

International Law Association Study Group

THE CONDUCT OF HOSTILITIES AND INTERNATIONAL HUMANITARIAN LAW

CHALLENGES OF 21ST CENTURY WARFARE

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FINAL REPORT

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General introduction: The work of the Study Group between 2012 and 2016

The Study Group on the Conduct of Hostilities in the 21st Century (hereinafter the SG) was established in 2011 and conducted its first meeting in Sofia in 2012. It conducted a workshop in Leiden in November 2013. During this workshop, three general topics were explored. These were the relationship of International Humanitarian Law (IHL) and International Human Rights Law in the conduct of military operations, technological challenges posed by new weapons systems and the function of the basic principles of IHL in the conduct of hostilities. An interim report on these topics was published and presented at the April 2014 Washington D.C. joint meeting of the ILA and the American Society of International Law. These topics were discussed further at a subsequent workshop held in Berlin at the Freie Universität in November of the same year. Attention was also devoted to the relationship of IHL with general international law and the place of IHL within the legal ‘pluriverse’ surrounding modern multinational military operations. The SG was unable to arrive at a consensus on a number of issues which arose, but the discussions were nevertheless extremely useful in highlighting some of the central questions related to the conduct of hostilities and focusing attention on the core area of the mandate; the legal challenges *within* IHL relating to the conduct of hostilities. It was decided in Berlin to refocus the work of the SG and the final report on those challenges and leave the broader questions of how IHL relates to other bodies of international law to further exploration in other forums.

Three working groups were established in Berlin to prepare working papers for the next meeting to be held in Oslo on 19-20 October 2015. Each working group had a coordinator and between 7-8 members and each of them produced a working paper for discussion at the Oslo meeting, which was hosted by the Norwegian Centre for Human Rights (University of Oslo). These three working papers were thoroughly discussed during the two-day meeting and all members subsequently had the opportunity to provide additional comments. These working papers and the subsequent comments form the basis for this final report. Working Group I focused on the issue of ‘The Military Objective’ under IHL, Working Group II on ‘Precautions in Attack’ and Working Group III on ‘Proportionality under IHL’. These three topics were unanimously determined to be core issues within IHL in relation to the

conduct of hostilities in modern warfare and each topic contained a number of sub-topics set out in the three working papers.¹ These working papers were edited and revised in consultation with the SG members by the three SG officers (Terry Gill, Chair; Robin Geiß, Rapporteur; and Robert Heinsch, Rapporteur). It is these revised and edited papers which together comprise the final report. Again, all members of the SG had the opportunity to comment on the final report.

THE MANDATE OF THE STUDY GROUP

Armed conflicts evolve dynamically and the way wars are fought has changed significantly over time. The majority of contemporary armed conflicts involve a multitude of different actors with varying military capabilities. This asymmetry creates an incentive for the inferior party to use war tactics which violate rules of international humanitarian law² in order to make up for disadvantages in matters relating to materiel, resources and fighting capacity. This links in with the observation that today's armed conflicts ('new wars') are often characterized not only by the objective to gain territory or military victory in the classical sense, but are rather often (also) about achieving independence, identity, ethnic cleansing, or spreading terror and gaining publicity. This being said, the traditional objectives of defeating enemy forces and gaining or maintaining control over territory are still highly relevant, including for non-State parties. For example, for the so-called Islamic State (IS) territorial control is a strategic priority. For State parties engaged in conflict with such groups, the objective is often to contain the threat posed by such tactics, regain and hold territories that such groups may have captured, degrade their ability to mount effective operations and ultimately to defeat them, which includes but is often not limited to a traditional military victory, whereby one side is forced to submit by superior force.

Although international humanitarian law has already adapted in certain ways, e.g. by providing rules for non-international armed conflicts (NIAC), one needs to keep in mind that IHL was originally designed to deal with interstate wars. What is more, in modern asymmetric armed conflicts the conduct of hostilities increasingly seems to take place in parallel with law enforcement operations. Thus, the central question is the extent to which the rules governing the conduct of hostilities need to be clarified, both in terms of their scope of application and their substantive aspects. Although some sub-aspects of this issue have been examined before, what is still missing is a coherent and more principled approach to the challenges of 21st century warfare. The central focus of the SG lies on the actual rules governing the conduct of hostilities, taking into account the three main areas highlighted above. In this context, it was not the aim of the SG to comprehensively deal with all of the various issues arising in relation to the conduct of hostilities, but to focus on selected issues where the SG felt that there is a need and/or potential for further clarification.

¹ Other core issues such as precautions against the effects of attacks or the prohibition of indiscriminate attacks were considered equally important by the SG but were not discussed in depth for lack of time and because of the limited page number allowed for ILA Reports.

² For coherence purposes, this report mainly uses the term International Humanitarian Law (IHL) in order to denote the area of law which deals with the rules and principles governing armed conflict. This area of law is also regularly called Law of Armed Conflict (LOAC), Law of War, or *Jus in Bello*.

Whereas API's scope of application is limited by virtue of Art. 49(3) API, the SG agreed that today it is widely accepted that the customary law rules governing the conduct of hostilities are applicable in all domains of warfare, i.e. land, air, sea as well as outer-space and cyber-space.³

Therefore, the SG decided to focus on three main issues related to the rules governing the conduct of hostilities: I. The meaning and interpretation of the term 'Military Objectives'; II. 'The Principle of Proportionality'; and III. 'Precautions'.

PART I: MILITARY OBJECTIVES⁴

OUTLINE

1. Art. 52(2) API: the two-pronged test
2. The first prong: objects making an 'effective contribution' to military action
 - 2.1. Military objectives by nature
 - 2.1.1. On Rule 23 HPCR Manual
 - 2.2. Military objectives by location
 - 2.3. Military objectives by purpose
 - 2.3.1. What evidence is needed to conclude there is intent to use an object for military purposes?
 - 2.4. Military objectives by use
 - 2.4.1. Defining the limits of the object
 - 2.4.1.1. Partial use of a building
 - 2.4.2. Dual use, simultaneous use
 - 2.4.3. Dual use of cyber-infrastructure: does Art. 52(2) API still lead to adequate results if applied in cyberspace?
 - 2.4.3.1. Is data an object?
 - 2.5. The controversy concerning the notion of 'war sustaining' objects as military objectives
 - 2.5.1. Are there any grounds for concluding that States not party to API have a greater latitude of discretion in this respect?
3. The second prong: the 'definite military advantage'
 - 3.1. The distinction between 'definite' and 'concrete and direct' military advantage

³ L. Doswald-Beck, J.M. Henckaerts, International Committee of the Red Cross, *Customary International Humanitarian Law*, (vol 1, CUP 2005) Rules 7, 8 (ICRC Customary IHL) p. xxxvi: 'The general rules contained in the manual [San Remo Manual on Naval Warfare] were nevertheless considered useful for the assessment of the customary nature of rules that apply to all types of warfare.' (emphasis added); see also M.N. Schmitt (ed), *Tallinn Manual on International Law Applicable to Cyber Warfare* (CUP 2013) (Tallinn Manual) and Program on Humanitarian Policy and Conflict Research at Harvard University, 'Manual on International Law Applicable to Air and Missile Warfare' (Harvard University 2009) <<http://ihlresearch.org/amw/HPCR%20Manual.pdf>> accessed 21 April 2017 (HPCR Manual).

⁴ This part of the report was initially drawn up by the members of working group 1 of the 2015 Oslo meeting: Gabriella Venturini (Group Coordinator), Robert Cryer, Paul Ducheine, Laurent Gisel, Wolff Heintschel von Heinegg, Oluwabunmi Lar, Gentian Zyberi. All members of the Study Group had a role in commenting upon the initial draft and the entire SG is responsible for the final version of all parts of the report.

3.2. On the implication of the Art. 8 ICC Statute

4. The relationship between Art. 23(g) HR and Art. 52(2) API
 - 4.1. The concept of 'enemy's property'
 - 4.2. Is Art. 52(2) API posterior and special?
 - 4.3. Is Art. 23(g) HR broader in scope?

1. Art. 52(2) API: the two-pronged test

Art. 52(2) API was determined to be the logical starting point for any discussion on military objectives. This is due to the fact that it not only provides the definition of a military objective in contemporary treaty law, but more especially, because of its status as customary international humanitarian law in both international armed conflicts (IAC) and non-international armed conflicts.⁵

In accordance with Art. 52(2) API the definition of military objective consists of a two-pronged test. The first prong is that by its nature, location, purpose or use, the object must make an effective contribution to military action. The second prong is that its destruction must give a definite military advantage in the circumstances ruling at the time. These two prongs are cumulative.

The two-pronged test in Art. 52(2) API has generated heated debates in the literature. One view, not shared within the SG, is that the total or partial destruction of an objective making an effective contribution to military action will ‘almost automatically’ offer a definite military advantage.⁶ According to this argument, the second part of the test would be deprived of any significant meaning.⁷ Some members of the SG were of the opinion that this could arguably apply for military objectives by ‘nature’, while other members did not share this position. However, the SG rejected such a broad interpretation for the other categories of military objectives. It is widely recognized that the second prong of the definition ‘purports to radically limit the category of legitimate objectives of military operations’.⁸

It is true that there are more situations in which both prongs are simultaneously fulfilled than situations in which only one prong is fulfilled and not the other; however, this should not lead to mistakenly assume that when one is fulfilled the other is also necessarily fulfilled.⁹ There are probably not many examples of objects that make an effective contribution to military action but the destruction of which would not offer a definite military advantage; one that may be suggested is the physical infrastructure of cyber space, such as cables and routers. The entire cyber-infrastructure is regularly used for both civilian and military purposes, hence rendering it a military objective because of its military applications. However, if a router or a cable is destroyed, cyberspace is so built that the data will simply be rerouted instantaneously and automatically through other paths within the networks. One could thus argue that such destruction would bring no military advantage, and that therefore, contrary to other dual-use objects, internet infrastructure actually does not constitute a military objective – unless it can be shown that the foreseen destruction or neutralization does indeed offer a definite military advantage because of the specific characteristic of that object or its location in the cyberspace.¹⁰

⁵ ICRC Customary IHL (n 3); Tallinn Manual (n 3) 125, Rule 38.

⁶ Y. Dinstein, *The Conduct of Hostilities under the Law of International Armed Conflict* (3rd edn, CUP 2016) 91.

⁷ R. Geiß and H. Lahmann, ‘Cyberwarfare: Applying the Principles of Distinction in an Interconnected Space’ (2012) 45(3) *Israel Law Review* 381, 388.

⁸ S. Oeter, ‘Methods and Means of Combat’ in D. Fleck (ed), *The Handbook of International Humanitarian Law* (3rd edn, OUP 2013) 115, 169.

⁹ A. Boivin, ‘The Legal Regime Applicable to Targeting Military Objectives in the Context of Contemporary Warfare’ (CUDH/UCHL, Research Paper Series / Collection des travaux de recherche No 2, 2006) 15-16.

¹⁰ M. Roscini, *Cyber Operations and the Use of Force in International Law* (OUP 2014) 190; ICRC Report, ‘International humanitarian law and the challenges of contemporary armed conflicts’ (32nd International Conference of the Red Cross and Red Crescent, Geneva, 8-10 December 2015, ICRC 2015)

The second prong of the definition requires that whether an object constitutes a military objective be assessed on a case-by-case basis in view of the circumstances ruling at the time, rather than at some hypothetical future time. Sweeping or anticipatory classification of objects would be inconsistent with this element of assessment whether an object is military and would negate the obligation to continually validate the nature of a proposed target. For example, it would be clearly contrary to IHL if all objects somewhat related to, owned by, or associated with the enemy were collectively considered military objectives. Art. 52(2) API has a clear temporal dimension, which works both ways. An object, which is normally used for civilian purposes, may turn into a military objective if it is used for military purposes. An object, which has been used militarily, becomes (again) a civilian object when the military use is abandoned. Thus, timely and reliable information of the military situation is an important element in the target selection and essential for the implementation of the principle of distinction.

2. The first prong: objects making an ‘effective contribution to military action’

The first prong of the test is in turn divided into two elements: first, the nature, location, purpose or use of the object; and second, the effective contribution of the object to military action. While ‘effective contribution to military action’ requires a proximate nexus between the object and the fighting, it is not limiting the notion of military objectives to only those of a purely ‘military nature’. Hence, targeting of objects such as fuel production facilities, bridges or the electrical grid can be permissible provided the object in question makes an effective contribution to military action.

2.1. Military objectives by nature

‘Nature’ refers to the intrinsic character of an object. For example, a weapon system or a missile launching site are objects that make an effective contribution to military action by their very nature. It is not only a question of use because the qualification of military objective by nature may remain even if the object is not actually used at the time of the attack (a military plane in a hangar remains a military objective). However, a military object which is used in such a manner that its nature can be said to have changed (e.g. a deserted military barracks housing refugees) will no longer be a military objective unless it would remain so because of purpose or location.¹¹

<<https://www.icrc.org/en/download/file/15061/32ic-report-on-ihl-and-challenges-of-armed-conflicts.pdf>>
accessed 21 April 2017 (ICRC 2015 IHL Challenges report) 42.

¹¹ Dinstein (n 6) 94.

2.1.1. On Rule 23 HPCR Manual Applicable to Air and Missile Warfare¹²

While Rule 1(y) of the HPCR Manual repeats literally the definition of military objective given by Art. 52(2) API, Rule 22 enumerates some examples of military objectives by nature (Rule 22(a)) or by location (Rule 22(b)). Rule 23 provides a further list of military objectives by nature. The Commentary to the HPCR Manual explains that in the view of the majority of the Group of Experts which drafted the HPCR Manual, ‘military objectives by nature were to be divided into two subsets. The first, reflected in Rule 22(a), consists of military objectives by nature at all times. By contrast, the second subset (reflected in Rule 23) consists of objects which become military objectives by nature only in light of the circumstances ruling at the time.’¹³ The objects listed in Rule 23 were subject to debate. Some disagreement emerged among the Group of Experts and the suggestion of a new subcategory of ‘temporary military objectives by nature’ was criticized by the ICRC.¹⁴ According to this opinion, objects falling into the categories mentioned in Rule 23 do not constitute military objectives by nature, while they may become military objectives by use or purpose, provided they fall under Art. 52(2) API definition in the circumstances ruling at the time. The members of the SG unanimously concluded that there was no basis in law for a subset of military objectives by nature in light of the circumstances ruling at the time and therefore this subset should be regarded as covered by ‘use’.

¹² Rule 23 HPCR Manual (n 3): ‘Objects which may qualify as military objectives through the definition in Rules 1 (y) and 22 (a) include, but are not limited to, factories, lines and means of communications (such as airfields, railway lines, roads, bridges and tunnels); energy producing facilities; oil storage depots; transmission facilities and equipment.’

Rule 1(y) HPCR Manual (n 3): ‘“Military objectives”, as far as objects are concerned, are 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 advantage.’

Rule 22(a) HPCR Manual (n 3): ‘In the definition of objects as military objectives (see Rule 1 (y)), the following criteria apply: (a) The ‘nature’ of an object symbolizes its fundamental character. Examples of military objectives by nature include military aircraft (including military UAV/UCAVs); military vehicles (other than medical transport); missiles and other weapons; military equipment; military fortifications, facilities and depots; warships; ministries of defence and armaments factories.’

¹³ Program on Humanitarian Policy and Conflict Research at Harvard University, ‘Commentary on Manual on International Law Applicable to Air and Missile Warfare’ (Harvard University 2010) 109 <<http://ihlresearch.org/amw/Commentary%20on%20the%20HPCR%20Manual.pdf>> accessed 21 April 2017 (HPCR Commentary).

¹⁴ The ICRC’s position on Rule 23 of the HPCR Manual states: ‘According to the ICRC, there are no subsets of military objectives by nature. In its view, it has no foundation in the existing law of international armed conflict. The Commentary to Rule 22 (a) clearly indicates that an object is a military objective by nature only if it has an ‘inherent characteristic or attribute which contributes to military action’. An ‘inherent characteristic or attribute’ cannot be conceived of on a merely temporary basis. By definition it has to be permanent. In the opinion of the ICRC, Rule 23 — for illustration purposes — includes categories of objects which, depending on the circumstances, may qualify as military objectives through use, purpose or location. In other words, every object falling into the categories mentioned in Rule 22 (a) is a military objective by nature, whereas the objects falling into the categories cited in Rule 23 may only under certain circumstances qualify as military objectives.’ See HPCR Commentary (n 13) 109, fn 261.

2.2. Military objectives by location

The generally accepted view is that ‘location’ refers to a site which is of importance for military operations, either because it is a site that must be seized or because it is important to prevent the enemy from seizing it.¹⁵ It should be noted that in the view of a number of Western States a specific area of land may be a military objective if, because of its location or other reasons specified in Art. 52(2) API, its total or partial destruction, capture or neutralization in the circumstances ruling at the time offers definite military advantage (see e.g. the declarations made on Art. 52 at the time of ratification of API by Italy, Germany, the United Kingdom, Canada, the Netherlands, New Zealand and France). This should be clearly distinguished from a situation in which several military objectives (by nature, purpose or use) are located in the same area. In any case, ‘the legality of target area bombing depends on the application of the principle of distinction and the proportionality principle’,¹⁶ but the targeting of several distinct military objectives located in the same area (as opposed to a military objective by location) is governed in particular by the prohibition of indiscriminate attacks and, in populated area, of area bombardments (Art. 51(5)(a) API).

2.3. Military objects by purpose

The SG agreed that the criterion of ‘purpose’ is concerned with the intended future use of an object.¹⁷ However, what does ‘intended future use’ encompass? Clearly, if the mere possibility that an object might be converted into some military use would be sufficient, then almost no limits in target selection would exist. As a limiting factor it has been suggested that purpose is predicated on intentions which are based on reasonable certainty and not on those figured out hypothetically in contingency plans based on a ‘worst case scenario’. In practice, military commanders rely on intelligence assessments to make such judgments. This practice corresponds to the notion of ‘reasonable certainty’ which is far more than mere speculation or conjecture.¹⁸

For military objectives by purpose, as for any other military objective, all feasible precautions must be taken to verify that the objective to be attacked is a military objective (Art. 57(1) API). While this provision in no way imposes an obligation of result, it does require that, in case of doubt, additional information must be obtained before an attack is launched.¹⁹ This obligation obviously requires that close attention be paid to the gathering, assessment and rapid circulation of information on potential targets. These activities are naturally dependent on the availability and quality of the belligerents’ technical resources.

¹⁵ Y. Sandoz, C. Swinarski and B. Zimmermann (eds), *The Commentary on the Additional Protocols of 8 June 1987* (ICRC 1987) 636, para 2021 (ICRC 1987 Commentary).

¹⁶ T. Marauhn and S. Kirchner, ‘Target Area Bombing’ in N. Ronzitti and G. Venturini (eds), *The Law of Air Warfare. Contemporary Issues* (1st edn, Eleven International 2006) 87, 102-03.

¹⁷ ICRC 1987 Commentary (n 15) 636, para 2022.

¹⁸ Dinstein (n 6) 100; W.H. Boothby, *The Law of Targeting* (OUP 2012) 103; M.N. Schmitt, ‘Targeting in Operational Law’ in T.D. Gill and D. Fleck (eds), *The Handbook of the International Law of Military Operations* (2nd edn, OUP 2015) 269, 280. A bombing raid that is carried out on the basis of mere suspicion as to the military nature of the target amounts *ipso facto* to a violation of the principle of distinction.

¹⁹ ICRC 1987 Commentary (n 15) 620, para 1952.

2.3.1. What information is needed to conclude that there is intent to use an object for military purposes?

In IHL, objective criteria must be relied upon to determine whether an object will be used in the future to make an effective contribution to the enemy's military action.

First, there must be clear indications that the enemy will use an object for military action. Second, the information must be objective and allow a reasonable commander to conclude that a specific object will, in the future, be used for contributing to the enemy's military action. This can be the case, for example, when the enemy has taken the decision to use it, but such decision has not yet been implemented.²⁰ This information must refer to a specific object (and not a class of objects), as each object must individually fulfill the definition of military objective to become a lawful target.²¹ Third, the evidence need not be 'beyond any reasonable doubt' in a criminal law sense. It suffices if a reasonable commander who bases her/his decision on the information from all sources which are available to him/her concludes that he/she has sufficiently reliable information to determine that an object will, in the future, make an effective contribution to the enemy's military action.²²

2.4. Military objectives by use

The generally accepted view is that 'use' refers to the current function of an object. This category comprises all objects directly used by the armed forces as well as those having a dual function that are of value for the civilian population, but also for the military in a manner that makes them fall under the definition of military objective.²³

2.4.1. Defining the limits of the object

An object has to be strictly defined. Each object needs to be looked at individually.²⁴ For the purpose of the notion of military objective, an object should be defined by its 'material / physical element', namely one building / a single structure for immovable objects. Whether or not a word exists that encompasses it (a school, a compound, a factory, etc.) cannot be a relevant criterion for defining an object for the rules on the conduct of hostilities. When a school (or a compound, a factory, etc.) is formed of several buildings, only the building(s) used for military purposes constitutes the specific,

²⁰ For instance, in the course of the Falklands/Malvinas conflict (1982) the British government used merchant vessels to transport troops and materiel to the islands. That was based on an Order-in-Council according to which the government was entitled to require British merchant vessels to assist in the military effort. Certainly, those 'ships taken up from trade' (STUFTs) were military objectives as soon as they were used to transport military personnel and materiel. The question is, whether and at what point in time merchant vessels could have been considered military objectives by purpose. Assuming that the Order-in-Council mentioned in a general manner that the government was entitled to require merchants vessels to assist, this would not have made them military objective by purpose unless and until it could be possible to determine (on the basis of the Order or otherwise) which specific ship(s) the government was going to require.

²¹ ICRC 1987 Commentary (n 15), para 2028.

²² ICRC Customary IHL (n 3) Rule 15.

²³ ICRC 1987 Commentary (n 15) 636, para 2023.

²⁴ For example, a school comprising of several buildings is not one object for the purpose of the definition of military objective.

distinct object which becomes a military objective(s), provided it / they meet the two-pronged test definition of Art. 52(2) API.²⁵

In reality, it might nevertheless remain difficult to draw a clear line on what is one building as opposed to two / several. Are two contiguous houses one or two buildings? To be a distinct building, does a minaret need to be separated from the rest of the mosque? Such situations can only be answered in a case-by-case analysis, and in view of the object and purpose of the rules governing the conduct of hostilities, namely to ensure respect for and protection of the civilian population and civilian objects. The delimitation of the building / structure should therefore be understood as narrowly as is reasonably possible in view of the circumstances of the case. Otherwise, buildings / structures should be considered as separate / distinct whenever reasonably possible.

2.4.1.1. Partial use of a building

Modern weapons technology will often enable the parties to an armed conflict which possessed such capabilities to target only that part of, e.g., a building that was in fact being used for military action. However, the majority of the SG took the position that if a given floor of a building can be attacked, this does not mean that only that floor is a military objective and that the remaining parts of the building remain civilian objects. When looking at one individual object partly used for military purposes, for example a multi-story building when only the roof or one apartment is used for military purposes, today's prevailing understanding of the notion of military objective is that once an object is used in such a way as to fulfill the definition of military objective, the entire object becomes a lawful target.²⁶ Some members of the SG, however, felt that to the extent a party had the capability to identify a specific portion of a building or structure as a military objective and direct an attack upon it, this would affect the classification of the other portions of the structure not being so used and result in them remaining civilian. The determination of whether an object qualifies in whole or in part as a military objective has clear implications for the prohibition of indiscriminate attacks. However, it might have less relevance for the obligation to take precautions in attack and for the prohibition of excessive collateral damage. Indeed, and while some members of the SG disagreed with this position, the majority of the SG considered the damage to the parts of the structure used for civilian purposes would in any case have to be factored into the proportionality assessment and requirement to take feasible precautions. In addition, (for proportionality) the concrete and direct military advantage would stem only from the destruction of the part used for military purposes. Furthermore, injury to civilians and damage to civilian objects located within those parts of the building that are used for civilian purposes would remain relevant even if the building has become a military objective (see below subsection 2.4.2.).

The technological capabilities of different actors are not and should not in the view of the SG be determinative of the definition of military objectives. It would run counter to the equal application of

²⁵ C. Droege, 'Get off my cloud: cyber warfare, international humanitarian law, and the protection of civilians' (2012) 94(866) *International Review of the Red Cross* 533, 562. This is not precluded by the fact that 'school' is mentioned as an object in Art. 52(3) API, as a school can well be a single building depending on the situation. Of course, when all the buildings that form the compound (or school, or factory, etc.) are used for military purposes, the entire compound (school, factory etc.) becomes a military objective.

²⁶ United States Department of the Navy, 'The Commander's Handbook on the Law of Naval Operations' (US Navy, US Marine Corps, US Coast Guard 2007) para 8.3 <http://www.jag.navy.mil/documents/NWP_1-14M_Commanders_Handbook.pdf> accessed 21 April 2017 (The Commander's Handbook); Tallinn Manual (n 3) 134-35.

IHL to all parties to an armed conflict that armed forces of technologically advanced States would come under stricter rules than those of less technologically advanced States. This is different with regard to precautions in attack, including precautions in the identification of a military objective, because of the criterion of ‘feasibility’. However, the definition of military objectives does not refer to either ‘feasibility’ or military capabilities of the respective party to the conflict.

2.4.2. Dual use, simultaneous use

The expression ‘dual use’, which is not identical to the meaning of the same term in arms control law, is commonly employed to refer to objects serving both military and civilian uses. This can be the case of an object of which distinct parts are used for military and civilian purposes respectively (see the example in 2.4.1.1 of a multi-story building in which one apartment/floor is used for military purposes). This can also be the case of an object which in its entirety simultaneously fulfills both functions (such as a single power plant providing electricity to both a military camp and a hospital). The term ‘dual use’ has no specific place within international humanitarian law, which only recognizes two categories of objects: military or civilian. However, for purposes of discussion, the term ‘dual use’ referring to a military objective which is also (simultaneously) used for civilian purposes is often used in a descriptive sense, which is the way it is used here.

As mentioned above, and provided that the military objective has been properly identified (cf. subsection 2.4.1.1. above), today’s prevailing understanding of the notion of military objective is that once an object is used in such a way as to fulfill the definition of military objective, the entire object becomes a lawful target. For the purpose of identifying whether the object fulfills the definition of military objective, it is irrelevant whether such use amounts to more than 50%. Beyond the question of the identification of the object, the principles of proportionality and precautions in attack remain obviously applicable when targeting such a dual-use object. In this context it is important to emphasize that an object used for military action qualifies as a military objective but that it still may not be attacked if collateral damage to civilians is expected to be excessive.

A problematic aspect is the (incidental) damage to that (non-separable) part of the object that remains being used for civilian purposes. A literal reading of the law could lead to the conclusion that, as the entire object has become a military objective, the destruction of the part that is not used for military purposes does not need to be factored into the proportionality assessment and precautionary measures as incidental damage.²⁷ According to Shue and Whippman, however, ‘state practice suggests that governments are uncomfortable with the notion that the civilian function of a dual-use facility can be ignored.’²⁸ The position that the destruction of the ‘civilian use’ of a dual-use object must be considered as incidental damage under the proportionality and (less often mentioned) precautions principles appears in official documents talking of dual-use objects²⁹ as well as in the doctrine³⁰, and

²⁷ W.H. Parks, ‘Asymmetries and the identification of Legitimate military objectives’ in W. Heintschel von Heinegg and V. Epping (eds), *International Humanitarian Law Facing New Challenges* (Springer Publications 2007) 65, 106.

²⁸ H. Shue and D. Whippman, ‘Limiting Attacks on Dual Use Facilities Performing Indispensable Civilian Functions’ (2002) 35(3) *Cornell International Law Journal* 559, 565.

²⁹ The Commander’s Handbook (n 26) para 8.3; C.D. Guymon (ed), ‘Digest of United States Practice in International Law’ (Office of the Legal Adviser, United States Department of State 2014) 737 <<http://m.state.gov/mc67643.htm>> accessed 21 April 2017.

³⁰ Shue and Whippman (n 28) 563; M. Sassòli and L. Cameron, ‘The Protection of Civilian Objects: Current State of the Law and Issues de lege ferenda’ in Ronzitti and Venturini (n 16) 35, 57-58; HPCR Commentary (n

the SG deemed it to be the better view while recognizing that the opposite view exists as well.³¹ Furthermore, the reverberating effects of an attack must be included in the collateral damages³² and while the destruction of a dual-use object constitutes the destruction of a military objective, the fact that the part of that military objective which was used for civilian purposes has been destroyed obviously prevents the civilians from using it, which is thus to be counted as incidental harm (see below Part II, subsection 1.1.1. on reasonably foreseeable indirect effects).

2.4.3. Dual use of cyber-infrastructure: does Art. 52(2) API still lead to adequate results if applied in cyberspace?

Although there is a growing consensus that IHL applies to cyber operations in armed conflict, the unique technological dimension of cyberspace raises the question whether the application of IHL rules can adequately meet the specific humanitarian concerns of cyber warfare. In particular, the application of the principle of distinction is problematic.³³ Since the Internet is used for both civilian and military purposes, in times of armed conflict basically every component might qualify as a military objective if its destruction offered a definite military advantage.³⁴ However, as discussed above (subsection 1.), the second prong of the definition of military objective might not be fulfilled because of the resilient character of the Internet.³⁵ Furthermore, as mentioned above (see subsection 2.4.2.), the incidental civilian harm caused by the damage to a dual-use object has to be considered, which would also apply to specific dual-use objects belonging to the cyber infrastructure. It has also to be noted that mere intrusion into a cyber system or downloading of the information resident therein do not qualify as attacks.

In any case, Art. 54 API prohibits rendering objects indispensable to the survival of the population useless, which would apply for example to attacks against the cyber infrastructure of a water network, subject to the purpose requirement of Art. 54 API.

To ensure a more comprehensive protection of cyber infrastructure and avoid the humanitarian cost of attacks against it, *de lege ferenda* alternatives could rely on Art. 56(1) API and exclude certain vital cyber infrastructure from attack because of the humanitarian consequence the attack might lead to;³⁶ or alternatively consider the whole of cyber infrastructure as an object indispensable for the survival of the population (Art. 54 API) in view of the havoc that an attack on the global cyber infrastructure as

13) 109; N. Lubell, 'Current challenges with regard to the notion of military objective – legal and operational perspectives' in E. Greppi, G.L. Beruto (eds), *Conduct of Hostilities: the Practice, the Law and the Future, Proceedings of San Remo Round Table 4-6 September 2014* (Franco Angeli 2014) 79, 84; M.N. Schmitt and E.W. Widmar, 'On Target: Precision and Balance in the Contemporary Law of Targeting' (2014) 7(3) *Journal of National Security and Policy* 379, 393.

³¹ W.H. Parks, 'Asymmetries and the identification of Legitimate military objectives' in W. Heintschel von Heinegg and V. Epping (eds), *International Humanitarian Law Facing New Challenges* (Springer Publications 2007) 65, 106.

³² Boothby (n 18) 414; ICRC 2015 IHL Challenges report (n 10) 52; Tallinn Manual (n 3) 160.

³³ Droege (n 25) 566; Geiß and Lahmann (n 7) 391.

³⁴ Droege (n 25) 562-63; Geiß and Lahmann (n 7) 384.

³⁵ See footnote 10 above and text in relation thereto. Very often there may not be a definite military advantage because the respective data can be rerouted. This, however, does not always hold true. Consider a network of a company that is not connected to the Internet and used for both civilian and military purposes. Hence, any statement on whether cyber infrastructure qualifies as a military objective should be made with great caution.

³⁶ Geiß and Lahmann (n 7) 391.

such could bring about to the food supply logistic chain in major cities; or to extend the presumption established by Art. 52(3) API to part of or the whole cyber infrastructure.

2.4.3.1. Is data an object?

As regards the on-going debate on whether the notion of ‘object’ includes data two different views were expressed in the SG.

According to the majority of the group of experts drafting the Tallinn Manual – and one body of opinion within the SG – there is, at present, not sufficient evidence that data may be considered as an object. In this context, it was opined that since data is intangible it does not qualify as an object, and certain members emphasized that the approach taken in the Tallinn Manual already stretches the law to its limits. Of course, States may, by subsequent practice or otherwise, agree that data qualify as objects.³⁷

In some literature³⁸ and in the opinion of other members of the SG this view seems to overly rely on a passage in the ICRC 1987 Commentary which is meant to distinguish the term ‘objects’ from notions like the ‘aim’ or ‘purpose’ of a military operation, not between tangible and intangible goods.³⁹ In this view the danger is that failure to view data as an object would leave without protection a whole range of civilian data, such as social security data, tax records, bank accounts, companies’ client files or election lists or records.⁴⁰ Deleting or tampering with such data could quickly bring government services and private businesses to a complete standstill. The conclusion that operations with these effects are not prohibited by IHL in today’s ever more cyber-reliant world seems difficult for those members of the SG to reconcile with the object and purpose of this body of norms.⁴¹ As a consequence, the interpretation of the term ‘object’ today, in its context and in view of the object and purpose of the rules on the conduct of hostilities, should in their view lead to the conclusion that data is an object to which the definition of military objective and the prohibition of directing attacks against civilian objects apply.⁴² Some other members of the SG pointed out, however, that this interpretation would mean that many types of cyber operations, such as intelligence and information operations which routinely alter or destroy data currently undertaken by a number of States on a regular basis, would be illegal and could potentially constitute a war crime. At present, the matter is probably unsettled in international law and the SG could reach no consensus on it as a general matter.

On the other hand, the SG as a whole agreed that the special protection afforded to certain classes of objects (medical units, cultural property, water systems, etc.) should be understood as extending to data pertaining to them and thus prohibiting operations directed at deleting, damaging, manipulating or

³⁷ Tallinn Manual (n 3) 127. In many domestic legal orders new provisions were adopted in order to characterize the theft of electricity a crime because the original rules on theft only applied to ‘objects’. See also M.N. Schmitt, ‘The notion of ‘objects’ during cyber operations: a riposte in defence of interpretive and applicative precision’ (2015) 48 Israel Law Review, 81-109.

³⁸ K. Macak, ‘Military Objectives 2.0: The Case for Interpreting Computer Data as Objects under International Humanitarian Law’ (2015) 48 Israel Law Review 55; H.H. Dinniss, *Cyber Warfare and the Laws of War* (CUP 2012) 181.

³⁹ ICRC 1987 Commentary (n 15) 634, para 2010.

⁴⁰ The commentary to Rule 38 of the Tallinn Manual explains that a minority of the international group of experts was of the opinion that, for the purposes of targeting, data *per se* should be regarded as an object. The majority characterized this position as *de lege ferenda*, Tallinn Manual (n 3) 125-34.

⁴¹ ICRC 2015 IHL Challenges report (n 10) 43. Furthermore, this would leave open the question of whether all data could be the lawful target of cyber operations, or whether another criterion exists – or should be developed – to distinguish protected data from that which could be attacked.

⁴² N. Melzer, ‘Cyberwarfare and International Law’ (UN Institute for Disarmament Research, Resources Paper 2011) 31; N. Lubell, ‘Lawful Targets in Cyber Operations – Does the Principle of Distinction Apply?’ (2013) 89 International Law Studies, US Naval War College 252, 255-56, 271.

otherwise tampering with such data.⁴³ For instance, the obligation to respect and protect medical facilities must be understood as extending to medical data stored in a hospital's network or otherwise belonging to it; they will be immune from attack or other hostile military operations because of their importance for medical treatment. Similarly, the prohibition to 'render useless' objects indispensable to the survival of the population will prohibit operations directed against the data that enable their proper functioning. A similarly special protection may apply to culturally important data.

2.5 The controversy concerning the notion of 'war sustaining' objects as military objectives

To constitute a military objective, an object must make an 'effective contribution' to 'military action'. The contribution must be directed towards the actual war-fighting capabilities of a party to the conflict. The generally accepted view is that 'to qualify as a military objective, there must exist a proximate nexus to military action (or 'war-fighting').'⁴⁴

The discussion related to 'war-sustaining' objects largely concerns the question to what extent economic targets can be the object of an attack. Until recently, the discussion was associated with the US Commander's Handbook on the Law of Naval Operations, which substitutes the words 'military action' with the formulation 'war-fighting or war-sustaining'.⁴⁵ The June 2015 US DoD Law of War Manual endorses the wording used in the CCW protocols,⁴⁶ identical to that of Art. 52(2) API, though it explains later on that 'the United States has interpreted the military objective definition to include these concepts ['war-fighting', 'war-supporting', and 'war-sustaining']'.⁴⁷ This position seems to be inspired by the experience of the American Civil War and by the practice of economic warfare in the Law of Naval Warfare and possibly the intention to apply a rather flexible standard of lawful military objectives. However, US practice is far from consistent.⁴⁸

The connection between military action and exports required to finance the war effort is too remote, as almost every civilian activity might be construed by the enemy as indirectly sustaining the war effort.⁴⁹ There is only one legal method of warfare which allows a party to an international armed conflict to 'target' the enemy's war-sustaining effort, i.e. a blockade. But even in naval warfare measures of economic warfare may only be directed against goods destined to the enemy's war fighting effort (blockade law). There is no indication in State practice that objects contributing to the

⁴³ M.N. Schmitt (ed), *Tallinn Manual 2.0 on the International Law Applicable to Cyber Operations* (2nd ed, CUP 2017) 515, Rule 132; ICRC 2015 IHL Challenges report (n 10) 43. For instance, the obligation to respect and protect medical facilities must be understood as extending to medical data stored in a hospital's network or otherwise belonging to it; they will be immune from attack or other hostile military operations because of their importance for medical treatment. Similarly, the prohibition to 'render useless' objects indispensable to the survival of the population will prohibit operations directed against the data that enable their proper functioning.

⁴⁴ Dinstein (n 6) 95-96; Schmitt (n 18) 279.

⁴⁵ The Commander's Handbook (n 26) para 8.2.

⁴⁶ US Department of Defense, 'Law of War Manual' (Office of General Counsel Department of Defense 2015) para 5.7.2 <<http://archive.defense.gov/pubs/law-of-war-manual-june-2015.pdf>> accessed 21 July 2016.

⁴⁷ *ibid* para 5.7.6.2.

⁴⁸ For instance, the US government condemned the sinking of (neutral) outbound oil tankers during the Iran-Iraq War (1980-88) as a violation of IHL although both parties to the conflict could have argued that, by destroying the oil exports, they would deprive the respective enemy of important revenues that enabled it to continue its war effort.

⁴⁹ L. Doswald-Beck (ed), *San Remo Manual on International Law Applicable to Armed Conflicts at Sea* (CUP 1995) Explanations, para 60.27; HPCR Manual (n 3) Rule 24; HPCR Commentary (n 13) 110; Tallinn Manual (n 3) 130-31, commentary on Rule 38, para 16.

enemy's war-sustaining effort qualify as such as military objectives and the SG believes that this position has no basis in the law as it stands today and should be clearly rejected.

Having said that, an object that makes an effective contribution to military action ('war-fighting') might also, depending on the circumstances, be a 'war-sustaining' object (for example an oil production facility which both generates revenue for the war effort ('war-sustaining') and provides fuel for the armed forces ('war-fighting'). It is the latter aspect that makes the object a military objective.). However, in the view of the SG an object that merely contributes towards the 'war-sustaining' capability of a party to the conflict, i.e., its war effort, does not qualify as a military objective.⁵⁰ The application of the definition of military objective in this situation would in itself violate the principle of distinction.

2.5.1. Are there any grounds for concluding that States not party to API have a greater latitude of discretion in this respect?

Since the customary rule is identical to the definition in Art. 52(2) API, the question is thus fundamentally one of interpretation of that norm.⁵¹ This rule essentially filled the gap that may have been created by some states not acceding to the Protocols. Non-parties to API have very little State practice to rely upon to support the view that there is a wider latitude for them. There is therefore no reason to believe that States not party to API have greater latitude of discretion in this respect.

3. The second prong: the 'definite military advantage'

The second prong of the test establishes that an object qualifies as a military objective only if its destruction, capture or neutralization would offer a 'definite military advantage' in the circumstances ruling at the time.

With regard to the adjective 'definite', the ICRC 1987 Commentary explains that 'According to the Rapporteur, the adjective 'definite' was discussed at length. The adjectives considered and rejected included the words: 'distinct' (distinct), 'direct' (direct), 'clear' (net), 'immediate' (immédiat), 'obvious' (évident), 'specific' (spécifique) and 'substantial' (substantiel). The Rapporteur of the Working Group added that he was not very clear about the reasons for the choice of words that was made.'⁵²

A 'definite' military advantage has been defined as 'concrete and perceptible' rather than 'hypothetical and speculative'.⁵³ Even when the military advantage is derived from the 'attack as a whole' (as stated

⁵⁰ But see Ryan Goodman's account of reportedly long-standing operational practice targeting war-sustaining infrastructure by the US and other States, R. Goodman, 'The Obama Administration and Targeting 'War-Sustaining' Objects in Non-International Armed Conflicts' (2016) 110 *American Journal of International Law* 663-79.

⁵¹ This definition has been used consistently in subsequent treaties, namely in Protocol II to the Convention on Certain Conventional Weapons, Art. 2(4); Amended Protocol II to the Convention on Certain Conventional Weapons, Art. 2(6); Protocol III to the Convention on Certain Conventional Weapons, Art. 1(3); Second Protocol to the Hague Convention for the Protection of Cultural Property, Art. 1(f).

⁵² ICRC 1987 Commentary (n 15) 635, para 2019.

⁵³ W.A. Solf, 'Art. 52 API' in M. Bothe, K.J. Partsch and W.A. Solf (eds), *New Rules for Victims of Armed Conflicts* (2nd edn, Martinus Nijhoff Publishers 2013) 367, para 2.4.6.

by two States in their military manuals⁵⁴) it bears emphasis that the attack as a whole constitutes a finite operation (an attack) with defined limits and must not be confused with the entire war effort.⁵⁵

The adjective ‘military’ limits lawful targets to those that serve a military purpose. Military advantage generally consists in ground gained and in annihilating or weakening the enemy armed forces.⁵⁶ It also can include targets which are used for direct logistical support, for military communications and maneuver, as well as production facilities engaged in producing arms or goods for military use. Objects do not, however, become military objectives because there would simply be a political or economic advantage to their destruction. Similarly, forcing a change in the negotiating attitudes of an adverse Party cannot be deemed a proper military advantage.⁵⁷

In interpreting the expression ‘definite military advantage’ the Eritrea-Ethiopia Claims Commission (EECC) held in a majority decision that ‘a definite military advantage must be considered in the context of its relation to the armed conflict as a whole at the time of the attack’ and that ‘there can be few military advantages more evident than effective pressure to end an armed conflict’.⁵⁸ This interpretation must be rejected since it admits that the advantage gained from an attack may be purely political instead of essentially military.⁵⁹

3.1. The distinction between ‘definite’ and ‘concrete and direct’ military advantage.

Articles 51(5)(b) and 57(2)(a)(iii) API on the principle of proportionality refer to the ‘concrete and direct’ military advantage anticipated. ‘‘Concrete’ means specific, not general; perceptible to the senses;’ ‘direct’ means ‘without intervening condition or agency’.⁶⁰ A remote advantage to be gained at some unknown time in the future is not to be included in the proportionality equation.⁶¹

The ICRC Commentary on the Additional Protocols explains that ‘The expression ‘concrete and direct’ was intended to show that the advantage concerned should be substantial and relatively close, and that advantages which are hardly perceptible and those which would only appear in the long term

⁵⁴ Several States made declarations upon ratification of API according to which the military advantage relevant for the principle of proportionality is the military advantage offered by ‘the attack as a whole’ (see below subsection 3.1.2); while none of these declarations apply to the definition of military objective, the military manual of Germany (para 407) and the UK (para 5.4.4(j) express this view also for the definition of military objective.

⁵⁵ K. Dörmann, ‘Obligations of International Humanitarian Law’ (2012) 4(2) Military and Strategic Affairs 15; Dinstein (n 6) 94-95, para 232; K. Watkin, ‘Military Advantage: A Matter of ‘Value’, Strategy and Tactics’ (2014) 17 Yearbook of international Humanitarian Law 277, 289ff, 339.

⁵⁶ ICRC 1987 Commentary (n 15) 685, para 2218.

⁵⁷ Schmitt (n 18) 253-54.

⁵⁸ Eritrea-Ethiopia Claims Commission, ‘Partial Award, Western Front, Aerial Bombardment and related claims – Eritrea’s Claims 1, 3, 5, 9-13, 14, 21, 25 & 26’ (Permanent Court of Arbitration, State of Eritrea vs Federal Democratic Republic of Ethiopia, 2005) paras 113, 121 <<https://pcacases.com/web/sendAttach/757>> accessed 21 April 2017. The discussion related to the attack of the Hircigo power plant. The Commission considered that the power plant was making an effective contribution to military action by purpose, because it was intended to provide electricity to a major port and naval facility, at Massawa (para 120). It then stated that ‘[i]n general, a large power plant being constructed to provide power for an area including a major port and naval facility certainly would seem to be an object the destruction of which would offer a distinct military advantage’ (para 121). So it would appear that the Commission considered first the actual military advantage that the destruction of the power plant offered, before turning to these additional - and mistaken - considerations related to ‘putting pressure to end an armed conflict’.

⁵⁹ Dinstein (n 6) 93.

⁶⁰ Solf, ‘Art. 57 API’ in Bothe, Partsch, Solf (n 53) 407, para 2.7.2.

⁶¹ *ibid.* See also Doswald-Beck (n 49) 124.

should be disregarded.⁶² Hence there do not seem to be well-founded reasons to believe that the terms ‘definite’ and ‘concrete and direct’ should be given different meanings in this regard. Both will similarly exclude hypothetical, indirect, and political advantages from being relevant for the selection of targets as well as for the rule of proportionality.

On the other hand, it has been argued that ‘concrete and direct’ adds a further element of specificity to the notion of ‘definite military advantage’. According to this opinion ‘at the stage of target selection, it is sufficient for an attacking Party to determine that the object is capable of yielding a definite military advantage; whereas in the context of assessing proportionality, the military advantage anticipated must be established with more certainty and is also then qualified in relation to potential collateral damage.’⁶³ This view found support in the ICRC Commentary⁶⁴ and in Bothe, Partsch and Solf,⁶⁵ and has been endorsed by the Inter-American Commission on Human Rights.⁶⁶ This reading is consistent with the principle of effectiveness in the interpretation of treaties whereby all provisions of a treaty should have a meaning.

3.2. On the implication of Art. 8 ICC Statute

Art. 8(2)(b)(iv) of the Rome Statute for the establishment of the International Criminal Court includes among the serious violations of the laws and customs applicable in international armed conflict launching an attack in the knowledge that it will cause collateral damage which would be clearly excessive in relation to the ‘concrete and direct overall military advantage’ anticipated. This provision seems to broaden the concept of military advantage by adding the term ‘overall’ to the ‘concrete and direct military advantage’. In a footnote to the text adopted for the elements of crimes under the ICC Statute, which was the result of very controversial discussions, includes the following statement: ‘The expression ‘concrete and direct overall military advantage’ refers to a military advantage that is foreseeable by the perpetrator at the relevant time. Such advantage may or may not be temporally or geographically related to the object of the attack.’⁶⁷ There is a risk that this explanation may invite unjustifiably expansive interpretations of the concept ‘concrete and direct military advantage’. However, in ‘informal consultations the need for this sentence was highlighted to cover attacks where the military advantage is planned to materialize at a later time and in a different place.’⁶⁸ This should be kept in mind when one tries to understand the meaning of the footnote.

⁶² ICRC 1987 Commentary (n 15) 684, para 2209.

⁶³ Boivin (n 9) 21.

⁶⁴ ICRC 1987 Commentary (n 15) 685, para 2218: ‘[I]t should be noted that the words ‘concrete and direct’ impose stricter conditions on the attacker than those implied by the criteria defining military objectives in Art. 52 (General protection of civilian objects) paragraph 2.’

⁶⁵ Solf, ‘Art. 57 API’ in Bothe, Partsch, Solf (n 53) 407, para 2.7.2: ‘‘Concrete’ means specific, not general; perceptible to the senses. Its meaning is therefore roughly equivalent to the adjective ‘definite’ used in the two pronged test prescribed by Art. 52(2). ‘Direct’, on the other hand, means ‘without intervening condition or agency’. Taken together the two words of limitation raise the standard set by Art. 52 in those situations where civilians may be affected by the attack.’

⁶⁶ Inter-American Commission on Human Rights, ‘Third Report on the Human Rights Situation in Colombia’ (OEA/Ser.L/V/II.102, Doc. 9 rev. 1, 1999) ch IV, para 78.

⁶⁷ International Criminal Court, ‘Elements of Crimes’ (ICC 2011) 19 <<http://www.icc-cpi.int/nr/rdonlyres/336923d8-a6ad-40ec-ad7b-45bf9de73d56/0/elementsofcrimeseng.pdf>> accessed 21 April 2017.

⁶⁸ K. Dörmann, *Elements of War Crimes under the Rome Statute of the International Criminal Court, Sources and Commentary* (ICRC, CUP 2002) 163. By way of example, reference was made to feigned attacks during

The fact that the Rome Statute has a different wording than the IHL rule does not modify the latter.⁶⁹ While the criteria of international criminal responsibility do not necessarily coincide with the elements of the substantive rules of international law, there cannot be a war crime without a violation of IHL. After the adoption of API some States declared that military advantage means the advantage anticipated from the attack considered as a whole and not from isolated or particular parts of the attack.⁷⁰ Based on these declarations some commentators conclude that the relative military value of the specific purpose of an individual attack must be assessed in the framework of the more complex overall campaign plan of a belligerent.⁷¹ However, no official explanation is given by these States as to the meaning of ‘attack as a whole’. In any case, it must however constitute a finite operation (an attack) with defined limits,⁷² and certainly does not mean the whole conflict. Such an interpretation could hardly be reconciled with the meaning of the words ‘concrete and direct’ and it would confuse ‘proportionality’ as required by the *ius ad bellum* rules of self-defense with the rules of proportionality in attack in the *ius in bello*.⁷³

Similarly, the addition of the word ‘clearly’ before ‘excessive’ in Art. 8 of the ICC Statute does not change the standard under IHL in that regard.⁷⁴

4. The relationship between Art. 23(g) Hague Regulations and Art. 52(2) API

Art. 23(g) Hague Regulations (HR) prohibits ‘To destroy or seize the enemy's property, unless such destruction or seizure be imperatively demanded by the necessities of war.’ This is a long-standing rule of customary international law applicable in both international and non-international armed conflicts.⁷⁵

The definition of military objectives set forth in Art. 52(2) API is also deemed to have achieved the status of customary law applicable in both international and non-international armed conflicts, since it

World War II to permit the allied forces to land in Normandy as mentioned by Solf: Solf, ‘Art. 52 API’ in Bothe, Partsch, Solf (n 53) 366, para 2.4.4.

⁶⁹ In this regard, the ICRC submitted at the Rome Conference that ‘*the inclusions of the word ‘overall’ is redundant*’, as the understanding that an attack against a particular target may offer an important military advantage felt over a lengthy period of time and in area other than the vicinity of the target ‘*is already included in the existing wording of Additional Protocol I.*’ (UN Doc. A/CONF.183/INF/10, 13 July 1998).

⁷⁰ See eg the Declarations on Art. 51 and 57 API by Italy (1986), Germany (1991), the United Kingdom (1992) and France (2001), Reservation/Declarations to API <https://www.icrc.org/applic/ihl/ihl.nsf/States.xsp?xp_viewStates=XPages_NORMStatesParties&xp_treatySelect=470> accessed 21 April 2017.

⁷¹ Oeter (n 8) 175-76.

⁷² See reference in n 55 above.

⁷³ US Secretary of Defense, ‘The Conduct of the Persian Gulf War: Final Report to Congress, Pursuant to Title V of the Persian Gulf Conflict Supplemental Authorization and Personnel Benefits Act of 1991’ (Public Law 102-25, 1992) at 611 seems to reflect such confusion: ‘An uncodified but similar provision is the principle of proportionality. It prohibits military action in which the negative effects (such as collateral civilian casualties) clearly outweigh the military gain. This balancing may be done on a target-by-target basis, as frequently was the case during Operation Desert Storm, but also may be weighed in overall terms against campaign objectives.’

⁷⁴ During the Rome Conference, the ICRC stressed that ‘[t]he addition of the words ‘clearly’ and ‘overall’ in this provision relating to proportionality in attacks must be understood as not changing existing law.’ See International Committee of the Red Cross, ‘Statement of 8 July 1998 relating to Bureau Discussion Paper in Document A/CONF.183/C.1/L.53’ (UN Doc. A/CONF.183/INF/10) 1.

⁷⁵ ICTY, *Prosecutor vs Hadzihanasanovic and Kubura* (Case No IT-01-47-AR73.3, 11 March 2005); ICRC Customary IHL (n 3) Rule 50.

has been used consistently in subsequent treaties and military manuals and it is supported by official statements, including those of states not being party to API.⁷⁶

4.1. The concept of ‘enemy’s property’

Some ambiguity surrounds the concept of enemy’s property, which is not defined by the Hague Regulations or by other international IHL instruments. It is interpreted to encompass both private and State property or property belonging to the enemy’s authorities, movable or immovable.⁷⁷ The scope of the prohibition in the Hague Regulations would clearly appear to be broader than simply during attack and includes destruction of enemy property in occupied territory (Art. 53 GCIV) and other situations not directly connected with the conduct of hostilities.⁷⁸

4.2. Is Art. 52(2) API posterior and special?

While Art. 52(2) API is clearly *lex posterior* compared to Art. 23(g) HR, specialty implies that two provisions govern the same subject-matter, which in our case is questionable. It is true that, in a broad perspective, both rules aim at regulating the conduct of hostilities by restricting destruction to what is militarily necessary;⁷⁹ their different formulation and setting mainly depend on historical patterns (Art. 23(g) HR) and on negotiating compromises (Art. 52 API). Nevertheless, when taking into consideration the key constituent elements of the two provisions further differences emerge.

4.3. Is Art. 23 HR broader in scope?

Art. 23(g) HR prohibits destruction of property both as a military objective and a collateral damage, as well as seizure; hence it seems to clearly apply also *outside* situations of hostilities. In this respect, its scope of application is broader than that of Art. 52(2) API, which covers only attacks and the latter would therefore be *lex specialis* compared to the former. Within the scope of application of Art. 52 API, namely during situations of hostilities, Art. 23(g) HR cannot be considered to allow the destruction of objects which are protected against direct attack. During hostilities, only those objects that fulfill the criteria of the definition contained in Art. 52(2) API can be qualified as military objectives and attacked.

On the other hand, Art. 23(g) HR does not aim at defining what is a military objective or a civilian object, but merely exempts a specific category of property from destruction. Although in practice civilian objects will be for the most part publicly or privately owned, they are not limited to enemy’s property; furthermore, Art. 52(2) API protects also the civilian objects belonging to the belligerents’ own civilians. From this point of view, the material scope of application of Art. 52(2) API is broader than that of Art. 23(g) HR.

In conclusion, Art. 23(g) HR and Art. 52(2) API, if considered singularly, are quite distinct. As was usual at the time of its adoption, Art. 23(g) HR lays down a general rule in a very succinct way. Subsequently, the principle underlying that rule was the basis of more detailed provisions, such as Art.

⁷⁶ ICRC Customary IHL (n 3) Rule 8.

⁷⁷ Solf, ‘Art. 52 API’ in Bothe, Partsch, Solf (n 53) 361-62; L.C. Green, *The Contemporary Law of Armed Conflict* (Manchester University Press 2008) 178; Dinstein (n 6) 252; J. Pictet (ed), *Commentary IV Geneva Convention* (ICRC 1958) 301; H.G. Dederer, ‘Enemy Property’ in *Max Planck Encyclopedia of Public International Law* (2013) 2.

⁷⁸ ICRC Customary IHL (n 3) Rule 50.

⁷⁹ Boivin (n 9) 17.

53 GCIV (on prohibited destruction in occupied territories) and Articles 52 and 57 API (on the protection of civilian objects from attacks and precautions to avoid or minimizing collateral damages caused by attacks). As the customary norm is identical to Art. 52(2) API we must conclude that today in the conduct of hostilities any destruction due to attacks against property is exclusively regulated by the rule contained in Art. 52(2) API. Put otherwise, in situations of hostilities, imperative military necessity does not allow attacking an object that does not constitute a military objective under Art. 52(2) API and the corresponding rule of customary law.

PART II: THE PRINCIPLE OF PROPORTIONALITY⁸⁰

OUTLINE

1. The different elements of the principle of proportionality
 - 1.1. Incidental loss of civilian life, injury to civilians and damage to civilian objects
 - 1.1.1. Effects of an attack
 - 1.1.2. Damage to civilian objects
 - 1.1.3. Civilian taking direct part in hostilities, hors de combat, and military medical doctors
 - 1.1.4. Mental injury
 - 1.1.5. Human shields
 - 1.1.6. Environmental damage
 - 1.2. Concrete and direct military advantage
 - 1.3. Excessiveness

⁸⁰ This part of the report was initially drawn up by the members of working group 3 of the 2015 Oslo meeting: Thilo Marauhn (Group Coordinator), Kazuhiro Nakatani, Eric Pouw, Ken Watkin, Kirsten Schmalenbach, Hector Olasolo Alonso, Jeroen van den Boogaard. All members of the Study Group had a role in commenting upon the initial draft and the entire SG is responsible for the final version of all parts of the report.

1. The different elements of the principle of proportionality⁸¹

The principle of proportionality is a fundamental principle of the law of armed conflict. It is central to the protection of the civilian population during the conduct of hostilities. Violating the principle of proportionality constitutes an indiscriminate attack. According to Art. 51(5)(b) API and Art. 57(2)(a)(iii) and (3) API, the principle of proportionality prohibits attacks

‘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.’

By virtue of customary international law parties to an armed conflict are under an obligation to abide by the principle of proportionality in both international as well as non-international armed conflicts.⁸² The importance and applicability of the proportionality principle in both types of armed conflict is uncontroversial. Nevertheless, the SG found that a number of the aspects of the proportionality analysis could benefit from further clarification in order to improve the protection of the civilian population.⁸³ Examples include: the kind of expected incidental harm that must be considered and factored into the proportionality analysis; the concept of the anticipated concrete and direct military advantage; the effect of considerations of force protection; whether criteria exist that indicate excessiveness and which may be applied in a manner as objective as possible; and whether the application of the principle of proportionality could or should differ in different types of conflicts.

1.1. Incidental loss of civilian life, injury to civilians and damage to civilian objects

The principle of proportionality requires a balancing of different considerations. Obviously, different factors will be at stake in different scenarios and depending on the circumstances of each specific case. But even before applying the principle of proportionality to any specific case in concreto, it is important to clarify in the abstract which factors must and/or may be taken into consideration when applying the principle of proportionality.

1.1.1. Effects of an attack

With regard to the question as to what kind of effects of an attack have to be taken into account with regard to the principle of proportionality, there are mainly two views which can be put forward: (i) that proportionality only concerns direct effects of the attack; (ii) that indirect effects of attacks must also be considered because if only direct effects were intended, the rule would have included the word ‘direct’ (as is the case with regard to military advantage). Therefore, the prevailing view is that

⁸¹ For an overview on the principle of proportionality see: W. Fenrick, ‘Applying IHL Targeting Rules to Practical Situations: Proportionality and Military Objectives’ (2009) 27 Windsor Yearbook of Access to Justice 271; R. Barber, ‘The Proportionality Equation: Balancing Military Objectives with Civilian Lives in the Armed Conflict in Afghanistan’ (2010) 15 Journal of Conflict and Security Law 467; R. Geiß and M. Siegrist, ‘Has the armed conflict in Afghanistan affected the rules on the conduct of hostilities?’ (2011) 93(881) International Review of the Red Cross 11, 29-35; J.v.d. Boogaard, ‘Fighting by the Principles: Principles as a Source of International Humanitarian Law’ in: M. Mathee, B. Toebes, M. Brus (eds), *Armed Conflict and International Law: In Search of the Human Face - Liber Amicorum in Memory of Avril McDonald* (T.M.C. Asser Press 2013) 3-32.

⁸² ICRC Customary IHL (n 3) Rule 14.

⁸³ Sloane labeled the standard of proportionality as a ‘singularly subjective and indeterminate legal standard’, See R.D. Sloane, ‘Puzzles of Proportion and the ‘Reasonable Military Commander’: Reflections on the Law, Ethics and Geopolitics of Proportionality’ (2015) 6 Harvard National Security Journal 299, 301-02.

indirect effects must also be considered alongside direct ones. The follow-on question that arises from this finding is where and how to draw the line between indirect effects that are relevant for purposes of the principle of proportionality and those that are too remote, if any.

Direct effects of an attack are consequently to be taken into account as part of the incidental harm to be considered for the proportionality analysis. For example: if an explosive weapon is used, it usually causes blast, fragmentation, thermal, cratering and penetration effects. As far as the effects of an attack on the civilian population are concerned, one could think of death, physical injury, caused by the blast wave, by fragments from the weapon or secondary fragmentation (such as glass fragments caused by the blast wave), by burns or by collapsed buildings and damaged vehicles.⁸⁴

Indirect effects on the civilian population, or ‘reverberating effects’ (also referred to as ‘knock on effects’), have been defined as ‘the effects that are not directly or immediately caused by the attack, but are nonetheless a consequence of it.’⁸⁵ Indirect effects of an attack describe especially its long-term consequences, e.g., the long-term consequences of damaged essential civilian infrastructure.⁸⁶ This could include effects on the health care system and level of hygiene that the civilian population is able to maintain during hostilities and after they have ended. According to an ICRC expert medical adviser:

‘health-care facilities may be directly affected by the blast or fragmentation effects of explosive weapons; electricity and water supplies may be cut off; health-care staff may be killed, injured or unable to get to work; and blood stocks may decrease because regular blood donors are unable to access health-care facilities. One or a combination of these factors usually means that the capacity of health-care facilities is weakened at precisely the time that they are most needed – that is, in the aftermath of an attack when hospitals are faced with multiple patients, often with multiple injuries.’⁸⁷

Regarding the consideration of indirect effects of an attack for purposes of the principle of proportionality, the main question that may be asked is whether it is an issue of how far the indirect incidental damage is actually (geographically or temporally) removed from the original attack (site), or whether it is rather a question of foreseeability. The SG agreed that foreseeability is the relevant criterion and that accordingly there is an obligation to take into account all indirect harm that can reasonably be foreseen by a reasonably well-informed person. As stated in the ICTY *Galić* case, that also requires that the ‘a reasonably well-informed person in the circumstances of the actual perpetrator, making reasonable use of the information available to him or her, could have expected excessive civilian casualties to result from the attack’⁸⁸ In addition, ‘the information necessary for reaching an assessment for purposes of the principle of proportionality shall emanate from all sources available at the relevant time.’⁸⁹ From this it follows, that reverberating effects that are unforeseeable

⁸⁴ *ibid* 14.

⁸⁵ ICRC Report, ‘Expert Meeting, Explosive Weapons in Populated Areas: Humanitarian, Legal, Technical and Military Aspects’ (24 to 25 February 2015 Chavannes-De-Bogis, Switzerland, ICRC 2015) 21 <<https://www.icrc.org/eng/assets/files/publications/icrc-002-4244.pdf>> accessed 21 April 2017 (ICRC Expert Meeting).

⁸⁶ *ibid* 5.

⁸⁷ *ibid* 14.

⁸⁸ ICTY, *Prosecutor vs Galić* (Judgement, Trial Chamber, Case No IT-89-29-T, 5 December 2003) para 58; see also ICRC Expert Meeting (n 85) 22.

⁸⁹ See eg United Kingdom declaration upon ratification of API (2002): ‘(c) Military commanders and others 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.’

need not be taken into account.

There is, however, no basis in IHL to impose a certain (absolute) time limit on those indirect effects that need to be taken into account. Various military manuals and statements by States indicate that long-term effects, i.e. indirect effects that occur long after the actual attack, must also be taken into consideration in so far as these are reasonably foreseeable.⁹⁰ Therefore, when considering indirect effects the focus should not primarily be on the timeframe in which these effects will materialize, but on their *foreseeability*.⁹¹ It is important to point out that indirect effects can be as or even more severe than the direct effects of an attack. For example, the reverberating effects on objects that are indispensable for the health care system may have a foreseeable and deep impact in terms of loss of civilian life and injury to civilians caused by a planned attack. That is not to say that the law prohibits mere inconvenience for the civilian population that is caused by hostilities - as mere inconvenience will usually not be excessive in comparison to the concrete and direct military advantage anticipated -, but it does mean that commanders need to balance the concrete and direct military advantage they seek to achieve with more than only the direct incidental harm they expect their planned attack to cause. Parties to an armed conflict can and should enhance their capability to anticipate foreseeable reverberating effects of a planned attack for example through military training of commanders and staff-officers, the consideration of previous battlefield experience and computer-driven simulation programs.

Against this backdrop, the SG unanimously agreed that the interpretation that only immediate effects need be taken into account is too narrow and highlighted the importance of reasonable foreseeability in relation to determining indirect effects.

Incidental harm must therefore be assessed from the attacker's perspective based on what was known – or should have been known on the basis of information available from all sources – at the time of the attack and what was reasonably foreseeable in that situation.

1.1.2. Damage to civilian objects

The definition of 'damage to civilian objects' as part of the principle of proportionality necessarily has to take into account the concept of 'military objective' (see also above Part I of this report), as according to Art. 52 API civilian objects are 'all objects which are not military objectives'. As far as

<<https://www.icrc.org/applic/ihl/ihl.nsf/Notification.xsp?action=openDocument&documentId=0A9E03F0F2EE757CC1256402003FB6D2>> accessed 21 April 2017. Similar declarations were made notably by Australia, Ireland, Italy and New Zealand.

⁹⁰ See eg Department of Defence, 'Australian Defence Doctrine Publication 3.14 Targeting' (Canberra, Defence Publishing Service 2009) para 1.21; UK Ministry of Defence, *The Manual of the Law of Armed Conflict* (OUP 2004) para 5.33.4; The Commander's Handbook (n 26) para 8.11.4; UN Office of Disarmament Affairs, 'Third Review Conference of the High Contracting Parties to 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' (Final Document, CCW/CONF.III/11, pt II, 2006) 4, preambular para 11; see also Tallinn Manual (n 3) 160, commentary on Rule 51, para 6.

⁹¹ This is also the ICRC position; see ICRC 2015 IHL Challenges report (n10) 52.

the scope of harm to objects within the principle of proportionality is concerned, the term to use is ‘damage’, which in the view of the SG also includes the loss of functionality of objects.⁹²

The SG discussed the suggestion that an object that does not qualify as a military objective because its destruction offers no definite military advantage in the circumstances ruling at the time, may nevertheless be taken into account – for purposes of the proportionality analysis – as contributing to the military advantage expected from an attack on another military objective if it is expected that this object could become a military objective in the future. The SG concluded that this suggestion has no basis in law. Objects, which could potentially become military objectives in the future, remain civilian objects as long as they have not yet actually become military objectives and any incidental damage to them must be included on the civilian side of the proportionality principle.⁹³

Another question discussed by the SG was the application of the principle of proportionality in relation to so-called ‘dual-use objects’,⁹⁴ i.e. objects which in the circumstances ruling at the time fulfill the definition of a military objective (e.g. because of the way in which they are used) but simultaneously also serve civilian functions (see discussion above Part I, subsection 2.4.). A case in point is an electric power station that supplies the civilian population but that is temporarily also used to supply a military compound in a manner that makes this power station fulfill the definition of military objective. The SG agreed that all foreseeable (direct and indirect) effects that an attack on a dual-use object might cause on the civilian use of this object must be taken into account as incidental civilian harm.⁹⁵ With respect to the above-mentioned example of the electric power station this means

⁹² For several views of the debate concerning the loss of functionality, see ICRC 2015 IHL Challenges report (n 10) 41; ICRC Report, ‘International Humanitarian Law and the challenges of contemporary armed conflicts’ (31st International Conference of the Red Cross And Red Crescent, Geneva, 28 November – 1 December 2011, ICRC 2011) 37; Droegge (n 25) 557-59; M.N. Schmitt, ‘Rewired warfare: rethinking the law of cyber attack’ (2014) 96(893) *International Review of the Red Cross* 189–206; H.H. Dinness, ‘The Nature of Objects: Targeting Networks and the Challenge of Defining Cyber Military Objectives’ (2015) 48(01) *Israel Law Review* 39-45.

⁹³ This has to be distinguished from the question of when an intended future use may make the object a military objective by purpose (see above pt I, subsection 2.3.); if it is already established at the time of the attack that the object is a military objective by purpose, then obviously incidental damage to this object does not constitute incidental damage to a civilian object.

⁹⁴ Notion that has been discussed in the first report, see ILA Study Group, ‘The conduct of hostilities under international humanitarian law - challenges of 21st century warfare’ (ILA Study Group Report 2014) 11-12 <<http://www.ila-hq.org/index.php/study-groups>> accessed 21 April 2017.

⁹⁵ ICTY, *Prosecutor vs. Prlić and al* (Judgment, Trial Chamber, Case No IT-04-74-T, 29 May 2013) paras 1582-4; US Joint Chiefs of Staff, ‘Joint publication 3 - 60, Joint Targeting’ (CJCS 2013) A-5; see also C.D. Guymon (ed), ‘Digest of United States Practice in International Law 2014’ (US Department of State 2014) 737 <<https://www.state.gov/documents/organization/244504.pdf>> accessed 21 April 2017; The Commander’s Handbook (n 26) para 8.3; Inspecteur Militair Juridische Dienst, ‘Humanitair Oorlogsrecht’ (Koninklijke Landmacht 2005) VS 27-412; Royal Army of the Netherlands, ‘The Humanitarian Law of War: A manual’ (official in Dutch, English unofficial translation, ICRC library, 2005) para 0546; Norway, ‘Manual i krigens folkerett’ (2013) para 2.22; Pentagon briefing on February 5, 2003 arguing that attacks on dual use facilities are considered as automatically producing incidental damage, M. Knights, ‘Infrastructure Targeting and Postwar Iraq’ (The Washington Institute 14 March 2003) <<http://www.washingtoninstitute.org/policy-analysis/view/infrastructure-targeting-and-postwar-iraq>> accessed 21 April 2017; HPCR Commentary (n 13) 109, Rule 22(d), para 7; Tallinn Manual (n 3) 134-35, commentary on Rule 39, para 2; C. Greenwood, ‘Customary International Law and the First Geneva Protocol of 1977 in the Gulf Conflict’ in P. Rowe (ed), *The Gulf War 1990-91 In International And English Law* (London, Routledge 1993) 73ff; Schmitt and Widmar (n 30) 393; M. Sassoli and L. Cameron: ‘The Protection of Civilian Objects: Current State of the Law and Issues de lege ferenda’ in N. Ronzitti and G. Venturini (n 16) 57-58; Shue and Whippman (n 28) 559, 565-66; H.

that the loss of electricity for the civilian population and other resultant foreseeable effects on civilians that an attack on this power station might cause must be taken into account as relevant incidental harm for purposes of the proportionality analysis despite the fact that the power station itself is a military objective.

1.1.3. Civilians taking direct part in hostilities, persons *hors de combat*, and military medical personnel

Civilians taking direct part in hostilities

It is clear that persons who at the time of the attack may lawfully be attacked do not factor into the proportionality analysis as relevant civilian harm. If anything, the loss of fighting capacity that would result from an attack on such persons may be factored into the military advantage that is to be obtained from the attack in question. Civilians directly participating in hostilities remain civilians but temporarily – for as long as they directly participate in hostilities – lose protection from direct attack. During such time they may not only be directly attacked but logically also do not count as relevant civilian harm for purposes of the principle of proportionality. It is equally clear, however, that civilians who are known to be sympathetic to the attacked party and who have participated directly to the hostilities in the past (but not at the time of the attack, cf. the so-called ‘revolving door’ controversy),⁹⁶ remain protected against direct attack and any loss of life or injury to them must be taken into consideration for purposes of the principle of proportionality.

Persons hors de combat, and military medical personnel

The SG noted that both the treaty-based and the customary law rule on proportionality refer to loss of life and injury to ‘civilians’. Other categories of protected persons who lack civilian status, namely combatants *hors de combat* and military medical personnel find no explicit mentioning. This raises the question of whether expected incidental harm to such persons may render an attack on a military objective unlawful, and if so on what legal basis.

These categories of persons enjoy strong protection under IHL. In the case of military medical personnel, it may be added that they fulfill an important medical function, potentially of benefit to all sides of the armed conflict. What is more, in light of the increasingly common presence of civilian medical personnel and facilities in areas of armed conflict, it may often be impossible or difficult to distinguish between civilian medical personnel which is undoubtedly protected by the principle of proportionality and military medical personnel. If indeed incidental harm to protected persons other than civilians did not need to be considered in the proportionality assessment, and considering that in such a case the expectation to cause them incidental harm – however extensive – could never render an attack unlawful, this position would undermine the special protection that IHL affords to these

Durham, ‘Keynote address’ in E. Greppi (ed.), *Conduct of hostilities: The Practice, the Law and the Future* (International Institute of Humanitarian Law, Franco Angeli 2015) 31.

⁹⁶ Regarding the so-called ‘revolving door’ controversy’: see K.W. Watkin, ‘Combatants, Unprivileged Belligerents and Conflicts in the 21st Century’ (International Humanitarian Law Research Initiative, Harvard Program on Humanitarian Policy and Conflict Research 2003) 11-12 <<http://www.hpcrresearch.org/sites/default/files/publications/Session2.pdf>> accessed 21 April 2017 and N. Melzer, ‘Keeping the Balance Between Military Necessity and Humanity: A Response to Four Critiques of the ICRC’s Interpretive Guidance on the Notion of Direct Participation in Hostilities’ (2010) 42(831) *New York University Journal of International Law and Politics* 831, 888ff.

persons. In particular, the SG noted that parties to an armed conflict must respect and protect medical personnel, and that this obligation has been understood notably by the ICRC as encompassing a prohibition on attacks that would be expected to cause excessive harm to protected persons other than civilians.⁹⁷ Furthermore, the SG noted that notwithstanding the narrow formulation of the proportionality rule in the ICRC Customary Law Study – referring only to civilians – the customary law rule comprising the principle of proportionality might actually be broader comprising also protected persons other than civilians. Indeed, several States’ military manuals⁹⁸ as well as experts’ reports and manuals refer to ‘protected persons’ (i.e. not only civilians) either when stating the principle of proportionality,⁹⁹ or in their definition of collateral damage which then applies to all the conduct of hostilities rules addressing incidental harm, including proportionality. While some members of the SG initially favored a literal reading of the proportionality rule, the SG agreed that incidental killings of or injury to protected persons other than civilians render the attack prohibited if it is excessive compared to the concrete and direct military advantage anticipated – whether one anchors this finding in the rules on the protection of medical mission (and in particular the obligation to protect and respect medical personnel including military medical personnel), in the rules on the conduct of hostilities, or in both.

It was also suggested that even if one would not recognize such an obligation through the application of specific norms, as a minimum, the Martens Clause would demand a constant effort to spare these actors and facilities from unnecessary risk and assess proportionality when operationally feasible.¹⁰⁰

1.1.4. Mental injury

The question whether and in how far ‘mental injury’ has to be taken into consideration when assessing civilian impact for purposes of the principle of proportionality was also discussed. One opinion expressed within the SG was that mental injury falls within the notion of ‘injury’ to civilians and that it is relevant when conducting the proportionality analysis. In this context reference was made to the Tallinn Manual on Cyber Warfare where, in the context of the definition of a cyber attack, serious

⁹⁷ For the ICRC position, see ICRC 2015 IHL Challenges report (n 10) 31-32. See also L. Gisel, ‘Can the incidental killing of military doctors never be excessive?’ (2013) 95(889) *International Review of the Red Cross* 215–30.

⁹⁸ Australia: Australian Defence Headquarters, ‘Australian Defence Doctrine Publication 06.4 Law of Armed Conflict’ (Canberra, Defence Publishing Service 2006) para 2.8; Canada: Office of the Judge Advocate General, ‘The Law of Armed Conflict at the Operational and Tactical Levels’ (Chief of Defence Staff 2001) para 204.5; New Zealand: New Zealand Defence Force, Headquarters, ‘Interim Law of Armed Conflict Manual’ (DM 112, Wellington, Directorate of Legal Services 1992) para 207; Philippines: Philippine Air Force, Headquarters, ‘Air Power Manual’ (Office of Special Studies 2000) paras 1–6.4. A contrary view is expressed in: US Department of Defense, ‘Law of War Manual’ (Office of General Counsel of the Department of Defense 2015, updated 2016) para 5.10.1.2 <<https://www.hsdl.org/?view&did=797480>> accessed 21 April 2017.

⁹⁹ See Final Report to the Prosecutor, the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia that speak of ‘injury to non-combatants’ (and not ‘injury to civilians’) under the principle of proportionality, ICTY Office of the Prosecutor, ‘Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia’ (2000) paras 49, 50 <<http://www.icty.org/en/press/final-report-prosecutor-committee-established-review-nato-bombing-campaign-against-federal>> accessed 21 April 2017. Doswald-Beck (n 49) 9, para 13(c); see also Doswald-Beck (n 49) 87, para 13.9. With regard to objects, see also HPCR Manual (n 3) Rule 1(l).

¹⁰⁰ For a detailed analysis of this issue, cf G.S. Corn and A. Culliver, ‘Wounded Combatants, Military Medical Personnel, and the Dilemma of Collateral Risk’ (Social Science Research Network 2016) <<https://ssrn.com/abstract=2884854>> accessed 21 April 2017.

illness and severe mental suffering are considered to be included in the notion of injury.¹⁰¹ Such a position would seem to require the consideration of similarly serious illness and severe mental suffering caused incidentally to civilians as relevant incidental injury under the principle of proportionality. This could be the case for example with regard to post-traumatic stress disorder.¹⁰² At the same time it was suggested within the SG that psychological harm should be distinguished from such mental harm and that psychological harm should be excluded from the proportionality analysis, noting that in the domestic criminal law of some States mental injury constitutes grievous bodily harm whilst psychological harm does not. It was put forward that mental injury is often seen as a biological condition that requires medical treatment whereas psychological disorders are usually treated through psychotherapy and psychological and behavioral interventions. Some members of the SG however raised concerns about how military commanders could be expected to evaluate this distinction. The question of proving a causal link between the attack and the mental injury in question also arose within the SG.¹⁰³

Various members of the SG agreed on the importance of this issue, bearing in mind however that mental harm could only be included within the proportionality analysis when it is measurable and when a causal link to a specific attack can be established (war is intrinsically harmful). The SG noted that acts or threats of violence the primary purpose of which is to spread terror among the civilian population, and which may and often will cause mental harm, are clearly prohibited.¹⁰⁴

1.1.5. Human shields¹⁰⁵

The SG also discussed the issue of ‘human shields’. The SG agreed that involuntary human shields remain protected, and that therefore any expected incidental harm to involuntary human shields is relevant under the principle of proportionality. The controversial issue with regard to human shields concerns the question whether *voluntary* shields are civilians protected against direct attack,¹⁰⁶ or whether the act of voluntary shielding amounts to direct participation in hostilities leading to a temporary loss of protection from attack. Going even further, there are some voices in the literature which claim that civilians who do not heed a precautionary warning prior to an attack and who remain in the area, factually become voluntary shields; while others have rightly pointed out that there might be many other reasons for being unable or unwilling to leave an area in spite of the warning. The SG considered that the view that civilians who do not heed to a warning would lose their protection has no

¹⁰¹ Tallinn Manual (n 3) 108, commentary on Rule 30, para 8.

¹⁰² E. Lieblich, ‘Beyond Life and Limb: Exploring Incidental Mental Harm Under International Humanitarian Law’ in D. Jinks et al (eds), *Applying International Humanitarian Law in Judicial and Quasi-Judicial Bodies* (The Hague, Asser Press 2014) 185-218.

¹⁰³ Stanford International Human Rights and Conflict Resolution Clinic and Global Justice Clinic at NYU School of Law, ‘Living Under Drones: Death, Injury and Trauma to Civilians from US Drone Practices in Pakistan’ (Stanford Law School & NYU School of Law 2012) <<http://chrgj.org/wp-content/uploads/2012/10/Living-Under-Drones.pdf>> accessed 21 April 2017.

¹⁰⁴ See Art. 51(2) API and Art. 13(2) APII; ICRC Customary IHL (n 3) Rule 2.

¹⁰⁵ See A. Rubinstein and Y. Roznai, ‘Human Shields in Modern Armed Conflicts: The Need for a Proportionate Proportionality’ (2011) 22 *Stanford Law & Policy Review* 93; N. Al-Duaij, ‘The Volunteer Human Shields in International Humanitarian Law’ (2010) 12 *Oregon Review of International Law* 117; M.N. Schmitt, ‘Human Shields in International Humanitarian Law’ (2009) 47 *Columbia Journal of Transnational Law* 292.

¹⁰⁶ For the arguments supporting this position, see ICRC, *Interpretive Guidance on the notion of direct participation in hostilities under International Humanitarian Law* (ICRC 2009) 56 and Melzer (n 96) 869-72.

basis in law.¹⁰⁷ It therefore agreed that a party that issues an effective advance warning is not relieved from its obligation to take all other feasible precautions including to avoid or minimize civilian harm, including with respect to those civilians who have not heeded to the warning (see below Part III, subsection 6.). The SG also agreed that the only manner in which civilians lose their protection is for such time as they directly participate in hostilities. Opinions within the SG remained split, however, with regard to the question whether voluntary human shielding could amount to directly participating in hostilities, and if so whether this could be the case for any voluntary human shield or only depending on specific circumstances. In this regard, the SG took note of the December 2016 amendment of the US DoD Law of War manual, which considers that (voluntary and involuntary) human shields remain protected civilians unless they take a direct part in hostilities.¹⁰⁸

1.1.6. Environmental damage¹⁰⁹

According to Art. 52(1) API and customary international humanitarian law,¹¹⁰ any object, which is not a military objective, is a civilian object. The SG agreed that as the environment does not fulfill the definition of a military objective, it must be considered a civilian object (or rather many civilian objects). Therefore, the principle of distinction applies to the natural environment and it is prohibited to attack any part of the natural environment unless it has become a military objective in the circumstances ruling at the time. Incidental damage to the environment or to specific objects forming part thereof constitutes relevant incidental civilian harm for the principles of proportionality and precaution (unless these objects have become military objectives). Such incidental harm may, alone or in combination with other incidental harm to civilians or civilian objects, render an attack unlawful.

¹⁰⁷ See eg UN Commission in Human Rights, ‘Report of the Commission of Inquiry on Lebanon pursuant to Human Rights Council Resolution S-2/1’ (A/HRC/3/2, UN General Assembly 2006) para 158 (‘A warning to evacuate does not relieve the military of their ongoing obligation to ‘take all feasible precautions’ to protect civilians who remain behind, and this includes their property. By remaining in place, the people and their property do not suddenly become military objectives which can be attacked. The law requires the cancelling of an attack when it becomes apparent that the target is civilian or that the civilian loss would be disproportionate to the expected military gain’); P.S. Baruch and N. Neuman ‘Warning Civilians Prior to Attack under International Law’ in R.A. Pedrozo and D.P. Wollschlaeger (eds), *International Law Studies – Vol 87, International Law and the Changing Character of War* (Naval War College Press 2011) 359ff, 395: ‘One of the concerns raised with regard to warnings is that after advising civilians to evacuate a certain area, military forces might consider anyone who did not evacuate as forfeiting civilian status and becoming a lawful attack objective. This, of course, is not the case and civilians who have not left the area must be taken into account in the proportionality analysis.’

¹⁰⁸ The manual as amended in December 2016 states that ‘If civilians are being used as human shields, provided they are not taking a direct part in hostilities, they must be considered as civilians in determining whether a planned attack would be excessive, and feasible precautions must be taken to reduce the risk of harm to them’, US Department of Defense, ‘Law of War Manual 2016’ (n 98) para 5.12.3.4; the original text, no longer valid, held that: ‘Harm to the following categories of persons and objects would be understood not to prohibit attacks under the proportionality rule: (...) human shields’, see Department of Defense, ‘Law of War Manual 2015’ (n 46) para 5.12.3.

¹⁰⁹ See E.T. Jensen, ‘The International Law of Environmental Warfare: Active and Passive Damage during Armed Conflict’ (2005) 38 *Vanderbilt Journal of Transnational Law* 145; C. Thomas, ‘Advancing the Legal Protection of the Environment in Relation to Armed Conflict: Protocol I’s Threshold of Impermissible Environmental Damage and Alternatives’ (2013) 82 *Nordic Journal of International Law* 83; A. Leibler, ‘Deliberate Wartime Environmental Damage: New Challenges for International Law’ (1992) 23 *California Western International Law Journal* 67; C. Droege and M.L. Tougas, ‘The Protection of the Natural Environment in Armed Conflict – Existing Rules and Need for Further Legal Protection’ in R. Rayfuse (ed), *War and the Environment* (Leiden, Brill Nijhoff 2014) 11, 33ff.

¹¹⁰ ICRC Customary IHL (n 3) Rule 9.

1.2. Concrete and direct military advantage

In the context of the principle of proportionality, the ‘military advantage anticipated’ is traditionally understood to consist of ground gained and a weakening of enemy forces.¹¹¹ In some modern armed conflicts especially in certain NIACs military advantages other than territorial gain may also – depending on the circumstances – be of relevance. It has been suggested that the notion of military advantage should be construed more broadly to encompass ‘any consequences of an attack which directly enhance friendly military operations or hinder those of the enemy’,¹¹² or ‘all sorts of tactical gains and military considerations, and that different advantages that need not necessarily derive from the destruction of the specific object under attack may be considered cumulatively’.¹¹³ Some members of the SG considered these views as too broad. In any case, the SG agreed that the notion of military advantage does not include advantages that are only political, psychological, economic, financial, social, or moral in nature.¹¹⁴ As the wording makes clear, the advantage sought must be a military one. This is adequately reflected in the definition put forward in Rule 1(w) of the Air and Missile Warfare Manual according to which: ‘Military advantage’ means those benefits of a military nature that result from an attack. They relate to the attack considered as a whole and not merely to isolated or particular parts of the attack.’¹¹⁵ This implies that there must be a measurable (while not necessarily calculable in a mathematical way) effect,¹¹⁶ with a ‘close connection between the action and the attainment of the military purpose’.¹¹⁷ However, even when States view the relevant military advantage as that anticipated from the ‘attack as a whole’,¹¹⁸ the ‘attack as a whole’ involves a finite, delimitable event, and should not be confused with the entire war.¹¹⁹

It is important to be clear whether one speaks of ‘military advantage’ in a general sense, or of a ‘military advantage’ that is relevant for the principle of proportionality (or the definition of a military objective), namely only the ‘concrete and direct military advantage’ (or ‘definite military advantage’, respectively). The military advantage that may justify civilian loss, injury and damages for purposes of the principle of proportionality must be (1) concrete, (2) direct and (3) military. The limiting qualifiers ‘concrete and direct’ fulfil different important functions. ‘Concrete’ means that there has to be a *real* (i.e. a tangible or measurable) effect, while ‘direct’ refers to the chain of causation. The expected military advantage must be sufficiently tangible. As such, it cannot be ‘based merely on hope or speculation’.¹²⁰ The qualifiers ‘concrete’ and ‘direct’ mean that the military advantage should be ‘substantial and relatively close’.¹²¹ Advantages that are vague, hypothetical, indirect, long-term, including possible military advantages that might indirectly derive from advantages in the political,

¹¹¹ ICRC 1987 Commentary (n 15) 685, para 2218.

¹¹² HPCR Commentary (n 13) 45.

¹¹³ K. Watkin, ‘Assessing Proportionality: Moral Complexity and Legal Rules’ (2005) 8 Yearbook of International Humanitarian Law 19; R. Geiß, ‘The Principle of Proportionality: Force Protection as a Military Advantage’ (2012) 45(1) Israel Law Review 71, 77.

¹¹⁴ HPCR Commentary (n 13) 45.

¹¹⁵ HPCR Manual (n 3) 5, Rule 1(w).

¹¹⁶ Watkin (n 113) 22.

¹¹⁷ F. Hampson and Y. Dinstein, ‘Proportionality and Necessity in the Gulf Conflict’ (1992) 86 Proceedings of the American Society of International Law 45, 47.

¹¹⁸ Australia, Belgium, Canada, France, Germany, Italy, the Netherlands, New Zealand, Spain, the United Kingdom and the United States. For example UK declaration upon ratification of API (n 89) para (i). Statements made by the other States are similar, see Reservation/Declarations to API (n 70).

¹¹⁹ See reference in footnote 55 above.

¹²⁰ HPCR Commentary (n 13) 92.

¹²¹ ICRC 1987 Commentary (n 15) 684, para 2209.

economic, moral or financial realms are therefore excluded.¹²² Clear examples of military advantageous results that may be expected from an attack are the ground that is conquered by the attack or the effects it has on opposing forces, both in terms of casualties and damage to the military objects and installations of the enemy.¹²³ Typical examples include the destruction of an enemy stronghold, military headquarters, or military equipment.

The concept of ‘military advantage’ is part both of the principle of proportionality and the definition of a military objective (for the latter, see above Part I.). The SG agreed that the meaning of ‘military advantage’ is identical with regard to both rules.¹²⁴ The question remains, however, whether the different qualifiers, namely the requirement of a ‘definite’ military advantage for purposes of defining a military objective, and the requirement of a ‘concrete and direct’ military advantage for purposes of the principle of proportionality, lead to different results with regard to the military advantages that may ultimately be taken into consideration under these different rules.

The qualifier ‘definite’ may be understood to mean that the military advantage must be of some substance and it must be highly likely that the military advantageous effect will be attained.¹²⁵ In this regard, the Bothe/Partsch/Solf Commentary on API indicates that the qualifier ‘concrete’, meaning ‘specific, and not general’, can be seen as more or less comparable to the adjective ‘definite’ used in Art. 52(2) API.¹²⁶ The manner in which the Air and Missile Warfare Manual defines ‘definite’ picks up on this interpretation, indicating that the term ‘definite’ is employed to exclude advantages which are merely potential, speculative or indeterminate, and thus renders it very similar to the understanding of ‘concrete’.¹²⁷ The additional qualifier ‘direct’, understood as requiring the absence of an ‘intervening condition or agency’,¹²⁸ shows that the military advantage relevant for the proportionality analysis is more restrictive than the one required to make an object a military objective in the first place: the military advantage must be ‘concrete *and* direct’, thus more than just any ‘remote advantage to be gained at some unknown time in the future’.¹²⁹ It thus seems that therefore the threshold is higher for the military advantage that is relevant to the proportionality rule. The ICRC Commentary notes that the words ‘concrete and direct’ are ‘intended to show that the advantage concerned should be substantial and relatively close, and advantages which are hardly perceptible and those which appear only in the long term should be disregarded’;¹³⁰ while the 2004 UK Military Manual stipulates that ‘‘concrete and direct’ means that the advantage to be gained is identifiable and quantifiable and one that flows directly from the attack, not some pious hope that it might improve the military situation in the long term’.¹³¹ The aspect which seems to be crucial is that ‘definite’ and ‘concrete and direct’ both

¹²² *ibid*; UK Ministry of Defence (n 90) para 5.33.3; Tallinn Manual (n 3) 161, commentary on Rule 51, para 8;

¹²³ ICRC 1987 Commentary (n 15) 685, para 2218.

¹²⁴ See, for example, Watkin (n 113) 3, 18.

¹²⁵ See the ICRC 1987 Commentary (n 15) 635, para 2019: ‘According to the Rapporteur, the adjective ‘definite’ was discussed at length. The adjectives considered and rejected included the words: ‘distinct’ (distinct), ‘direct’ (direct), ‘clear’ (net), ‘immediate’ (immédiat), ‘obvious’ (évident), ‘specific’ (spécifique) and ‘substantial’ (substantiel). The Rapporteur of the Working Group added that he was not very clear about the reasons for the choice of words that was made.’; Solf, ‘Art. 52 API’ in Bothe, Partsch, Solf (n 53) 367, para 2.4.6: ‘It may, however, be concluded that the adjective is a word of limitation denoting in this context a concrete and perceptible military advantage rather than a hypothetical and speculative one.’

¹²⁶ cf Solf, ‘Art. 57 API’ in Bothe, Partsch, Solf (n 53) 407, para 2.7.2.

¹²⁷ HPCR Commentary (n 13) 49, Rule 1(y), para 7.

¹²⁸ cf Solf, ‘Art. 57 API’ in Bothe, Partsch, Solf (n 53) 407, para 2.7.2.

¹²⁹ *ibid*; See also ICRC 1987 Commentary (n 15) 685, para 2218.

¹³⁰ ICRC 1987 Commentary (n 15) 684, para 2209.

¹³¹ UK Ministry of Defence (n 90) para 5.33.3.

exclude advantages that are hardly perceptible or those which would only appear in the long run or advantages that are merely potential, speculative, indeterminate or based on hope.¹³²

The SG also discussed the issue of ‘force protection’ within the context of the principle of proportionality and in light of the notion of a ‘concrete and direct military advantage’.¹³³ The concept of force protection is not legally defined, but might be understood as referring to minimizing risks and losses to preserve combat capability. The majority of the SG, agreed that the notion of force protection is relevant for the implementation of the proportionality principle at least in certain circumstances. Whether military commanders are under a duty to protect their subordinates derived from the domestic law of their respective State is irrelevant in this regard. What matters is that under IHL preventing losses among ones' own troops constitutes a military advantage, and provided this military advantage is sufficiently concrete and direct it may be considered for purposes of the principle of proportionality. For example, the military advantage of saving troops which are under enemy fire would amount to a concrete and direct military advantage that is to be factored into the proportionality analysis when attacking the source of enemy fire. Saving one's own forces is the very purpose of fire support to troops in contact. It should, however, also be noted that while force protection is a relevant military consideration, it does not automatically trump other considerations. The relative value of protecting ones' own forces is not necessarily higher than the expected incidental harm to civilians.

The debates turn on the relevance of force protection (or force preservation) when comparing various (alternative) means or methods to achieve a specific military advantage. In that regard, there is no doubt that an attack cannot take place if the only means and methods considered feasible for force protection are such that the incidental civilian casualties and damages expected would be excessive in relation to the anticipated concrete and direct military advantage. The more complicated issue is whether the protection of one's own force that results from choosing a safer means or method of attack, e.g. a high altitude attack that under the circumstances is considered ‘safer’, constitutes a concrete and direct military advantage of that attack, relevant for the principle of proportionality.

The SG agreed that the military advantage resulting from ‘force protection’ may only be included in the proportionality analysis if it is concrete and direct.¹³⁴ This means that in circumstances where a decision is being made to adopt a method or means of attack anticipated to be more protective for the attacking forces, but also expected to result in greater incidental damage, the difference in terms of ‘force protection’ between the two means or methods of attack cannot be factored into the assessment of the military advantage of the less secure attack. This is because the advantage becomes apparent only when the safer method of attack is compared to a hypothetical less secure course of action that was never carried out. As such, the advantage is too remote or hypothetical to qualify as a ‘concrete and direct military advantage’, as required by the principle of proportionality. Furthermore, if force protection could be considered as a military advantage in such a situation, the proportionality test

¹³² cf Solf, ‘Art. 57 API’ in Bothe, Partsch, Solf (n 53) 407, para 2.7.2; ICRC 1987 Commentary (n 15) 684, para 2209; HPCR Commentary (n 13) 92, Rule 14, para 9; Tallinn Manual (n 3) 161, commentary on Rule 51, para 8.

¹³³ For a general overview see N. Neuman, ‘Applying the Rule of Proportionality: Force Protection and Cumulative Assessment in International Law and Morality’ (2004) 7 Yearbook of International Humanitarian Law 79-112; Geiß (n 113) 71. The SG also discussed how the issue of force protection relates to precautions. The SG agreed that force protection considerations are relevant ‘military considerations’ for the application of the principle of precautions; see also discussion on force protection in the context of precautions at pt III, subsection 2.2.2 below. Some members of the SG indicated that the main relevance of the issue of force protection lies in the context of precautions rather than in the context of the principle of proportionality.

¹³⁴ Geiß (n 113) 88.

could be one-sidedly manipulated. Indeed, the excessiveness requirement for a specific operation would depend of the consideration of other hypothetical operational options and the danger to one's own troops in these other operations. In any case, the idea that the armed forces' own soldiers could be ascribed a greater value in the balancing exercise than civilians is incompatible with the principle of proportionality, and in fact would undermine this principle.

1.3. Excessiveness

The word that has been codified in the principle of proportionality to determine the difference between a lawful attack and an unlawful attack is the word 'excessive'. The original draft drawn up by the ICRC contained the word 'proportionate', but this wording appeared to be unacceptable to some States during the negotiations. Frits Kalshoven has claimed to have proposed the use of the word 'excessive' during these debates, which was subsequently accepted.¹³⁵

Some commentators have pointed out that the expected 'concrete and direct military advantage' and the 'incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof' are incomparable as incommensurate factors.¹³⁶ It should be noted, however, that the balancing of different considerations in the realm of the principle of proportionality is nothing unusual at all. It is the rule rather than the exception and it should not be viewed as an obstacle to carry out a sound proportionality analysis. For example, under human rights law, the principle of proportionality typically requires the balancing of public order maintenance on the one hand with certain limitations on individual freedoms on the other hand.

When determining excessiveness for purposes of the principle of proportionality in the realm of IHL, quantitative and qualitative factors play a role. This part of the proportionality analysis requires the (difficult) attribution of certain values to the anticipated military advantage and expected civilian damages. As an example for the combination of qualitative and quantitative factors one might think of the military advantage anticipated from an attack killing three ordinary soldiers, which must be deemed to be in principle lower than the advantage anticipated from killing three high-ranking commanders due to the military importance of the different functions fulfilled. But of course the assessment will necessarily always be situational, depending on the circumstances of each specific case. It could be the case that under the given circumstances the three ordinary soldiers are fulfilling a centrally important military task in which case the military advantage of defeating these soldiers could be seen as higher as the military advantage anticipated from an attack on higher-ranking soldiers. Conversely, the military advantage offered by attacking high-ranking officers assigned to administrative tasks might be quite low. The assessment of the expected civilian harm is similarly situational. The relative value of an abandoned shepherd-shed in a rural area would seem to be relatively low but this assessment may change if the shed is used as shelter by civilians. A quasi-mathematical assessment may sometimes be possible; for example, when a planned attack is directed against one hundred enemy combatants but expected to cause the death of three civilians.

¹³⁵ As indicated by Frits Kalshoven during a presentation of Jeroen van de Boogaard on 'Controversial issues surrounding the principle of proportionality in international humanitarian law' at a research meeting of the Kalshoven-Gieskes Forum on International Humanitarian Law at Leiden Law School on 27 November 2012.

¹³⁶ See, for example, K. Anderson, 'The Ethics of Robot Soldiers?' (Law of War and Just War Theory Blog 4 July 2007) <<http://kennethandersonlawofwar.blogspot.nl/2007/07/ethics-of-robot-soldiers.html>> accessed 21 April 2017; Sloane (n 83) 299, 321.

Whether an attack qualifies as excessive is to be determined from the perspective of a ‘reasonable military commander’.¹³⁷ According to the ICTY Trial Chamber: ‘In determining whether an attack was proportionate, it is necessary to examine whether a reasonably well-informed person in the circumstances of the actual perpetrator, making reasonable use of the information available to him or her, could have expected excessive civilian casualties to result from the attack’.¹³⁸ It is important to note that while the determination of excessiveness from the perspective of a reasonable military commander necessarily leaves commanders with a certain margin of discretion, it is an objective standard. Incidental harm may be proportionate from the perspective of a reasonable military commander even if an individual commander might regard it as excessive; conversely incidental harm may be excessive from the perspective of a reasonable military commander even if an individual commander might regard it as proportionate. The principle of proportionality thus accommodates operational realities. In addition, while it allows for a certain spectrum of decisions that would be in line with the law, at the same time the principle of proportionality also sets an objective limit whenever a reasonable military commander would consider the expected civilian damages to be excessive.

Furthermore, the armed forces may strive for more objectivity in the application of the principle of proportionality by institutionalizing procedures for the purpose of targeting that include the obligation to conclude a proportionality analysis with clear guidance on the understanding of the factors that need to be taken into account. The objectivity of the process may also be further enhanced by ensuring that as far as possible military commanders have access to well-trained (military) legal advisers throughout the ‘targeting cycle’.

It was suggested by some members of the SG that a (large-scale) survey assessing where military operators and civilians would ‘draw the line’, i.e. at which point they would consider civilian casualties and damages to be excessive, in a number of different scenarios would be useful.¹³⁹ This empirical research could then feed into military doctrine and training modules and inform operational decision-making in the application of the principle of proportionality.

¹³⁷ Sloane (n 83) 299, 302: ‘At best, its [the principle of proportionality’s] implementation in the field is guided by the nebulous standard of the good-faith and optimally informed ‘reasonable military commander.’

¹³⁸ ICTY, *Prosecutor vs Galić* (n 88) para 58.

¹³⁹ See Janina Dill, *Legitimate Targets? Social Construction, International Law and US Bombing* (Cambridge Studies in International Relations 133, CUP 2014). See, L. Blank, G.S. Corn and E. Jensen’s rather critical post, ‘Surveying Proportionality: Wither the Reasonable Commander?’ (Just Security 25 March 2015) <<https://www.justsecurity.org/21474/surveying-proportionality-reasonable-commander/>> accessed 21 April 2017, and J. Dill’s answer, ‘‘Proportionate’ Collateral Damage and Why We Should Care About What Civilians Think’ (Just Security 27 March 2015) <<https://www.justsecurity.org/21529/meaning-proportionate-collateral-damage-care-civilians/>> accessed 21 April 2017.

PART III: PRECAUTIONS¹⁴⁰

OUTLINE

1. Precautions in attack
2. When are precautions ‘feasible’?
 - 2.1. Scope and content of the feasibility caveat
 - 2.2. Factors to be taken into consideration when determining feasibility
 - 2.2.1. Financial implications as a relevant factor in the determination of feasibility
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3. Increasing incentives for compliance
4. The obligation to take constant care
5. The obligation to verify
6. Feasible precautions in the choice of means and methods of attack: No general obligation to use the most precise or modern technology
7. The obligation to take effective advance warning

¹⁴⁰ This part of the report was initially drawn up by the members of working group 2 of the 2015 Oslo meeting: Charles Garraway (Coordinator), Mike Schmitt, Jann Kleffner, Heike Krieger, Sandesh Sivakumaran, Aurel Sari, Yaël Ronen, Louise Arimatsu, Geoffrey Corn. All members of the Study Group had a role in commenting upon the initial draft and the entire SG is responsible for the final version of all parts of the report.

1. Precautions in attack

The obligation to take all feasible precautions to avoid or minimize the risk to civilians resulting from military operations is a fundamental principle of the law of armed conflict.¹⁴¹ Precautions are of central importance to the protection of the civilian population. Nevertheless, compared to the principle of distinction and the principle of proportionality, the issue of precautions has remained under-researched and more problematically under-emphasized.

The principal legal regime governing precautions in attack during an international armed conflict is laid out in Art. 57 API. As mentioned above, the customary law rules governing the conduct of hostilities are applicable in all domains of warfare.¹⁴² To the extent that Art. 57(4) API had imposed through the use of the term ‘reasonable’ a standard ‘a little less far-reaching’ than ‘all feasible precautions’,¹⁴³ the customary rules pertaining to precautions in attack today impose the requirement of taking all feasible precautions in all domains of warfare.¹⁴⁴

It is now generally accepted that the obligation to take ‘precautions in attack’ also applies to NIAC by virtue of customary international law.¹⁴⁵ Although the obligation as such does not appear in APII (nor in Common Art. 3 GC I-IV), Art. 13(1) APII requires that ‘the civilian population and individual civilians shall enjoy general protection against the dangers arising from military operations’. As the ICRC Customary IHL Study commentary to Rule 15 states: ‘it would be difficult to comply with this requirement without taking precautions in attack’.¹⁴⁶

By virtue of customary international law, parties to an armed conflict are under an obligation to take precautions in attack in both international as well as non-international armed conflicts.

It follows from the humanitarian rationale and structure of Art. 57 API, which starts out with a general obligation to exercise constant care to spare the civilian population, that the provision imposes a presumptive obligation to take precautions and that the feasibility caveat provides the basis for a possible rebuttal. In other words, the obligation to take precautions is the rule and it may only be dispensed with in exceptional cases.

¹⁴¹ See G.S. Corn, ‘War, Law, and the Oft Overlooked Value of Process as a Precautionary Measure’ (2014) 42 *Pepperdine Law Review* 419; G.S. Corn, ‘Precautions to minimize civilian harm are a fundamental principle of the law of war’ (Just Security 8 July 2015) <<https://www.justsecurity.org/24493/obligation-precautions-fundamental-principle-law-war>> accessed 21 April 2017. On precautions see generally J.F. Quéguiner, ‘Precautions under the law governing the conduct of hostilities’ (2006) 88(864) *International Review of the Red Cross* 793-821; Dinstein (n 6); Oeter (n 8); I. Henderson, *The Contemporary Law of Targeting* (Brill 2009) ch 7; Boothby (n 18) ch 7; M. Sassoli and A. Quintin, ‘Active and Passive Precautions in Air and Missile Warfare’ (2014) 44 *Israel Yearbook on Human Rights* 69-123.

¹⁴² See text in relation to footnote 3 above.

¹⁴³ ICRC 1987 Commentary (n 15) 687-88, para 2230.

¹⁴⁴ See also in this sense HPCR Manual on International Law Applicable to Air and Missile Warfare where it precisely discusses this and states that ‘the Group of Experts reached the conclusion that, as a general principle, the same legal regime applies equally in all domains of warfare (land, sea or air)’, HPCR Commentary (n 13) 124-25, Rule 30, para 2.

¹⁴⁵ ICRC Customary IHL (n 3) Rules 15-21; B.J. Egan, ‘International Law, Legal Diplomacy, and the Counter-ISIL Campaign: Some Observations’ (2016) 92 *International Law Studies*, US Naval War College. See also S. Sivakumaran, *The Law of Non-International Armed Conflict* (OUP 2012) ch 2.5.1. Both, Art. 3(10) of the Amended Protocol II to the Conventional Weapons Convention and Art. 7 of the Second Protocol to the Cultural Property Convention, apply in NIAC.

¹⁴⁶ ICRC Customary IHL (n 3) Rule 15.

2. When are precautions feasible?

The feasibility qualifier is linked to several specific obligations, namely the obligations laid out in Art. 57(2)(a)(i) and (ii) API, usually referred to as precautions in attack. Rules 16-19 in the ICRC Customary Law Study also include the feasibility qualifier. Similarly, the relevant obligations regarding precautions against the effects of attacks, namely Art. 58(a), (b), (c) API and customary IHL Rules 22-24 also include the feasibility qualifier. The SG noted that the general understanding of feasibility is the same for both precautions in attack and precautions against the effects of attacks.

2.1. Scope and content of the feasibility caveat

Understanding the full effect of the feasibility qualifier in relation to these obligations is perhaps the most complicated aspect of implementing precautions. Unfortunately, neither the text of these provisions nor the associated 1987 ICRC Commentary provides much insight into the meaning of this qualifier.¹⁴⁷

‘Feasible’ is an inherently variable concept and the obligation is always context dependent, i.e. what is feasible will not only be contingent on the environment in which the attack is to be carried out but will also depend on a range of factors including time, terrain, weather, capabilities, available troops and resources, enemy activity and civilian considerations.¹⁴⁸ It is against this backdrop that the obligation to take precautions in attack is often described as ‘relative’.¹⁴⁹

The word ‘feasible’ has indeed been defined as ‘those precautions which are practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations’. This text is found in Art. 3(10) of Amended Protocol II and Art. 1(5) of Protocol III to the 1980 Convention on Certain Conventional Weapons (CCW) and is reflected in reservation b) which the United Kingdom made on ratification of API.¹⁵⁰ Similar wording was used by other States such as France and Spain.¹⁵¹ This understanding has received widespread acceptance and was also supported by the SG.

¹⁴⁷ For example, when discussing the target verification obligation, the Commentary provides that, ‘[o]nce again the interpretation will be a matter 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. It is not clear how the success of military operations could be jeopardized by this.’ See ICRC 1987 Commentary (n 15) 682, para 2198.

¹⁴⁸ The phraseology has been discussed in many separate contexts including the ICRC Customary International Humanitarian Law Study, see ICRC Customary IHL (n 3) Rule 15; ICTY, *Prosecutor vs Galić* (n 88) para 58, fn 105; UK Ministry of Defence (n 90) paras 5.32.2 – 5.32.10.

¹⁴⁹ There is also the comment by the chair in Session 2 of the ICRC Expert Meeting on Explosive Weapons in Populated Areas: Humanitarian, Legal, Technical and Military Aspects which reads: ‘While the rules prohibiting indiscriminate attacks and requiring attacks to respect proportionality are absolute, the requirement to take precautions is relative, based on what is feasible’, see ICRC Expert Meeting (n 85) 18.

¹⁵⁰ The text of the reservation made by the UK (n 89).

¹⁵¹ According to the interpretative declaration submitted by Spain: ‘It is the understanding [of the Government of Spain] that in Articles 41, 56, 57, 58, 78 and 86 the word ‘feasible’ means that the matter to which reference is made is practicable or practically possible taking into account all circumstances at the time when the situation arises, including humanitarian and military considerations.’ (1989) <<https://www.icrc.org/applic/ihl/ihl.nsf/Notification.xsp?action=openDocument&documentId=FC622F31C9E2236EC1256402003FB660>> accessed 21 April 2017.

The 2015 US Department of Defense Manual deals with the matter in less detail and is somewhat controversial. According to the manual '[t]he standard for what precautions must be taken is one of due regard or diligence, not an absolute requirement to do everything possible. A wanton disregard for civilian casualties or harm to other protected persons and objects is clearly prohibited.'¹⁵² 'Wanton disregard' implies that no precautions have been taken and so it is almost otiose to say that it is clearly prohibited. It is also somewhat surprising given that the US has stated that Art. 57(2)(a)(ii) API is an 'accurate statement of the fundamental law of war principle of discrimination'.¹⁵³ The question is whether the assessment of feasibility was, under the circumstances, one that a reasonable commander in the same situation would have made.

The Harvard Air and Missile Warfare Manual has taken the view that the standard for precautions required in the air domain is 'feasibility' (and not 'reasonableness'),¹⁵⁴ defined as per the abovementioned CCW definition;¹⁵⁵ precisely in the chapter on precautions, 'the Group of Experts [drafting the Air and Missile Warfare Manual] reached the conclusion that, as a general principle, the same legal regime applies equally in all domains of warfare (land, sea or air)'.¹⁵⁶ The Rules in the Tallinn Manual also use 'feasible'.¹⁵⁷ Some of the experts in the 2013 Tallinn Manual stated that the difference between the term 'reasonable' and 'feasible' is tenuous and 'that the distinction is so highly nuanced as to be of little practical relevance, and that the applicable legal standard is operationally the same'.¹⁵⁸ Under this view, 'the attacker must perform those precautionary measures that are both technically possible and militarily feasible'.¹⁵⁹ The SG agreed with this finding. The Tallinn Manual 2.0 simply deleted this discussion and any reference to the fact that the standard might be different, which further supports the position that the standard of 'all feasible precautions' applies in all domains.¹⁶⁰

The Group noted that feasibility is to be determined from an *ex ante* perspective, i.e. prior to (and if possible during) the attack and on the basis of the information available at the time; not with hindsight. As United Kingdom Reservation (c) to Additional Protocol I stipulates, '[m]ilitary commanders and others 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.'¹⁶¹

2.2. Factors to be taken into consideration when determining feasibility

According to Art. 3(10) of the 1996 Amended Mine Protocol of the UN Weapons Convention, the circumstances to be included in the feasibility determination include but are not limited to: (a) the short- and long-term effect of mines upon the local civilian population for the duration of the

¹⁵² US Department of Defense, 'Law of War Manual 2015' (n 46) para 5.3.3.2.

¹⁵³ Harold Koh, Legal Adviser, Department of State, 'Letter to Paul Seger, Legal Adviser of Switzerland regarding Switzerland's Position on the US Reservation to Protocol III of the Convention on Certain Conventional Weapons' (30 December 2009) quoted in: US Department of Defense, 'Law of War Manual 2015' (n 46) para 5.11, fn 279.

¹⁵⁴ See HPCR Manual (n 3) 12, 16, 18-20, 26, 34, Rules 20, 31, 32, 39, 40, 42-44, 46, 68(d) and 95(c).

¹⁵⁵ See HPCR Manual (n 3) 4, Rule 1(q).

¹⁵⁶ HPCR Commentary (n 13) 124-25, Rule 30, para 2.

¹⁵⁷ See Tallinn Manual (n 3) 167-68, 176, Rules 53-54 and 59.

¹⁵⁸ Tallinn Manual (n 3) 165.

¹⁵⁹ *ibid.*

¹⁶⁰ Tallinn Manual 2.0 (n 43).

¹⁶¹ UK declaration upon ratification of API (n 89) para (c).

minefield; (b) possible measures to protect civilians (for example, fencing, signs, warning and monitoring); (c) the availability and feasibility of using alternatives; and (d) the short- and long-term military requirements for a minefield. More generally, the UK Military Manual states 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 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.’¹⁶²

According to the 2015 US Department of Defense Manual relevant circumstances may include:

‘the effect of taking the precaution on mission accomplishment; whether taking the precaution poses a risk to one’s own forces or presents other security risks; the likelihood and degree of humanitarian benefit from taking the precaution; the cost of taking the precaution, in terms of time, resources, or money; or whether taking the precaution forecloses alternative courses of action.’¹⁶³

Few could dispute that ‘feasible’ e.g. in relation to the target verification obligation certainly factors in the capability of a commander to gather and assess information. For example, while it would be ‘feasible’ for a commander with eyes on the target (through human intelligence on the ground) or with access to real-time imagery from an unmanned aerial vehicle to continue to gather information on a potential target up to the moment of the actual attack decision (and even while the attack was in progress), it would not be ‘feasible’ for a commander lacking this capability to do the same. In this sense, the feasibility qualifier is relatively uncontroversial; a commander cannot be required to do that which is simply practically impossible under the given circumstances. Resources and capacity are thus relevant factors in the determination of feasibility.

However, it bears emphasis that even if some options may not be available due to a lack of resources, the military commander in charge will have to explore other options. As the wording of Art. 57(2)(a)(i) and (ii) API makes clear, those planning an attack have to do *everything* feasible to verify the military nature of the target and take *all* feasible precautions in the choice of their means and methods. If lack of resources or capacity does not allow ascertaining that the proposed target is actually a military objective, the attack must not take place.

2.2.1. Financial implications as a relevant factor in the determination of feasibility

The question whether financial costs can be factored into the feasibility assessment is controversial. The 2015 US Department of Defense Manual explicitly refers to ‘money’ as a circumstance to be taken into consideration when assessing feasibility.¹⁶⁴ The SG found this position controversial and

¹⁶² UK Ministry of Defence (n 90) para 5.32.5; Generally see also Oeter (n 8) 200, para 460.

¹⁶³ US Department of Defense, ‘Law of War Manual 2015’ (n 46) para 5.3.3.2.

¹⁶⁴ *ibid.*

agreed with the view put forward in the literature that '[t]here is no basis in international humanitarian law for factoring expense into feasibility assessments. Once a belligerent purchases equipment and supplies it to its forces in the field, it must be used if it is available, makes good military sense and will minimize civilian impact'.¹⁶⁵ The SG noted that financial considerations should not be confused with specific resources considerations, e.g. when a military commander has the intention to save up a weapon/ammunition in short supply for a later occasion where it is expected that the use of this weapon would be more appropriate from a military or humanitarian perspective, knowing that it is in short supply and cannot easily be replaced. Such resources considerations are recognized factors in the determination of feasibility. Conversely, allowing financial and economic considerations as such to enter the equation is risky given that they may be abstract and remote and could easily be invoked so as to manipulate the obligation to take feasible precautions.

2.2.2. Force protection as a relevant consideration when determining feasibility

The relevance of the protection of one's own forces is also controversially debated. Much of the controversy, however, concerns the question whether (and how) force protection may be factored in the proportionality calculus (see Part II above).¹⁶⁶ With regard to precautions, it is beyond doubt that in times of armed conflict force protection is a priority concern of every military commander and as such it is a standard 'military consideration' that may be taken into account when assessing the feasibility of a given precautionary measure.¹⁶⁷ It bears emphasis, however, that force protection is only one among many factors determining feasibility and it does not automatically trump relevant humanitarian considerations. Indeed, the accepted definition of feasible precautions recalled above, makes humanitarian considerations as relevant as military ones.

3. Increasing the incentives for compliance

The SG noted a structural problem regarding the operational implementation of precautionary measures, namely that they may often be perceived as compromising the tactical gains and anticipated military advantages of a given attack. When the obligation is emphasized exclusively in terms of mitigating civilian risk, there is, as the 1987 ICRC Commentary notes, a risk that commanders will view the obligation in competition with military operational considerations. In contrast, the obligation should be understood as one that typically – albeit not always – operates symmetrically with military operational interests of maximizing situational awareness, as the 1987 ICRC Commentary highlights.¹⁶⁸ Commanders should constantly seek to maximize the effect of using the finite combat power available, and therefore typically have a constant operational interest in avoiding the use of such power against targets that do not in fact qualify as military objectives. In other words, commanders and operational planners should instinctively seek to maximize the use of intelligence, surveillance and reconnaissance (ISR) assets to gain the best situational awareness possible. Framing precautionary obligations in general and the obligation to verify in particular in these terms would highlight the convergence of military and humanitarian consideration in maximizing the use of

¹⁶⁵ M.N. Schmitt, 'Precision attack and international humanitarian law' (2005) 87(859) *International Review of the Red Cross* 462.

¹⁶⁶ Part II (1.2), text in relation to footnotes 133 and 134.

¹⁶⁷ Sassoli and Quintin (n 141) 69-123; see the definition of 'feasible' recalled above: '*those precautions which are practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations*' (emphasis added).

¹⁶⁸ ICRC 1987 Commentary (n 15) 680-81, para 2195.

available ISR assets.¹⁶⁹ If commanders perceive situational awareness as a force multiplier, it leads to choose not to utilize available ISR resources only as the result of genuine considerations of military necessity. These could include, *inter alia*, concerns over loss of surprise; concerns over losing ISR assets considered essential for future missions; prioritizing ISR efforts towards other anticipated targets; and the risk that information overload might dilute combat initiative. All of these considerations arguably influence a military ‘feasibility’ judgment, but when a commander views situational awareness as an operational advantage, and not merely as a humanitarian measure, it is less likely that these considerations will be prematurely or unjustifiably invoked.

4. The obligation to take constant care

According to Art. 57(1) API ‘[i]n the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects.’ With reference to NIAC, note should be taken of Art. 13(1) APII, which reads: ‘The civilian population and individual civilians shall enjoy general protection against the dangers arising from military operations.’ The ICRC Customary IHL Study confirms that the constant care obligation applies in both international and non-international armed conflicts.¹⁷⁰

Although Art. 57 is located among the rules related to the employment of combat power – commonly referred to within military circles as the ‘targeting process’, there is no indication that the general obligation is limited to this process. The SG agreed that in spite of Art. 57’s title ‘Precautions in attack’, the obligation to take constant care to spare the civilian population applies to the entire range of military operations and not only to attacks in the sense of Art. 49 API. This follows from the clear wording of the provision and from the fact that reducing its scope of application to that of attacks would deprive the provision of most of its meaning given that relevant scenarios would already be covered by Art. 57(2)-(5) API.¹⁷¹ The scope of application of the general obligation laid out in Art. 57(1) API therefore is broader than that of the specific obligations contained in paragraphs 2-5, which only apply to attacks. Such a broad reading of Art. 57(1) is supported *inter alia* by the UK Manual which distinguishes between Art. 57(1) and Art. 57(2), pointing out that the phrase ‘military operations’ ‘has a wider connotation than ‘attacks’ and would include the movement or deployment of armed forces’ (footnote 187 to para 5.32.). The text goes on to say that: ‘So the commander will have to bear in mind the effect on the civilian population of what he is planning to do and take steps to reduce that effect as much as possible. In planning or deciding on or carrying out attacks, however, those responsible have more specific duties.’¹⁷² Art. 57(2)-(5) API should thus be understood as derivative specifications of the general obligation stipulated in Art. 57(1) API.¹⁷³ They can be derived from and partially overlap with Art. 57(1) API without, however, exhausting the broader meaning of this provision.

¹⁶⁹ Corn, ‘War, Law, and the Oft Overlooked Value of Process as a Precautionary Measure’ (n 141) 430.

¹⁷⁰ ICRC Customary IHL (n 3) Rule 15.

¹⁷¹ Quéguiner (n 141) 796.

¹⁷² UK Ministry of Defence (n 90) para 5.32.1. As shown by Rule 30 and its commentary, the Harvard Air and Missile Warfare Manual consider that the obligation of constant care applies at all times and places and with no exception, HPCR Commentary (n 13) 124-25, Rule 30, para 2.

¹⁷³ According to the 1987 ICRC Commentary, ‘the other paragraphs [of Art. 57 API] are devoted to the practical application of this principle’, see ICRC 1987 Commentary (n 15) 680, para 2191.

According to the ICRC Commentary to Art. 57 API, '[t]he term 'military operations' should be understood to mean any movements, maneuvers and other activities whatsoever carried out by the armed forces with a view to combat.'¹⁷⁴ The SG agreed with such a broad understanding of the term 'military operations'.

The term 'constant care' is not defined under IHL. Even the 1987 ICRC Commentary refers to it only as a 'general principle'.¹⁷⁵ Constant care is, of course, a quite general obligation. But generality need not dilute its significance. The use of the word 'shall' in Art. 57(1) API indicates that whatever it is that this provision entails is binding upon the parties to the Protocol. It has been said to apply to all domains of warfare¹⁷⁶ and all levels of operations.¹⁷⁷ The obligation to take constant care is best understood as an obligation of conduct, i.e. a positive and continuous obligation aimed at risk mitigation and harm prevention and the fulfillment of which requires the exercise of due diligence.¹⁷⁸ As such it is relative in character, i.e. what precisely the obligation requires depends on the circumstances of each specific case. As a general rule, the higher the risks for the civilian population in any given military operation, the more will be required in terms of care. Naturally, risks for the civilian population are particularly high, whenever the military is executing an attack. It is for this reason, that Art. 57(2-5) lists a number of 'attack-specific' obligations, in addition to the general obligation contained in Art. 57(1).

5. The obligation to verify

According to Art. 57(2)(a)(i) API 'those who plan or decide upon an attack *shall 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 [...] and that it is not prohibited by the provisions of this Protocol to attack them.'¹⁷⁹ According to the ICRC Customary IHL Study in both international and non-international armed conflicts, '[e]ach party to the conflict must do everything feasible to verify that targets are military objectives.'¹⁸⁰

The obligation to verify is crucial for two reasons: first, it functions to minimize the risk that a target will be mistakenly assessed as qualifying for deliberate attack; second, it functions to maximize the probability that attacks will only be directed at targets that genuinely contribute to bringing the enemy into submission. In other words, the obligation to verify not only gives expression to a central humanitarian rationale, it is also in line with the dictates of military logic. The obligation can usefully be regarded as the procedural corollary to the general obligation to distinguish civilians and civilian objects from military objectives.¹⁸¹ The obligation requires verification that the target is a

¹⁷⁴ *ibid.*

¹⁷⁵ *ibid.*

¹⁷⁶ HPCR Commentary (n 13) 124-25, Rule 30, para 2.

¹⁷⁷ Corn, 'Precautions to Minimize Civilian Harm are a Fundamental Principle of the Law of War' (n 141): 'a requirement to take 'constant care' to mitigate the risk to civilians and civilian property must animate all strategic, operational, and tactical decision-making (...)'.
¹⁷⁸ The commentary on Rule 52 of the Tallinn Manual suggests that 'in cyber operations, the duty of care requires commanders and all others involved in the operations to be continuously sensitive to the effects of their activities on the civilian population and civilian objects, and to seek to avoid any unnecessary effects thereon.' See Tallinn Manual (n 3) 166, commentary on Rule 52, para 4.

¹⁷⁹ Emphasis added.

¹⁸⁰ ICRC Customary IHL (n 3) Rule 16.

¹⁸¹ W.G. Schmidt, 'The Protection of Victims of International Armed Conflict: Protocol 1 additional to the Geneva Conventions' (1984) 24 *Air Force Law Review* 189, 235.

‘combatant’,¹⁸² or a civilian taking a direct part in hostilities, or a military objective in line with the definition in Art. 52(2) API and that it is not prohibited by IHL to attack them.¹⁸³ It is a continuous obligation subject to the feasibility-qualifier and therefore context dependent.¹⁸⁴ The wording ‘shall do everything feasible to verify’ indicates a requirement to maximize the utilization of available intelligence, surveillance and reconnaissance assets to gain the most comprehensive situational awareness possible under the circumstances; and where possible utilize analytical processes to transform this battlefield information into intelligence.¹⁸⁵ The United Kingdom Manual lists different factors to which any commander selecting a target will have to pay regard, namely:

‘a. whether he can personally verify the target; b. instructions from higher authority about objects which are not to be targeted; c. intelligence reports, aerial or satellite reconnaissance pictures, and any other information in his possession about the nature of the proposed target; d. any rules of engagement imposed by higher authority under which he is required to operate; e. the risks to his own forces necessitated by target verification.’

While the specific aspects that are to be taken into consideration will always depend on the given situation, other factors that can play a role are: the level of risk for civilians in case of an erroneous identification of the target; the type of target and the basis for its identification as a lawful target; the likelihood of confusion with civilians or civilian objects – e.g. there is a greater risk of confusion if target identification is based mainly on ‘patterns of life’ –; or past errors in target identification in similar situations, on the basis of similar sources of intelligence and/or with regard to similar types of targets.

6. Feasible precautions in the choice of means and methods of attack: no general obligation to always use the most precise or modern technology

According to Art. 57(2)(a)(ii) API ‘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 to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects.’ According to the ICRC Customary IHL Study in both international and non-international armed conflicts ‘[e]ach party to the conflict must take all feasible precautions in the choice of means and methods of warfare with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects.’¹⁸⁶

¹⁸² Combatant is used here in a generic sense encompassing privileged and unprivileged belligerents, including fighters of an organized non-State armed group.

¹⁸³ ICRC Customary IHL (n 3) Rule 8.

¹⁸⁴ The United Kingdom Manual deals with verification, it states: ‘The problem of verification is obviously different for the air or artillery commander drawing up target lists from a distance than it is for a tank troop commander who has enemy armored vehicles in his sights. The former has more time to make up his mind; the latter is more easily able to verify the target.’ See UK Ministry of Defence (n 90) para 5.32.2.

¹⁸⁵ The Report to the ICTY Prosecutor about the NATO Bombing Campaign 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. Both the commander and the aircrew actually engaged in operations must have some range of discretion to determine which available resources shall be used and how they shall be used’, see ICTY Office of the Prosecutor (n 99) para 29.

¹⁸⁶ ICRC Customary IHL (n 3) Rule 17.

According to the Air and Missile Warfare Manual '[t]here 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 obligation to avoid – or, in any event, minimize – collateral damage, cannot be fulfilled without using precision guided weapons'.¹⁸⁷ The SG agreed with this finding. There is no obligation to acquire the most precise or modern technology (or any particular technology) on the market nor is there a general obligation for a party to an armed conflict to use in all situations the most precise technology that it has in its arsenal.

In this regard it should be kept in mind that even though a weapon may be classed as 'precision-guided', it may still be more destructive than other weapons (e.g. in the case of a 1000 lb. precision guided munitions (PGM) versus a 250 lb. dumb bomb).

At the same time, it bears emphasis that all precautionary obligations are 'technology neutral', i.e. they apply irrespective of the weapons technology used, including PGMs. Thus, if the use of a PGM will avoid or minimize incidental civilian casualties compared to another means or method of warfare and provided its use is *feasible* under the given circumstances (i.e. taking into account both military and humanitarian considerations), then using such a PGM is compulsory. Similarly, if the only way to carry out an operation without violating the prohibitions of indiscriminate or disproportionate attacks is to use a PGM, then the attacker is faced with only two options: to use the PGM; or not carry out the attack at all.

It bears emphasis that this reasoning applies not only to the issue of PGMs but to all methods and means of warfare, including 'modern' technologies such as cyber-attacks, drone strikes and the possible future use of increasingly autonomous weapons systems.

7. The obligation to take effective advance warning

Providing advance warnings to civilians in order to mitigate the risk of attack is one of the most commonly debated precautionary measures.¹⁸⁸ Art. 57 specifically requires that 'effective advance warning shall be given of attacks which may affect the civilian population, unless circumstances do not permit.' Israel's 2014 operations in Gaza, and the extensive efforts to provide such warnings, have elevated the discourse on this warnings precaution to unprecedented levels: some worry that the Israeli Defense Forces (IDF) created an unrealistically high bar on when and how to provide warnings; conversely, some condemn the IDF because the warnings did not produce their intended effects; finally, some suggest that the extent of warnings were the result of policy decisions, and not legal obligation.

It is important to note the way that the provision is phrased. It indicates that the presumption (subject to the exception) is that a warning shall be given.¹⁸⁹

Generally speaking, advance warnings may include but are not limited to leaflets, signals, phone calls, text messages, as well as passing warnings to village elders and others likely to influence decision to take shelter or temporarily leave the area. Whether they can be qualified as 'effective' depends on the

¹⁸⁷ HPCR Manual (n 3) Rule 8.

¹⁸⁸ See P.S. Baruch and N. Newman, 'Warning civilians prior to attack under international law - theory and practice' (2011) 41 Israel Yearbook of Human Rights 359ff.

¹⁸⁹ Quéguiner (n 141) 807.

circumstances of each given case. As is the case with all the precautionary obligations the assessment has to be made *ex ante*, on the basis of the information available prior to the attack and not with hindsight. The military commander taking the relevant decision must thus be assessed, objectively, on whether the warning efforts could have reasonably been expected to produce the intended protective effect in the circumstances ruling at the time, in view of information available from all sources to the commander.

It is clear that warnings that leave civilians with no means of, or time to, escape cannot be considered 'effective'. Similarly, military operations that qualify as an attack cannot simultaneously qualify as a warning. In this regard, so-called 'roof knock operations' were controversially discussed within the SG.¹⁹⁰ Some members of the SG argued that so-called 'roof knock operations' amount to an attack, because they involve an act of violence against the adversary and that it is therefore prohibited to direct such tactics against a civilian object. On the other hand, it was argued that when used against a military objective in order to warn civilian bystanders, it may constitute a precaution in the choice of means and methods of warfare to avoid or minimize civilian casualties.¹⁹¹

Both Art. 57(2)(c) API as well as the corresponding customary law rule take into consideration that issuing an effective advance warning may not always be possible or 'feasible'. Unlike other precautionary obligations, however, these provisions do not use the word 'feasible' but speak of an obligation to give effective advance warning 'unless circumstances do not permit'. The explanation of this qualifier in the 1987 ICRC Commentary is cursory and somewhat cryptic.¹⁹² This is unfortunate, as when, where, and why this qualifier is legitimately applicable to rebut the presumptive obligation to provide warnings is critically important, as foregoing warnings can substantially contribute to civilian risk.

It is clear that whenever a force is objectively incapable of providing an advance warning, the circumstances do not permit such a warning. Such scenarios, however, will presumably be quite rare. In most situations, providing some form of warning, even if cursory, will be possible. If by nothing other than a bullhorn or yelling towards a group of civilians, or 'buzzing' a town before launching an air attack, some warning effect may result. Such a type of warning may not be the most effective warning but it is likely to have some effect in terms of civilian risk mitigation, and if circumstances do not allow for any alternatives it is certainly better than no warning at all, and therefore this kind of warning would be obligatory. Conversely, whenever a military commander has different options to warn, he must – as far as circumstances permit – opt for the most effective warning. This follows from the object and purpose of the warning requirement, namely to mitigate risks for the civilian population, as well as the general, overarching obligation to take constant care to spare the civilian population.

¹⁹⁰ The US reportedly used this method in Iraq, see Y. Torbati and I. Ali, 'U.S. military used 'roof knock' tactic in Iraq to try to warn civilians before bombing' (Reuters 26 April 2016) <<http://www.reuters.com/article/us-mideast-crisis-usa-airstrike-idUSKCN0XN2NK>> accessed 21 April 2017.

¹⁹¹ Israel's report on operation protective edge discusses roof knocking in para 313 on page 180, that is in part VI D 2 c on choice of means and methods and not in part VI D 2 b on advance warnings, see State of Israel, 'The Gaza Conflict 7 July – 26 August 2014, Factual and legal Aspects' (2015) 180, para 313 <<http://mfa.gov.il/ProtectiveEdge/Documents/2014GazaConflictFullReport.pdf>> accessed 21 April 2017.

¹⁹² ICRC 1987 Commentary (n 15) 686-87, paras 2222-25.

The 1987 ICRC Commentary references loss of necessary surprise when it is a condition of the attack's success as the motive for including the qualifier in the rule.¹⁹³ This is logical, as it would contradict basic military logic to require commanders to provide warnings when doing so would seriously undermine the effect of an anticipated attack by providing the enemy the opportunity to effectively prepare for the attack. In that regard, military manuals refer to both the success of the attack and the preservation of the forces.¹⁹⁴ Beyond these, some members of the SG submitted that reduction of the anticipated military advantage, and possibly the protection of civilians where it is clear that a warning would lead to the use of human shields may also be relevant considerations.

At the same time, it is important to note that such considerations do not automatically set aside the obligation to warn. Any warning prior to an attack carries the risk of somehow mitigating the attack's effectiveness or endangering the attacking forces. Allowing any loss of tactical initiative to justify dispensing with the warning requirement would therefore result in an exception that swallows the rule.

If the warning requirement is to have any meaning, the expected effects of the warning in terms of protecting civilians and the presumptive nature by which it was established in Art. 57(2)(c) API and the corresponding customary law rule must weigh against dispensing with it for any slight loss of tactical advantage or other military disadvantage. The ICRC Customary IHL Study captures this point quite well by referring to 'cases where the element of surprise is *essential* to the success of an operation.'¹⁹⁵ This is reflected in military manuals.¹⁹⁶ Warnings must therefore be required unless providing them will produce a compromise to the mission that creates a genuine risk of failure. Ultimately, assessing when it is appropriate to forego a warning is highly situational and depends on what an objective, reasonable commander would have decided under the given circumstances. The determination whether circumstances do not permit a warning is a balancing exercise in which different considerations must be weighted rather than a simple yes or no answer. It would seem that where issuing a warning is likely to lower civilian casualties by 90% but where the warning would

¹⁹³ *ibid* para 2223.

¹⁹⁴ UK Ministry of Defence (n 90) para 5.32.8; US Department of Defense, 'Law of War Manual 2015' (n 46) 5.11.1.3. While the 2015 DOD Law of War Manual reinforces the application of the qualifier to attacks requiring surprise, it also suggests that circumstances that would not permit for warnings include 'legitimate military reasons, such as exploiting the element of surprise in order to provide for mission accomplishment and preserving the security of the attacking force.' The term 'such as' indicates that surprise is not the exclusive justification for dispensing with the presumptive requirement to provide warnings, although the Manual does not provide insight into other justifications.

¹⁹⁵ ICRC Customary IHL (n 3) Rule 20.

¹⁹⁶ UK Military Manual, 'where the element of surprise is crucial to the success of the military operation', see UK Ministry of Defence (n 90) para 5.32.8; Australia Military Manual: an action that 'is likely to be seriously compromised by a warning', see Australian Defence Force Warfare Center, 'Law of Armed Conflict' (Canberra, Defence Publishing Service 2006) para 5.56; US Commander's Handbook: if the success of the mission is 'placed in jeopardy', it may justify resorting to a general warning instead of a specific warning, see The Commander's Handbook (n 26) para 8.9.2; The US Operational Law Handbook, 'where surprise is a key element', see US International and Operational Law Department, 'Operational Law Handbook' (Charlottesville, Virginia, The Judge Advocate General S Legal Center & School, US Army 2015) 24 <https://www.loc.gov/rr/frd/Military_Law/pdf/operational-law-handbook_2015.pdf > accessed 21 April 2017; US response to ICRC memorandum regarding the 1990-91 Gulf conflict, '[w]here surprise is important to mission accomplishment and allowable risk to friendly forces, a warning is not required', see S.J. Cummins and D.P. Stewart (eds), 'Digest of United States Practice in International law 1991-1999' (US Department of State 1991-1999) 2064; all emphasis added.

have a slight impact on the tactical advantage sought, any reasonable commander would choose to warn. In any case, what seems clear is that commanders should be trained to assume warnings will be provided, and demand significant tactical and operational justification for dispensing with them. Otherwise, the benefit of the warning precaution will be substantially diluted.

Finally, it is important to bear in mind that civilians not heeding to a warning and remaining behind do not lose their protection from direct attack under the rules relevant to the conduct of hostilities. While they will be subject to a heightened (factual) risk of becoming collateral damage, legally they remain protected civilians. Not heeding a warning cannot be equated with a direct participation in hostilities. Therefore, an effective advance warning does not relieve the attacker from the obligation to take all other feasible precautionary measures to avoid and in any event to minimize civilian harm.