.org/wp-content/uploads/2018/03/NATO's-intelligence-adaptation-challenge.pdf accessed 18 May 2019.

and operate the most advanced reconnaissance available, that same state may not, without adequate information, carry out an attack. Therefore, in practice this may restrict some states to the extent that they are reliant on more advanced allies to provide information on potential targets. However, the difference in weaponry and intelligence is not insignificant as the variable is more nuanced and open to interpretation; unlike PGMs, situational awareness is an ongoing process and must be maintained by commanders. Therefore, the more rigorous intelligence standard is, in real terms, higher and more restrictive than those for precision munitions.

This advancement of technology at a differing rate has added to the difficulties faced by coalition partners. These coalitions already faced differences in legal obligation and political rationale, and now face challenges from levels of situational awareness and real-time knowledge. The precautionary principle in IHL has thus had to develop in line with these technological advances so that it now requires a higher standard from states with greater technical capabilities. The challenge this has now created is how this operates within coalitions who own disparate levels of technology, and information. As I have argued, this higher expectation from the understanding of 'all feasible' measures presented in IHL could see coalition states facing domestic legal challenges. The Varvarin Bridge case highlights how even forces without final operation in the attack can be investigated for their role in incidents during conflict.

Nonetheless, this understanding of the NATO alliance does not address the further complexity of whether a more advanced member state is obliged to provide this technological support to their coalition partners or share intelligence that they have obtained. The complexity of intelligence sharing agreements has already been mentioned.[217] These are developed in isolation from IHL principles but the significance of successful identification and verification in targeting is critical to military success. The developments in technology can therefore present opportunities but also challenges to military operations, and thus develop IHL accordingly.

[217] 1.3.7; 1.3.8.

Chapter Five

Intelligence and the Fatal Flaws in Technological Reliance

5.1 Introduction

"The Americans were using some of the most sophisticated tools in the history of the war, technological marvels of surveillance and intelligence gathering that allowed them to see into once-inaccessible corners of the battlefield. But the high-tech wizardry would fail in its most elemental purpose: to tell the difference between friend and foe."[1] This critical flaw in advanced technology for use in military intelligence and surveillance capacities has created a number of issues for IHL.

Amid the claims of the massive surveillance dragnet of the US intelligence machine, opportunities for data exploitation have increased and claims to accuracy have heightened. In some respects, the development of improved precision weaponry has, in and of itself, created a greater demand for accurate and timely intelligence. As was stated as early as 1999: "…the emphasis on precise targeting that limits friendly and non-combatant casualties greatly increases the need to collect, analyse, and disseminate intelligence in something approaching 'real time'."[2] Over a decade later, in another war zone, the issue of accurate intelligence was raised by an incident that killed 10 civilians travelling in a convoy near Takhar, Afghanistan. This particular incident is enlightening in that it focuses on the very real problem of faulty intelligence leading to an individual being placed on the Joint Prioritised Effects List (JPEL), known colloquially as a 'kill list'.

This chapter will highlight how these claims to accuracy can be misleading for the application of IHL using the Takhar incident in 2010 and an example from Gaza in 2014. I

[1] David S Cloud, 'Anatomy of an Afghan War Tragedy' (10 April 2011) *LA Times* http://articles.latimes.com/2011/apr/10/world/la-fg-afghanistan-drone-20110410 accessed 19 July 2018.
[2] Richard A Best Jr, 'Kosovo: Implications for Military Intelligence' (5 November 1999) *CRS Report for Congress, The Library of Congress* https://www.everycrsreport.com/files/19991105_RL30366_fb37a2ab7103f2cb51abadd9b733cdba2110a286.pdf accessed 19 July 2019.

argue that the contrary picture presented by these cases indicates just how complex the IHL principles can be in application for commanders and for legal analysis. I demonstrate why it is vital to always consider the caveat 'in the circumstances prevailing at the time'. The cases also demonstrate how significant the development of technology has been for the interpretation of IHL and how standards may now be interpreted differently as a result. To understand the complexities of intelligence gathering in modern warfare and how targeting relates to this, I will outline the problems faced by forces in Afghanistan. This is significant in that the issue of identification is at the core of targeting for IHL. To provide context, I will then outline the targeting doctrine used by forces, which is the operationalisation of IHL principles.

5.2 The Problem of Afghanistan

Modern warfare could be said to be characterised by the increase in urban and guerrilla types of non-international armed conflict, rather than the state against state wars of the first half of the 20th century.[3] This type of conflict creates increased risk for the civilian population and thus a greater difficulty for forces in identifying combatants who are intermingled with the civilian population. Therefore, the principles of distinction,[4] proportionality,[5] and precautions[6] have become even more pertinent for both achieving military advantage and protecting the civilian population. Although the wars in the Balkans and latterly in Iraq and Syria provide good examples of these types of conflict, I suggest that the war in Afghanistan is able to provide an excellent case study for the challenges faced in modern warfare. This is currently being hailed as the US' longest war[7] and due to the history

[3] Jelena Pejic, 'The protective scope of Common Article 3: more than meets the eye' (2011) 93:881 IRRC 189; John Spencer, 'The Destructive Age of Urban Warfare; or, How to Kill a City and How to Protect it' (28 March 2019) *Modern War Institute* https://mwi.usma.edu/destructive-age-urban-warfare-kill-city-protect/ accessed 24 November 2019.
[4] API Art. 48; 2.2.1.
[5] API Art 51(5)(b); 2.2.2.
[6] API Art. 57; 2.3.
[7] See for example Nick Wadhams, 'Afghanistan's War' (3 September 2019) *Bloomberg* https://www.bloomberg.com/quicktake/afghanistan accessed 4 November 2019; Emma Graham-Harrison, 'Afghanistan: current US withdrawal plan risks 'total civil war', top envoy says' (3 September 2019) *The Guardian* https://www.theguardian.com/world/2019/sep/03/us-afghanistan-troop-withdrawal-peace-ambassadors accessed 4 November 2019; Negar Mortazavi, 'US Politicians agree on pulling troops out of

and complexity of the region it provides an illuminative demonstration as to how IHL has been applied in coalition operations. Furthermore, due to the length of the conflict and the public perception there are numerous sources available for analysis with a significant number of states engaging in the coalition.

The first issue that should be addressed is that of the inherent difficulties faced by the US-led coalition in the identification of combatants in Afghanistan. Operation Enduring Freedom was the US-led invasion of Afghanistan in October 2001 following the 11 September attacks on the World Trade Centre. The first phase of this conflict was led by the US with support from the UK, outside of a UN Security Council resolution and justified as an action taken in self-defence.[8] Despite overwhelming offers of support for the initial phases of the operation, the vast majority of states did not join the coalition until it became the International Security Assistance Force (ISAF) in December 2001; this was when Germany became a party to the conflict. It was at this point that the conflict would be considered to have altered from an IAC to a NIAC, as the ISAF forces were in place to support the stability operations of the new Afghan government.[9]

It comes without surprise that any force commencing combat operations in Afghanistan would be faced with considerable difficulties. Nicknamed the 'graveyard of empires', Afghanistan has a unique geography and tribal population that has been the subject of conflict for many centuries. As early as 330BC, Alexander the Great faced challenges that thousands of years later the forces of Operation Enduring Freedom would come to know well. As Jones reflects of Alexander's campaign: "His adversaries were not conventional European armies but tribesmen and horse warriors who inhabited the steppes and mountains of the region… Alexander's army was technically superior to the local forces they

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Afghanistan – but how can they do it and at what risk?' (14 September 2019) *The Independent* https://www.independent.co.uk/news/world/americas/us-politics/us-troops-afghanistan-trump-taliban-talks-peace-war-a9105001.html accessed 4 November 2019.

[8] Charter of the United Nations (adopted 26 June 1945 entered into force 24 October 1945) Chapter VII, Art. 51: "Nothing in the present Charter shall impair the inherent right of individual or collective self-defence if an armed attack occurs against a Member of the United Nations…" https://www.un.org/en/sections/un-charter/chapter-vii/ accessed 4 June 2019.

[9] NATO, 'ISAF's mission in Afghanistan (2001-2014)(Archived)' (1 September 2015) https://www.nato.int/cps/en/natohq/topics_69366.htm accessed 10 July 2019.

faced, but it needed to clear and hold an expansive territory."[10] This is a statement that could as easily apply to recent efforts in the country. As such, the history of Afghanistan is littered with empires who have failed in their aim to command and control the territory, notably the USSR in the 1980s.[11] Shultz and Dew succinctly explain: "The mighty Soviet Army had been worn down … by eight years of protracted and bloody guerrilla warfare in a hostile and mountainous land, against tribal warriors it had greatly underestimated."[12] The US, in the wake of the 11 September attacks, were acutely aware of the difficulties faced by the Soviets and, guided by this history, did take steps to approach the challenge in a new manner.

The CIA director at the time, George Tenet, briefed the President a few days after the attacks, saying that the plan "…stressed one thing: we would be the insurgents. Working closely with military Special Forces, CIA teams would be the ones using speed and agility to dislodge an emplaced foe."[13] Deputy Secretary of Defense at the time, Paul Wolfowitz, was concerned that the US was going to follow in the catastrophic steps of the Soviets. He hoped to avoid this by blending US and Afghan forces and promoted the approach that: "US Army Special Forces should be used on the ground with Northern Alliance forces to help direct US air attacks, gather intelligence, and help deliver humanitarian aid where needed."[14] This demonstrates that the US were acutely aware of the asymmetric nature of the conflict they were embarking on and the difficulties they were likely to face in identifying legitimate targets.[15]

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[10] Seth G Jones, *In the Graveyard of Empires* (WW Norton & Company: New York 2010) 5.

[11] At their peak in 1985, the Soviets had 120,000 troops stationed in Afghanistan but, three years later, having negotiated a withdrawal and lost some 26,000 troops, they left. In comparison, during the current conflict in Afghanistan, total troop numbers peaked in 2011 with ISAF data indicating that there were 132,000 from across the allied nations, the US providing the majority share of 90,000. Datablog, 'Afghanistan troop numbers data: how many does each country send to the NATO mission there?' (2011) *The Guardian* https://www.theguardian.com/news/datablog/2009/sep/21/afghanistan-troop-numbers-nato-data accessed 23 July 2018.

[12] Richard Shultz Jr & Andrew Dew, *Insurgents, Terrorists, and Militias: The warriors of contemporary conflict* (Columbia University Press 2006) 147.

[13] Gary Berntsen and Ralph Pezzullo, *Jawbreaker: The Attack on Bin Laden and Al Qa'ida* (Crown Publishers: New York 2005) 312.

[14] Jones (n 10) 90.

[15] State Armed Forces are generally obliged to distinguish themselves from civilians API Art. 44(3); API Art. 44(7); CIHL Rule 106; But also see William H Ferrell III, 'No Shirts, No Shoes, No Status: Uniforms, Distinction, and Special Operations in International Armed Conflict' (2003) 178 Military Law Review 94 .

The crucial factor in the ongoing war was the nature of the tactics employed by the insurgent forces. These tactics were "…rooted in a tribal model of warfare, which relied on an asymmetric hit-and-run approach to take advantage of the guerrillas' knowledge of the local terrain and utilize a sympathetic and supportive populace."[16] This ability to simply fade away after an attack was one that stymied the Soviets in the 1980s, and was one of the issues the US had already faced in their war in Vietnam.[17] In turn, demand for high quality intelligence, rapid response and a combination of both high- and low-tech methods would be required to turn the tide. Furthermore, the obligations of IHL on the coalition forces required them to only target military objectives and as such the need to adequately distinguish lawful targets from civilians is vital.

5.3 Battlefield Transparency

It is not merely the nature of the terrain and the tactics of the adversary that have made Afghanistan a notable battlefield. Numerous accounts from soldiers who have been deployed in the recent Afghanistan conflict show how the issues faced by them are not new. These stories illustrate how even sophisticated, technologically advanced forces can become frustrated: "The valley felt like a network of watchers who set up American platoons, relaying word to those laying traps. Soto sensed eyes following the patrol. *Everybody can see us*."[18] These problems have driven the development of some of the most advanced technology in the world. In this soldier's account the consideration of IHL overlay the difficulties faced on the ground: irrespective of the rules of engagement, the soldier would have needed to identify a combatant, either as a member of an organised armed group or through their direct participation in hostilities prior to launching an attack.[19]

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[16] Shultz & Dew (n 12) 149.
[17] For more on this see, Martin Van Creveld, *Command in War* (Harvard University Press, 1985) Chapter 7, The Helicopter and the Computer. Also see, Nick Turse, *Kill Anything That Moves: The Real American War in Vietnam* (Picador 2013).
[18] CJ Chivers, 'A War Without End' (8 Aug 2018) *New York Times* https://www.nytimes.com/2018/08/08/magazine/war-afghanistan-iraq-soldiers.html accessed 2 September 2018.
[19] 2.2.1.1.

Commenting on the development Schmitt notes: "Today, the battlefield has become phenomenally transparent to those fielding advanced ISR [intelligence, surveillance and reconnaissance] assets. No longer are the obstacles that traditionally masked enemy activity – such as night, poor weather, range, terrain, and intelligence processing and distribution times – insurmountable."[20] As the most advanced force in the world, the US has created asymmetry to the extent that it has driven the opposition force to adopt tactics in deliberate breach of IHL.

This is far from a new phenomenon and it was seen during the first Gulf War in 1991. During this conflict Sadaam Hussein frequently co-mingled civilians and military installations in an attempt to protect his military assets. It is known that the Government of Iraq was aware of their obligations under IHL, and "…in the month preceding the coalition air campaign… a civil defense exercise was conducted, during which more than one million civilians were evacuated from Baghdad."[21] Yet, no grand scale evacuation was undertaken during the War. Moreover, as declarations by the coalition to avoid targeting in populated areas increased so did the number of fighter jets positioned next to cultural monuments and the movement of military assets into these areas.

This pattern was also seen during the Kosovo conflict in 1999. This may have been as a result of the nature of the ethnic cleansing efforts; however, the results were the same. "Dispersion, vacant civilian structures to hide in, and a lack of detailed target data from reconnaissance troops on the ground… aided Yugoslav concealment and deception operations."[22] Moving forward, in 2014 Israel was criticised by the UN for targeting a school in Gaza killing 13 civilians. In a statement following the incident the Israel Defense Force (IDF) said that they were embroiled in a conflict "with Hamas terrorists in the area of Beit Hanoun, who are using civilian infrastructure and international symbols as human shields."[23] The trend continues and by 2017 there are stories of Isis militants using human shields in

[20] Michael Schmitt, 'Asymmetrical Warfare and IHL' (2008) 62 Air Force Law Review 1, 8.
[21] US/UK, 'Report on the Conduct of the Persian Gulf War. Department of Defense Report to Congress on the Conduct of the Persian Gulf War' (1992) 31:3 ILM 612, from https://casebook.icrc.org/case-study/united-statesunited-kingdom-report-conduct-persian-gulf-war accessed 12 September 2018.
[22] John Gentry, *How Wars are Won and Lost: Vulnerability and Military Power* (Prager 2011) 122.
[23] Ian Pennell, 'Gaza UN school shelter hit, 'killing 13'' *BBC World News* (25 July 2014) https://www.bbc.co.uk/news/world-middle-east-28468526 accessed 13 September 2018.

Syria: "…and what's really happening in Raqqa – similar to what we saw in Mosul but on a smaller scale – the Isis fighters on the ground are using these civilians as their own shields, as their own hostages. They are using snipers to kill civilians who are trying to escape."[24] Thus, identifying combatants and military objectives becomes increasingly difficult whilst compliance with IHL for coalition forces becomes more important, politically, than ever before.

In order to successfully identify military objectives during these conflicts reliance is placed increasingly on advanced technology. The link between the quality of intelligence available and the methods and means of targeting is critical to the success of an operation. As Arnold said in 1945: "Targeting is the intersection of intelligence and operations."[25] Thus, successful targeting can be said to be the result of good intelligence and reliable operations. Aside from the political and legal issues created by civilian casualties, they provide minimal military value. Success in a military operation requires the reduction of the opposing force's military advantage and so accuracy in targeting is crucial. To operationalise the legal, political and military obligations most militaries now have targeting protocols and doctrine to guide these operations. Targeting protocols remain some of the most secret documents, creating difficulties for objective analysis of the application of legal principles.[26] However, it is possible to further our understanding through reviewing targeting doctrine to appreciate how this process works in practice.

5.4 Targeting Cycle

The US DoD describes targeting as: "…the process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and

[24] Lucy Pasha-Robinson, 'Isis: 2,000 fighters using Raqqa's civilians as human shields as US-led coalition makes significant gains in Syria' (5 August 2017) *The Independent* https://www.independent.co.uk/news/world/middle-east/isis-2000-fighters-raqqa-civilians-human-shields-us-coalition-significant-gains-syria-a7878631.html accessed 13 Sep. 18.
[25] Quote attributed to General Henry (Hap) Arnold in 1945, in US Department of Defence, *Joint Tactics, Techniques and Procedures for Intelligence Support to Targeting* (9 January 2013) Joint Publication 2-0.1.1, I-3 https://fas.org/irp/doddir/dod/jp2_01_1.pdf accessed 20 July 2019.
[26] 3.2; 6.9.

capabilities."[27] The process of making targeting decisions is detailed and complex, considering a broad range of factors including policy, military and legal issues presented by the specific objectives. In order to facilitate the targeting process effectively, states develop doctrine to guide operators at all levels within the process. The considerations here are thus reflective of the IHL principles of distinction,[28] proportionality,[29] and precautions.[30]

Fig. 2 Joint Targeting Cycle[31]

This diagram presents the unclassified process developed by the US but is indicative of the approach taken by NATO states and similar allies. The process, in some respects, starts at the end. It is designed to address the desired 'end state' to meet the commander's objectives; as such it requires operators to question what the result should look like. This is as relevant for combat targeting decisions as it is for targets of intelligence. These objectives

[27] Joint Chiefs of Staff, *Joint Targeting, Joint Publication 3-60,* US Department of Defense, Executive Summary https://www.justsecurity.org/wp-content/uploads/2015/06/Joint_Chiefs-Joint_Targeting_20130131.pdf accessed 4 February 2018.
[28] API Art. 48; 2.2.
[29] API Art. 51(5)(b); 2.2.1.
[30] API Art. 57; 2.3.
[31] This joint targeting cycle is taken from US doctrine; however, it gives a reasonable overview of the NATO processes and is broadly the approach taken by the UK. As instructed at Institute of International Humanitarian Law, Sanremo, *Targeting Course*, for operational military and practitioners, October 2018.

are often communicated to forces using operation plans (OPLANs)[32] and can be updated to reflect the 'commander's intent'. For example, if the purpose of a mission is to disrupt the infrastructure of the enemy forces the end state might be a destruction of key bridges across the areas of operations. This would then fall into the target development stage which requires an intelligence gathering operation to acquire information about which of these bridges are necessary, their locations, their structure and their regular usage. This stage is essentially the IHL requirement to establish the military advantage anticipated.[33] It demonstrates how important the requirement is to consider operations as a whole, rather than as individual attacks.[34]

As part of this intelligence process it would be important to establish what civilian objects or civilians may be in the area, and any other objects that would form part of a no strike list (NSL).[35] Once the target has been validated it can be added to either a 'joint target list' or a 'restricted target list' (RTL).[36] The difference between these, from a targeting and IHL view, is significant, as objectives added to the restricted list may only be targeted in certain circumstances. To use the Varvarin Bridge case[37] as an example, the German addition of the bridge to the target list could have been made to the restricted list with information concerning the Sunday market and thus, they would have exhausted their duties in the provision of intelligence that was available at the time. Alternatively, had the bridge been added to the unrestricted list, one may query whether this was an accurate representation of the position due to the number of civilians likely to be in the area. It could of course be argued that aerial reconnaissance is inherently limited and without 'on the ground' intelligence, or deeper cultural knowledge, it would be difficult to know that a Sunday

[32] An Operation Plan is defined as a "complete and detailed joint plan" with full details of the concept of operations. US Department of Defense, *Department of Defense Dictionary of Military and Associated Terms,* (15 February 2016 as amended) JP1-02, 177 https://fas.org/irp/doddir/dod/jp1_02.pdf accessed 3 March 2018.
[33] 2.2.
[34] 2.3.
[35] No Strike Lists "identify and functionally characterize [law of war] LOW protected No-Strike entities" per US Department of Defense, Chairman of the Joint Chiefs of Staff Instruction, *No-Strike and the Collateral Damage Estimation Methodology* (2009, February 13) US Department of Defense, Enclosure C, 2(a).
[36] Restricted Target Lists provide "the target identification, effects restrictions, nominating command/agency, rationale, and approval authority for target engagement and effects." Per Chairman of the Joint Chiefs of Staff, Enclosure C, 2(d).
[37] 4.8.

market was a regular occurrence. This indicates just how important context can be for converting information into intelligence.

Once targets have been identified it then becomes a matter of assessing the capabilities available to the commander to execute the mission. Therefore, this is the stage at which the decision is made on whether lethal or non-lethal methods should be used. Using the example of disrupting the infrastructure, the options could include destroying bridges at key points, or it may be that a targeted cyber operation could be launched against logistics databases to disrupt flow in this manner.

Following a decision to carry out a lethal strike the process moves into the step known as 'weaponeering'.[38] The choice of types of munition can be driven by a number of factors including the likely collateral damage estimates of different means. There is a range of munitions available to military forces, and so factors such as payload, accuracy and their ability to achieve the objective will all be considered.[39] This is the process whereby compliance with the precautionary principle will be reviewed, to ensure that all feasible precautions have been taken "…in the choice of means and methods of warfare with a view to avoiding, and in any event minimising, incidental loss of civilian life."[40] It may be decided that there are no lethal means available that would be proportionate and so alternate methods may need to be sought. Collateral damage that is deemed to be excessive in relation to the direct and concrete military advantage[41] may be considered to amount to an indiscriminate attack.[42] Therefore, in order to comply with IHL it is important to consider the extent of the effects on the civilian population.

The subsequent step is the commander's decision to authorise the engagement of the verified targets using specific methods and means already determined. It is clear from this that the level of intelligence required in the decision-making process prior to the point at

[38] 3.3.
[39] For a discussion on this see William Boothby, *The Law of Targeting* (OUP 2012) Chapter 13, 'Weapons'.
[40] ICRC Customary Study, Rule 17, *Choice of Means and Methods of Warfare* https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule17 accessed 10 June 2019.
[41] API Art 51(5)(b); 2.2.1.
[42] *Prosecutor v Galić* (Appeals Judgment) ICTY-98-29-A (30 November 2006) 133; API Art. 51(4).

which the decision is made is extensive. As Schmitt et al remark: "The key point from a legal perspective is that during this phase the commander approves specified courses of action, which requires a determination of compatibility with both law and policy guidance."[43] The authorisation process is supported by targeting staff and legal advisors so that, prior to reaching the decision to conduct the attack, the commander will have considered the legal obligations of proportionality, distinction and precautions.[44] Once a target has been approved it passes to the individual command level.[45]

All of these steps form part of the planning stage in targeting and will be applied to both deliberate and dynamic targeting, as Schmitt et al comment: "A key aspect of the cycle is its flexibility in accommodating different timescales."[46] Nevertheless, it is important to note that the quality of the planning will vary as a result of what Pratzner identifies as the four key factors: time, intelligence, competency in tradecraft and mental agility to changing environments.[47] This definition of intelligence reflects the qualifiers in the precautionary principle, such that the judgment needs to be based on the information that is available at the time.[48] This IHL principle has been structured to reflect the various demands of combat operations and although it can be criticised for its lack of precision, this flexibility enables increased compliance.[49]

The intelligence here is qualified as not being purely based on the quantity of assets available: "… the quality of intelligence – a deep understanding of the enemy through intense study, modelling of potential reactions to friendly actions, a thorough knowledge of the enemy's ability to take blows and adapt – matters at least as much as the quantity."[50] This level of knowledge is valuable throughout the targeting cycle. It is this depth of

[43] Michael Schmitt, Jeffrey Biller, Sean C Fahey, David S Goddard & Chad Highfill, 'Joint and Combined Targeting: Structure and Process' in Jens David Ohlin, Larry May & Claire Finkelstein (eds.) *Weighing Lives in War* (OUP 2017) 303.
[44] 2.2.
[45] Meaning by either land, sea, air or cyber forces.
[46] Schmitt et al, Joint and Combined Targeting' (n 43) 300.
[47] Phillip R Pratzner, 'The Current Targeting Process' in Paul AL Ducheine, Michael N Schmitt & Frans PB Osinga (eds.) *Targeting: The Challenges of Modern Warfare* (TMC Asser Press 2016) 82.
[48] 2.3.
[49] 2.2.2.
[50] Ibid 83.

knowledge that provides context for operations and, as will be been in Takhar, this can easily be underestimated when using advanced technology. However, it is this aspect that is significant for investigating the scope of the precautionary principle, and if this has developed in practice.

Once the decision has been made at the joint level, the task becomes the responsibility of the individual team to execute the target. The legal requirements of the precautionary principle and the intelligence standard required to carry out the attack are known, at this level, as one of achieving 'positive identification'.[51] At this stage the process is conducted as 'F2T2EA';[52] which is find, fix, track, target, engage, and assess. For targets that have been planned through the regular process this is a verification of the prior decisions, reflecting the ongoing legal requirements. However, it is mainly associated with what is known as 'dynamic targets' or 'time-sensitive targets'. These are objects of opportunity and may offer only a fleeting chance to conduct an attack, usually as a result of intelligence, surveillance and reconnaissance activities. It is these time-sensitive targets that have tended to prove the most problematic with regard to civilian casualties.[53] These fleeting targets are also most likely to be the ones that have been identified in advance or placed on the Joint Prioritised Effects List. They have therefore been identified as a military objective prior to their discovery in a physical location and have been located as part of another operation.[54]

Once the attack has taken place, an assessment is conducted to establish how successful the operation has been and to determine if the desired 'end state' has been achieved. This stage will inform the cycle again. Throughout this process, whether as a deliberate target or in response to a rapidly evolving threat, the main legal principles are interwoven. But how much intelligence is needed will constantly vary depending on the circumstances prevailing at the time. Therefore, if there is no quantity or quality determined, and no clear benchmark, the changing value of intelligence can be subject to interpretation. An example

[51] 2.5.2; 2.5.3.
[52] Joint Chiefs of Staff, Joint Targeting (n 27) II-21.
[53] Human Rights Watch, *Off Target: The Conduct of the War and Civilian Casualties in Iraq* (December 2003) https://www.hrw.org/reports/2003/usa1203/usa1203.pdf accessed 21 July 2019.
[54] This is the most likely scenario for Amin in Takhar during 2010.

of this difference in opinion is demonstrated by an incident that occurred in Gaza in 2014, which was evaluated later by the UN Human Rights Commission.[55]

5.5 Gaza: The Potential for a Quality Standard

On 24 July 2014, during Operation Protective Edge in Gaza, the Israeli Defence Forces (IDF) conducted an attack in the area surrounding the Beit Hanoun Elementary Co-ed School A & D.[56] It was reported that 13 people were killed at the school, including six children, with many others being wounded.[57] This was one of a number of incidents that were investigated by the UN Human Rights Council's independent commission of enquiry[58] but is of particular interest due to the initial critical reports.

On 30 July 2014, the BBC reported that Israel had responded to the UN's early criticisms of the attack by providing video surveillance from an unmanned aerial vehicle (UAV). This showed that the school compound was empty at the time of the attack, and as such they were meeting their obligations under IHL. In response to this the UN commented to the BBC that "the resolution of the video is so poor compared with proper satellite imagery that you cannot see some of the trees in the compound, let alone people."[59] The footage was widely broadcast by Israeli news media showing a mortar landing in an empty yard.[60] There are several interesting aspects of this incident from a targeting and intelligence or verification

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[55] UN Human Rights Council (UN HRC) in resolution S-21/1. UN HRC '21st special session of the Human Rights Council on the human rights situation in the Occupied Palestinian Territory, including East Jerusalem' (23 July 2014) UN Doc S-21/1 https://www.ohchr.org/EN/HRBodies/HRC/SpecialSessions/Session21/Pages/21stSpecialSession.aspx.

[56] There are several schools in the region and a number have been subject to investigation by the UN Human Rights Commission, Human Rights Watch and the Israeli Defence Forces (IDF). As such they were given references by the HRC in their report (n 55) .

[57] Human Rights Watch, *Israel: In-Depth Look at Gaza School Attacks,* (11 September 2014) https://www.hrw.org/news/2014/09/11/israel-depth-look-gaza-school-attacks accessed 21 July 2019.

[58] Created by the UN Human Rights Council (UN HRC) in resolution S-21/1. UN HRC '21st special session of the Human Rights Council on the human rights situation in the Occupied Palestinian Territory, including East Jerusalem' (23 July 2014) UN Doc S-21/1 https://www.ohchr.org/EN/HRBodies/HRC/SpecialSessions/Session21/Pages/21stSpecialSession.aspx .

[59] BBC News Middle East, 'Gaza conflict: UN accuses Israel over Jabaliya attack' (30 July 2014) *BBC News* https://www.bbc.co.uk/news/world-middle-east-28558433 accessed 10 July 2017.

[60] Mitch Ginsberg, 'IDF: Mortar round landed in empty UNWRA yard, did not kill Gazans' (27 July 2014) *Times of Israel* www.timesofisrael.com/idf-mortar-round-landed-in-empty-unrwa-yard-did-not-kill-gazans/ accessed 21 July 2019.

viewpoint. Most notably it raises the point that the quality of footage may be viewed as being insufficient for targeting purposes. This would raise a query as to the scope of this obligation under the precautionary principle, given that it requires all feasible precautions, without any definition of quality.[61]

The attack in question was carried out by artillery mortars, and, according to the IDF, was in response to Hamas firing from the area. It is not clear if the decision to launch the attack was based on the aforementioned UAV footage but was targeted to "the source of the fire."[62] Therefore, it is uncertain how relevant the footage is for establishing whether or not the IDF had taken the requisite precautions to avoid civilian casualties. Nonetheless, the criticism of the quality of the footage by the UN would indicate that had this attack been based primarily on the footage from the surveillance aircraft then it may have been deemed inadequate to meet the precautionary principle of IHL. The UN HRC is fairly critical of the attack highlighting that the advance warnings provided were insufficient, no witnesses identified any rocket fire from the militants in the vicinity, there were no attempts by Hamas to prevent evacuation and, in any case, there was not enough time to carry out an evacuation.[63] Whilst all these criticisms are likely to be valid, the confirmation by the Government of Israel that the school was not the subject of the attack is significant.[64]

The IDF forces were required to take all feasible precautions to avoid, or at least minimise, incidental damage to civilians and civilian objects,[65] which were within the school. This requirement includes the choice of weapons and timing of attack,[66] as well as prohibiting attacks which are indiscriminate.[67] The UN HRC report on the incident comments that: "While the commission cannot know what precautionary measures were taken by the IDF in

[61] API Art. 57; 2.3.
[62] Israel Defence Forces, *Hamas Fires from Populated Area, Prevents Civilian Evacuation* (24 July 2014) https://www.idf.il/en/articles/hamas/hamas-fires-from-populated-area-prevents-civilian-evacuation/ accessed 21 July 2019.
[63] UN HRC [UN HRC report], *Report of the detailed findings of the independent commission of inquiry established pursuant to Human Rights Council resolution S-21/1,* (24 June 2015) UN Doc. A/HRC/29/CRP.4, 425-429 https://www.ohchr.org/en/hrbodies/hrc/coigazaconflict/pages/reportcoigaza.aspx accessed 21 July 2019.
[64] Ibid 431.
[65] API Art. 57(2)(a)(ii).
[66] API Art. 57(3); APII Art. 13(1) .
[67] API Art. 51; API Art. 52(1).

each attack, based on a number of cases, there are concerns that the IDF may not have done everything feasible to verify whether civilians were present in the buildings selected for attack."[68] These concerns are primarily based on concerns over the 'roof-knocking' technique[69] employed by the IDF[70] and the timing of some of the attacks during the evening.[71] Nevertheless, the UN HRC report does highlight the effectiveness of warning measures prior to air strikes during this period, which resulted in zero casualties.[72] Therefore, their primary concerns appear to be focused on the effectiveness of warnings prior to attack for ground operations.

However, these are considered to only be required when the attack "may affect the civilian population"[73] and when circumstances permit. The circumstances generally considered to remove the requirement to provide advanced warnings are in the case of surprise attack or where advance warning may damage the security of the friendly forces. Furthermore, in situations where the speed of response is critical it may restrict the feasibility of providing effective warnings.[74] In this case the IDF based their decision on a 'returning fire' basis and so, although they had attempted to provide warnings to the UN in the area, it could be argued that it wasn't reasonable, and indeed could have proven more of a risk, to delay the attack.

In their legal analysis, the UN HRC refer to previous investigations into the use of artillery fire and mortars by the Israelis in 2009. They say that: "in firing 120mm high explosive mortar rounds, the IDF had not maintained an adequate safety distance between whatever its target point might have been and the school."[75] Further they state that the "means of response to an identified source of mortar fire that would have carried the least risk to

[68] UN HRC, Report (n 55) 241.
[69] 'roof knocking' is a technique employed by the IDF to warn of an impending attack. It uses a loud but non-explosive or low-impact munition to drop on the roof of a building prior to a destructive strike. It is a controversial technique. For more see Jereon van den Boogaard, 'Knock on the Roof: Legitimate Warning or Method of Warfare?' (2016) 19 Yearbook of International Humanitarian Law 183.
[70] UN HRC, Report (n 55) 235-240.
[71] UN HRC, Report (n 55) 232.
[72] UN HRC, Report (n 55) 234.
[73] API Art. 57(2)(c).
[74] Rule 20, ICRC Customary Study, *ICRC* https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule20#Fn_E202BFDF_00017 accessed 10 July 2020.
[75] UN HRC, Report (n 55) 445.

civilians and property, including the UNRWA school, would have been a precisely targeted missile strike."[76] This is likely to be true but overlooks the fundamental issue that the feasible precautions standard is based on what is reasonable at the time of the attack. This principle considers the circumstances prevailing when the decision was made and so, if the IDF were under attack, as is reported, they were able to respond with the force that they had available at the time. It is not required that forces always have access to precision munitions,[77] only that they should take all *feasible* precautions in the methods and means of attack. Thus, the judgment on feasibility relies on understanding what information was available to the commander at the time, and subsequently whether the decision was in accordance with the law.[78]

In their closing remarks the UN HRC do consider the feasibility criteria. However, they still conclude that the use of artillery mortars "in the immediate vicinity of an UNRWA school sheltering civilians is highly likely to constitute an indiscriminate attack which, depending on the circumstances, may qualify as a direct attack against civilians, and may therefore amount to a war crime."[79] In support of this they assert that the IDF should have applied the lessons learned from Operation Cast Lead[80] in 2008/2009 where a similar action led to the death of several civilians.

However, the criticism of the precautionary measures taken in this individual case need to be viewed against "the *expected* rather than the *actual* civilian loss and the *anticipated* rather than the *actual* military advantage."[81] (emphasis added) The Final Report to the Prosecutors of the ICTY made the point that determinations to distinguish between military and civilians during conflict should not "necessarily focus exclusively on a specific incident. If precautionary measures have worked adequately in a very high percentage of cases, then

[76] UN HRC, Report (n 55) 445.
[77] 4.5.
[78] 2.5.
[79] UN HRC, Report (n 55) 446.
[80] Israel Defence Force, 'Operation Cast Lead' (undated) https://www.idf.il/en/minisites/wars-and-operations/operation-cast-lead-2008-09/ accessed 21 August 2019; UN General Assembly, *Human Rights in Palestine and other Occupied Territories: Report of the UN Fact-Finding Mission on the Gaza Conflict* (25 September 2009) Human Rights Council 12th Session [Goldstone Report] https://www2.ohchr.org/english/bodies/hrcouncil/docs/12session/A-HRC-12-48.pdf accessed 21 August 2019.
[81] APV Rogers, *Law on the Battlefield* (Manchester University Press 2012) 150.

the fact they have not worked well in a small number of cases does not necessarily mean they are generally inadequate."[82] The IDF have a full body of operational law not dissimilar to that which is found in the US.[83] Furthermore, it is reported that the IDF require multiple sources to confirm a target, except in circumstances where troops are in contact with the enemy.[84] As such, the UN HRC should take into account the overarching limits placed on forces by the IDF. That the IDF's body of doctrine requires multiple sources of intelligence prior to launching an attack is interesting for the discussion on developing norms for the precautionary principle under IHL. It appears to reflect the requirement that NATO advocate following the Kunduz incident in 2009,[85] and it would start to resemble a quantity standard within doctrine that is not present in IHL.

Following the UN HRC's investigation, the Israeli Military Advocate General made the decision to open a criminal investigation into the incident of 24 July 2014. They publicly reported their findings from this investigation in August 2018 at which point they had closed the case without any further legal proceedings. The investigation found that the commanders who were involved in the strike "assessed that, with the exception of the school, the area was devoid of civilians."[86] Therefore, the precautions they took were primarily focused on preventing harm to the school, by using a single mortar and "employing visual surveillance"[87] to minimise damage. The Military Advocate General found that, at the time the decision to attack was made, there was no expectation of collateral damage, which was found to not be unreasonable at the time. Further, the commanders were found to have carried out several precautionary measures "… including the use of the

[82] ICTY, *Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia* (14 June 2000) 29.
[83] The State of Israel, *The 2014 Gaza Conflict: Factual and Legal Aspects* (May 2015) https://mfa.gov.il/MFA/ForeignPolicy/IsraelGaza2014/Pages/2014-Gaza-Conflict-Factual-and-Legal-Aspects.aspx accessed 20 July 2019; Craig Jones, 'Frames of law: targeting advice and operational law in the Israeli military' (2015) 33 Society and Space 676; Michael Schmitt & John Mariam, 'The Tyranny of Context: Israeli Targeting Practices in Legal Perspective' (2015) 37:1 U. Pa. J. Int'l L. 53.
[84] Schmitt & Mariam, The Tyranny of Context' (n 83) 132.
[85] 3.9.
[86] Israeli Defence Force, 'Decisions of the IDF Military Advocate General Regarding Exceptional Incidents that Allegedly Occurred during Operation Protective Edge: Update No 6' (15 August 2018) https://www.idf.il/en/minisites/military-advocate-generals-corps/releases-idf-military-advocate-general/mag-corps-press-release-update-6/ accessed 20 June 2019.
[87] Ibid.

most precise munitions available to the forces, and the use of visual surveillance."[88] The significant point here is that the forces used the methods and means that were the most accurate in the circumstances and they had considered the possible effects of these on the civilian population.

5.6 Surveillance Quality and IHL

As has been analysed, IHL does not mandate a specific quantity or quality of intelligence that should be used in verification for targeting.[89] However, it is apparent that the UN have an expectation with regard to this. Thus, it is important to return to the question of the quality of the surveillance footage criticised by the UN.

It is not clear whether this footage was used by the commanders during the attack and the UN do not provide any reference to it within their report of 2015, with the IDF only using the phrase 'visual surveillance'. Visual surveillance could be taken to mean the UAV footage, but it could also refer to what military personnel describe as 'eyes-on'; having a physical view of the target, often the role of forward observers. The footage released by IDF shows an empty yard outside the school, and it is confirmed by the Military Advocate General that the forces were aware of the use of the school itself as a shelter.[90] Given that neither party to the discussion has highlighted the UAV surveillance in their investigations it is difficult to analyse with any certainty the value that was placed upon this footage. Nonetheless, it is clear that an organ of the state had access to this footage, and it is likely, given the real time provision of UAV video surveillance, that this was available at the time of the attack.

It would be reasonable to expect that the footage would be used as part of the decision-making process, and certainly should have been available for the process. In this case the footage of the empty yard would not have added anything to the precautionary assessment and only supports the decision made at the time. The criticism of the quality of the footage

[88] Ibid.
[89] 2.3.
[90] Ibid .

to the extent that "you cannot see some of the trees in the compound, let alone people"[91] should be considered in light of the prevailing circumstances.

The precautionary principle and verification standard under IHL do not define the quality or quantity of intelligence to be used. However, that is not to say that IHL permits 'firing blind' as this would be considered to be an indiscriminate attack, that is prohibited.[92] As such, it could be argued that, at a certain point, surveillance footage should be considered to be unusable for the justification of an attack. Footage that is so substantially degraded that it provides no usable information or information that is misleading should be treated with caution. This seems a reasonable and logical consideration as part of a decision to launch an attack but creates a number of issues, not least of which is the asymmetry this creates within the system of IHL.[93]

In the case of the Gazan school, it is my contention that the IDF were obliged to carry out everything reasonable or practicably possible within the circumstances prevailing at the time. The forces were in direct contact with Hamas forces who were firing from the area near the school and so were permitted to return fire. To do so they were required to consider the impact any action would have on any civilians in the vicinity, in this case within the school, which they were aware of and which is not disputed. Therefore, they needed to use the methods and means available to them to reduce or minimise damage to the school.

It is my opinion that the use of precision munitions was not required if they were not available to the forces that were under fire. They would have only been obliged to delay their response if this would have resulted in excessive collateral damage compared to the direct and concrete military advantage. In this case the footage from the UAV should have been consulted prior to the attack, presuming this was reasonably possible, and given that it displayed an empty school yard it only confirmed the beliefs of the commanders. In a review of the British operation to take Basra during the Iraq war in 2003/2004, Rogers comments:

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[91] BBC News Middle East, 'Gaza conflict: UN accuses Israel over Jabaliya attack' (30 July 2014) *BBC News* https://www.bbc.co.uk/news/world-middle-east-28558433 accessed 10 July 2017.
[92] API Art. 51(4)(a).
[93] 4.2; 4.6.

"British artillery units required forward observation of the target, either by human spotter or by way of video film taken from an unmanned drone, to reduce civilian casualties."[94] This suggests that the Israelis would be in a similar position within Gaza, and as such the usage of video surveillance would be a standard process for artillery strikes. Therefore, if this footage was indeed at a quality that was lower than "proper satellite footage"[95] it is not necessarily a relevant factor, unless there was better information available at the time. This does not appear to be the case.

There is an indication here of the UN expecting a higher quality of surveillance technology to be employed within armed conflicts to reduce collateral damage. This appears to be based on an understanding of IHL more akin to international human rights law and a 'least harmful means' measure[96] than of the Hague Law aspects of IHL.[97] The development of advanced surveillance technologies certainly enables a better situational awareness during conflict but there are inherent dangers associated with an over-reliance on technology to clear the 'fog of war', not least of which is the moving goalposts of 'near certainty', 'reasonable certainty', and all 'feasible precautions' as discussed previously.[98] As Ignatieff comments: "For the central claim of the new technological gospel was that computers, battlefield sensors and spy satellites could dispel the 'fog' of war – the chaotic uncertainty in which battles unfold; and eliminate the 'friction' – adverse terrain, climate, equipment failure, troop morale and other incalculable factors – standing in the way of military victory."[99] However, a good example of the dangers of over-reliance on technology can be demonstrated by the exploration of an incident that happened in 2010 near Takhar in Afghanistan. This incident is underscored by the development of geolocation and tracking technology, which has been made possible as a result of new targeting techniques.

Advances in technology have resulted in the development of new targeting methodologies, as was seen with video surveillance being used for artillery fire. The proliferation of

[94] APV Rogers (n 81) 148.
[95] BBC News Middle East, Gaza conflict (n 91).
[96] 5.5.
[97] As discussed, 2.4 .
[98] 2.5.2.
[99] Michael Ignatieff, *Virtual War: Kosovo and Beyond* (Chatto & Windus 2000) 173.

technology has enabled greater possibilities for gaining location information and data from mobile devices, such as phones, and developing network mapping tools to understand insurgent forces. However, the expectations created by the value and quality of technology can be misleading, creating disparity between what is possible in an ideal situation and what is realistic during the chaos of war. Furthermore, this can create legal uncertainty due to the flexibility with which IHL has been framed,[100] and particularly the requirement of the precautionary principle which mandates that which is practically possible.[101] I contend that this principle has developed as the advances in technology now allow for more intelligence to be gathered in advance and during attack, but this does not mandate their usage when it is not practically possible at the time.

5.7 The Dragnet of Metadata

The US National Security Agency (NSA) is known for its broad collection of phone and internet records and its retention and usage of 'metadata'. This metadata will provide information on the duration of a call, to whom it was made and when it was made. It does not provide content from the call or text. As NSA General Counsel Stewart Baker said: "metadata absolutely tells you everything about somebody's life. If you have enough metadata, you do not really need content."[102] This was mentioned at the John Hopkins University Foreign Affairs Symposium to the former NSA and CIA Director, Michael Hayden. In outlining how the US DoD selects targets, including location data, presumed identity and associates, he agreed with Baker and said: "we kill people based on metadata."[103]

As alarming as this statement may have been to the American public,[104] the use of data collected through phone, internet and satellite communications is as old as signals

[100] See the discussion 2.2.1.1.
[101] 2.3.
[102] See 'The John Hopkins Foreign Affairs Symposium Presents: The Price of Privacy: Re-Evaluating the NSA' (7 April 2014) Online video clip, *YouTube*. 17m59 https://www.youtube.com/watch?v=kV2HDM86XgI accessed 20 June 2019.
[103] Ibid.
[104] For more on this see David Cole, 'We kill people based on metadata' (10 May 2014) *The New York Review* https://www.nybooks.com/daily/2014/05/10/we-kill-people-based-metadata/ accessed 4 July 2019.

intelligence itself.[105] Furthermore, Hayden attempted to mollify the audience of the symposium by confirming that "the US government doesn't kill American citizens on the basis of their metadata. They only kill foreigners."[106] This is a reflection of the issue presented by the US Constitution's Bill of Rights to the intentional targeting and killing of American citizens abroad.[107] There has been considerable concern raised within the US as to the targeting of US citizens by drone strike overseas, but the Obama White House was clear: "When a US citizen goes abroad to wage war against America and is actively plotting to kill US citizens, and when neither the United States nor our partners are in a position to capture him before he carries out a plot, his citizenship should no more serve as a shield than a sniper shooting down on an innocent crowd should be protected from a SWAT team."[108] Therefore, despite the NSA's assurances that they are not basing targeting decisions on metadata for US citizens, the actual situation is unclear. Obama's statement that an individual is 'actively plotting to kill' would indicate that intelligence data is being gathered and analysed on these individuals and would indeed be required before launching an attack in accordance with IHL.[109]

Nevertheless, the statement by the NSA is of little comfort to the millions of people worldwide that the NSA admit to having targeted their data collection methods upon. The NSA reportedly uses a program called 'Skynet' that collects vast quantities of metadata and "feeds them into a machine-learning algorithm which supposedly identifies likely couriers working to shuttle messages and information between terrorists."[110] This software works by filtering out information based on previous examples and collates the information to enable analysts to be more targeted in their work.

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[105] 1.3.6.
[106] John Naughton, 'Death by drone strike, dished out by algorithm' (21 February 2016) *The Guardian* https://www.theguardian.com/commentisfree/2016/feb/21/death-from-above-nia-csa-skynet-algorithm-drones-pakistan accessed 10 June 2018.
[107] For more on this see, US Department of Justice, 'Lawfulness of a Lethal Operation Directed Against a US Citizen who is a Senior Operational Leader of Al-Qa'ida or an Associated Force' (8 November 2011) White Paper http://fas.org/irp/eprint/doj-lethal.pdf accessed 4 November 2019; .
[108] President Obama, quoted in Lynn Davis, Michael McNerney and Michael Greenberg, 'Clarifying the Rules for Targeted Killing: An Analytical Framework for Policies involving Long-Range Armed Drones' (2016) The Rand Corporation, 10.
[109] This would be needed to comply with the distinction principle, to identify that an individual is either a member of an organised armed group or directly participating in hostilities; 2.2.1.1; 2.2.1.2.
[110] Ibid.

There is a limited amount known about how and what decisions are made before an individual is added to what the military know as a Joint Prioritised Effects List (JPEL), or more colloquially, a 'kill list'. In 2015 leaked official documents obtained by The Intercept suggest that intelligence personnel collect information on potential targets which is drawn from "government watchlists and the work of intelligence, military and law enforcement agencies."[111] It is likely that the metadata collected by the NSA was part of this intelligence information which is compiled into a condensed format. It was reported that it took on average around 58 days for President Obama to approve a target and that gave a 60-day window for US forces to conduct a strike.[112] The approval to the list of targets would have needed to provide for the initial stages of IHL requirements, such that this approval would need to establish that the person being considered for targeting, is not a civilian nor subject to special protection.[113]

One of the top-secret documents that was obtained by The Intercept showed how the watchlist was displayed to drone operators "linking unique codes associated with cell phone SIM cards and handsets to specific individuals in order to geolocate them."[114] Therefore, as dramatic as the killing of people by metadata sounds it appears that it is one part of a larger intelligence machine. As Naughton concludes: "…algorithms don't kill people – yet. They just put them on lists of candidates for extrajudicial killing. Maybe we should be grateful for such small mercies."[115] From an IHL perspective though, the addition of a name to this list does not exhaust the requirement to take feasible precautions, and so more information should be gained at the point of attack.[116] The problems for IHL with adding individuals to target lists have already been explored in the *Varvarin Bridge* case;[117] add to that the

[111] Jeremy Scahill, 'The Assassination Complex' (15 October 2015) *The Intercept* https://theintercept.com/drone-papers/the-assassination-complex/ accessed 2 July 2019.
[112] Ibid.
[113] API Art. 57(2)(a)i; For a discussion on the US approach to this in the context of the war on terror see Gloria Gaggioli, 'Targeting Individuals Belonging to an Armed Group' (2018) 51 Vanderbilt Journal of Transnational Law 901; Rogier Bartels, 'When do Terrorist Organisations Qualify as "Parties to an Armed Conflict" under International Humanitarian Law?' (2017-2018) 56:2 The Military Law and the Law of War Review 451.
[114] Ibid.
[115] Naughton (n 106).
[116] See the full gamut of steps required by API Art. 57; 2.3.
[117] 4.8.

complexity of modern technology, algorithms, metadata and various intelligence sources and the situation becomes even more opaque.

5.8 Tracking the Phones

In 2003, during the Iraqi conflict it was reported that the US-led coalition used intercepts from satellite phones to carry out time-sensitive targeting attacks against leadership objectives. This type of intelligence gathering was also reported to still be taking place during the Syrian conflict in 2012, albeit by the Syrian forces.[118] This indicates that the techniques in intelligence gathering based on advanced technology are being increasingly adopted by numerous states. A particular incident in Takhar during 2010 demonstrates the inherent risk associated with both the building of an intelligence picture rooted in technology and the targeting of individuals based on geolocation of SIM cards.

On 2 September 2010, ISAF Joint Command issued a press release stating that they had carried out a "precision air strike targeting an Islamic Movement of Uzbekistan senior member assessed to be the deputy shadow governor for Takhar province this morning."[119] Certain details of the attack remain contested, and as with any analysis of an incident during conflict, the information can only be ascertained through official press releases, media reports and NGO investigations.[120] The air strike was carried out by fighter jets that targeted a convoy of six vehicles travelling through a rural area in Rustaq District.[121] The

[118] Gordon Rayner & Richard Spencer, 'Syria: Sunday Times journalist Marie Colvin killed in 'targeted attack' by Syrian forces' (22 February 2012) *The Telegraph* https://www.telegraph.co.uk/news/worldnews/middleeast/syria/9098175/Syria-Sunday-Times-journalist-Marie-Colvin-killed-in-targeted-attack-by-Syrian-forces.html accessed 1 July 2019. Also see, Frank Smyth, '*Caveat Utilitor*: Satellite phones can always be tracked' (24 February 2012) *Council to Protect Journalists.* https://cpj.org/blog/2012/02/caveat-utilitor-satellite-phones-can-always-be-tra.php accessed 1 July 2019.
[119] ISAF Joint Command, 'Coalition forces conduct precision strike against senior IMU member in Takhar province' (2 September 2010) Defe*nse Visual Information Distribution Service* https://www.dvidshub.net/news/55603/coalition-forces-conduct-precision-strike-against-senior-imu-member-takhar-province accessed 10 May 2018.
[120] 3.2; 6.9.
[121] These details are confirmed by both the ISAF Joint Command's Press Release as well as Kate Clark's detailed investigation for the Afghanistan Analysts Network. See Kate Clark, 'The Takhar Attack' (10 May 2011) *Afghanistan Analysts Network Thematic Report* http://www.afghanistan-analysts.org/wp-content/uploads/downloads/2012/10/20110511KClark_Takhar-attack_final.pdf accessed 1 March 2018.

fighter jets dropped two bombs on the convoy and this was followed a short time later by helicopter attack aircraft. To this point the eye-witness accounts and those of ISAF concur.

The role the helicopters played is less certain. Journalist Kate Clark requested information from ISAF surrounding the purpose of the helicopters' gun attacks and was told that: "Something was seen fluttering in the car, so the pilots were authorised to re-engage against the occupants who were in the vehicle. The re-strike was against the people in the car."[122] In contrast one of the witness accounts reports that the helicopter "just stopped and shot straight at Zabet Amanullah. It shot no-one else. The helicopter flew around and came up to me and looked at me and at the bodies. But they didn't shoot."[123] In all 10 people were killed in the attack. The conflicting opinions here are significant for an IHL perspective; the target in both accounts is agreed to be Amanullah, the disagreement surrounds whether he was a legitimate target.[124] Therefore, that aside for the moment, had the targeting been focused on Amanullah then it could be argued to be in accordance with IHL, such that the target was identified,[125] and the attack was conducted by a means that was able to comply with the principles of proportionality[126] and precautions.[127]

That Clark's report on the response by ISAF is that they chose to target the convoy is troubling. It implies that the target was the convoy as a whole, rather than merely Amanullah. In order for the targeting of the convoy to be lawful, it would need to be demonstrated that the other members of the group with Amanullah were also members of an organised armed group. I would suggest that the assumption that they were members of an armed group,[128] or directly participating in hostilities,[129] based merely on their travelling in a convoy with Amanullah, who was believed to be a member of the Taliban, is insufficient for IHL. Without further evidence to suggest that each member of the convoy was a member of the Taliban, I would contend that mere association on that day would be

[122] Clark, The Takhar Attack (n 121) 22.
[123] Clark, The Takhar Attack (n 121) 23.
[124] As per the distinction criteria of API Art. 48; 2.2.1.
[125] API Art. 48; 2.2.1.
[126] API Art 51(5)(b); 2.2.2.
[127] API Art. 57; 2.3.
[128] 2.2.1.1.
[129] 2.2.1.1.

insufficient to meet the qualification of direct participation in hostilities, unless the convoy was carrying weaponry, or there was evidence to suggest they were planning or preparing an attack.[130] Furthermore, it should be understood in the context of IHL's requirements that "in case of doubt… that person shall be considered to be a civilian."[131] However, it would be lawful to launch an attack against Amanullah as part of the convoy, so long as this met the principle of proportionality.[132] Therefore, to launch this attack the commander would have needed to take 'all feasible precautions'[133] to ensure that the collateral damage was not expected to be excessive in relation to the direct and concrete military advantage anticipated.[134] In this case, the report that the helicopter attack returned and targeted Amanullah could be argued to be legitimate in meeting the military advantage expected, and so would be lawful in accordance with IHL.

Although all incidents are difficult to evaluate, this case is particularly challenging because, unlike many others,[135] ISAF continue to assert that this attack was a successful mission against a military objective. The target of the strike was an individual understood to be the Taliban's shadow governor for the Takhar region, known as Mohammed Amin. Amin was placed on the Joint Prioritised Effects List by ISAF's Joint Special Operations Command (JSOC). The intelligence operation that led to him being placed on the list was as a result of mapping a cluster of cell phones related to the Taliban and Islamic Movement of Uzbekistan and the monitoring of such.[136] The analysts came to believe that one of the SIM cards they were monitoring had been passed to Amin and he had started to use the name Zabet Amanullah as an alias or 'nom de guerre'.

The individual targeted in the convoy was a man known as Zabet Amanullah, and, evidently, he was carrying the cell phone that was being tracked by the US. The problem is that the Zabet Amanullah who was travelling in the group was travelling as part of a parliamentary election convoy. The district governor of Rostaq, Malim Hussain, confirmed that the convoy

[130] See discussion on direct participation in hostilities at 2.2.1.1.
[131] API Art 50(1).
[132] API Art 51(5)(b); 2.2.2.
[133] API Art. 57; 2.3.
[134] API Art 51(5)(b); API Art 57(2)(a)iii; 2.2.2, 2.3.
[135] 6.6.
[136] Clark, The Takhar Attack (n 121) 12.

belonged to the candidate Mr Khorasani who was travelling in the area. Hussain was reported as saying that as a result of the attack "ten people were killed, including a local commander called Amanullah, a former member of the Mujahideen who was not a member of the Taliban."[137] The crucial fact then is whether the agent travelling in the convoy known as Zabet Amanullah, who was using the phone tracked by the US and a former member of the Mujahideen, was, in fact, Mohammed Amin.

5.9 A Case of Mistaken Identity?

It is this issue of identification that is at the heart of the dispute in this situation. As Grey reflects: "What gave this case resonance, pointing to a more systematic failure in intelligence, was not the fact of the mistake but the vehemence with which those involved defended their actions."[138] There are two sides to this story: one is brought by the officials involved in the action. These include the US forces and intelligence groups, part of JSOC, who provided the details to the JPEL. The other side of the argument is brought by a varied group of individuals with personal expertise in the region, who have interviewed witnesses, spoken to JSOC personnel, and hunted down the 'real' Mohammed Amin.

Michael Semple of Harvard University, who had previously worked with Amanullah on Human Rights research in the region, followed the story from the beginning and immediately started to investigate. He says: "It took me six months to find the real Mohammed Amin and work out the relationship between him and Zabet Amanullah."[139] To Semple it was clear from the conversation they had that Amin was the person the US were hunting, and despite being reticent about his current role, "…it was clear that he was still active in the insurgency."[140] It is not unusual for locals to claim mistakes in targeting but this particular case appears to be somewhat different: "Zabet Amanullah was a famous person

[137] Malim Hussain quoted in 'Afghan election campaign workers killed in air strike' (2 September 2010) *BBC News South Asia* https://www.bbc.co.uk/news/world-south-asia-11163742 accessed 5 March 2018.
[138] Stephen Grey, *The New Spymasters: Inside espionage from the Cold War to Global Terror* (Penguin Books 2015) 212.
[139] Michael Semple, 'Caught in the crossfire' (16 May 2011) *Foreign Policy* https://foreignpolicy.com/2011/05/16/caught-in-the-crossfire-3/ accessed 5 March 2018.
[140] Semple (n 139) 3.

locally, known personally to many provincial officials, but US intelligence had not carried out basic background checks on the name."[141]

The prominence of Amanullah has lent considerable credence to the claims of a case of mistaken targeting, and yet the US continue to maintain that they targeted the right person. Grey asked General Petraeus, who was the Commander of US and NATO troops in the region at the time, and he responded: "Well, we didn't think, in this case, with respect, we knew. We had days and days of what's called 'The Unblinking Eye', confirmed by other forms of intelligence that informed us that there is no question about who this individual was."[142] Clark's interviews with JSOC operators was much the same: "…they insisted the technical evidence that they were one person is irrefutable."[143] When pushed further on the issue by Clark in her interviews "…they argued that they were not tracking a name, but targeting the telephones."[144] According to Duane Clarridge, a former head of counterterrorism for the CIA, who conducted his own independent investigation into the events of 2 September, "…once it was decided that Amanullah's phone was being carried by a Taliban commander, his fate was sealed."[145]

All those who have investigated this incident have concluded that somewhere along the line the identities of Amanullah and Amin accidentally became conflated. The complex political situation of the region often led those in official positions to be in contact with Taliban operators. Grey reports spending time with a regional police chief in northern Afghanistan: "He was not a friend of the Taliban, but at the same time he knew them personally. Our days together were punctuated by taunting mobile calls back and forth between Daud and

[141] Pratap Chatterjee, 'How lawyers sign off drone attacks' (15 June 2011) *The Guardian* https://www.theguardian.com/commentisfree/cifamerica/2011/jun/15/drone-attacks-obama-administration accessed 10 March 2018.
[142] Grey (n 138) 213 .
[143] Clark, The Takhar Attack (n 121) 13.
[144] Ibid 13.
[145] Grey (n 138) 212. Grey's information is based on a report published by the Eclipse Group that was an organisation headed by Claridge a former CIA agent. He ran a network of agents across the Middle East and supplied the US government with reports on activities in the region. The report is no longer locatable online. For more on the group see, Mark Mazzetti, 'CIA retiree runs Afghan spy network from US' (24 January 2011) *International Herald Tribune* https://www.nytimes.com/2011/01/23/world/23clarridge.html accessed 11 June 2019.

his enemy."[146] Therefore, there are clear links between innocent officials and active members of an insurgency. In a country like Afghanistan this is unsurprising, and once again the 'tyranny of context'[147] rules. This is also important for developing an understanding of how the precautionary principle in IHL can be challenged by new technological approaches, as well as the intelligence driven decisions that determine status as civilian or combatant.[148]

The methodology of network analysis that is used to establish members of a terrorist or insurgency group may be flawed by this inability to comprehend context. Through the collection of vast amounts of data by intelligence organisations and processing this through complex computer analysis "…it is assumed that it is possible to visualize otherwise invisible social connections by 'letting data speak' and show a hidden reality made of nodes, links, hubs and connections among individuals."[149]

The metadata that is collected from phones can be linked to networks of other users creating a hierarchy of an organisation based on patterns, activity and voice analysis.[150] It therefore utilises the SIM card of a mobile phone as a form of proxy for an individual who is to be added to the targeting list. As Mazzetti remarks: "…analysts were able to locate the target by tracking his cell phone signal and the interception of this served as positive target identification authorizing the strike."[151] For a legal analysis, the critical aspect is that the identification is based on the metadata and, in some cases, the real identity of the individuals targeted may not even be known.[152] This is reminiscent of the comments made by JSOC to Clark in her investigation and their statements that they were targeting the phone, not the person.[153] This presents significant challenges to the understanding of IHL, and presents issues that were unlikely to be foreseen by the drafters of the treaties.

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[146] Grey (n 138) 215.
[147] Phrasing from Michael Schmitt & John Mariam, 'The Tyranny of Context: Israeli Targeting Practices in Legal Perspective' (2015) 37:1 U. Pa. J. Int'l L. 53.
[148] In accordance with the principle of distinction API Art. 48; 2.2.1.
[149] Giuseppe Zappalà, 'Killing by metadata: Europe and the surveillance-targeted killing nexus' (2015) 1:3 Global Affairs 251, 254.
[150] Jeremy Scahill and Glenn Greenwald, 'The NSA's secret role in the US assassination programme' (2 October 2014) *The Intercept* https://theintercept.com/2014/02/10/the-nsas-secret-role/ accessed 20 September 2018.
[151] Mark Mazzetti, *The way of the knife: The CIA, a secret army, and a war at the ends of the Earth* (Penguin 2013) 85.
[152] Zappalà (n 149) 255.
[153] Clark (n 121) 13.

5.10 IHL and Metadata

For a lawful action during armed conflict, the targeting would have to be carried out against a military objective[154] whilst taking all feasible precautions to minimise collateral damage.[155] Therefore, the argument would need to be based on whether the targeting of the phone was a military objective that provided direct and concrete military advantage.[156] The lethal targeting of an individual phone, outside of the context of it being physically in the possession of an individual, would seem somewhat unlikely. Although claims are made by officials involved that they are targeting the phone, this is overly simplistic. A more reasonable understanding of this claim is that they are targeting the individual who is in possession of that phone. The phone itself, and the metadata attached to it, are the nefarious activity that provides the link to the insurgency. It is, in IHL parlance, the action which has created or demonstrated their membership of an organised armed group or direct participation in hostilities making them lawfully targetable under IHL.[157] As such there are several issues raised for IHL analysis.

The most significant points for the discussion on the level of intelligence required to conduct an attack are: whether the person or the phone is considered to be the military objective; what level of identification is considered sufficient to meet the principle of distinction; whether the attacks were discriminate; and finally if the methodology has been generally successful and thus this individual failing is not indicative of a systematic problem.

5.10.1 A Phone as a Military Objective

A military objective is limited to "…those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military

[154] API Art. 48; 2.2.1.
[155] API Art. 57; 2.3.
[156] API Art 51(5)(b); 2.2.2.
[157] API Art 51(3); 2.2.2.

advantage."[158] To describe the mobile phone as a military objective would probably be a reasonable argument, as although a phone is a dual-use object its usage for communication and organising military action would make an effective contribution to military action. However, if it was purely the phone that was the subject of the attack then it would be required of the commander to consider options that would minimise civilian casualties. Furthermore, the destruction of a single mobile phone is unlikely to provide a definite military advantage given their ubiquity. As such, it is reasonable to take the view that the individual was the target of any attack built on intelligence from metadata and, therefore, the rules concerning civilian status are the area of law most relevant.

For an individual to be considered targetable under IHL, the person needs to be classified as either: a combatant as part of an armed state group; a member of an organised armed group; or, a civilian who is directly participating in the hostilities.[159] These definitions are contextual and, in some cases, contested. In analysing the position of mobile phones within a network, an individual who is holding one of these is already discounted from membership of a state's armed forces and so are not granted combatant status on this basis.[160] The result of this is that in order to target individuals normally granted civilian status they must be considered to hold a continuous combat function, or be taking a direct part in the hostilities at the time of the attack. Given the information that Amin was added to the JPEL based on his association and involvement with the Taliban,[161] it is reasonable to believe that this was as part of an organised armed group.

The membership of an organised armed group is somewhat contentious having been covered during the ICRC's major research project to clarify the notion of 'direct participation in hostilities'. The intended result of this project was a consensus document involving over forty experts from around the world. However, the actual result was so contentious that "a significant number of them [the experts] asked that their names be deleted as participants,

[158] API Art. 52(2).
[159] Knut Ipsen, 'Combatants and non-combatants' in Dieter Fleck (ed.) *The Handbook of International Humanitarian Law* (3rd edn. OUP 2013) .
[160] Ibid 80-85.
[161] Semple (n 139).

lest inclusion be misinterpreted as support for the Interpretive Guidance's propositions."[162] Nearly a decade later the contention over this ICRC guidance document remains fresh to some of those who were involved, indicating how controversial it remains.[163]

There are a number of issues with the treatment and definition of organised armed groups under the proposals raised by the ICRC.[164] The primary issue that is relevant to the discussion of the Takhar attack is the problem with defining membership of the group. The ICRC defines membership of an organised armed group on a purely functional basis reflecting the individual's continuous combat role in the group. It explains this as "…individuals whose continuous function involves the preparation, execution, or command of acts or operations amounting to direct participation in hostilities are assuming a continuous combat function."[165] By linking membership to direct participation in hostilities the ICRC have taken a pragmatic approach, but this does not remedy the issue of someone like Amin.

Amin is known to be a member of the Taliban but when he was tracked down by Semple he was living in Pakistan[166] and, as such, not operating on the frontline of operations. Therefore, it is not known what role he was playing in the insurgency at that time, and roles such as commanding and planning the attacks could easily be conducted by phone.[167] The complexity of this situation is likely to be present for the majority of individuals who have been located, tracked and placed onto the JPEL.[168] Furthermore, even the complex

[162] Michael Schmitt, 'The Interpretive Guidance on the Notion of Direct Participation in Hostilities: A Critical Analysis' (2010) 1 Harvard National Security Journal 5, 6.
[163] Author's discussions in Autumn 2018 with several experts involved; Also see William Boothby, '"And for such time as:" The Time Dimension to Direct Participation in Hostilities" (2010) 42 International Law and Politics 741; APV Rogers, 'Direct Participation in Hostilities: Some Personal Reflections' (2009) 48 Mil L & L War Rev 143; Michael Schmitt, 'Deconstructing Direct Participation in Hostilities' (2010) 42 NYU Journal of Int'l L and Politics 697 .
[164] For a discussion of this see Dapo Akande, 'Clearing the Fog of War: The ICRC's Interpretive Guidance on Direct Participation in Hostilities' (2010) 59 Int'l & Comp LQ 180; also, Michael Schmitt, 'Deconstructing Direct Participation in Hostilities: The Constitutive Elements' (2010) 42 NYU J Int'l L & Pol 697.
[165] Nils Melzer, [ICRC guidance] *Interpretative Guidance on the Notion of Direct Participation in Hostilities under International Humanitarian Law* (2009) International Committee of the Red Cross, 34 https://www.icrc.org/en/doc/assets/files/other/icrc-002-0990.pdf accessed 6 July 2019.
[166] Semple (139).
[167] Semple (139).
[168] This gets even more complex when one considers the US view of the involvement of drug traffickers as financiers for the insurgency in Afghanistan. For more on this discussion see, Michael Schmitt, 'Targeting

operation that led to the death of Osama bin Laden[169] could be legally queried due to the nature of the role he was undertaking at the time.[170] Under the ICRC guidance the crucial factor to be established in these cases is one of proximity to the hostilities, the belligerent nexus; one of the same issues the group of experts had failed to agree upon.

The problem of membership is compounded by the narrow definition of direct participation in hostilities taken by the ICRC guidance. This is established by a direct causal link between the act and the likelihood of harm, with "one causal step."[171] As Watkins comments: "This approach limits action to deal with … attacks to a reactive posture focused on 'acts' rather than on the capacity of an opponent to plan and attack in the future."[172] The ICRC definition then tends to limit direct participation to the tactical level. However, this is taken to include acts that constitute an "integral part of a concrete and co-ordinated tactical operation that directly causes harm."[173] This then can be considered to include intelligence gathering, analysis and transmission, as well as the command and coordination of specific military operations. When this is taken into account Watkins' claim to a reactive position is perhaps less clear.

In spite of the lack of clear legal agreement on the membership of organised armed groups, US practice certainly takes the view that they were in an armed conflict with Al-Qaeda and associated forces.[174] The UN Special Rapporteur on extrajudicial, summary or arbitrary executions suggested that the pertinent point for lethal targeting is whether or not an

Narco-insurgents in Afghanistan: The Limits of International Humanitarian Law' (2009) 12 Yearbook of International Humanitarian Law 1.

[169] For an overview of this operation which is now even immortalised in the film *Zero Dark Thirty* (Columbia Pictures 2012) see Adrian Brown, 'Osama Bin Laden's death: How it happened' (10 September 2012) *BBC News* https://www.bbc.co.uk/news/world-south-asia-13257330 accessed 5 July 2019.

[170] At times US rhetoric placed Bin Laden at the head of the organisation and the chief commander, at others they stated he was no longer in charge of the organisation and had been side lined into Pakistan. The truth of these conflicting statements would be significant for making an argument for membership of the organised armed group due to the belligerent nexus requirement.

[171] ICRC Guidance (n 165) 53.

[172] Kenneth Watkin, 'Opportunity Lost: Organized Armed Groups and the ICRC Direct Participation in Hostilities Interpretive Guidance' (2010) 42 NYU J Int'l L & Pol 641, 658.

[173] ICRC Guidance (n 165) 54.

[174] See 'Legality of Drone Warfare' (undated) *The Bureau of Investigative Journalism* https://www.thebureauinvestigates.com/explainers/legality-of-drone-warfare accessed 23 July 2019; Curtis Bradley and Jack Goldsmith, 'Obama's AUMF Legacy' (2016) 110:4 AJIL 628.

armed conflict is ongoing.[175] The role of drone strikes and lethal targeting operations outside of active battlefields is contentious but is not significant for the attack in Takhar.[176] With respect to the creation of a list of military targets Emmerson states: "In a situation qualifying as an armed conflict, the adoption of a pre-identified list of individual military targets is not unlawful; if based upon *reliable intelligence* it is a paradigm application of the principle of distinction."[177] (emphasis added)

In combination with the ICRC formulation for membership of organised armed groups, Amin, in a role that commands, coordinates or provides intelligence for military operations, would be considered as a military objective. Therefore, the intelligence that is gathered to place him on the JPEL for targeting would need to confirm his actual operational value to the Taliban to ensure he qualified as a legitimate military target. Further, the qualification of targeting being 'based upon reliable intelligence' made by Emmerson is crucial. This indicates how important the reliability of the intelligence is from the Human Rights perspective for the addition of a name to a military target list. However, it should be recalled that from an IHL perspective the only requirements are that everything practical or practically possible is done to ascertain the military nature of the objective.[178] Thus, the extension of this by Emmerson and the Human Rights perspective should be understood in the context of the *lex specialis* of IHL.[179]

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[175] UN General Assembly, *Extrajudicial, summary or arbitrary execution*, Report by the Special Rapporteur, Christof Heyns (13 September 2013) A/68/382 https://www.justsecurity.org/wp-content/uploads/2013/10/UN-Special-Rapporteur-Extrajudicial-Christof-Heyns-Report-Drones.pdf accessed 10 June 2018. The standard for reaching the threshold of an armed conflict is established by *Prosecutor v Dudko Tadić* [1999] ICTY IT-94-1-A available at http://www.icty.org/x/cases/tadic/acjug/en/tad-aj990715e.pdf accessed 10 January 2018*;* The Republic of Nicaragua v The United States of America (1986) ICJ.

[176] For more on these discussions see: Ryan Goodman, 'Al-Qaeda, the Law on Associated Forces and 'Belonging to' a Party (did the UN drones reports get it rights?)' (18 October 2013) *Just Security* https://www.justsecurity.org/2191/al-qaeda-law-forces-belonging-to-party-drones-reports/ accessed 10 June 2018; Jens Iverson, 'The Drone Reports: Can Members of Armed Groups be Targeted?' (6 November 2013) *OpinioJuris* http://opiniojuris.org/2013/11/06/drone-reports-can-members-armed-groups-targeted/ accessed 10 June 2018.

[177] UN General Assembly, *Promotion and protection of human rights and fundamental freedoms while countering terrorism,* Report by the Special Rapporteur, Ben Emmerson (18 September 2013) A/68/389, 24. http://www.justsecurity.org/wp-content/uploads/2013/10/2013EmmersonSpecialRapporteurReportDrones.pdf accessed 10 June 2018.

[178] AP57(2)(a)i; 2.2.3.

[179] For more on the relationship of this see 2.4.

5.10.2 Metadata and Proof of Membership of an Organised Armed Group

The addition of Amin to the Joint Prioritised Effects List required confirmation of his proximity to the acts that fulfilled the direct participation in hostilities criteria so that he could be confirmed as a military objective. Grey remarks that: "There was no doubt the Americans had recorded conversations involving someone who was a Taliban commander plotting an attack, but without access to their secret records, no one could be sure who exactly they were listening to on which phone at the time."[180] Thus, the 'commander plotting' the attack would be considered to be a part of an organised armed group and targetable as a military objective. This position is confirmed by the ICRC who say that: "…proactive operations initiated by the armed forces based on *solid intelligence* regarding the function of a person within an organized armed group could also be carried out at a moment when the targeted persons were not directly participating in hostilities."[181] (emphasis added) Again there is significance placed on the quality of the intelligence required to target an individual as part of an organised armed group. That both Emmerson and the ICRC have emphasised the importance of this part of the process for compliance with IHL is significant for the purposes of evaluating the effects of technology on this area.

The actual level of detail that the US held as to the nature and function performed by the person whom they intended to target remains secret, and as such cannot be evaluated. The requirement to understand the function which the individual is considered to be fulfilling is significant for a technologically based intelligence operation. As stated earlier, metadata does not uncover the content of the communications it intercepts, it merely builds a profile based on activity; who is contacting whom, when and where they are. It could then be argued that any attack based purely on metadata is by inference indiscriminate as it would not fulfil the requirements to ensure that the attack is conducted against a military objective unless it was able to tie an individual to a specific hostile act. The value of this methodology is also being undermined by insurgents who "…avoid detection by having up

[180] Grey (n 138) 215.
[181] ICRC Guidance (n 165) footnote 199.

to 16 different SIM cards linked to their identity at a time. In other cases, family members and friends, including children, borrow mobile devices and are mistakenly targeted."[182] Therefore, I would argue that to ensure a strike based on metadata fulfils the principle of distinction under IHL it requires more than just network analysis. Although, "…in practice, the principle of distinction must be applied based on information which is practically available and can reasonably be regarded as reliable in the prevailing circumstances…"[183] indiscriminate attacks are prohibited.

I would argue that if the sole information available to the targeters is that a SIM card is part of a network, the mere act of being in possession of the phone is, in my opinion, insufficient to fulfil the verification requirements of IHL. The phone could, in theory, be considered to be a military objective targetable under IHL but a mobile phone is by its nature substantially different to fixed objectives, such as the radio telecommunications station (RTS) targeted during the NATO campaign over Kosovo.[184] Fenrick purports that the RTS "would be a military objective if it was integrated into the military command, control or communications system."[185] I concur and on this basis the phone targeted in Takhar was demonstrably part of the military command structure, however the substantial difference is the way that communications systems have altered in the intervening decades. Given the proliferation of mobile communications I contend that the simple act of holding the phone cannot constitute direct participation in hostilities, irrespective of how broadly that is drawn. It is the purpose and scope of what the phone is to communicate that is significant. Metadata's value lies in the understanding of the activity and network, but without other information, such as the nature of the conversations, human intelligence, and other substantive contextual information it cannot solely be expected to fulfil the distinction requirements of IHL.

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[182] Kashmira Gander, 'NSA drone strikes based on mobile phone data' (10 February 2014) *The Independent* https://www.independent.co.uk/news/world/politics/nsa-drone-strikes-based-on-mobile-phone-data-9119735.html accessed 20 September 2018.
[183] ICRC Guidance (n 165) 35.
[184] See discussions on this Paolo Benvenuti, 'The ICTY prosecutor and the review of the NATO bombing campaign against the Federal Republic of Yugoslavia' (2001) 12:3 EJIL 503; Aaron Schwabach, 'NATO's War in Kosovo and the Final Report to the Prosecutor of the International Criminal Tribunal for the Former Yugoslavia' (2001) 9 Yul J Int'l & Comp L 167; WJ Fenrick, 'Targeting and Proportionality during the NATO Bombing Campaign against Yugoslavia' (2001) 12:3 EJIL 489.
[185] Fenrick, Targeting (n 184) 496.

The Takhar incident is valuable as Amanullah was someone who had lived very publicly for several years. The investigations conducted after the attack show that simple public source information would have shown his involvement in the regional election campaigns and quickly show that he was not a member of the Taliban. Clark criticises the lack of background information gained on both individuals during the intelligence gathering operation and demonstrates how this would have untied the two names into two separate people.[186] Grey reflects that the conflation of the two individuals came about as a result of the separation between the intelligence gatherers and the 'real world'. He suggests: "while this elite had access to tremendous technical tools with which to observe the world, all the secrecy and isolation stymied their ability to check and understand what they picked up."[187]

The fact that the US maintained the success of the operation long after the incident is also something of an anomaly and is worthy of consideration. It is not possible to state categorically what happened in Takhar but the certainty both sides present is concerning. The lack of transparency in what intelligence the JSOC had, and relied upon, to make the decision to place the SIM card details on the Joint Prioritised Effects List exacerbates an already complex situation. That is not to say that the intelligence operation conducted by the JSOC was inherently flawed, there were a significant number of successful attacks conducted on this basis.[188] However, the risks posed by the over-reliance on technology are well demonstrated by the death of Amanullah and the members of that convoy in 2010.

5.11 Conclusion

The problem of identification in modern warfare environments characterised by guerrilla tactics and urban landscapes is well understood. In order to clear some of the 'fog of war', technology has developed considerably to gather vast quantities of data, analyse it and turn it from information into actionable intelligence. However, over-reliance on this can

[186] Clark Report (n 121) 14.
[187] Grey (n 138) 209.
[188] Grey (n 138) 215.

disconnect operators from real world considerations and common sense resulting in an increased risk of civilian casualties, to the detriment of all concerned.

In the case of the Takhar incident the problem for intelligence operations is highlighted by the fact that even though Mohammed Amin was a self-confessed operator in the Taliban even that name was an alias. So, if names are changeable, the terrain is difficult, the insurgents are blended into the civilian population, tactics are constantly evolving, and even technology changes hands, it poses an incredible challenge for allied forces to identify, track and target the enemy. Field Marshal Peter Inge indicates the difficulty: "In the intelligence community I am told that the threat is now called multi-faceted or multi-directional, which actually means that we are not very sure what it is or where it's coming from."[189]

On the other hand, the criticism the Israelis faced for the quality of their aerial footage suggests that there is a 'Catch 22' faced by military operators. If they do not use the highest technology available to them then they will face potential criticism for indiscriminate attacks; if they use the most advanced technology to gather an incredible amount of information, they face the criticism of killing by metadata. It is my suggestion that although both of these arguments have merit, the legal obligation is a sliding scale dependent on the circumstances at the time. This is the reasonable position created by the IHL principle of all feasible precautions. The problem for this standard is that it lacks clarity; this has been intensified by the considerable development of technology. There can be little certainty in the chaos of war, but a commander needs to be clear on the expectations and requirements placed on him. For that to be possible the legal regime needs to be made clearer so that the differing demands on various actors and investigators are coherent.

[189] Field Marshal Peter Inge, Chief of the General Staff, 1994 quoted in Mark Urban, *UK Eyes Alpha: The inside story of British Intelligence* (Faber & Faber 1996) 140.

Chapter Six

Mistakes, Investigations and Transparency: Give us the Clarity to Know

6.1 Introduction

"Give me the liberty to know, to utter, and to argue freely according to conscience, above all liberties."[1] In 1644, John Milton wanted to *know*… he was writing about the restrictions on the printing press that the government of the day were introducing. Over 350 years later we still find ourselves challenged by this demand. The age of the internet has vastly increased our ability to find information; however, with this has come the need to be discerning about the sources we use, the information we digest and the way in which this is portrayed. Distrust has become a way of life, and an occupational hazard of using the internet, one which 21st century citizens should be well aware of.

This chapter will outline the issues presented by the lack of transparency and classified nature of targeting protocols, rules of engagement and post-incident investigations. In order to be able to assess any development in IHL it is valuable to understand the current position of state practice. Furthermore, to be able to ascertain whether there is an intelligence standard that is widely regarded as being required prior to and during an attack, it is important to establish what standards are applied, and how incidents of civilian casualties have been investigated, and by whom.

Through examination of mistakes it should be possible to determine what standards are widely accepted and applied; however, the significant differences in reporting from the states concerned and outside bodies present more questions than answers. Through analysis of investigatory standards from an IHL and international human rights law approach, I will demonstrate the lack of clarity for state investigatory obligations. With reference to a number of specific situations, I will highlight the potential pitfalls of the reliance on states to conduct their own investigations into instances of mistaken targeting,

[1] John Milton, *Areopagitica* (1644).

and how the continuing lack of transparency further obfuscates the question of the existence of an intelligence standard.

This chapter will also demonstrate how states take a varied approach to the transparency of their operations and investigations. The three states featured here are the US, the UK and Germany. They prove interesting for comparison as they have approached this problem with very disparate methods, despite frequently operating in coalitions, and potentially also being involved in the same incidents of civilian casualties.

It could be argued that there is now a surplus of information but insufficient knowledge. Speaking in 2012, Dr Ken Henry, former Secretary of Australia's Department of Treasury, and Executive Chair of the Australian National University's Institute of Public Policy at the time, said: "I can't remember a time in the last 25 years when the quality of public policy debate has been as bad as it is right now… There is insufficient understanding of the issues Australia confronts. There is a role for deeper analysis, there's a role for deeper thinking and there's a role for a much higher quality of public debate, and all of this needs to happen before governments make and announce decisions."[2] Therefore, it is clear that information isn't intelligence; those two concepts are not synonymous.

For the law of armed conflict this presents a number of challenges; most notably the challenge of developing intelligence in varied and difficult environments. Modern warfare is predominantly fought in conflicts that are described as Non-International Armed Conflicts by IHL, with adversaries that are able to rapidly alter tactics and deflect, deceive and deny access to information. Intelligence mistakes during warfare are far from new, with notable examples such as Pearl Harbour in World War II[3] demonstrating just how devastating these can be for either side of a conflict. However, modern technology has now provided the opportunity to gather vast quantities of information on adversaries all over the world. This

[2] Ken Henry, 'Future Proofing' (14 August 2012) *ANU Media Release* https://news.anu.edu.au/?p=16401 accessed 23 January 2019.
[3] See for example, David Kahn, 'The Intelligence Failure of Pearl Harbor' (1991) 70:5 Foreign Affairs 138; AR Northridge, 'Pearl Harbor: Estimating Then and Now' (22 September 1993) *CIA Library* https://www.cia.gov/library/center-for-the-study-of-intelligence/kent-csi/vol9no4/html/v09i4a07p_0001.htm accessed 1 August 2019.

has not come without its own hazards though as is demonstrated by the incident in Takhar[4] and will be seen in the discussion over the events in the Persian Gulf.[5] It is important then to establish if the law of armed conflict has adjusted its expectations based on the development of such technology.

6.2 Military 'Intelligence' as an Oxymoron?

Mistakes in intelligence are not a new phenomenon, and with the best will in the world they will likely continue with errors being attributable to both humans and artificial, or computer-derived, intelligence. As Petzner clearly states: "There are no magical solutions that ensure execution mistakes do not occur, for Von Clausewitz's concepts of the 'fog of war' and 'friction' are as prescient today as in his time."[6] Two incidents involving civilian airliners outside the field of armed conflict demonstrate just how fatal these errors can be. In 1983, 289 civilians were killed in the tragedy that befell the Korean Airlines 747. The aircraft went off course on its route from Anchorage, to Seoul and drifted into Soviet airspace. The events that followed have been thoroughly investigated. The reports available show that the information the Soviets were operating on was flawed. The instruction was given despite the pilot of the jet firing the missiles being concerned as to the aircraft's civilian status.[7]

In 1988, another civilian jet was shot down in error with the loss of 290 lives. Iran Air 655 was mistakenly identified as a threat by the USS Vincennes that was patrolling the Persian Gulf. This vessel was equipped with the computer-controlled Aegis weapons system. The system had four distinct modes ranging from 'semi-automatic', where humans work with the system to determine when and what to target, through to 'casualty', where the system

[4] 5.9.
[5] 6.10.
[6] Philip Pratzner, 'The Current Targeting Process' in Paul Ducheine, Michael Schmitt & Frans Osinga (eds.) *Targeting: The Challenges of Modern Warfare* (Asser Press 2016) 85.
[7] See Thom Patterson, 'The downing of Flight 007: 30 years later, a Cold War tragedy still seems surreal' (31 August 2013) *CNN* https://edition.cnn.com/2013/08/31/us/kal-fight-007-anniversary/index.html accessed 5 July 2019; Asaf Degani, 'The Crash of Korean Air Lines Flight 007' in Asaf Degani (ed.) *Taming HAL: Designing Interfaces Beyond 2001* (Palgrave Macmillan 2003); Randy Luethye, *The Cold War, KAL-007 & Communism: Intelligence Secrets Revealed* (CreateSpace 2015) .

calculates alone what is best to protect the ship. At the time of the incident Aegis was in semi-automatic mode so the data was being judged by humans. Nonetheless, despite hard data clearly showing the 18 sailors and officers that the aircraft was not a fighter jet, trust in the computer overruled. Thus, although the intelligence was available and showed that the target was a civilian aircraft, the failure to question the technology led to this tragedy.[8]

Given that the much cited 'fog of war' will always hinder the abilities of even the most advanced military force, mistakes will frequently happen. The question arises as to what obligations are in place to mitigate these, or further to investigate them once they have happened, whether as part of a 'lessons learned' process, for potential for individual criminal liability or for state liability. In order to be able to understand the role and methods taken in operational incident investigation, it is important to address how these may be obligated by IHL and managed by different states.

6.3 Investigating Operational Incidents

The issues surrounding investigations are well raised by Lattimer, who says: "In the absence of an explicit obligation to investigate civilian damage on the face of the Geneva Conventions, belligerents have often appeared reluctant to inquire into the circumstances of civilian deaths…"[9] The legal obligations to undertake investigations in the case of civilian casualties during armed conflict come from two different branches of international law; notably, international humanitarian law and international human rights law. The requirements created by these can be less than clear and do not necessarily accord with each other. Furthermore, it is important to recall that IHL provides for both individual criminal responsibility and state liability and these may be managed differently by states.[10]

[8] See PW Singer, *Wired for War* (Penguin Books 2009) 124-125.
[9] Mark Lattimer, 'The Duty in International Law to Investigate Civilian Deaths in Armed Conflict' in Mark Lattimer and Philippe Sands (eds.) *The Grey Zone: Civilian Protection Between Human Rights and the Laws of War* (Oxford: Hart Publishing 2018) 41.
[10] 3.5; 4.9.

6.3.1 International Humanitarian Law

Despite establishing a duty to investigate incidents under IHL, Schmitt contends that this only applies to situations in which "…there is reasonable suspicion, or a credible allegation of a war crime having been committed."[11] The duty is not well formed in treaty or customary law and so it's arguable that these provide insufficient practical guidance.[12] The Geneva Conventions require state parties to "search for persons alleged to have committed"[13] grave breaches and customary law requires states to "…investigate war crimes allegedly committed by their nationals or armed forces, or on their territory, and, if appropriate, prosecute the suspects."[14] Additional Protocol I (API) compels contracting parties to repress and suppress grave breaches as well as "all other breaches."[15] Therefore, both acts and omissions can form the substance for breaches of IHL.

Although no standards are explicitly stated within IHL, Schmitt reaches two general conclusions. Firstly, a duty to investigate occurs as a result of an allegation of any conduct that may amount to a war crime. Secondly, the allegation needs to be reasonably credible but can come from any source and could be given to any level of the chain of command.[16] There are two other main sources of guidance for the scope of the obligations to instigate investigations.[17] The first of these is the 2005 UN General Assembly (UNGA) guidelines for investigations into alleged violations of IHL. These principles and guidelines state that the obligation to maintain respect for IHL includes the duty to "…investigate violations effectively, promptly, thoroughly, and impartially."[18] The second source is the report

[11] Michael Schmitt, 'Investigating violations of International Law in Armed Conflict' (2010) 2 Harvard National Security Journal 31, 83.
[12] Ibid.
[13] Geneva Conventions 1949, GCI Art. 49, GC2 Art. 50, GC3 Art. 129, GC4 Art. 146.
[14] ICRC Customary Law Study, Rule 158, available at https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule158 accessed 22 July 2019.
[15] API Art. 86 & 87.
[16] Schmitt, Investigating Violations (n 11) 36-39.
[17] Commander Sylvaine Wong, 'Investigating Civilian Casualties in Armed Conflict: Comparing U.S. Military Investigations with Alternatives under International Humanitarian and Human Rights Law' (2015) 64 Naval Law Review 111, 119.
[18] UN General Assembly, *Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian*

produced by the 2009 UN Fact Finding mission on the Gaza Conflict which provides the guidance that investigations should be: independent, effective, prompt and impartial.[19] Although this is a somewhat contentious report,[20] the four principles established here largely reflect the standards already produced by the earlier UNGA guidance.

The main problem presented by the lack of clarity under the IHL regime is the question of *when* an investigation should be carried out. It appears clear that states have an obligation to investigate in the case of alleged violation,[21] but whether this extends to situations where civilian casualties may have occurred as the result of operations conducted in accordance with IHL is less clear. The UN Special Rapporteur on the promotion and protection of human rights and fundamental freedoms whilst countering terrorism, certainly believes so, stating that: "Having regard to the duty of states to protect civilians in armed conflict… in any case in which civilians have been, or appear to have been, killed, the state responsible is under an obligation to conduct a prompt, independent and impartial fact-finding inquiry and to provide a detailed public explanation."[22] This is then a higher standard than as a direct result of existing IHL guidance.

Sassòli and Olson limit the obligation to situations of *possible* violations which is a position more akin to Schmitt's.[23] Whereas the Turkel Commission argued for a difference between examination and investigation, stating there is "a general duty to *examine* all suspected violations of international humanitarian law… [and]… an additional duty to *investigate*

Law, (2005) UNGA Res. 60/147, Annex, UN Doc. A/RES/60/147, 3 http://legal.un.org/avl/pdf/ha/ga_60-147/ga_60-147_ph_e.pdf accessed 22 July 2019.

[19] UN General Assembly, *Human Rights in Palestine and other Occupied Arab Territories: Report of the United Nations Fact-Finding Mission on the Gaza Conflict* (25 September 2009) Human Rights Council 12th Session, UN Doc. A/HRC/12/48 https://www2.ohchr.org/english/bodies/hrcouncil/docs/12session/A-HRC-12-48.pdf accessed 22 July 2019.

[20] See for example Laurie Blank, 'Finding Facts but Missing the Law: The Goldstone Report, Gaza and Lawfare' (2010) 43:1 Case Western Reserve Journal of International Law 279.

[21] See (n 10) & (n 11).

[22] UN General Assembly, *Promotion and Protection of Human Rights and Fundamental Freedoms while Countering Terrorism* (18 September 2013) UN Doc A/68/389, 78 https://www.securitycouncilreport.org/un-documents/document/a68389.php accessed 24 July 2019.

[23] Marco Sassòli and Laura Olson, 'The Relationship between International Humanitarian Law and Human Rights Law Where It Matters: Admissible Killing and Internment of Fighters in Non-International Armed Conflicts' (2008) 90 IRRC 599 .

certain types of alleged violations known as 'war crimes.'"[24] On the face of things, this introduction of additional nuance may seem to overly complicate an already difficult area. I would argue that to be able to understand the scope of the obligations to investigate under IHL it is necessary to contextualise the investigatory role within the broader framework of obligations. IHL is designed to protect civilians and balance humanity with military necessity. In order to be able to conduct operations in accordance with the fundamental principles of distinction,[25] proportionality,[26] and precautions[27] I have argued throughout this work that a certain level of intelligence is essential. In order to establish whether an *investigation* or merely an *examination* in cases of potential civilian casualties is sufficient I would suggest that the requirements of IHL as a whole need to be considered. Furthermore, I would argue that investigations form part of the precautionary obligation, thus should be considered as part of the practical and practically possible standard as developed.[28]

6.3.2 Investigation as a Precautionary Obligation

The precautionary principle is judged on the information available to the commander at the time of the attack, however, there will inevitably be instances in which there are unexpected results. In these circumstances the resultant casualties may be *excessive* in relation to the concrete and direct military advantage achieved, and perhaps, as in the Kunduz case,[29] the overall action could be judged to have failed to meet the proportionality or precautionary measures of IHL. That is not to say that the individual who launched the attack would automatically be considered to have committed a war crime or a grave breach

[24] The Public Commission to Examine the Maritime Incident of 31 May 2010 (Turkel Commission), 2nd Report, *Israel's Mechanisms for Examining and Investigating Complaints and Claims of Violations of the Laws of Armed Conflict According to International Law* (February 2013) 22 http://www.humanrightsvoices.org/site/documents/?d=13397 accessed 24 July 2019.
[25] API Art. 48; 2.2.1.
[26] API Art 51(5)(b); 2.2.2.
[27] API Art. 57; 2.3.
[28] Ibid.
[29] 3.5.

under international criminal law for prosecution as the requisite *mens rea* is absent.[30] However, it could be indicative of a breach of IHL arising to state liability.[31]

Nevertheless, in modern warfare conducted by the main states considered in this work, the US, the UK and Germany, it is highly unlikely that an incident of this nature would meet the *mens rea* requirements of international criminal law in the intentional targeting of civilians, or launching an attack in "awareness of the extent of the anticipated harm."[32] However, that is not to say that it could not, or would not, amount to a violation of IHL. In this case it could only be determined by an investigation taking place following the incident.

In discussing collateral damage, Dinstein reminds us that "…even collateral damage to civilians and civilian objects is by no means determined by purely crunching numbers of casualties and destruction on both sides."[33] This would be an oversimplification of the principle of proportionality as established within IHL. The measure is more complex and requires a balance between the *anticipated* gain and civilian harm, thus a simple 'body count' does not present the full picture.[34] Despite this, states have often come under criticism for failing to provide information on recording deaths. This came to prominence following the US-led invasions of Afghanistan and Iraq in the early 2000s; the position captured by General Tommy Franks who said: "We don't do body counts."[35] It is understandable that states do not wish to decontextualize the data; however, from an accountability and transparency perspective, it is perhaps one of the best litmus tests that NGOs, the general public and 'outsiders' can obtain.

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[30] This is a standard of "intent to kill or wilfully cause serious bodily harm which the perpetrator should reasonably have known might lead to death" *Prosecutor v Setako Ephrem* (Appeal Judgment) ICTR-04-81-A (28 September 2011) 257. *Prosecutor v Kvočka et al* (Appeal Judgment) ICTY-98-30/1 (28 February 2005) 261; *Prosecutor v Kordić and Čerkez* (Appeal Judgment) ICTY-95-14/2 (17 December 2004) 37; *Prosecutor v Delalic et al [Čelebici Case]* (Appeal Judgment) ICTY-96-21-A (20 February 2001) 423.

[31] 3.5; 4.9.

[32] Robert Cryer, Håkan Friman, Darryl Robinson & Elizabeth Wilmshurt, *An Introduction to International Criminal Law and Procedure* (CUP 2010) 302.

[33] Yoram Dinstein, 'The Principle of Proportionality', in Kjetil Mujezinović, Camilla Guldahl Cooper and Gro Nystuen (eds.) *Searching for a 'Principle of Humanity' in International Humanitarian Law* (CUP 2012) 76.

[34] For more on this see Yoram Dinstein, *The Conduct of Hostilities under the Law of International Armed Conflict* (2nd edn, OUP 2010) Specifically Chapter 5; also for the relationship of proportionality to longer-term and less direct effects of war see Isabel Robinson and Ellen Nohle, 'Proportionality and precautions in attack: The reverberating effects of using explosive weapons in populated areas' (2016) 98:1 IRRC 107.

[35] NC Crawford, *Accountability for Killing: Moral Responsibility for Collateral Damage in America's post-9/11 wars* (OUP 2013) 88.

Therefore, although simple number crunching is insufficient, it is frequently used as a method to measure the success of missions, particularly for the media and NGOs. Furthermore, Lattimer says: "…when civilian casualties are incurred (either unexpectedly or expectedly) an investigation is required to find out what happened in order to enable an informed decision to be made about the risk to civilians in any subsequent attack(s)."[36] Logically, and based on the targeting doctrine operated by, for example, NATO forces,[37] it follows that to be able to establish the effectiveness of an action it needs to be assessed post-attack so that the next mission can be planned with this in mind. To be able to accurately assess and determine the appropriate methods and means to comply with the precautionary principle, a commander needs to be aware of past practice. As much as commanders' decisions will be based on the knowledge available to them at the time, these decisions cannot be removed from the feedback loop of information.

Throughout any conflict, the 'fog of war' will obscure information and the rapid pace of operations means that it is unreasonable to expect no mistakes to occur. IHL allows for this and thus the *mens rea* for grave breaches under international criminal law is set at a standard of intention or deliberate breach.[38] This recognises that, even if all feasible precautions have been taken, mistakes are likely to happen. However, I would argue that without some form of investigation following one of these mistakes it would not be possible to determine whether a breach of IHL has occurred. Perhaps more significantly it is often implied that lessons should be learned by these errors, to prevent their reoccurrence.[39] This is simpler to justify in the negative from a legal perspective. If an attack takes place and there are civilian casualties, but the military do not engage in any kind of investigation as they believe it was successful, then under the broad remit of IHL's investigation standard, this would in theory be adequate. An example of this could be the Takhar incident in 2010, which the US maintain to have been a successful mission despite the contra-indications of it targeting civilians. The problem arises when, and if, this type of attack is carried out again by

[36] Lattimer (n 10) 59.
[37] 5.4.
[38] See (n 32).
[39] See for example the discussion over Gaza at 5.5 and also the change of rules of engagement during the Kosovo conflict see 4.8.

using the same process and procedures. If this once again resulted in civilian casualties it would be difficult to justify the argument that all feasible precautions had been taken, as substantial knowledge from the former incident would not have been obtained. All reasonable measures to prevent excessive collateral damage would arguably include the understandings from previous incidents of civilian loss.

Therefore, I would agree with Lattimer that IHL creates a positive obligation on states "to investigate *all* IHL violations, including a failure to take precautions in attack…"[40] This would be substantiated by the practice of states which has increasingly demonstrated a willingness to monitor civilian casualties and conduct investigations into 'reportable incidents'.[41] These are defined by the US DoD as "…a possible, suspected, or alleged violation of the law of war, for which there is credible information."[42] The UK approach is covered by a 'shooting incident review', which is initiated: "If civilians *may* have been killed or injured although there is no indication that LOAC/ROE have been breached…"[43] (emphasis added) This is commenced within 48 hours and will result in either: a Service Police investigation; an internal unit investigation; or no further action. This approach is reminiscent of the different levels created by the Turkel report[44] in that an initial enquiry is made, following which a decision is made by the commander as to the potential severity of the case. As Schmitt cautions though,[45] this type of state practice is created not only by legal obligations under IHL but also by domestic policy, constitutional concerns and human rights obligations. This is the same way that rules of engagement are formulated, and as such is not an indication that

[40] Lattimer (n 10) 70.
[41] For a discussion on the threshold and requirements of US doctrine on reportable incidents, see Alon Margalit, 'The Duty to Investigate Civilian Causalities During Armed Conflict and its Implementation in Practice, in TD Gill et al (eds.) *Yearbook of International Humanitarian Law 2012* (TMC Asser Press 2014); Michal Drabik, 'A Duty to Investigate Incidents Involving Collateral Damage and the United States Military's Practice' (2013) 22 Minn J Int'l L. 15.
[42] US Department of Defense, 'DoD Law of War Program' (9 May 20016) Directive 2311.01E, 3.2 https://www.hsdl.org/?view&did=463264 accessed 5 August 2019.
[43] See UK Parliament, *UK Armed Forces Personnel and the Legal Framework for Future Operations: Written evidence from Brigadier (Rtd) Anthony Paphiti,* Defence Select Committee Session 2012-14, part III https://publications.parliament.uk/pa/cm201314/cmselect/cmdfence/writev/futureops/law06.htm accessed 5 August 2019.
[44] Israel's Mechanism for Examining and Investigating complaints and Claims of Violations of the Laws of Armed Conflict According to International Law, *The Public Commission to Examine the Maritime Incident of 31 May 2010: The Turkel Commission* (February 2013) https://www.gov.il/BlobFolder/generalpage/alternatefiles/he/turkel_eng_b1-474_0.pdf accessed 3 August 2019.
[45] Schmitt (n 11) 56, 77-78.

a state necessarily carries out these investigations as an understanding of a legal duty under IHL.[46] Arguably the most prevalent of these considerations is that of human rights obligations, which have posed significant challenge to military investigations.

6.4 International Human Rights and the Potential for Development

International human rights have played a substantial role in influencing practice for investigating operational incidents. Philip Alston, the UN Special Rapporteur on extrajudicial, summary, or arbitrary executions, recommended that civilian casualties in Afghanistan be investigated by the UN HRC. He said: "If states are not carrying out reasonably neutral investigations and prosecutions of what appear to be serious violations, it does leave open the possibility that the international community should be intervening in some way."[47] Alston recognises every state's desire and right to conduct investigations into their own citizens' actions in the first instance but places the requirement that these should be 'reasonably neutral'. This is a relatively low bar in the context of investigations, especially when compared to the standards required by the European Court of Human Rights (ECtHR).

The jurisprudence of the ECtHR has developed the scope and reach of the investigations that states are obliged to undertake with respect to Article 2, the right to life.[48] In the case of *McKerr v UK*[49] they state that "…the obligation to protect the right to life under Article 2 of the Convention[50]… also requires by implication that there should be some form of effective official investigation when individuals have been killed as a result of the use of

[46] 2.5.1.
[47] Office of the High Commissioner for Human Rights, *Special Rapporteur Calls on the Government and the International Community to Make Renewed Efforts to Prevent Unlawful Killings* (15 May 2008) http://10.18.65.10/huricane/huricane.nsf/view01/533CB6919E27ED9AC125744F0037EDE9?opendocument accessed 6 August 2019.
[48] Article 2 of the European Convention on Human Rights, the right to life. For more on this see Council of Europe, *Guide on Article 2 of the European Convention on Human Rights: Right to Life* (Updated 30 April 2019) Especially Section IV. Procedural Obligations https://www.echr.coe.int/Documents/Guide_Art_2_ENG.pdf accessed 9 August 2019.
[49] (2002) 34 EHRR 20, para 111.
[50] The Convention here is referring to the European Convention on the Protection of Human Rights and Fundamental Freedoms 1950.

force."[51] The Court determined that authorities must take "whatever reasonable steps they can to secure the evidence concerning the incident,"[52] that the next of kin should be involved in the process[53] and the investigation should be independent.[54] The major UK case of *Al-Skeini v Secretary of State for Defence*[55] established ten requirements for investigations[56] saying that the Convention implied a "procedural obligation of a proper and adequate investigation into loss of life," without regard to the "difficulties created by situations of insurgency."[57] In *Ergi v Turkey* the ECtHR held that despite the prevalence of violence the obligations under Article 2 could not be displaced and an effective and independent investigation was obliged.[58] Furthermore, the ECtHR require that an "an investigation's conclusions must be based on thorough, objective and impartial analysis of *all* relevant elements."[59] The requirement for an independent and impartial investigation "capable of leading to the establishment of facts and the liability of those responsible has, in the Court's case-law, been considered as an obligation inherent in Article 2."[60] Despite these cases primarily being focussed on domestic implementation of ECHR obligations their significance for times of unrest and conflict is demonstrable.

In *Ahmet Özkan and Others v Turkey*[61] the court determined that although the use of force was 'absolutely necessary' in the circumstances, Turkey had still failed in its obligation to protect life as they had failed to establish if there were any civilian casualties. The failure to protect civilians through indiscriminate methods and means of attack was also the subject of the cases *Abuyeva and Others v Russia*[62] and *Benzer and Others v Turkey.*[63] The

[51] Office of the High Commissioner (n 47) 111.
[52] Office of the High Commissioner (n 47) 113.
[53] Office of the High Commissioner (n 47) 115.
[54] Office of the High Commissioner (n 47) In this they said that independent "means not only that there should be no hierarchical or institutional connection but also clear independence" at 112. On this also see *Incal v Turkey* (2000) 29 EHRR 449, para 73 – participation of military officials in court proceedings were "legitimate cause to doubt the independence and impartiality" of the court.
[55] [2004] EWHC 2911, [2004] All ER 197 (QB Div Ct. 2004).
[56] Ibid 321.
[57] Ibid 319-320.
[58] (2001) 32 EHRR 18, para 85.
[59] *Kolevi v Bulgaria* (2014) 59 EHRR 23, para 201; *Armani da Silva v UK* (2016) 63 EHRR 589, para 234.
[60] *Kamalak v Turkey* App no 2251/11 (ECtHR, 8 October 2013) para 31.
[61] App no 21689/93 (ECtHR, 6 April 2004) paras 306-308.
[62] (2015) EHRR 5, para 203.
[63] App no 23502/06 (ECtHR, 12 November 2013) para 184.

independence of the investigators was highlighted by the court in *Isayeva v Russia;*[64] further they consider that independence is lacking where there is a hierarchical relationship with potential suspects.[65] The level of scrutiny required during an investigation "which satisfies this minimum threshold must, in the Commission's view, depend on the circumstances of the particular case."[66] Russell welcomes this case dependent criterion, and reflects that contested cases are "prevalent during times of unrest and conflict and there are occasions when the lack of clarity is intentionally created by state actors to enable impunity."[67] These conclusions are not unique to the European cases and have also been reached by other regional human rights bodies.[68]

In 2018 the UNHRC adopted General comment 36[69] on article 6, the right to life, of the International Covenant on Civil and Political Rights.[70] This provides that "states must… investigate alleged or suspected violations of article 6 in situations of armed conflict in accordance with the relevant international standards."[71] This reaffirms the statements made by regional human rights bodies[72] and provides that investigations must be "independent, impartial, prompt, thorough, effective, credible and transparent."[73] The affirmation of these standards at the international level is significant and reflects the

[64] (2005) EHRR 38, paras 210-211.
[65] See *Sandru and Others v Romania* App no 22465/03 (ECtHR, 8 December 2009) para 74; *Enukidze and Girgvliani v Georgia* App no 25091/07 (ECtHR, 26 April 2011) para 247 et seq.
[66] *McCann and Others v UK* (1995) ECommHR 79, para 193. Also see *Jordan v UK* (2001) 37 EHRR 52, para 105; *Edwards v UK* (2002) 35 EHRR 487; *R (on the application of Amin) v Secretary of State for the Home Department* [2003] 4 All ER 1264.
[67] Hannah Russell, *The Use of Force and Article 2 of the ECHR in Light of European Conflicts* (Hart Publishing 2017) 147.
[68] For example see *Case of Ituango Massacres v Colombia* (Preliminary Objections, Merits, Reparations and Costs) Inter-American Court of Human Rights Series C No 148 (1 July 2006); *Case of "Mairipan Massacre" Mairipan Massacre v Colombia* (Preliminary Objections, Merits, Reparations and Costs) Inter-American Court of Human Rights Series C No 134 (7 March 2005).
[69] UNCHR, 'General Comment No. 36 on article 6 of the International Covenant on Civil and Political Rights, on the right to life' (2018) UN Doc CCPR/C/GC/36
[70] International Covenant on Civil and Political Rights (adopted 16 December 1996, entered into force 23 March 1976) 999 UNTS 171 (ICCPR)
[71] UNCHR (n 69) 64.
[72] *Al-Skeini and Others v UK* App no 55721/07 (ECtHR, 7 July 2011) paras 161-162; *Case of the Santo Domingo Massacre v Colombia* (Preliminary Objections, Merits and Reparations) Inter-American Court of Human Rights Series C No 259 (30 November 2012); African Commission on Human and Peoples' Rights (ACHPR) 'General Comment No. 3 on the African Chart on Human and Peoples' Rights: The Right to Life (Article 4)' (adopted 4 to 18 November 2015, Banjul, The Gambia) https://www.achpr.org/legalinstruments/detail?id=10 accessed 10 July 2020
[73] UNCHR (n 69) 28.

developments that have been made by the regional human rights bodies. However, it is important to retain some caution in the application of human rights standards directly to situations of armed conflict, as is highlighted within the updated Minnesota Protocol.[74]

The 2016 Minnesota Protocol is an updated version of the 1991 UN Manual,[75] which operates alongside the UN Principles on the Effective Prevention and Investigation of Extra-legal, Arbitrary and Summary Executions.[76] These provide common standards for the investigation of potentially unlawful deaths, and states: "The duty to investigate a potentially unlawful death - promptly, effectively and thoroughly, with independence, impartiality and transparency - applies generally during peacetime, situations of internal disturbances and tensions and *armed conflict*."[77] (emphasis added) However, it then qualifies that during armed conflict this duty must be "considered in light of both the circumstances and the underlying principles governing international humanitarian law."[78] Therefore, in spite of the UN and regional human rights bodies providing a broad body of jurisprudence and development on the duty to investigate loss of life, human rights obligations must still be understood in the context of the provisions of IHL during a time of armed conflict. Nevertheless, the UN do oblige states to record and publicly explain their reasons for non-compliance,[79] which aims to increase transparency in investigations. As Todeschini reflects: "When a breach of article 6 ICCPR is coterminous with a violation of IHL… the applicability of the ICCPR alongside IHL will require states to respect the human rights law standards of investigation, especially as reflected in the Minnesota Protocol."[80] As such, it is demonstrable that human rights law has played a significant role in the

[74] UNCHR, 'The Minnesota Protocol on the Investigation of Potentially Unlawful Death (2016): The Revised United Nations Manual on the Effective Prevention and Investigation of Extra-legal, Arbitrary and Summary Executions' (2017) UN Doc HR/PUB/17/4.
[75] UNCHR, 'United Nations Manual on the Effective Prevention and Investigation of Extra-legal, Arbitrary and Summary Executions' (1991) UN Doc E/ST/CSDHA/.12.
[76] Principles on the Effective Prevention and Investigation of Extra-legal, Arbitrary and Summary Executions, UNGA Res 44/162 (15 December 1989) [UN Principles 1989] these remain unchanged.
[77] Ibid 20.
[78] Ibid 20.
[79] Ibid 20 & 22-24.
[80] Vito Todeschini, 'The Human Rights Committee's General Comment No. 36 and the Right to Life in Armed Conflict' (21 January 2019) *OpinioJuris* http://opiniojuris.org/2019/01/21/the-human-rights-committees-general-comment-no-36-and-the-right-to-life-in-armed-conflict/ accessed 10 July 2020.

development of investigatory standards in the case of loss of life even during times of armed conflict.

In the UK the development of a body of law concerning military investigations has been controversial. The problem is highlighted by Tugendhat and Croft who state: "The damage is done when legal norms such as the [European Convention of Human Rights] ECHR – created for the relatively predictable governance mechanisms of post-war Europe – are imposed in chaotic and inherently uncertain conflict zones."[81] Additionally there remains scholarly debate on the applicability of human rights during times of armed conflict.[82] As Lubell reflects: "[t]he focus of the arguments is now shifting from the question of if human rights law applies during armed conflict to that of how it applies…"[83] There are a number of problems with the joint applicability of IHL and human rights, the most significant for the discussions on investigating targeting mistakes are the ability of human rights bodies and IHL to 'speak the same language'. This is highlighted by Lubell, who suggests that "… care must be taken in the choice of terms, remembering that although IHL and human rights law may share many goals, they remain separate creatures."[84] This is significant as by the 2009 Goldstone Report[85] into the Gaza Conflict, independence, effectiveness, promptness and impartiality were referred to as the universal principles for investigations.[86] These principles, although developed by human rights bodies, accord with those established by Schmitt from an IHL perspective. Therefore, he concludes that: "there is no inconsistency between the broad principles applicable in human rights and humanitarian law investigations."[87]

[81] Thomas Tugendhat and Laura Croft, 'The Fog of Law: An introduction to the legal erosion of British fighting power' (2013) *Policy Exchange*, 54 https://policyexchange.org.uk/wp-content/uploads/2016/09/the-fog-of-law.pdf accessed 10 August 2019.
[82] See Kenneth Watkin '21st Century Conflict and International Humanitarian Law: Status Quo or Change?' in Michael Schmitt and Jelena Pejic (eds) *International Law and Armed Conflict: Exploring the Faultlines* (Martinus Nijhoff 2007) Chapter 10; Michael Dennis, 'Non-Application of Civil and Political Rights Treaties Extraterritorially During Times of International Armed Conflict' (2007) 40 Isr L Rev 453; Noam Lubell 'Parallel Application of International Humanitarian Law and International Human Rights Law: An Examination of the Debate (2007) 40 Isr L Rev 648; and Françoise Hampson, 'The Relationship between International Humanitarian Law and Human Rights Law from the Perspective of a Human Rights Treaty Body' (2008) 90 IRRC 549; 2.2.2.
[83] Noam Lubell, 'Challenges in applying human rights law to armed conflict' (2005) 87:860 IRRC 737, 738.
[84] Ibid 753.
[85] UNGA (n 18).
[86] UNGA (n 18) 1611.
[87] Schmitt (n 11) 55.

However, the types of investigation that can be carried out during a time of conflict are likely to differ significantly to those that could be carried out by, for example, police in the UK. Margalit suggests that it would be more appropriate to consider investigations in this context as an initial 'post-attack review'.[88] He suggests that these "…should include practically possible and reasonable actions bearing in mind the circumstance of armed conflict and that there is no *prima facie* criminal behaviour involved in causing civilian casualties."[89] I would concur with this argument. It is this 'review' that would enable the commander to evaluate the position post-attack for the confirmation of his desired 'end state.'[90] It is this stage that would also be crucial in establishing compliance with the IHL precautionary principle for later attacks. This review would appear, in principle, to be a similar approach to that taken by the UK in their 'shooting incident review'. The standard of everything reasonable in the prevailing circumstances would also align with the precautionary principle and could be said to be part of this IHL requirement. Indeed, this would accord with state practice whereby a fact-finding procedure is carried out by the chain of command.[91]

If an initial review determines that there have been civilian casualties then a further, more detailed investigation should be initiated. As Emmerson says: "While the fact that civilians have been killed or injured does not necessarily point to a violation of international humanitarian law, it undoubtedly raises issues of accountability and transparency."[92] It is this last point that is most significant for the development of an understanding of state practice for the development of custom. I would argue that the lack of transparency afforded during these investigations, not only potentially breaches international human rights obligations,[93] but can also hinder the ability to understand developments in state

[88] Margalit (n 41) 175.
[89] Margalit (n 41) 176.
[90] 5.4.
[91] For US practice see AR 15-6 Investigations ss1-5, 2-1, 3-7, 3-10(b). For UK see Battle-Group Operational Order, 19.3-19.4.
[92] UN General Assembly, *Promotion and protection of human rights and fundamental freedoms while countering terrorism,* Report by the Special Rapporteur, Ben Emmerson (18 September 2013) A/68/389, 21 http://www.justsecurity.org/wp-content/uploads/2013/10/2013EmmersonSpecialRapporteurReportDrones.pdf accessed 21 July 2019.
[93] See Minnesota Protocol, (n 74) 20; and *Al-Skeini and others v UK* App no 55721/07 (ECtHR, 7 July 2011) the 2nd item on their ten-point list is "open and objective oversight for the benefit of the deceased's family and the public" 321.

practice that could amount to new customary law in IHL. This could then be argued to amount to a form of Baxter paradox,[94] such that the significant number of state parties to the treaties forming IHL can be said to have made it "more difficult to demonstrate what is the state of customary international law *dehors* the treaty."[95] Additionally, this lack of transparency has led to several different bodies undertaking investigations into the same incident, which can further confuse the law.

It is not difficult to find examples of the difference in opinions following investigations. An early example occurred following the bombing of a UN compound in Qana, Lebanon. In this case the UN Secretary General launched his own investigation which completely dismissed Israeli claims that it was the result of faulty intelligence and stated: "it [was] unlikely that the shelling of the United Nations compound was the result of gross technical and/or procedural errors."[96] Thus, the internal military investigation was found lacking by the UN and so it remains a point of contention as to whether this incident was indeed a state violation of IHL or merely a 'fog of war' mistake.

6.5 Mistakes and Disputes

A consistent theme throughout the investigations and case studies presented in this work is the challenges faced by the different interpretations provided by the parties involved. In certain cases, the state involved has accepted and admitted to a mistake during the targeting process; an investigation is then undertaken and a part of the results of this are made public. In other situations, the state involved has maintained the view that the object which was targeted was indeed a military objective and was lawfully targeted under IHL. In order to be able to assess the development of an intelligence standard under IHL it is important to assess the extent to which mistakes in targeting, and the disputes surrounding these, have been treated.

[94] R R Baxter, 'Treaties and Custom' (1970) 129 *Recueil des Cours de l'Académie de Droit International* 64.
[95] Hugh Thirlway, 'Professor Baxter's Legacy: Still Paradoxical?' (2017) 6:3 ESIL Reflections 1, 1.
[96] Michael Resiman, 'The Lessons of Qana' (1997) 22 Yale J. Int'l L. 381, 390.

6.5.1 The Chinese Embassy

One of the most prominent cases of mistaken intelligence from the Kosovo conflict was the bombing of the Chinese Embassy in Belgrade in 1999. During the night of 7 May, NATO aircraft fired several missiles at the Embassy which reportedly killed 3 Chinese civilians and injured around 15 more.[97] The US and NATO officials were quick to announce that this had been a mistake, with a joint statement from US Secretary of Defense and the CIA Director being made the following morning. They stated: "The bombing was an error. Those involved in targeting mistakenly believed that the Federal Directorate of Supply and Procurement was at the location that was hit. That military supply facility was the intended target…"[98] They had evaluated the incident immediately and said, during this initial briefing, that they believed it had occurred as a result of faulty information, rather than as a result of mechanical or pilot error. A full investigation was immediately launched.

On 22 July 1999, the CIA released a public statement following the conclusion of the investigation. In it they cited three basic failures: the location technique was flawed; none of the military databases contained accurate information for the validation process; and, neither of these problems was detected in the target review process.[99] The CIA explained that the target development process they took used three different maps to establish the location of the Federal Directorate of Supply and Procurement building. It was said to be located at Bulevar Umetnosti 2 in New Belgrade. However, none of the maps they had provided a reference for the building, and none of them correctly identified the current location of the Embassy.[100] However, their report makes something very clear: "…the

[97] ICTY, *Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia* (14 June 2000) [Final Report] 80.
[98] Central Intelligence Agency, 'Joint Statement by Secretary Cohen and DCI Tenet' (8 May 1999) https://www.cia.gov/news-information/press-releases-statements/press-release-archive-1999/pr050899.html accessed 21 July 2019.
[99] Central Intelligence Agency, 'DCI Statement on the Belgrade Chinese Embassy Bombing: House Permanent Select Committee on Intelligence Open Hearing' (22 July 1999) https://www.cia.gov/news-information/speeches-testimony/1999/dci_speech_072299.html accessed 21 July 2019.
[100] CIA (n 98).

location of the Chinese Embassy was not a question that anyone reasonably would have asked when assembling this particular target package."[101]

The process used by the CIA to locate the fixed target was known as 'intersection' and 'resection'.[102] The CIA, less used to developing fixed targeting data, noted that this process was insufficient for aerial targeting because it could only provide an approximate location. However, in this case the information was fed into a database that was then relied on for the aerial attack. This caused the result that the target was several hundred metres[103] from where they believed it to be. The location of the Chinese Embassy was not considered during the planning of the attack, which was based on database information: "In general, diplomatic facilities... are given relatively little attention in our databases because such facilities are not targets."[104]

The Final Report to the OTP for the ICTY reviewed the incident and confirmed the problem with the targeting review process. The Joint Staff's reviews were "limited to validating the target data sheet geographical coordinates and the information put in the database by the NIMA analyst."[105] As this process was largely circular the flaws in the original geolocation information were not uncovered and "highlighted the system's susceptibility to a single point of database failure."[106] They conclude that there can be no responsibility attributed to the aircrew as they were given incorrect information; further the senior leaders should not be held criminally responsible because "they were provided with wrong information by officials by another agency."[107]

The lack of criminal responsibility applied by the OTP is an example of the IHL requirements that for liability to apply it must be more than a mere mistake. The lack of liability applied to the commanders is also a reasonable conclusion. However, I would contend that it would

[101] CIA (n 98).
[102] CIA (n 98).
[103] The exact figure varies dependent on the account you cite – at times it is cited as 300m, 500m, or several blocks.
[104] CIA (n 98).
[105] Final Report (n 97) 83.
[106] Final Report (n 97) 83.
[107] Final Report (n 97) 85.

have been beneficial at this point for the OTP to clarify the element of state liability created by the mistakes of one part of the state. The CIA, as a limb of the US state, cannot be separated from the military operations of the state, and so the errors made during their intelligence assessment are attributable to the US.[108] The US admitted the mistake and paid compensation to the Chinese government as well as the families who had suffered as a result, and as such took responsibility for the incident.

This case then appears to be a genuine instance of mistaken identity. An early failure to gather sufficiently accurate information led to a reliance on it for the aerial targeting campaign. The checks and balances in place to verify the information were insufficient to discover the error and the result was the controversial bombing of the Embassy. The investigation undertaken by the OTP however appears to have relied heavily on the statements made by the CIA and little else. Therefore, it could be argued that there is limited evidence for engagement with those who believe that this action was deliberate.

6.5.2 The Counternarrative

As quickly as the apology came from the NATO forces, the opposing story gathered momentum. The Chinese quickly believed that the bombing was deliberate and it prompted mass protests in China.[109] It was hard for the Chinese to believe that "… the world's most advanced military had bombed a fellow UN Security Council member and one of the most vocal opponents of the NATO air campaign because of a mapping error."[110] Two reporters followed this counternarrative and claimed that "the Chinese Embassy was removed from a prohibited targets list after NATO electronic intelligence (Elint) detected it sending army signals to Milosevic's forces."[111] The reporters who researched this story firmly believed

[108] See Kimberley Trapp, 'Great Resources Mean Great Responsibility: A Framework of Analysis for Assessing Compliance with API Obligations in the Information Age' in Dan Saxon (ed.) *International Humanitarian Law and the Changing Technology of War* (Koninklije Brill 2012) 163.
[109] Rebecca MacKinnon, 'Clinton apologizes to China over embassy bombing' (10 May 1999) *CNN* http://edition.cnn.com/WORLD/europe/9905/10/kosovo.china.02/ accessed 22 July 2019.
[110] Kevin Ponniah and Lazara Marinkovic, 'The night the US bombed a Chinese embassy' (7 May 2019) https://www.bbc.co.uk/news/world-europe-48134881 accessed 22 July 2019.
[111] John Sweeney, Jens Holsoe and Ed Vulliamy, 'NATO bombed Chinese deliberately' (17 October 1999) *The Observer* https://www.theguardian.com/world/1999/oct/17/balkans accessed 22 July 2019.

that the attack was a deliberate effort to stop the transmission of communications for Milosevic, and maintain this to date.[112]

The complex political narrative of the two states makes this a highly contentious issue, as Moore reflects: "In the face of a lack of definitive proof that it was accidental or intentional, the bombing of the embassy remains to this day a matter of belief, of trust – either one believes the argument provided by the US that it was an error, or one does not."[113] Despite the immediate apology by President Clinton, and a fully formed and detailed investigation, the distrust created by this incident is still relevant for political relations. Therefore, this could be used as a basis for arguing that an independent investigation into these types of incident would be valuable. Whilst the action taken was part of a NATO operation, the US rapidly took responsibility for it and conducted their own investigation. Much like the Takhar incident in 2010,[114] lack of trust and transparency can lead to continued debate as to the real target of the attack and undermines the perceived reliability of official reports.

The immediate recognition of the mistake and public statements to that effect, combined with the public disclosure of the investigation results, was significant. It is unusual that the full scope of the intelligence gathering operation and the flaws therein are provided but, in this case, due to the sensitive political situation, it was desirable. Nonetheless, there remain those who believe that the targeting of the Embassy was deliberate. This distrust in the investigation could be explained by a lack of any substantial independent review. Whilst the OTP did cover this case in their Final Report, they relied heavily on the testimony provided by the CIA. Furthermore, as there was no indication of any activity amounting to grave breaches of IHL, the incident was not investigated any further.

From an intelligence standard under IHL, this case highlights that the various systems for gathering and analysing data are significant for the success of the operation. The process

[112] Ponniah and Marinkovic (n 110).
[113] Gregory J Moore, 'Not Very Material but Hardly Immaterial: China's Bombed Embassy and Sino-American Relations" (2010) 6(1) Foreign Policy Analysis 23, 31. This article provides the statistic that at the time of the research, 86% of Americans believe the bombing was an accident whereas 57% of Chinese believe it was intentional. .
[114] 5.8.

used by the CIA was by their own admission insufficiently accurate to be used for aerial targeting purposes. One wonders then whether the individuals tasked with locating the supply depot, the military objective, were aware of the intended scope of the operation. Additionally, and perhaps more importantly, whether the commander in charge of conducting the attack had been informed of the weaknesses in the intelligence gathering process. It seems reasonable to assume, given the CIA statements, that neither part of the process was aware of the limitations of the other. This 'stove-piping' of processes, approaches and purposes within a state indicate how overly secretive operations can lead to fatal consequences. This type of stove-piping is demonstrated in this case within parts of a single state. This can become even more complicated with the increased complexity of coalition operations.[115]

6.6 The US Approach: Mistakes over *Médecins Sans Frontieres*

The vast majority of incidents of civilian casualties during armed conflict are investigated by the military responsible. Over the past decade the approaches and requirements to conduct investigations into civilian casualties have changed. The US historically had a patchwork approach to instances of civilian casualties with different services, and organisations, adopting their own procedures outside of criminal enforcement.[116] As non-parties to both API and the Rome Statute[117] establishing the International Criminal Court, the US maintain independence to investigate their forces and continue to "refuse to subject its troops to international scrutiny."[118] In 2009, this altered when General Stanley McChrystal issued a tactical directive stating that military forces must "avoid the trap of winning tactical victories – but suffering strategic defeats – by causing civilian casualties or excessive damage and thus alienating the people."[119] As part of this process he created Civilian

[115] 4.7; also see Royce Frengle, 'Beyond Afghanistan: Effective Combined Intelligence, Surveillance and Reconnaissance Operations' (April 2010) Air Command and Staff College, Maxwell AFB https://apps.dtic.mil/dtic/tr/fulltext/u2/1018423.pdf accessed 10 August 2019.
[116] Wong (n 17) 127.
[117] The Rome Statute of the International Criminal Court 1998 https://www.icc-cpi.int/nr/rdonlyres/ea9aeff7-5752-4f84-be94-0a655eb30e16/0/rome_statute_english.pdf accessed 6 July 2019.
[118] Wong (n 17) 114.
[119] NATO/ISAF UNCLASS, 'Tactical Directive 6 July 2009' https://www.nato.int/isaf/docu/official_texts/Tactical_Directive_090706.pdf accessed 12 December 2017.

Casualty Tracking cells which were part of both ISAF and USFOR-A mandates in Afghanistan. These had minimum standard requirements that applied across the coalition[120]; thus, the disparate approach that had been seen across the coalition forces became unified. As a result of this a not insignificant number of redacted reports have been released on instances during the Afghan conflict.[121]

A good example of this is from October 2015, when US forces, during a joint operation with Afghan forces, mistakenly struck a Trauma Centre in Kunduz, Afghanistan. The hospital was operated by Médecins Sans Frontieres (MSF) and it was reported that the strike killed 42 people who were in the hospital facility at the time. The MSF hospital, just like the Chinese Embassy, was a civilian object and so would not be lawfully targetable under IHL. Furthermore, hospitals are granted special status under IHL and so are not lawfully targetable, even if they are treating military personnel.[122]

MSF report that, during September 2015, the hospital was suddenly in the middle of a "quickly shifting frontline when the armed opposition launched a takeover of Kunduz city."[123] This increased activity meant that the hospital had over 100 patients they were treating at the time of the attack. The US conducted a detailed investigation into the incident and concluded that "this tragic incident was caused by a combination of human errors, compounded by process and equipment failures."[124] The attack occurred when an Air Force AC130 gunship was called in to support a number of Afghan troops who were under fire in the area. The aircraft was operating without having had their targeting dataset updated with details of the 'no-strike list' due to a technical fault. Therefore, they were

[120] See ISAF Standard Operating Procedures, 302, 307.
[121] These include those on the Kunduz MSF Hospital in 2015, the JAG Report into Iran Air 655, and the numerous press releases cited throughout this work .
[122] GCI Art. 23; GCIV Art. 14; N Gordon & N Perugini, '"Hospital Shields" and the Limits of International Law' (2019) 30:2 EJIL 439.
[123] Médecins Sans Frontier, 'On 3 October 2015, US airstrikes destroyed our trauma hospital in Kunduz, Afghanistan, killing 42 people' (undated) https://www.msf.org/kunduz-hospital-attack accessed 12 August 2019.
[124] United States Central Command [US CENTCOM], 'Summary of the Airstrike on the MSF Trauma Centre in Kunduz, Afghanistan on October 3, 2015; Investigation and Follow-on Actions' (21 November 2015) https://info.publicintelligence.net/CENTCOM-KunduzHospitalAttack.pdf accessed 12 August 2019.

unaware of the location of the MSF hospital having "intended to target a different compound several hundred feet away."[125]

The US concluded that: "certain personnel failed to comply with the rules of engagement and the law of armed conflict" but that these did not amount to a war crime.[126] A failure to comply with rules of engagement does not, in and of itself, amount to a breach of IHL.[127] However, a statement that indicates that personnel failed to comply with the law of armed conflict, raises the concern that at some stage of the targeting process there was a failure to uphold the principles of distinction,[128] proportionality,[129] or precautions.[130] In this case I would suggest that the precautionary principle had not been adequately satisfied, as the state was aware of the location of the MSF hospital, even if the individuals in the gunship were not. As such, I would contend that this incident amounts to a state liability of a breach of IHL as the processes and procedures they had in place were insufficient to comply with the protected status requirements of IHL.[131] As a result of the investigation a significant number of recommendations were made to improve processes with a "comprehensive review of the targeting process" and reinforcement of the application of the no-strike list.[132] Nonetheless, MSF called for an independent international investigation, suggesting that the attack could be determined to be a war crime.[133]

Despite an apparently detailed fact-finding investigation, MSF remained unsatisfied with the conclusions. The distrust demonstrated by MSF could be said to have developed as a result of the perceived lack of independence of the investigation, which was conducted internally by the US. As Wong reflects, the: "…investigating body operates in an environment

[125] Reuters, 'Report: Combination of Errors led to US bombing of MSF Hospital in Afghanistan' (24 November 2015) *News Week* https://www.newsweek.com/report-combination-errors-led-us-bombing-msf-hospital-afghanistan-398120 accessed 10 August 2019.
[126] US CENTCOM (n 124) 3.
[127] 2.5.1.
[128] API Art 48; 2.2.1.
[129] API Art 51(5)(b); 2.2.2.
[130] API Art 57; 2.3.
[131] 4.5.
[132] US CENTCOM (n 124) 4.
[133] Guillaume Decamme, 'MSF hospital strike was 'human error': US general' (25 November 2015) *Digital Journal* http://www.digitaljournal.com/news/world/human-technical-errors-to-blame-for-afghan-hospital-strike-nyt/article/450403 accessed 4 August 2019.

emphasising military effectiveness and often issues classified reports that cannot always be shared in full with the victims or the human rights community."[134] However, in wars like those observed in Afghanistan, Iraq and Syria, winning the hearts and minds of the population can be as important to the success of the campaign as military action and thus a lack of transparency in operations can have significant effects.

6.7 The UK Approach: The RAF's 'World Record'

The UK do not routinely publish investigation reports into civilian casualty incidents. The reasons behind this are likely two-fold. Firstly, as Schmitt suggests, the UK investigatory system is firmly embedded in criminal law enforcement[135] and thus a case needs to reach this threshold for unclassified information to become available.[136] In certain cases commissions may be established when the military justice system has been deemed to have failed. Investigations can be launched under the provisions of the Inquiries Act 2005, which enables Ministers to establish an inquiry "where it appears to him that… particular events have caused, or are capable of causing, public concern…"[137] These have included the *Baha Mousa* inquiry into the death of an Iraqi citizen whilst in British custody.[138] More latterly the Aitken report of 2011 identified systemic failures in the handling of detainees.[139] However, these inquiries were launched after the perceived failure of the military justice system to provide accountability for potential breaches of IHL.[140]

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[134] Wong (n 17) 156.
[135] See Schmitt (n 11).
[136] This is in no way a guarantee that information will become available. The author has attempted and failed to find a number of cases, not least of which was the Supreme Court Judgment on the involvement of SOCA in the Takhar incident of 2010. For more on this see Kate Clark, 'The Takhar Case: London judge dismisses claim on targeted killings' (6 February 2014) https://www.afghanistan-analysts.org/the-takhar-case-london-judge-dismisses-claim-on-targeted-killings/ accessed 8 August 2018.
[137] Inquiries Act 2005, Art 1(1)(a).
[138] For further discussion on this see, Andrew Williams, 'The Iraq abuse allegations and the limits of UK law' (2018) 3 Public Law 461.
[139] See Sir William Gage, *The Report of the Baha Mousa Inquiry* (8 September 2011) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/279192/1452_iii.pdf accessed 10 August 2019.
[140] Phil Shiner, 'The abject failure of British military justice' (2008) 74:1 Criminal Justice Matters 4.

An alternative reason for the less prolific evidence of fact-finding investigations could be a result of a smaller operational force, and coalition operations frequently seeing the US take the lead on investigations.[141] In recent years the UK has been operational in Syria and Iraq and the statistics on these operations may present a further explanation. Figures provided by the Ministry of Defence in March 2019 suggested that throughout the four years of airstrikes the RAF had killed or wounded 4,315 enemy fighters with only one civilian casualty. The British charity, Action on Armed Violence, had requested the figures from the MOD and responded with scepticism. "The RAF's claim of a ratio of one civilian casualty against 4,315 enemies must be a world record in modern conflict… it is clear far more needs to be done by the UK to improve transparency surrounding civilian casualties from airstrikes."[142] The BBC had already conducted their own investigation into RAF operations in Iraq, notably the operation to take back Mosul, and raised a number of concerns including: reports some RAF weapons malfunctioned; instances where bombs failed to detonate; and, occasions where missiles went off target.[143] These types of incident do not necessarily lead to the conclusion that civilians were harmed but it does indicate that the operation wasn't as flawless as the initial data may appear. Nonetheless, these do not automatically mean that the RAF has violated any principles of IHL, but it does call into question the thoroughness and efficacy of their battle damage assessments.

Targeting doctrine requires a battle damage assessment to be carried out as the final stage in the targeting process.[144] This stage is designed to inform the target development process again, enabling commanders to assess previous action and thus inform progress.[145] NATO defines battle damage assessments as: "the assessment of effects resulting from the

[141] For an example of this see the mistake made near *Deir al-Zor* military airfield in Syria. This involved two Australian hornets as part of a US-led operation, that was fully investigated by the US. Andrew Greene, 'RAAF fighters dropped six bombs on government forces in botched air strikes in Syria' (29 November 2016) https://www.abc.net.au/news/2016-11-30/syria-botched-air-strikes-australian-hornets/8077588 accessed 5 July 2019.
[142] Quoted in Alexandra Heal, 'RAF says it harmed just one civilian out of 4,000 enemy fighters in Iraq and Syria' (7 March 2019) *The Guardian* https://www.theguardian.com/uk-news/2019/mar/07/raf-says-it-harmed-just-one-civilian-out-of-4000-enemy-fighters-in-iraq-and-syria accessed 6 August 2019.
[143] Jonathan Beale, 'RAF strikes on IS in Iraq "may have killed civilians"' (1 May 2018) *BBC News* https://www.bbc.co.uk/news/uk-43965032 accessed 6 August 2019.
[144] 5.4.
[145] See Michael Schmitt, Jeffrey Biller, Sean C Fahey, David S Goddard & Chad Highfill, 'Joint and Combined Targeting: Structure and Process' in Jens David Ohlin, Larry May & Claire Finkelstein (eds.) *Weighing Lives in War* (OUP 2017) 303.

application of military action, either lethal or non-lethal against a military objective. It analyses and reports what has been achieved through applying a capability (lethal or non-lethal) against a target."[146] As such, in the case of an airstrike it requires assessment of the effects of the strike, considering what ordnance was used, its effects, and reviews the extent to which it has been successful. In order to maintain compliance with the IHL principles of distinction and proportionality, precautions must be taken to assess the harm that may be caused to civilians. Although IHL does not prescribe the undertaking of battle damage assessments, I would argue that, to a certain extent, they form the basis of meeting the precautionary principle of IHL.

If we view the targeting process cyclically, as in NATO doctrine, then the battle damage assessment, although conducted after an attack, actually forms the first step in the next targeting process. To assess a target initially, it is required that a commander uses all information reasonably available to him to be able to conduct an attack that is targeted at a specific military objective and minimises harm to civilians. Therefore, using the RAF airstrikes over Syria and Iraq as an example, in order for the commanders to plan their operations to minimise civilian casualties they would need to understand the effects of their previous strikes. This would give commanders the situational awareness to be able to take all feasible precautions in the methods and means of attack used in their later strikes. Given the rapid pace of operations that is not to say that a thorough investigation to the level of a criminal investigation would need to be undertaken, as this would be considered to be unreasonable.

The over-reliance on the necessity for there to be a full criminal investigation "…is to encourage the misconception that where there is no crime… there is no violation…"[147] Lattimer highlights that this could "effectively green-light a strategy of attack that may pay due attention to avoiding the commission of war crimes but nonetheless has a calamitous

[146] NATO Allied Joint Publication, *Allied Joint Doctrine for Joint Targeting AJP-3.9* (April 2016) 2-7 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/628215/20160505-nato_targeting_ajp_3_9.pdf accessed 6 August 2019.

[147] Mark Lattimer, 'The Duty to Investigate Civilian Deaths in Armed Conflict: Looking Beyond Criminal Investigations' (22 October 2018) *EJIL: Talk!* https://www.ejiltalk.org/the-duty-to-investigate-civilian-deaths-in-armed-conflict-looking-beyond-criminal-investigations/ accessed 6 August 2019.

effect on the security of civilians."[148] I would argue that a full criminal investigation is not required under IHL but that some form of assessment or review is necessary to ensure compliance with the precautionary principle. The nature of this standard is that which is reasonably available at the time and so I would suggest that battle damage assessments should be carried out in a reasonably prompt manner to ensure future attacks remain discriminate and proportionate to the overall military advantage.[149] In the example of the RAF strikes, although this was a fast-paced environment, the statistics were gathered from strikes that took place over four years. It is reported that battle damage assessments were primarily undertaken by aerial surveillance, which has its own inherent weaknesses.[150] Furthermore, the total numbers of civilian casualties during this US-led operation remain contested. British NGO, Airwars, suggests that the locally reported figure is 29,000 civilian deaths, but official coalition figures cite around 1,300.[151] These statistics, however, do not account for other civilian objects that may have been damaged as a result of an attack.

The dispute over civilian casualty numbers is a constant problem during conflict; the nature of urban and guerrilla warfare makes this even more prominent. This is as a result of the intermingling of civilians with enemy fighters and urban areas being the site of many civilian objects such as hospitals, housing, schools and infrastructure.[152] However, in the case of Syria, Iraq and Afghanistan, the NGOs who are providing civilian casualty statistics are sometimes in closer contact with the civilian population.[153] Their ground presence, and lack of military connection, can enable them to interview more witnesses and gain a different understanding of the situation than their military counterparts can. Thus, an instant dismissal of accounts other than the official military reports is misplaced. The difference can

[148] Ibid.
[149] This argument follows a similar logic to that of Rear Admiral (Ret.) James Goldrick, 'A Strategic Commander's Perspective' in David Lovell (Ed.) *Investigating Operational Incidents in a Military Context: Law, Justice, Politics* (Brill 2014) 21-29.
[150] Beale (n 143) .
[151] Alexa O'Brien, 'Where's the coverage of civilian casualties in the war on ISIS?' (22 July 2019) *Defense One* https://www.defenseone.com/ideas/2019/07/wheres-coverage-civilian-casualties-war-isis/158585/ accessed 6 August 2019.
[152] 2.5.2.
[153] For an example of this see the Afghanistan Analysts Network field work research into the Takhar incident in 2010, Kate Clark, 'The Takhar Attack' (May 20111) *Afghanistan Analysts Network* http://www.afghanistan-analysts.org/wp-content/uploads/downloads/2012/10/20110511KClark_Takhar-attack_final.pdf accessed 6 August 2019; also see Christoph Reuter, *Kunduz, 4 September 2009* (Kein & Aber 2010).

also be seen with reports from investigations conducted by bodies other than internal military investigations. The importance of the reports from NGOs is demonstrated throughout this work,[154] in the manner in which they are able to provide substantial insight into the results of attacks carried out by states. Although these NGOs may not always engage with the principles of IHL in a scholarly manner, they are able to provide information to guide academic lawyers in the manner in which IHL has seemingly been applied when states are less willing to provide a similar level of clarity.

6.8 The German Approach: Domestic Accountability

The investigations made in this thesis into the Kunduz incident[155] and that of Varvarin Bridge[156] demonstrate a notable difference in the way Germany approaches the issue of potential breaches of IHL. In both of these cases the information that was available for the analysis came from court records and their judgements, rather than from official, but redacted, military accounts or NGO and media reports, as has been seen in the US and UK. The German domestic legal system is substantially different to those present in the US and UK, and this, coupled with the history and cultural abhorrence to war, has likely created the difference we see in military jurisdiction.[157] Germany, unlike the UK and the US, does not have military justice courts and all cases are treated within the domestic courts.[158] This enables a greater degree of transparency for understanding state practice, when a case is considered to reach the standard necessary for investigation as a potential war crime.

[154] 3.3; Kate Clark (n 153) .
[155] 3.3.
[156] 4.8.
[157] The operation of the German domestic legal system is out with the scope of this work. However, for a discussion on the different ways military investigations are treated within judiciaries and how common law and civil law countries tend to vary see, Mindia Vashakmadze, *Understanding Military Justice* (2010 DCAF) https://www.dcaf.ch/sites/default/files/publications/documents/Milit.Justice_Guidebook_ENG.pdf accessed 10 August 2019.
[158] Ibid.

Germany had long avoided being involved in 'out-of-area' conflicts which only changed with the Federal Constitutional Court's judgement on the Basic Law in 1994.[159] Despite Germany sending operational troops to Afghanistan, they did not support the Iraq war, as Noetzel and Schreer reflect: "Much more doubtful is the societal dimension of strategy-making… Germany's culture of restraint *vis-à-vis* the use of force will continue to place tight political and, in turn, operational restrictions on Bundeswehr operations."[160] The recency with which Germany has become more engaged with military operations in support of their NATO allies, and the significant constraints placed upon them by the Bundestag, has led to a very different approach to military justice.[161] It is clear that, compared to their coalition partners, the Bundeswehr are under much greater restraints from their political masters. This 'culture of restraint' has led to increased focus on the transparency of operations, and thus the subsequent investigations.

The potential issue with the use of domestic, civilian courts for the application of IHL principles was highlighted in the discussion of the Kunduz case.[162] Each of the courts during the trial history for this incident took different measures to adopt and apply IHL principles within the domestic understanding of the principles. This led to, in my opinion, a misapplication in the way the proportionality principle operates within IHL which is different to that which is usual within domestic law. On the other hand, the use of domestic courts in theory lends a greater transparency and perception of accountability than can be present with internal military investigations, as has been seen in the US.

The humanitarian focus of German politics had led them to establish a war crimes unit, under the principle of universal jurisdiction, for the prosecution of violations of international criminal law. This unit was created in 2002 pursuant to the German Code of Crimes against

[159] For more on this see 1.3.9. Also, for background on the development of the German political position concerning offensive military operations see Karl-Heinz Kamp, 'The German Bundeswehr in out-of-area operations: to engage or not to engage?' (1 August 1993) *World Today.*
[160] Tim Noetzel and Benjamin Schreer, 'All the way? The evolution of German military power' (2008) 84:2 International Affairs 211, 221.
[161] For more on this see Patrick Mello, 'National restrictions in multinational military operations: A conceptual framework' (2019) 40 Contemporary Security Policy 38; DW Staff, 'Germany's non-combat caveats to be reviewed by NATO' (28 November 2006) *Deutsche Welle* https://www.dw.com/en/germanys-non-combat-caveats-to-be-reviewed-by-nato/a-2250071 accessed 7 November 2018.
[162] 3.10.

International Law. Known by the acronym ZBKV, the unit investigates and analyses information on these crimes and the Federal Prosecutor General provides legal guidance to start investigative procedures.[163] The nature of the German legal system allows for "pure universal jurisdiction"[164] so there is no requirement for a link to Germany to bring a case. Nevertheless, the law grants a broad discretion to the prosecutor to avoid an overload of cases, which has led to criticism by scholars who cite that claimants have a limited ability to question a dismissal.[165] In 2008, Amnesty International conducted a detailed investigation into the German war crimes court. The report was fairly critical of the approach taken in practice stating: "… despite the strong provisions permitting German courts to exercise universal jurisdiction over a broad range of crimes, Germany today has effectively become a safe haven from prosecution for foreigners responsible for crimes under international law committed abroad against other foreigners."[166] Therefore, despite considerable oversight, in theory, over military operations and the provision of a universal jurisdiction for war crimes, the criticisms remain.

Nevertheless, in comparison to the more secretive military justice systems operated by the US and the UK, Germany's reliance on domestic courts enables a level of transparency not seen elsewhere. I would suggest that from the perspective of IHL, the universal jurisdiction provision of the German war crimes unit is less significant for efficacy as is perhaps stated by Amnesty, in that nationality-based jurisdiction would apply for members of the Bundeswehr.[167]

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[163] *Bundeskriminalamt*, *Central Unit for the Fight against War Crimes and further Offences pursuant to the Code of Crimes against International Law (ZBKV)* (undated) https://www.bka.de/EN/OurTasks/Remit/CentralAgency/ZBKV/zbkv_node.html accessed 4 August 2019.

[164] Maria Elena Vignoli quoted in Benjamin Duerr, 'International Crimes: Spotlight on Germany's War Crimes Unit' (10 January 2019) *Justiceinfo* https://www.justiceinfo.net/en/tribunals/national-tribunals/39936-international-crimes-spotlight-on-germany-s-war-crimes-unit.html accessed 5 August 2019.

[165] See Gerhard Werle & Florian Jessberger, '*Das Völkerstrafgesetzbuch'* (2002) *Juristenzeitung* 725, 730 .

[166] Amnesty International , *Germany: End Impunity through Universal Jurisdiction,* (2008) No Safe Haven Series, http://www.iccnow.org/documents/AI_Ger.pdf accessed 4 August 2019.

[167] In accordance with IHL's obligation for states to be liable for the actions of the members of their armed forces, API Art 91; Also see Frits Kalshoven. 'State Responsibility for Warlike Acts of the Armed Forces: From Article 3 of Hague Convention IV of 1907 to Article 91 of Additional Protocol I of 1977 and beyond' (1991) 40:4 The International and Comparative Law Quarterly 827.

6.9 Independence and Transparency

As these cases have highlighted, investigations that are carried out by the state responsible can often be considered to lack independence and thus are criticised on this basis. The German system of using domestic courts does appear to manage to increase the perception of independence, although Amnesty International are still somewhat critical. As one of the four principles outlined above,[168] an independent inquiry is perhaps the most controversial. The problems with independence were analysed by Wong, and she suggests modifying the US system to publish unclassified summaries of incidents, whilst supplementing this with the International Humanitarian Fact Finding Commission (IHFFC)[169] for particularly sensitive issues or those relating to the higher echelons of command.[170] Thus, by supplementing the US national investigation system with the IHFFC, increased transparency could be achieved.

The desire for transparency is largely driven by human rights advocates and the problem was succinctly outlined by Amnesty International in their report on the Kosovo conflict in 1999. Specifically, they stated that: "…the confidential nature of any investigation and the reported absence of measures against any NATO personnel cast doubt on NATO's commitment to getting to the bottom of specific incidents in accordance with international law."[171] A decade later and Human Rights Watch, speaking of Operation Cast Lead in Gaza, asserted that "…more than one year after the conflict, neither side has taken adequate measures to investigate serious violations or to punish perpetrators of war crimes."[172] The issue of transparency continues and has more recently been attached to the subject of armed drones (unmanned aerial vehicles).

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[168] 6.4.
[169] Established by API, for more see https://www.ihffc.org/index.asp?Language=EN&page=home accessed 10 July 2019 .
[170] Wong (n 17) 167.
[171] Amnesty International, *FRY/NATO: "Collateral Damage" or Unlawful Killings? Violation of the Laws of War by NATO during Operation Allied Force,* (5 June 2000) 25 https://www.amnesty.org/en/documents/eur70/018/2000/en/ accessed 2 April 2019.
[172] Human Rights Watch, *Turning a Blind Eye: Impunity for Laws-of-War Violations during the Gaza War,* (2010) https://www.hrw.org/report/2010/04/11/turning-blind-eye/impunity-laws-war-violations-during-gaza-war accessed 5 August 2019.

In 2013, the UN Special Rapporteur on extrajudicial, summary or arbitrary executions published a report into the use of unmanned aerial vehicles for targeted operations.[173] The report indicated that "nations have an obligation to publish details such as their targeting criteria, civilian casualties and investigations."[174] Furthermore it stated that "…operators must not be placed within a chain of command that requires them to report within institutions that are unable to disclose their operations."[175] This is, in effect, suggesting that the CIA's operation of drones for covert targeting operations is outside of international law.[176] The data surrounding air strikes and drone operations was published by the US from around September 2016 until October 2017, when it abruptly stopped before restarting again late in 2018.[177] However, once the data started appearing again significant pieces of information had been removed. A spokesperson from the NATO mission in Afghanistan is quoted as saying: "We determined we were giving the enemy too much detail with the information we were providing in the strike reports. The strikes by themselves are stand-alone events, but together across time tell a comprehensive story of our targeting methodology which we prefer not provide to our adversaries."[178]

The issue of operational security is at the heart of targeting methodologies, and thus transparency is often displaced by the desire to keep operations secret. However, as Smithberger, a national security expert for Project on Government Oversight,[179] says: "Operational security is important, but so is democratic accountability. Without more

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[173] UN General Assembly, *Extrajudicial, summary or arbitrary executions: Report of the Special Rapporteur on extrajudicial, summary or arbitrary executions, Christof Heyns.* (13 September 2013) UN Doc. A/68/382 http://www.justsecurity.org/wp-content/uploads/2013/10/UN-Special-Rapporteur-Extrajudicial-Christof-Heyns-Report-Drones.pdf accessed 6 August 2019.

[174] Alice Ross, 'UN Expert calls for increased transparency over armed drones' (17 October 2013) *The Bureau of Investigative Journalism* https://www.thebureauinvestigates.com/stories/2013-10-17/un-expert-calls-for-increased-transparency-over-armed-drones accessed 6 August 2019.

[175] UNGA, Extrajudicial (n 173) C.112.

[176] Due to the fact that the CIA operate covertly under strict classification and outside of the military command structure. See CIA Organizational Structure at https://www.cia.gov/about-cia/leadership/cia-organization-chart.html accessed 14 July 2019.

[177] Abigail Fielding-Smith and Jessica Purkiss, 'US ends blackout on Afghan air strike data' (5 October 2018) *The Bureau of Investigative Journalism* https://www.thebureauinvestigates.com/stories/2018-10-05/us-resumes-release-of-afghan-strike-data accessed 6 August 2019.

[178] Quoted in Jessica Purkiss and Abigail Fielding-Smith, 'US air strike data from Afghanistan takes step back in transparency' (20 December 2018) *The Bureau of Investigative Journalism* https://www.thebureauinvestigates.com/stories/2018-12-20/us-strike-data-step-back-transparency accessed 6 August 2019.

[179] A US NGO, for more on their work see https://www.pogo.org accessed 12 July 2019.

transparency and oversight, we can't have an informed conversation about what we are achieving or failing to accomplish."[180] I would further Smithberger's statement and suggest that this also means that any attempt to objectively analyse state practice for a development of customary IHL will be inherently weakened by the lack of information available. It is understandable that states need to maintain certain aspects of their operations hidden from public view, but the lack of transparency afforded may create more issues. This was shown by the UK RAF's claims regarding their operations to target ISIS fighters in Iraq and Syria.

The results of an investigation into any potential breach of IHL or an instance of mistaken targeting will vary significantly dependent on the body who is conducting it, and so can always be challenged on this basis. The reports carried out by NGOs, investigative journalists and sometimes domestic courts are the ones that are readily available whereas frequently the facts of the incident can be clouded in mystery and hidden behind the veil of national security.

6.10 The Disparity of Difference

An early example of the different reporting and investigation standards can be demonstrated by looking back to the incident involving the Iranian civilian airliner over the Persian Gulf in 1988.[181] The flight itself was an Iran Air Airbus A300, flight IR655. There are two reports available investigating the actions that caused this airliner to be shot down by a missile launched by the Aegis semi-automatic defence system on the USS Vincennes, which was in an engagement with Iranian vessels. These reports have been released by the US Judge Advocate General's Corps (JAG) and, as it was a civilian airliner, the International Civil Aviation Organization (ICAO).

[180] Purkiss & Fielding-Smith (n 177) .
[181] 6.5.1.

There are strong parallels between the Chinese Embassy bombing, which would come over a decade later, and the shooting down of IR655. Most notably, both of the incidents would be declared an accident by the US, but, in both cases, governments of those injured would still remain distrustful of the US.[182] In the case of flight IR655, this was perhaps unaided by the official JAG report which stated: "Given the fact that the surface engagement was initiated by the Iranians, I believe that the actions of Iran were the proximate cause of this accident and would argue that Iran must bear the principal responsibility for the tragedy."[183] Perhaps as a result of those claims, Iran instigated proceedings at the International Court of Justice in May 1989. These were made under the auspices of a claim against the US for a violation of the Montreal Convention[184] and for compensation.[185] These claims were eventually settled in February 1996 with the US agreeing to pay $131.8m to Iran as compensation.[186]

Flight IR655 left Bandar Abbas airfield at 0647 on 3 July 1988, bound for Dubai. On board the flight were 274 passengers and 16 crew, all civilians with no report indicating or implying that the flight was anything other than what it appeared. At 0654 the aircraft was destroyed by two surface-to-air missiles despatched by the USS Vincennes, which was stationed in the Strait of Hormuz; all on board flight IR655 were killed. From a legal perspective there is no doubt that the civilian airliner would be protected under IHL,[187] but the crew onboard the Vincennes had identified the aircraft as a military jet[188] with hostile intent, and thus it had been targeted and destroyed.[189]

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[182] See Max Fisher, 'The Forgotten Story of Iran Air Flight 655' (17 October 2013) *The Washington Post.*
[183] US Joint Advocate General Corps. *Formal Investigation into the Circumstances Surrounding the Downing of Iran Air Flight 655 on 3 July 1988* (19 August 1988) [JAG Report] 3 https://www.jag.navy.mil/library/investigations/VINCENNES%20INV.pdf accessed 22 July 2019.
[184] The Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation (23 September 1971, entered into force 26 January 1973) [the Montreal Convention].
[185] See ICJ, *Application Instituting Proceedings: Aerial Incident 3 July 1988 (Islamic Republic of Iran v United States of America)* (17 May 1989 https://www.icj-cij.org/files/case-related/79/6623.pdf accessed 7 July 2019.
[186] See ICJ, *Settlement Agreement on the Case Concerning the Aerial Incident of 3 July 1988 before the International Court of Justice*, (9 February 1996) https://www.icj-cij.org/files/case-related/79/11131.pdf accessed 7 July 2019.
[187] See Wolff Heintschel von Heinegg 'The Law of Armed Conflict at Sea' in Dieter Fleck (ed.) *The Handbook of International Humanitarian Law* (3rd edn. OUP 2013) 499.
[188] Potentially an F14, as identified by the JAG Report (n 183).
[189] International Civil Aviation Organisation, *Airbus A300B2, EP-IBU, accident in the vicinity of Qeshm Island, Islamic Republic of Iran on 3 July 1988*, [ICAO Report] ICAO Circular 260-AN/154, 3.2.1.

The issue then was how could something so innocuous as a scheduled airliner, which would be considerably bigger than a fighter, be misidentified by the US Navy, on a ship nicknamed 'Roboship',[190] as an F14 military jet? The US JAG report of 19 August 1988 listed seven problems that caused the mistake to happen. These were that: the Vincennes was engaged with Iranian surface vessels; IR655 had taken off from a military airfield; the 'contact' (IR655) was heading directly toward the Vincennes; the aircraft radiated no known signature; warnings went unanswered; time pressures; and the final one, which for the purposes of IHL is most significant. This said that the Captain "…had every right to suspect that the contact was related to his engagement with the IRGC boats – until proved otherwise. The proof never came."[191] The JAG report highlights that the Captain of the Vincennes had operated within his rules of engagement and given the information available to him at the time "…reasonable minds will conclude that the Commanding Officer did what his nation expected of him in the defense of his ship and crew. This regrettable accident, a by-product of the Iran-Iraq war, was not the result of culpable conduct onboard Vincennes."[192] Furthermore, the lack of culpability by the crew onboard the Vincennes does not automatically dismiss the responsibility held by the state for breaches of IHL.[193]

The rules of engagement however were criticised by the ICAO investigation. Although civil aviation pilots would not routinely be given rules of engagement per se, they are issued with NOTAMS, which are Notices to Airmen.[194] These advised the pilots of the activity in the Gulf and the due precautions which should be taken by them when transiting this area. The ICAO investigation concluded that the "full implications"[195] of the rules of engagement operated by the US warships in the area were not made clear. "It was not specified what was considered to be 'operating in a threatening manner', what distance was considered 'well clear of United States warships', and what was meant by 'could place the aircraft at

[190] PW Singer (n 8).
[191] JAG Report (n 183) 6.
[192] JAG Report (n 183) Preamble, 7.
[193] Mark McMahon, 'Laws of War' in Samantha Besson, and John Tasioulas (eds.) *The Philosophy of International Law* (OUP 2010).
[194] For an explanation of these see National Air Traffic Services, Aeronautical Information Services at http://www.nats-uk.ead-it.com/public/index.php%3Foption=com_content&task=blogcategory&id=178&Itemid=289.html accessed 10 August 2019.
[195] ICAO Report (n 189) 2.2.5.

risk'"[196] In review of the non-redacted parts of the rules of engagement that are available in the JAG report I would go so far as saying that the rules of engagement were actually unlawful under IHL.

This assertion is made on the basis that the first provision cited for air traffic is: "All tracks originating in Iran will be identified as 'unknown assumed enemy.'"[197] Granted it later states that positive identification is mandatory before engaging an aircraft, but allows that aircraft "either demonstrating hostile intent or committing a hostile act" are exceptions to that rule.[198] These rules of engagement are contrary to the provisions of IHL, that in cases of doubt a person or object should be at all times assumed civilian in nature.[199] These rules of engagement have turned that on its head, and as such have created additional risk to civilian activity in the area. It should be noted however, that the US is not a party to API and as such is only bound by the principles that have become developed as custom. They state that in cases of doubt: "… commanders and other decision-makers must make the decision in good faith based on the information available to them in light of the circumstances ruling at the time."[200] Nevertheless, I would argue that to assume that an object or individual is hostile until proven otherwise, places the burden too far in the opposite direction and would fail to meet the precautionary principle.[201] I would further argue that IHL protects civilians and civilian objects, until such a time as a result of their actions,[202] nature, purpose or use they lose their protection under IHL and become targetable.[203] Therefore, by attributing all objects as military is counter to the dictates of IHL and can increase risk to civilians. Due to the rules of engagement in place at the time of the IR655 flight, every civilian aircraft that left Bandar Abbas was treated as hostile until it was confirmed as

[196] ICAO Report (n 189) 2.2.5.
[197] JAG Report (n 183) Part III, C, 3, c(1).
[198] JAG Report (n 183) Part III, C, 3, c(3).
[199] API Art. 50(1).
[200] US Department of Defense, *Law of War Manual,* 5.4.3.2 available at (June 2015, updated December 2016) https://dod.defense.gov/Portals/1/Documents/pubs/DoD%20Law%20of%20War%20Manual%20-%20June%202015%20Updated%20Dec%202016.pdf?ver=2016-12-13-172036-190 accessed 2 September 2017.
[201] API Art. 57; 2.3.
[202] By directly participating in hostilities or by being a member of an organised armed group 2.2.1.1.
[203] API Art 52(2); 2.2.1.2.

civilian, which could have furthered the misperception that appears to have happened in this tragic case.

This misperception was likely aggravated by the automated Aegis system that the Vincennes was operating. This missile defence system was able to operate in several 'modes' including fully automatic, however at the time of the incident it was operating in a semi-autonomous manner, requiring the crew to make the decision to fire.[204] The Aegis computer system had registered the airliner with an icon identical to the enemy fighter jets, and was showing as 'unknown enemy', therefore, as Singer comments: "Even though the hard data was telling the crew that the plane wasn't a fighter jet, they trusted what the [Aegis] computer was telling them more."[205] Nevertheless, the system itself was operating properly as programmed, and after the fact the data was able to demonstrate just how confused the crew had become.[206] This was such that the US DoD concluded that "combat induced stress on personnel may have played a significant role in this incident" and so they recommended study into "stress factors impacting on personnel in modern warships with highly sophisticated command, control, communications and intelligence systems, such as Aegis."[207] As such, although the system was working perfectly, and was not operating autonomously, the decision to fire was likely as a result of competing information, and an over-reliance on the technical information portrayed by the Aegis system, which itself was portraying conflicting information.

This incident again demonstrates that an over-reliance on technology can lead to mistakes. Once the information relied upon appears to come from a reliable technological source it is lent credibility that in the 'fog of war' can be compelling. This incident also highlights how two different investigatory bodies can treat the same incident so differently. ICAO make no attempt to interpret international law as they are primarily concerned with reaffirming "the fundamental principle of general international law that states must refrain from resorting to

[204] PW Singer (n 8) 124.
[205] PW Singer (n 8) 125.
[206] JAG Report (n 183) Preamble, 9.
[207] JAG Report (n 183) Part V, A, 2 .

the use of weapons against civil aircraft."[208] Their investigation was conducted as a fact-finding mission. It was intended to establish the root causes of the incident from a safety perspective to prevent reoccurrence. In this case it could be argued that there is none more independent than ICAO, given their civilian and international status. Furthermore, they have no vested interests in either the US or the Iranian side of the story; their primary objective is to control and maintain international aviation safety. Their report has also given this highly contentious situation a level of transparency that perhaps would not usually be demonstrated by the military.

6.11 Alternative Approaches

The contra argument to transparency in the investigation process is highlighted by Lord Justice Moses of the UK Court of Appeal who said: "…what is described as 'judicial creep' … threatens the ability of the armed forces to exercise that essence of professional military skill, the ability to act with flexibility and instinct within the framework of a superior commander's intent."[209] Nevertheless, this comment should not be taken out of context. It is made in relation to the increasing judicial involvement of the ECtHR into the way in which investigations are undertaken[210] rather than as a restriction on transparency *per se*.

McLaughlin suggests that a solution to the demands for transparency, whilst still maintaining an adequate balance of privacy and integrity, could be achieved through the use of an independent guarantor: "…someone or some agency that is not of the military, perhaps not even of the State, who is publicly recognized as an agent who has nothing to gain or lose by standing up during and after an investigation process to confirm, or

[208] ICAO, *Observations of the International Civil Aviation Organisation* (4 December 1992) Attachment B, 6 https://www.icj-cij.org/files/case-related/79/9699.pdf accessed 7 August 2019.
[209] Thomas Tugendhat and Laura Croft, 'The Fog of Law: An introduction to the legal erosion of British fighting power' (2013) *Policy Exchange*, 7 https://policyexchange.org.uk/wp-content/uploads/2016/09/the-fog-of-law.pdf accessed 10 August 2019.
[210] See *Al-Jedda v UK* App no 27021/08 (ECtHR, 7 July 2011); and *Al-Skeini* (n 93).

otherwise, that it has been properly conducted."[211] I would suggest that whilst this seems like a sensible and pragmatic approach it prompts the question of who this could be.

It has already been demonstrated that the use of human rights bodies can be controversial, and result in a differing standard than that which would normally be applied by IHL.[212] Nonetheless, as Hampson states: "If implemented appropriately, scrutiny by human rights bodies is not something that the armed forces should fear."[213] She continues by stating that: "…it is essential that human rights bodies address situations of armed conflict in a manner that is fully cognisant of the reality of armed conflict."[214] It is this second point that I contend the UN HRC did not fully achieve when investigating the Gaza Conflict, in that they took a view more normalised to human rights obligations than that of IHL.[215] Therefore, although human rights bodies and organs of the UN could fulfil a role that is perceptibly independent from states, they need to be able to appreciate the unique nature of IHL, and its significant operational differences from human rights law.

6.12 Conclusion

This chapter has outlined the considered requirements for operational incident investigations from both the study of IHL and international human rights laws. It is clear that investigations must be carried out for incidents in which there is potential for a grave breach of IHL or for claims of a war crime. However, beyond this the agreed upon standards are somewhat unclear. I would argue that all potential violations of IHL should be investigated and contend that in the case of civilian casualties it is impliedly required that some form of battle damage assessment is carried out. Without any form of post-attack review it will be

[211] Rob McLaughlin, 'The Emerging Paradigm for Operational Incident Investigation' in David Lovell (ed.) *Investigating Operational Incidents in a Military Context: Law, Justice, Politics* (Brill 2014) 215.
[212] 5.5.
[213] Françoise Hampson, 'ESIL- International Human Rights Law Symposium: 'Operationalising' the Relationship Between the Law of Armed Conflict and International Human Rights Law' (11 February 2016) *EJIL: Talk!* https://www.ejiltalk.org/esil-international-human-rights-law-symposium-operationalising-the-relationship-between-the-law-of-armed-conflict-and-international-human-rights-law/#more-14050 accessed 4 August 2019.
[214] Hampson, Ibid.
[215] 5.5.

difficult for a commander to justify further strikes without awareness of the limitations of the information gained from previous activity. It is my contention that this is how the precautionary principle is able to bring operational effect to maintaining compliance with the principles of distinction and proportionality.

The different systems outlined within this chapter highlight how coalition partners can have a significantly varied approach to conducting fact finding investigations into their militaries. This once again creates asymmetry in warfare, particularly for an individual who has been caught in the crossfire of conflict. In these circumstances it would depend on which state took responsibility for the incident as to how and when the results of the investigation may be known. This would appear to be in direct contravention of the human rights principles that provide for clarity for family members, and also could raise a query under IHL for the promotion of minimising the harm to civilians.

To be able to establish if an intelligence standard has developed further in relation to modern warfare and technological developments, it is important to be able to analyse recent state practice, to establish if this is a developing legal norm. This is only possible if there is sufficient information available to external bodies to conduct such objective analysis. Although the calls for transparency and independent oversight primarily come from NGOs and human rights campaigners, I argue that transparency is required to be able to establish substantive developments in customary IHL. This argument does not root in a humanitarian agenda; it primarily concerns the importance of clarity for law in the complex situations created by modern warfare.

Chapter Seven

Conclusion

7.1 Aims and Scope

The aim of this research project was to attempt to establish if an intelligence standard had been developed under IHL for targeting given the significant advances made in technology for surveillance in the intervening decades since the ratification of the Additional Protocols. The project adopted a methodology that took specific instances of mistaken targeting in a number of conflicts and endeavoured to analyse the state rationale for intelligence operations for targeting. The project worked primarily with practice from three states: the US, the UK and Germany, in order to demonstrate how their differences may become problematic for an understanding of any intelligence standard.

The main challenge presented by this project was the tremendous secrecy surrounding targeting protocols and intelligence operations during conflicts. This has become a key part of the project and I have highlighted the problems presented for external analysis of legal development in this area. The nature of transparency forms the heart of the final chapter of this work which demonstrates the varied approaches taken by states in their investigations. This also presents the significant role taken by human rights bodies in the growth of standards for investigations, and the conflict this can pose for military practitioners.

This research has been conducted during a time in which there are considerable scholarly discussions over the nature and role of autonomous systems for military use during armed conflict.[216] The developments of technology are far outpacing the ability of law to react to the changing nature of warfare. The importance of this is due to the increasing discussions over autonomous weapons systems, and autonomous military systems in general. There are a number of scholars who have looked at the compliance of autonomous systems with IHL. As Boothby suggests: "…if it is possible at the planning stage to take precautions in attack, which will remain sufficiently reliable throughout the period that the autonomous platform

[216] 4.3.

is programmed to search for its target, this will in principle be a sufficient discharge of the precautions obligations."[217] However, even if this is correct, I would argue that this presents an enormous 'if'; as examples such as the Grdelica bridge case show, the unexpected is a continuous problem.

This project is intended to clarify the method by which existing legal principles have been adapted by states for use in this rapidly changing space. It emphasises the significant problems this could cause for discussions over autonomy when the previous standards have yet to be agreed upon. Furthermore, the work shows how asymmetry has been created in an area of law that has traditionally been considered symmetrical in application.[218]

7.2 Research Overview

Initially, it was important to establish what legal obligations were developed from IHL for the practice of targeting. It was here that the concept of 'all feasible precautions' was analysed in detail. This outlined state practice and looked at the temporal scope of the obligation. I argued that a precautionary principle is an obligation that is present in all forms of warfare and that this standard was at the very least one of 'constant care.' I raised the point that in a situation where a state has effective control[219] over the battlefield then, perhaps, the precautionary principle would require a greater degree of care than in a rapidly evolving situation.

Further complexity has been added to customary and treaty law through military doctrine. The role and purpose of rules of engagement, and the standard developed therein, was assessed. Although these are not intended to be considered as law, they provide the operationalisation of IHL principles and, I argue, are important to appreciate a state's

[217] B Boothby, 'How far will the law allow unmanned targeting to go?' in Dan Saxon (eds.) *International Humanitarian Law and the Changing Technology of War* (Brill 2014) 58 .
[218] Mark McMahon, 'Laws of War' in Samantha Besson, and John Tasioulas (eds.) *The Philosophy of International Law* (OUP 2010).
[219] *Prosecutor v Dudko Tadić* (Trial Judgment) ICTY-94-1-T (7 May 1997); *Republic of Nicaragua v United States (Nicaragua Case)* [1986] ICJ 14, 27 April 1986; Article 28 of The Rome Statute of the International Criminal Court 1998.

understanding of its obligations. The concept of 'positive identification' is very significant for the purpose of this project and it was explored in depth. I have argued that the way this has been formulated normatively increases the requirements for verification on the battlefield and pushes it closer to an international human rights standard than that of IHL. I suggest that the way these standards have been developed would indicate that IHL may be better constructed to recognise the difference between peacekeeping and stability missions compared to major combat, rather than the current delineation between international and non-international conflicts.

Once the requirements of IHL were established these were applied to the case study of the incident in Kunduz, Afghanistan during 2009. This case provided a framework to explore a number of the issues that this work was intended to highlight. It showed that different states have both varied treaty obligations and contrasting understanding of IHL obligations. I was able to highlight how a lack of transparency was present in conducting case studies of this nature and how that can obfuscate the development of custom through state practice.

The Kunduz case was particularly significant, not only because a large number of civilians were mistakenly killed, but also because it involved German military forces outside of Europe. For Germany operations in Afghanistan were highly contentious and so when this incident happened it was very well publicised. Furthermore, it led to a high-profile case at the Federal Constitutional Court, which enabled a greater amount of detail to be obtained than would usually be the case in the UK or the US.

Despite that I argue that the way in which IHL principles were applied by the German domestic courts was at odds with the way the principles are developed and understood by IHL practitioners. Notably the continuing obligation to take precautions requires that at any point the decision could be taken to cancel or suspend the attack if the presence of civilians becomes known. It obliges a position of continuous diligence throughout the process, and as I argue later, this continues after the attack as well.

Kunduz was also significant for the claims made by the ICRC and NATO that IHL principles had been breached in the attack. NATO reports indicate that they do not consider it

sufficient to rely on one source of human intelligence for an attack. This indicates that there is a quantitive standard that is expected to be met by NATO forces during targeting. I argue given the timeframe available to the commander in this situation, and the potential for additional support from allies or headquarters, he was required to seek these even if they proved to be unavailable. I contend that the precautionary principle requires commanders to be proactive in their attempts to obtain information prior to, during and post-attacks to ensure that they have done everything 'feasible' in the circumstances at the time. The relationship of allies within a coalition was significant for Kunduz as it was argued that the commander was unwilling to trust his US peers. Therefore, the work next focussed on the nature of technological asymmetry and coalition operations.

I demonstrated that technology for intelligence, surveillance and reconnaissance has increased states' ability to have real-time communications during conflict. However, this has not developed equally across all states. Each state adopts its own military requirements and individual objectives and thus disparity of arms has been created. I used the development of precision-guided munitions to frame the discussion on surveillance technology as this has largely been agreed upon.

The Kosovan conflict highlighted just how valuable and effective precision-guided munitions could be and so gave rise to the argument that they should always be used, particularly in urban areas. I conclude that precision-guided munitions are not required where they are not available, but, if an attack without precision-guided munitions would cause damage that is excessive in relation to the direct and concrete military advantage then it cannot be undertaken. Therefore, this would present an advantage to a more advanced and well-funded military, such as the US, because they would have a greater range of possibilities presented to them. Furthermore, this argument can be extended to cover the technology available for intelligence surveillance and reconnaissance.

Although states are not obliged to invest in military technology, a state that does not have access to a certain level of intelligence information may not carry out an attack. This could therefore restrict the operations of some parties to a conflict who may have lesser capabilities than the US. However, the problem with this argument is judging what the

benchmark standard is considered to be. I would argue that IHL is designed to be a balance between military necessity and humanity. Therefore, IHL should never be understood as accepting the lowest common denominator. I would argue then that IHL and intelligence standards should be viewed as a sliding scale that should be aspirational, so that all states are able to achieve a similar level of compliance. It is likely that as a result of this technological disparity that any development would remain as 'soft law'. Nonetheless, given the considerable reliance placed on manuals such as those established at San Remo[220] and Tallinn,[221] a similar manual on the proposed 'intelligence standard' could present a valuable development in IHL.

This advancement of technology at a differing rate has added to the difficulties faced by coalition partners. There are already considerable difficulties for allied forces in coalitions presented by the different understandings of their legal obligations as well as political rationale. Technology has created further issues whereby separate parties may have diverse levels of situational awareness and real-time knowledge. I argue that the precautionary principle in IHL has been required to develop to harmonise with these technological advances such that it now requires a higher standard from states with greater technical capabilities. This divergence of standards raises an issue for coalition forces. I explored how this may affect different states forces, and how the responsibility for intelligence may present domestic legal challenges. However, this understanding of the NATO alliance still does not assist in establishing whether the standard is such that a more advanced member state is obliged to provide intelligence in support of their coalition partners or share any that they have obtained.

The advances of technology for intelligence, surveillance and reconnaissance are at the heart of this project and these can be to the advantage or detriment of civilians caught up in conflict. The problem of identification was demonstrated by reference to the difficulties faced by forces during the conflict in Afghanistan. It is no accident that the country has

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[221] Michael Schmitt (ed.) *Tallinn Manual 2.0 on the International Law Applicable to Cyber Operations* (CUP 2017) Prepared by the International Group of Experts at the invitation of the NATO Cooperative Cyber Defence Centre of Excellence

become known as the ‘graveyard of empires’ and identifying the enemy in this terrain is a considerable challenge. However, the technologically superior US-led force had access to the world’s most advanced reconnaissance systems. It may be thought then that the intelligence would be simple to obtain and operate upon. However, the overreliance on technology can be just as devastating for civilians in a conflict. The incident of Takhar demonstrates this well and suggests that new targeting methodologies need to remain within the overall context to stay relevant as without such these can lead to devastating results.

The quality of surveillance was also discussed through the criticisms faced by the Israelis in 2014. This presented an opportunity to attempt to understand if a quality quantum had been created within IHL, which appears to be a position that the UN HRC would welcome. However, I argue that this is not present within the feasible precautions standard of IHL. I suggest that a sliding scale of intelligence requirements is created by the caveat present in IHL requiring that decisions are judged based on the ‘circumstances prevailing at the time’. However, this standard lacks clarity and has led to a mixed approach within investigations.

The final chapter covers the thorny issue of transparency and investigations into operational incidents. The requirement to conduct investigations into incidents during targeting is only clear in IHL where those incidents would reach the threshold of grave breaches of IHL or war crimes. Beyond that IHL is purportedly silent on the requirement to conduct them into all incidents of civilian casualties. My argument is that in order for states to comply with the three principles of distinction, proportionality and precautions incidents of civilian casualties should be investigated. It is my contention that the duty to investigate civilian casualties stems from the requirement to do everything feasible to assess collateral damage as part of the battle damage assessment under targeting doctrine. The issue here is whether this obligates states to have ‘boots on the ground’ to conduct these investigations or if aerial surveillance is sufficient. I suggest that it is once again what is reasonable for the commander to undertake in the circumstances at the time but should be carried out relatively promptly to inform further attacks.

It is understandable that certain information would need to remain out of the public purview, but this is approached very differently by the three states in this project. I argue that a lack of perceived independence within investigations is one of the biggest challenges faced by states and undermines efforts to respond to those affected by the conflict. Furthermore, the different approaches taken by states can create a new level of uncertainty and asymmetry that can appear to be in contravention of human rights principles seeking to provide clarity for family members.

My overarching argument is that the problem with a lack of transparency and independent oversight prevents objective analysis and thus obfuscates any developments within state practice. The argument is concerned with the importance of clarity for law in a complex situation such as modern warfare, with the inherent increase in risks for civilians with conflict taking place in urban environments.

7.3 Further Research

The purpose of this research project was to establish if there was an agreed upon intelligence standard for verification under IHL. During the time it has taken to undertake this work technology has advanced further, as a recent article highlights: "The US Army wants to build smart, cannon-fired missiles that will use AI to select their targets, out of reach of human oversight."[222] Whether they will actually achieve this scientific endeavour remains to be seen, however it is clear that demands for autonomy remain high. Furthermore, the nature of conflict has potentially altered once again with peace talks underway in Afghanistan[223] and the threat of war with Iran on the horizon.[224] Despite the

[222] David Hambling, 'US Army is developing AI missiles that find their own targets' (19 August 2019) *The New Scientist* https://www.newscientist.com/article/2212982-the-us-army-is-developing-ai-missiles-that-find-their-own-targets/ accessed 26 August 2019.
[223] Simon Tisdall, 'Donald Trump's "peace agreement" is a betrayal of Afghanistan and its people' (19 August 2019) *The Guardian* https://www.theguardian.com/commentisfree/2019/aug/19/trump-peace-plan-betrayal-afghanistan accessed 26 August 2019.
[224] Jon Gambrell, Josef Federman & Zeina Karam, 'Drone war takes flight, raising stakes in Iran, US tensions' (25 August 2019) *AP News* https://www.apnews.com/0f9be65b6ea54fab83d01b959283fcf3 accessed 26 August 2019.

changing nature of global politics, it does seem clear that conflict will continue and so the demands for accurate and reliable compliance with IHL are as great as ever.

In order for autonomous systems to be able to comply with IHL principles it is crucial that we can provide a version of the legal obligations that can be programmed into computer systems. Furthermore, the reliability of these systems and the persons responsible for their development, production and operation need to be clear what these obligations require.

Given this I would suggest that research should be furthered into the technological implications for intelligence standards under IHL by looking at the role algorithms take in making decisions. Although it is presently accepted that autonomous systems will remain compliant with IHL by having a 'man-in-the-loop,' my concern is that this 'man-in-the-loop' is being provided with intelligence information that has been analysed and filtered by algorithm, thus potentially distorting situational awareness. Furthermore, I believe that the problem of deception within the intelligence cycle is a potentially significant problem that could easily mislead algorithms and provide information to operators that is incorrect, whether by nefarious means or purely that which has been treated as true by the system.

7.4 Concluding Remarks

Throughout this research I have argued that a higher normative standard has come to be expected of 'all feasible precautions' than may have originally been foreseen by the drafters of the additional protocols. It is my contention that the all feasible precautions standard is customary law applicable in both international and non-international armed conflicts. I would suggest that the standard of 'reasonable certainty' created by positive identification and the intelligence communities' approach to intelligence has created a normative standard of at least two sources of intelligence. I believe that the temporal scope for the precautionary principle is one that extends from before, during and after an attack to ensure compliance with the fundamental principles of distinction and proportionality. I would suggest that some form of enquiry and assessment is required post-attack and, in the

case of unexpected or significant civilian damage, then this should be raised for thorough investigation.

I suggest that there should be greater transparency in the investigatory process for incidents during conflict to enable scholars, NGOs and civilian bodies to objectively analyse practice for consideration of developing custom. It is recognised that certain information needs to be classified to protect operational and national security, however I believe that the reports released by the US, and the approach taken by Germany, enabled a greater level of information to ensure compliance with IHL. A reluctance on the part of the military to engage with the general public can have a negative effect on perceptions, and NGOs are more likely to be critical in these cases.

There is limited certainty in war, but it is crucial for all to know the rules that should be applied, and the obligations they are required to comply with. This work has been limited by the considerable restrictions placed on operational doctrine. I would suggest that to further the development of law, and to ensure it remains relevant for today's modern battlefields, there is a substantial need for greater transparency, independence and clarity. This needs to be gained in order that we are able to regulate the operation of advanced computer systems in this already complex space.

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