The Evolution of International Humanitarian Law: An Anthropological Perspective

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Abstract – This article uses Douglas and Wildavsky’s cultural theory of risk from the field of anthropology, in order to provide a new explanation regarding what factors influenced the evolution of international humanitarian law in general, and the rules of targeting in particular. The starting point of the analysis is that the attitudes of states to risk, and the strategies states employ to manage risk influence their conduct on the international arena. Another facet of the discussion is an examination of whether the cultural theory of risk may be used to explain the motives of states and non-state actors for violating the rules of international humanitarian law. Building on the proposition that the attitudes of states towards the way risk should be managed may shape the content of the law, as well as whether the law is obeyed, the article additionally considers whether the disagreement between scholars, regarding how the legal rules are to be interpreted, may be explained by reference to attitudes individual scholars hold towards risk. The academic discussion regarding the legality of the employment of lethal autonomous robots on the battlefield is used as a case study to test this hypothesis.

Keywords: international humanitarian law, the rules of targeting, anthropology, risk theory, lethal autonomous robots

1. Introduction

Prior to 1864, there were no treaties that regulated the way in which states conducted armed hostilities and protected various groups such as those captured in a battle.1 Instead, states signed treaties which were binding on the parties to the conflict for the duration of that particular armed conflict.2 In contrast to the 19th century, international humanitarian law (hereinafter IHL) is now a well-established branch of international law.3 The purpose of this article is to chart the evolution of the rules of targeting through the perspective of anthropology in order to

2 Ibid.
explain what social phenomena spurred the relevant changes in the law. Subsequently, it will be investigated whether anthropology can provide an insight into why different legal commentators provide different interpretations of these norms. It is hoped that this analysis will shed light on why proponents of the lawfulness of employing autonomous robots on the battlefield apply the same rules as those who oppose the introduction of these technologies but reach a different conclusion as to the legality of these systems.

It is suggested that anthropology is an appropriate lens of analysis because it is concerned with the study of societies and culture. Particularly, Mary Douglas and Aaron Wildavsky’s cultural theory of risk is arguably a fruitful avenue for analysing the evolution of the rules of targeting and the current legal debates related to these norms. The notion of risk, which is defined as the possibility of a loss occurring, goes to the heart of the rules of targeting. The rules of targeting are concerned with alleviating the suffering in war as ‘much as possible’ while allowing parties to achieve the mission objective. These norms therefore delineate the point at which allocating more resources away from operational needs to the protection of civilians and the sacrifice of additional military advantage exposes the force and the attainment of the mission objective to such degree of risk that there is no legal requirement to take further measures to mitigate danger to civilians and civilian objects. The cultural theory of risk is a promising approach for shedding new insights into why the rules of targeting evolved in the way they did because the theory goes beyond explaining how individual psychology and cognitive processes shape how individuals estimate the likelihood of a particular adverse event occurring and the magnitude of potential loss. The theory examines how social, cultural, historical and geographical factors influence the way in which individuals and groups think about risk and respond to it.

6 Declaration Renouncing the Use, in Time of War, of Explosive Projectiles Under 400 Grammes Weight, Saint Petersburg, 29 November / 11 December 1868, taken from taken from (1907) 1 A.J.I.L. Supplement 95-6.; Convention (IV) Respecting the Laws and Customs of War on Land and its Annex: Regulations concerning the Laws and Customs of War on Land. The Hague, 18 October 1907, UKTS 9, Cd. 5030.
2. The Cultural Risk Theory

According to Douglas and Wildavsky, people do not perceive risk as loss which occurs on average.\(^9\) This is because, ‘...socialized cognitive patterns work like filters in the evaluation of information about risks.’\(^{10}\) The values the person holds due to the cultural group she belongs to will influence the way in which that person will interpret the information before her.\(^{11}\) For instance, the Lele in Congo fear an attack by magicians while Californians in the U.S. are most concerned about the impact of second hand smoke on their health.\(^{12}\) This is not to say that Douglas and Wildavsky treat risks as if they do not materially exist.\(^{13}\) What they are saying is that, ‘...individuals encounter threats with a pre-existent package of beliefs and assumptions’ which are constructed through culture.\(^{14}\) In formulating the cultural theory of risk, Douglas and Wildavsky focused on how groups behave\(^{15}\) and treated the behavior of individuals as indirectly describing how groups conduct themselves under the influence of culture.\(^{16}\)

Douglas and Wildavsky maintain that all cultures and societies as well as specific groups in society have four group prototypes.\(^{17}\) These group prototypes explain attitudes to risk in societies and in segments of societies.\(^{18}\) However, their proposals have not been extensively empirically tested and some commentators such as Castel disagree with Douglas and Wildavsky.\(^{19}\) Castel argues that similarities in cultures are superficial and that cultures evolve so that the four cultural prototypes identified by the two authors even if true lack stability.\(^{20}\) On the other hand, Rippl who is a sociologist, has conducted a study which she argues shows that there is evidence that groups in society mirror the four cultural prototypes.\(^{21}\) Rippl gave a questionnaire to sociology students in Germany which tested their attitudes to various phenomena.\(^{22}\) Rippl used a specialist computer program to process the answers and to develop

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9 Boyne, Risk (Open University Press 2003) 44.
11 Renn, Risk governance: coping with uncertainty in a complex world (Routledge 2008) 22.
12 Boyne n.9, 44.
13 Mythen, ‘Sociology and the art of risk,’ 306.
14 Ibid.
15 Boyne n.9, 53.
16 Ibid.
17 Renn n. 11, 121.
18 Ibid.
19 Ibid. 56;60.
20 Ibid.
22 Ibid, 154.
correlations between them. Rippl justified her method by arguing that although one cannot study culture by studying individuals, the study of individuals may nevertheless reveal cultural processes. Other studies such as those conducted by Marris, Langford and O’Riordan corroborate that it is possible to map the outlook of individuals on particular issues to the cultural prototypes developed by Douglas and Wildavsky. It is proffered that evidence for the validity of cultural theory can moreover be gleaned from the works of psychologists. Psychologists argue that culture involves mental constructs that provide people with guides how to judge situations and that give people guidelines for how to behave. Thus, cultural theory of risk merits consideration.

2.1 The Four Prototypes

Douglas and Wildavsky propose that in every society there co-exist individualists, egalitarians, hierarchists and fatalists. Each of these cultural prototypes is classified using the criteria of ‘group’ and ‘grid.’ The term ‘group’ refers to the degree to which individuals are either individualistic or collectivist. The term ‘grid’ refers to the degree to which there is a hierarchical system in society with those in authority adopting measures to restrict the freedom and choice of individuals. Those individuals who belong to a cultural prototype that is high in grid are bound by many cultural constraints. Meanwhile, those who belong to groups and societies which are characterised by low grid, have few social constraints influencing their actions. Each of the four prototypes scores differently on the ‘grid’ and ‘group’ criteria.

Hierarchists rely on bureaucratic systems or those who have a high position in the group’s hierarchy to manage the affairs of the group. What is more, the group is characterised by strong cohesion. Individuals belonging to the hierarchist cultural prototype use rules to

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23 Ibid, 154.
24 Ibid, 151.
26 Renn, n. 11, 119.
28 Renn, n. 11 121.
29 Ibid.
31 Lupton, Ris (Psychology Press 1999) 51.
32 Ibid.
33 Renn n. 11 121.
34 Rippl, n. 21, 149.
35 Ibid.
deal with uncertainty.\textsuperscript{36} They do not worry about risks as long as capable institutions or those with authority manage risks and as long as risk management strategies provide for all eventualities.\textsuperscript{37} The bureaucratic institutions only intervene to curb those activities that impose excessive risks.\textsuperscript{38} In determining whether an activity poses excessive risk, the bureaucrats use mathematics and statistics to calculate what harm is likely to occur on average.\textsuperscript{39} They then apply a cost-benefit analysis to determine whether the risk is acceptable, meaning that a risky activity is not regulated if its benefit to the group or society outweighs the cost.\textsuperscript{40}

Hierarchists believe that agonising decisions can be resolved by applying the cost-benefit analysis.\textsuperscript{41} For instance, in determining whether society should build mines to extract resources, they will first ask individuals how much they are prepared to pay to have a slightly higher chance of survival.\textsuperscript{42} They will then compare the incommensurable values of the average reduction in life expectancy of a miner to the value of extracted resources using monetary values as a yardstick.\textsuperscript{43} Hierarchists adopt this approach because they believe that the application of the cost-benefit analysis leads to the welfare of society being maximised.\textsuperscript{44} The good of the collective is more important to hierarchists than the rights of each individual person.\textsuperscript{45} Hierarchists additionally support paternalistic legislation such as requiring individuals to wear seat belts.\textsuperscript{46}

Egalitarians have a strong sense of solidarity in their group and do not like hierarchical structures.\textsuperscript{47} Unlike hierarchists, they oppose small elites such as the government or the experts making decisions how to manage risks.\textsuperscript{48} Egalitarians ignore the benefits conferred by risk activities such as by automobile transport and instead concentrate on the harm that the activity causes.\textsuperscript{49} They strive to the ideal of zero risk although they recognize that completely eliminating risk is unrealistic.\textsuperscript{50} Egalitarians are the most risk averse of the four cultural

\textsuperscript{36} Renn, n. 11, 121.
\textsuperscript{37} Ibid.
\textsuperscript{38} Adams, n. 30, 34; 208.
\textsuperscript{39} Rayner, Cultural theory and risk analysis (Greenwood Press 1992) 110.
\textsuperscript{40} Ibid.
\textsuperscript{41} Adams, n. 30, 107
\textsuperscript{42} Ibid, 102; 103; 107.
\textsuperscript{43} Ibid, 107.
\textsuperscript{44} Ibid, 105.
\textsuperscript{45} Rippl, n. 21, ‘149.
\textsuperscript{46} Adams, n. 30, A1; 57.
\textsuperscript{47} Rippl, n. 21, 149.
\textsuperscript{48} Renn, n. 11, 121.; Rippl, n. 21150.
\textsuperscript{49}Adams, n. 30, 44
\textsuperscript{50} Ibid, 57.
prototypes and are likely to mistakenly reject a risk which could have been safely accepted.\textsuperscript{51} When managing risks, egalitarians will consider technical, ethical and socioeconomic arguments.\textsuperscript{52} Egalitarians find that cost-benefit analysis objectionable either because it undervalues goods they value or because it ignores altogether the goods they value such as ‘community cohesion.’\textsuperscript{53}

Fatalists have weak group cohesiveness and believe that risk is best dealt with by luck or fortune.\textsuperscript{54} They view themselves as having little control over risk and their lives because they live in an environment characterized by inequality where other members of the group occupy higher positions in the group hierarchy.\textsuperscript{55} Fatalists would not participate in the debate over risk or try to manage risk.\textsuperscript{56}

Individualists have low group cohesiveness.\textsuperscript{57} They think that risk management should be left to the individual rather than to the state.\textsuperscript{58} Individualists think for example that it is for the individual to decide whether to use the seat belt and that the state should not intervene to pass legislation to make seat belt use compulsory.\textsuperscript{59} They would want the market forces to regulate food safety.\textsuperscript{60} Individualists think that more successful than adverse outcomes will transpire from risk taking.\textsuperscript{61} Individuals of this cultural prototype additionally see risk-taking as offering an opportunity to succeed in a competitive world and to pursue their goals.\textsuperscript{62} They value equality and individuality.\textsuperscript{63}

Individualists see nature as ‘robust’ and as capable of withstanding human impact.\textsuperscript{64} They are optimistic and believe in acting by trial and error.\textsuperscript{65} They are likely to mistakenly pursue a risk which should have been rejected.\textsuperscript{66} Individualists are not concerned about equity.\textsuperscript{67} Anecdotal evidence reveals that they prefer a cost-benefit analysis when faced with

\textsuperscript{51 I}bid, 58.
\textsuperscript{52} Rayner, n. 39, 110
\textsuperscript{53} Adams, n.30,107
\textsuperscript{54} Ibid \textasciitilde Lupton, n.31, 51.
\textsuperscript{55} Adams, n.30,36.
\textsuperscript{56} Adams, n.30, 40;45.
\textsuperscript{57} Rippl, n. 21,149
\textsuperscript{58} Adams, n. 30, 40;64
\textsuperscript{59} Adams, n.30, 40.
\textsuperscript{60} Ibid.
\textsuperscript{61} Adams, n.30, 212.
\textsuperscript{62} Renn, n.11, 121.
\textsuperscript{63} Renn, n.11,37\textasciitilde Adams, n. 30,36.
\textsuperscript{64} Adams, n. 30,40
\textsuperscript{65} Adams, n. 30, 212
\textsuperscript{66} Ibid, 58.
\textsuperscript{67} Renn, n.11, 37\textasciitilde Adams, n.30, 36.
risk management decisions. They are prepared to impose risks on society if it is to their benefit and will only care about risks imposed on society to the extent such imposition of risk impacts their own welfare.

3. Chronological Examination of State Conduct

Having considered the four cultural prototypes, the conduct of states as a collective entity and the conduct of individual states will be examined so as to map them to the four cultural prototypes. The assessment will take a chronological approach to state practice.

3.1 Prior to 1864

The practice of Western states prior to 1864 arguably shows that they exhibited an attitude to risk which corresponds to the individualist cultural prototype. This is because they chose not to create a hierarchical structure such as a treaty-based IHL regime to mitigate suffering. Instead, they decided on an ad hoc basis how to manage risk to which military operations conducted by the adversary exposed their civilians by concluding agreements with adversaries for the duration of a particular armed conflict. Individualists prefer to make autonomous decisions instead of creating centralised institutions for managing risk. Additionally, it is being maintained that state behavior in the 19th century can be said to match the individualist attitude to risk-taking as offering an opportunity to pursue goals and to succeed in a competitive world.

Particularly, in the 19th century states oftentimes viewed risks associated with the declaration of war as an opportunity to capture territory, augment wealth and increase power. They knew that losing the war would mean finding themselves with heavy debts. Just like individualists who view nature as ‘robust’ and as capable of withstanding human impact,

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68 Renn, n. 11, 123.
69 Adams, n. 30, 108-109
71 Reydams n. 70,734.; Ripple, n. 21, 149.
72 Adams, n.30, 40;64
73 Renn, n.11, 121.
75 Black, n.74, 7.
European states of that time period regarded their nations as capable of surviving human loss of death among conscripts and hardship associated with waging the war.\(^{76}\)

### 3.2 1899-1945

States signed the first IHL treaty, the Geneva Convention for the Amelioration of the Condition of the Wounded in Armies in the Field 1864, thanks to the efforts of a Swiss merchant Henry Dunant.\(^{77}\) Thereafter, states, including non-Western powers, continued to codify rules of IHL at a rapid pace through making declarations and acceding to treaties. The preoccupation with chiseling out clear guidelines can be seen from the fact that states scheduled regular conferences which led to the adoption of such instruments as the St. Petersburg Declaration 1868, the Hague Conventions of 1899 and the Hague Declaration Concerning Asphyxiating Gases 1899 among others.\(^{78}\)

It is suggested that this shift from ad hoc governance mechanisms for managing risks associated with the conduct of hostilities to development of a treaty framework signifies that states no longer espoused the individualist cultural prototype. They now exhibited a hierarchist cultural prototype. Hierarchists favour establishing centralised governance systems for regulating the affairs of the group and have cohesion between group members.\(^{79}\) Although states could not at that time period be characterised as a tightly-knit community, the conclusion of IHL treaties evidences the emergence of shared values. Moreover, similarly to hierarchists, states arguably only proscribed those practices which exposed civilians to ‘excessive’ risks.\(^{80}\) This is because the provisions of the treaties and state practice shows that measures to reduce humanitarian suffering and loss were only adopted if the benefit of adopting such safeguards far outweighed the cost in terms of military advantage of taking steps to protect civilians. For instance, Article 25 Hague Convention on War on Land IV 1907 prohibits attacks on undefended towns, villages, dwellings and buildings.\(^{81}\) Whilst this provision encapsulates the

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76 Adams, n.30, 40.; John Andrew, Progress and the Quest for Meaning: A Philosophical and Historical Inquiry (Cranbury: Associated University Press Inc., 1993), 87.
77 Reydams, n.70, 734.
79 n.11, 149.
80 Adams, n.30, 34;208.
81 Art. 25 Convention (IV) Respecting the Laws and Customs of War on Land and its Annex: Regulations Concerning the Laws and Customs of War on Land, opened for signature 18 October 1907, in force 26 January 2010; UKTS 9, Cd.5030.
requirement to distinguish between civilian objects and military objectives,\textsuperscript{82} states during World War I treated the bombing of the civilian population to degrade their morale as lawful.\textsuperscript{83} The co-existence of these two legal standards points to the fact that states were only prepared to reduce danger to the civilian population where the benefit of alleviation of humanitarian loss exceeded the cost of military advantage which had to be forgone to protect the civilians.

Furthermore, the conduct of states during World War II reveals the mindset of a group which belongs to the hierarchist cultural prototype. Hierarchists are prepared to sacrifice the interests of the minority if this benefits the majority of the population as a whole.\textsuperscript{84} They see the benefit of the policy to the majority as outweighing the cost to those who are made worse off by the measure.\textsuperscript{85} During World War II states carried out air bombings even though most bombs landed off target.\textsuperscript{86} Although states regarded indiscriminate attacks as unlawful, they used air power because the destruction of industrial facilities offered high military advantage.\textsuperscript{87} States argued that civilian casualties were incidental collateral damage and hence were a lawful byproduct of the attack.\textsuperscript{88} Additionally, states took the position that they discharged their duties to civilians when they applied Article 27 of the Hague Convention on War on Land IV 1907 and exercised ‘reasonable’ care when placing the bomb onto the target.\textsuperscript{89} In effect, states applied a cost-benefit calculus in determining what military practices to adopt. Those living in urban areas were arguably sacrificed for the greater goal of protecting the country from the Nazi threat.\textsuperscript{90}


\textsuperscript{83} Ibid, 198.

\textsuperscript{84} Adams, n.30, 105; Rippl, n.21,149.

\textsuperscript{85} Steve Rayner, n.39,110.


\textsuperscript{88} Hays Parks, n.87, 51.


\textsuperscript{90} Peter Duignan and Lewis Henry Gann, \textit{World War II in Europe: Causes, Course, and Consequences} (Stanford: Stanford University, 1995), 11–16.
Another source of evidence that states during World War II exhibited the hierarchist cultural prototype is the dropping by the U.S. of the atomic bomb on two Japanese cities. Commentators who have examined the memoirs of military and political leaders concluded that the U.S. dropped the bomb in order to induce the Japanese to surrender. Many more civilians would have died had the U.S. deployed ground troops to conduct military operations and had it employed a naval blockade of the region. This reasoning resembles that applied by hierarchists who would treat the total lives saved by ending the war sooner as outweighing the cost of lives lost in the immediate attack. What is more, there is some evidence that the Allies in World War II carpet-bombed the civilians hoping this would end the war sooner. If this is the case, then such practices provide further evidence of states espousing a hierarchist attitude to managing the risk of losing the military campaign.

Following the end of World War II, the individual and collective attitudes of states to risk associated with taking steps to protect civilians are more difficult to trace. During this time period states negotiated a treaty which imposes stricter obligations to take precautionary measures to protect civilians. Equally, during this time period, some states and non-state actors committed flagrant violations of IHL in international and non-international armed conflicts. Thus, the analysis will draw a distinction between the factors which prompted states to assume additional legal obligations from the perspective of cultural risk theory and between the reasons why some states and armed groups chose to disregard their obligations.

3.3 1945 and Onwards

94 Ibid.
The key development for IHL and for the rules of targeting in particular occurred in 1977 when states acceded to the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977. The contribution of API 1977 to the targeting context was that it clarified customary international law and introduced a treaty provision, Article 57, which required the attacker to take precautions in attack so as to reduce the incidental injury to civilians and damage to civilian objects. Article 57(2)(a)(i) API 1977 requires those who plan or decide upon an attack to do everything ‘feasible’ to verify that the objectives to be attacked are military objectives. Meanwhile, Article 57(2)(a)(ii) API 1977 requires those who plan or decide upon an attack to take all ‘feasible’ precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimising, incidental loss of civilian life, injury to civilians and damage to civilian objects. Finally, Article 57(2)(a)(iii) API 1977 requires the attacker to refrain from deciding to launch any attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.

It is suggested that these provisions point to states gradually transitioning away from the hierarchist attitude to risk towards an egalitarian attitude to risk. Firstly, the provisions show that states were willing to cooperate more, a characteristic of egalitarian groups. Hays Parks observes that prior to the adoption of API 1977 customary international law placed the responsibility for incidental injury to civilians only on the defender and the civilians. By shifting the responsibility on the attacker for such injury, the provision arguably fostered greater cooperation between the attacker and the defender to protect civilians.

Secondly, it is suggested that the stringency of the obligations of the two rules provide further evidence of states gradually shifting away from the hierarchist attitude to risk. A number

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100 Art. 57(2)(a)(ii) API 1977.
101 Art. 57(2)(a)(iii) API 1977.
102 Renn, n.11, 121.
103 Hays Parks, n.87, 153-154.
104 Ibid, 154.
of states such as the U.K., Germany and Canada upon ratifying API 1977 entered a declaration that the term ‘feasible’ as used in Art. 57 API 1977 refers to, ‘...those [precautions] which are practicable or practically possible, taking into account all the circumstances ruling at the time, including humanitarian and military considerations.' The standard of measures which it is ‘practicable or practically possible’ to take is high and denotes all precautionary measures which it is possible to take in the circumstances. This standard arguably resembles an egalitarian attitude to risk management because whilst the threshold of ‘feasible’ recognises that it is impossible to completely eliminate dangers to which the attack exposes the civilians, it reflects an aspiration to reduce risk to the lowest possible value. What is more, in forgoing a degree of military advantage by taking precautionary measures, states could arguably be said to be akin to egalitarians who are prepared to forgo the use of automobiles in order to reduce pollution.

Although it is being put forward that there are signs of states moving from a hierarchist to an egalitarian approach to viewing risks, it is not being maintained that states have completely abandoned their hierarchist approach to risk management in the context of armed hostilities. Instead, societies and government apparatuses have a higher threshold of civilian casualties that they find acceptable. At the same time, states have maintained their hierarchist attitudes to managing risks associated with not attaining the strategic objectives of the military campaign. The current practices are a big improvement to those of World War I and World War II for instance.

According to Shaw, a sociologist who studies global politics, Western states are preoccupied with managing the political risk of losing domestic and international support for the military campaign. They thus concurrently pursue conflicting goals of reducing soldier

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106 Belgium’s Law of War Manual provides that ‘everything possible must be done to avoid incidental damage to civilian objects and loss of civilian life.’ Belgium, Law of War Manual (1983), p. 28.; The US Rules of Engagement for the Vietnam War stated that ‘while the goal is maximum effectiveness in combat operations, every effort must be made to avoid civilian casualties, minimize the destruction of private property, and conserve diminishing resources’. U.S, Rules of Engagement for the Vietnam War (1971), § 3(a).; In 1991, in a letter to the UN Secretary-General concerning the Gulf War, Costa Rica commended ‘the precautions taken by the forces of the United States of America and its allies aimed at attacking as far as possible only military targets and causing the least possible suffering to the civilian population.’ Costa Rica, Letter dated 17 January 1991 to the UN Secretary-General, UN Doc. S/22101, 17 January 1991, p. 2., taken from Henckaerts and Doswald-Beck, Customary International Humanitarian Law, 2:345;347;348.
107 Adams, n.30, 57.
108 Ibid, 44.
casualties, civilian casualties and of managing the way in which the media portrays the prosecution of the military campaign.\textsuperscript{110} When states such as the U.S. assume risks to the force which go beyond legal requirements, they give pragmatic justification for the policy which appears to be premised on the cost-benefit analysis. For instance, whilst fighting a counterinsurgency in Afghanistan, the U.S. instructed that the principle of proportionality be applied differently.\textsuperscript{111} The military advantage offered by the destruction of the target was to be balanced against the number of civilian lives lost, civilian objects destroyed and the loss of legitimacy in the eyes of the local population.\textsuperscript{112} The rationale was that civilian casualties make it easier for the insurgents to recruit new followers.\textsuperscript{113} The counterinsurgency context is unique in that victory cannot be secured without gaining the support of the local population.\textsuperscript{114} Thus, the U.S. in determining what risks to assume to its force balanced the military cost of reducing civilian casualties against the strategic benefit offered by the mitigation of humanitarian loss. This cost-benefit approach to managing risks associated with the prosecution of the military campaign corresponds to the hierarchist cultural prototype.\textsuperscript{115}

The contention that many states are in the process of transition from one cultural prototype to another is consistent with cultural risk theory. There is evidence that people may combine more than one cultural prototype in their behavior depending on the issue at hand.\textsuperscript{116} Lovelock for example was an individualist who challenged the views held by the scientific community but he was also an egalitarian who campaigned for the protection of the endangered species.\textsuperscript{117}

Assuming that it is the case that international community is gradually shifting to an egalitarian outlook on how to manage risk to which military operations expose civilians, a question arises how one can explain violations of IHL. The answer is that states as an international community may have a different cultural prototype to that exhibited by each individual state. The violations of IHL by states could be explained by reference to the individualist and hierarchist cultural prototypes. The motivation of the state for violating IHL will determine whether that state espouses individualist or hierarchist cultural prototype. For

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\item \textsuperscript{110} Shaw, \textit{The new Western way of war: risk-transfer and its crisis in Iraq}, 96;98.
\item \textsuperscript{111} The U.S. Army, \textit{The U.S. Army Marine Corps Counterinsurgency Field Manual}, Marine Corps Warfighting Publication No 3-33.5 (Chicago: The University of Chicago Press, 2007), at par. 7-32;7-36.
\item \textsuperscript{112} \textit{Ibid}.
\item \textsuperscript{113} \textit{Ibid}, at par. 1-141.
\item \textsuperscript{114} \textit{Ibid}, at par. 1-141;1-149;1-153.
\item \textsuperscript{115} Rayner, n.39, 110.
\item \textsuperscript{116} Adams, n. 30 203.
\item \textsuperscript{117} \textit{Ibid}.
\end{itemize}
instance, Iran is not party to API 1977 and Iraq acceded to this treaty in 2010.\textsuperscript{118} During the Iran-Iraq 1980-1989 war, both parties directly targeted civilians and civilian objects.\textsuperscript{119} Iran arguably did so due to having a hierarchist attitude to risk management while Iraq exhibited an individualist outlook.

Iran targeted civilians and used children to charge into artillery barrages even though it was governed by Islamic laws.\textsuperscript{120} Islamic laws have a prohibition on targeting civilians which are similar to the principle of distinction of IHL.\textsuperscript{121} Islamic laws prohibit the targeting of (1) women, (2) children, (3) elderly, (4) members of the clergy whose activities are confined to worship and (5) individuals who are paid by the armed forces to perform services which do not amount to taking part in military operations.\textsuperscript{122} Iran aimed not only to drive back the Iraqis, but additionally to spread governance by Islamic laws to Iraq.\textsuperscript{123} The Ayatollah saw the leader of Iraq as a Sunni tyrant who oppressed the Shi’a majority.\textsuperscript{124} There is hostility between Shi’a and Sunni communities because they disagree over who the follower of Prophet Muhammad is and over the interpretation of religious texts.\textsuperscript{125}

It appears that the Ayatollah as the leader of Iran applied a cost-benefit analysis and decided that the benefit of toppling Saddam Hussein outweighed the human cost of innocent


\textsuperscript{120} Ibid.


\textsuperscript{122} Al-Dawoody, ‘War in Islamic Law: Justifications and Regulations,’ 201-212.

\textsuperscript{123} Randal, n.119


lives who were being sacrificed to achieve this goal. This approach to managing the risk of loss of lives among Iranian children and Iraqi civilians reflects a hierarchist cultural prototype. Hierarchists have persons in authority making decisions how society is governed and are prepared to sacrifice individuals when this serves the welfare of the community. They additionally use the cost-benefit analysis in determining whether to expose individuals to risk.

In invading Iran, Saddam Hussein arguably exhibited the individualist cultural prototype. He thought that Iraq was weakened by the Revolution which took place the previous year and that he would be able to topple the Khomeini regime which he saw as a threat. Just like individualists, Saddam arguably saw the taking of risk associated with the invasion of Iraq as offering an opportunity to succeed in a competitive world and to pursue his personal goals. He was prepared to impose risks on Iraqi society associated with the conduct of hostilities because he was only concerned with his own personal goal of remaining in power. This reflects the mentality of individualists who impose risks on society if it is to their benefit and only care about risks to which their decisions impose others to the extent such imposition of risk impacts their own welfare. Finally, just like individualists who are overoptimistic about risk-taking, Saddam underestimated the ability of Iran to resist. The armed conflict lasted eight years.

It is averred that non-state actors in choosing whether to observe the rules of targeting may exhibit individualist or fatalist cultural prototypes. Traditionally, armed groups engaged in non-international armed conflict have poor records of complying with their legal obligations. According to Mack and Pejic who published a report in their capacity as legal advisers at the International Committee of the Red Cross, armed groups in order to be persuaded to disseminate IHL within their group usually need to be told why compliance with IHL is desirable from a strategic point of view. These armed groups arguably have an

126 Randal, n. 119.
127 Rippl, n.21, 149.
128 Rayner, n. 39, 110.
129 Hardy, n. 124.
130 Renn, n.11, 121.
131 Hardy, n. 124.
133 Ibid., 58; Hardy, n. 124.
134 Hardy, n. 124.
136 Mack and Pejic, n. 135, 30.
individualist attitude to risk because they believe that it is up to them rather than for the state or international treaties to prescribe whether to expose civilians to danger. Moreover, just like individualists, these armed groups are prepared to impose risks on society if it is to their benefit and will care about risks imposed on civilians to the extent such imposition of risk impacts their own welfare.\textsuperscript{137} They may choose to observe the rules of targeting in order to gain legitimacy among the local population, to ensure that their captured fighters are treated well and to conserve military resources.\textsuperscript{138} They may also observe IHL anticipating that this will allow for social reconciliation post conflict or in exchange for an amnesty from prosecutions for having taken a direct part in hostilities.\textsuperscript{139}

Armed groups who do not respond to incentives for complying with IHL in all likelihood do so because they belong to the fatalist cultural prototype. Some armed groups are decentralized and have semi-autonomous or splinter factions operating under an ill-defined leadership structure.\textsuperscript{140} They may lack control over territory and lack capacity to train and discipline their members.\textsuperscript{141} It is suggested that these armed groups are likely to view themselves as having little control over whether IHL is complied with, because they are a marginalised group in relation to the state, and because they lack the organised structure to disseminate the law within the group.\textsuperscript{142} They are thus akin to fatalists who view themselves as having little control over risk and their lives because they live in an environment characterized by inequality where other members of the group occupy higher positions in the group hierarchy.\textsuperscript{143} Fatalists do not participate in the debate over risk and do not try to manage risk.\textsuperscript{144}

\section*{4. Applying Cultural Risk Theory to Understand Disagreement about the Law}

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\item\footnote{Adams, \textit{Risk}, 108-109.}
\item\footnote{Mack and Pejic, n. 135,4-5.}
\item\footnote{Ibid.}
\item\footnote{Mack and Pejic, \textit{Increasing Respect for International Humanitarian Law in Non-International Armed Conflicts}, (February 2008) Report for the international Committee of the Red Cross 1, 11. <http://www.icrc.org/eng/assets/files/other/icrc_002_0923.pdf>}
\item\footnote{Ibid.}
\item\footnote{Ibid, 11;23.}
\item\footnote{Adams, n. 30 36.}
\item\footnote{Ibid, 40; 45.}
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Having examined how the cultural prototypes shape how states develop IHL and how states and non-state actors apply IHL, the discussion will consider whether cultural risk theory is capable of explaining why legal commentators give differing interpretations to the rules of targeting. The debate between commentators of whether the military commander in applying the principle of proportionality needs to consider reverberating effects of the attack on civilians will be used as a case study.

Reverberating effects of an attack are second and third order effects of an attack on civilians. An example is the inability of water plants, sewage facilities and hospitals to deliver services as a consequences of an attack on the electricity generating plant. Traditionally, reverberating effects on civilians were considered too remote because at the time of the attack the commander is unlikely to know the amount of funds which will be available for repair, how the repair will be prioritised and whether the country will receive international assistance. Commentators such as Kalshoven accepted the traditional view and did not attempt to argue that reverberating effects of the attack are foreseeable and that potential intervening factors do not make such damage remote. Scholars such as McCormack and Mtharu on the other hand put forward an argument that reverberating effects are foreseeable because past armed conflicts supply evidence of how many civilians are likely to die on average over the longer term. Moreover, these two commentators point out that because commanders often take into account both the anticipated short-term and longer term military advantage in applying the proportionality principle, they should also consider both short and longer term harm to civilians. Meanwhile, Schmitt argued that reverberating effects had to be considered by military commanders because improved military capabilities have created an expectation among the national electorate and international community regarding the permissible level of incidental injury to civilians.

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147 Ibid.
148 Ibid.
149 McCormack and Mtharu, n. 148, 10-12.
150 Ibid, 9.
It is suggested that Kalshoven expressed the view that reverberating effects should not be considered as part of the application of the principle of proportionality because he views the law through the hierarchist cultural prototype. Hierarchists have respect for authority and ‘conform closely’ to existing group norms on how to manage risk. The existing position most likely was premised on the fact that the taking of reverberating effects into consideration would have limited the range of lawful targets and thereby increased the risk of not attaining the military goal of the campaign. Although Schmitt accepts that reverberating effects are relevant to the proportionality assessment, he exhibits a hierarchist attitude to risk. This is because he uses a cost-benefit analysis in order to argue in favour of the reinterpretation of the law. It is important to keep civilian casualties low in order to retain the support of the electorate for the military campaign and the targeting of dual-use military objectives such as electricity generation stations is likely to produce severe humanitarian loss in the longer term. Finally, it is suggested that McCormack and Mtharu are egalitarians who see it as inequitable that military commanders do not give weight to humanitarian loss which occurs weeks and months after the attack had been executed even though it is highly probable that such loss will transpire. This discussion shows that disagreements about the law and proposals as to how the law should be interpreted can be explained by reference to commentators espousing different cultural prototypes. Given the current debates regarding whether the fielding of autonomous robotic systems complies with the rules of targeting, it is of interest to examine what insight cultural risk theory provides into this discourse. The investigation will focus on the arguments commentators put forward when discussing whether such systems fall foul of the principle of distinction.

5. Cultural Risk Theory and Debates about Autonomous Robots

Backstrom and Henderson argue that autonomous robotic systems are capable of complying with the requirement to discriminate between civilians and combatants on the one hand, and

152 Lupton, n. 31, 51.
153 Schmitt, n. 151, 156.
154 Shaw, The new Western way of war: risk-transfer and its crisis in Iraq, 71; 75; 94; 96; 98; Middle East Watch, Needless deaths in the Gulf War: civilian casualties during the air campaign and violations of the laws of war (New York: Human Rights Watch, October 15, 2008), 180-186.
155 McCormack and Mtharu, n. 148, 9.
civilian objects and military objectives on the other hand.\textsuperscript{156} This is because scientists are capable of inventing robotic systems which possess artificial intelligence.\textsuperscript{157} The artificial intelligence would enable the robot to learn the characteristics of military objectives by being repeatedly exposed to different scenarios.\textsuperscript{158} Eventually, the robot will learn to reliably distinguish between military objectives and persons and objects which enjoy immunity.\textsuperscript{159}

The approach of Backstrom and Henderson to resolving the issue of whether the employment of autonomous robots is lawful reflects a hierarchist view of the world. Hierarchists have faith in the views of experts such as scientists and only intervene to mitigate risk where there is a high likelihood as opposed to a mere conjecture that the damage in question will materialise.\textsuperscript{160} Backstrom and Henderson take it as a starting point that scientists are capable of programming machines which will be able to distinguish between military objectives and civilian objects as reliably as human beings. They do not question whether proponents of autonomous robots are over confident about the ability of scientists to create machines which can match human recognition patterns. A blind faith in science creates a risk that machines will be put on the battlefield which do not meet the strict threshold of the principle of distinction of ‘at all times distinguish.’\textsuperscript{161}

Sharkey, a Professor of Artificial Intelligence and Robotics, believes that robots could never comply with the principle of distinction to the same standard as a human being.\textsuperscript{162} Robots rely on sensors to recognise the nature of objects and facial features.\textsuperscript{163} They can be misled in an environment where the situation is constantly in flux and where the targets are continuously moving.\textsuperscript{164} Moreover, Sharkey thinks that it is difficult to translate the IHL definition of a civilian into a computer code because a civilian is defined as someone who is not a combatant.\textsuperscript{165} Finally, effective discrimination requires the application of common sense and common sense cannot be programmed into computers.\textsuperscript{166} It is being put forward that another

\textsuperscript{157} Ibid, 493.
\textsuperscript{158} Ibid, 493.
\textsuperscript{159} Ibid, 493.
\textsuperscript{160} Adams, n. 30, 107; Sigve Oltedal et al., Explaining Risk Perception. An Evaluation of Cultural Theory, Rotunde (Trondheim: Norwegian University of Science and Technology, Department of Psychology, 2004), 20.
\textsuperscript{161} Art. 48 API 1977.
\textsuperscript{163} Ibid, 788-789.
\textsuperscript{164} Ibid.
\textsuperscript{165} Ibid.
\textsuperscript{166} Ibid, 789.
problem with Backstrom and Henderson’s overconfidence in science is that they do not consider the fact that a simulated battlefield can never recreate the complexity and unpredictability of the real battlefield.\(^{167}\)

Additionally, Backstrom and Henderson exhibit a hierarchist cultural prototype by proposing that the principle of distinction requires a degree of certitude of 95% percent.\(^{168}\) This proposition does not reflect the fact that scientists have an unlimited time in which to develop robotic systems and that the principle of distinction is formulated as an absolute prohibition. Thus, their proposition is arguably premised on an assumption made by hierarchists that civilians should be protected from the imposition of ‘excessive’ risks rather than as being entitled to immunity.\(^{169}\)

In contrast to Backstrom and Henderson, Sharkey exhibits an egalitarian cultural prototype because he is hesitant to conclude that robots could ever comply with the principle of distinction.\(^{170}\) Egalitarians focus on the long-term impact of human activities and will abandon a course of action which has a potential to inflict irreversible hazards on future generations instead of taking chances even if the activity confers benefit on society.\(^{171}\) Robots confer a benefit on the country which uses them of reducing soldier casualties.\(^{172}\)

Kastan is another commentator who adopts an egalitarian approach to answering the question whether employment of autonomous weapons comports with the principle of distinction. He argues that even if it were possible to program a robot to require it to ascertain that it has a particular degree of certainty that the target is a military objective before firing, it is unclear how a robot could discern between different degrees of certainty.\(^{173}\) Furthermore, Kastan thinks that the use of autonomous robots should be confined to geographic areas where


\(^{168}\) Henderson and Backstrom, ‘New Capabilities in Warfare: An Overview of Contemporary Technological Developments and the Associated Legal and Engineering Issues in Article 36 Weapons Reviews,’ 495.

\(^{169}\) Adams, n.30, 34; 208.


\(^{171}\) Renn, n. 11, 121.; Rippl n 21, 150.


the robot is unlikely to encounter civilians. If the robot is likely to encounter civilians, it should be supervised by a military commander.

6. Conclusion

The comparison of how different commentators analyse compliance of robotic systems with the principle of distinction shows that the discussion is not confined to disagreement regarding what the law requires. Each argument has deeper roots and reflects how a particular commentator views science, technology and the world order. The cultural theory of risk sheds light into why some individuals place faith in science and why others distrust new technologies until evidence emerges to show such technologies to be safe. By revealing the assumptions a person makes when suggesting how the law should be interpreted, the analysis helps to reflect on the nature of the current debates. It reveals that the discourse is not confined to armed forces advocating the employment of autonomous robotic systems and to NGOs such as the International Committee for Robot Arms Control campaigning against the use of such systems.

The broader examination of what cultural prototype individual states and international community as a whole might exhibit suggests that the world order is constantly in flux. States at one point were individualists but have since changed their orientation. Although the hierarchist cultural prototype continues to predominate, it is also the case that adherence to the egalitarian cultural prototype is on the rise. Another interesting aspect of the article is that it illustrated why states and non-state actors choose to disregard their IHL obligations. The upshot is that it is time for commentators to discuss not only what the law requires, but additionally what values individual societies and states collectively have. This greater awareness of social and cultural forces will enable a more informed discussion into whether the employment of robotic systems is (i) lawful and (ii) normatively desirable.

175 Ibid, 62.