

Are All Soldiers Created Equal? – On the Equal Application of the Law to Enhanced Soldiers

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Enhanced soldiers (with biochemical, cybernetic or prosthetic enhancements) will soon become an integral part of armed conflicts. The deployment of soldiers with superior battlefield abilities raises important legal questions that are only now emerging as we begin to understand the implications of such technological advancements. One of the most pressing issues regarding enhanced soldiers is whether the existing legal framework, designed to regulate and safeguard the needs of conventional soldiers, can—and should—be applied differently when the subjects have qualitatively different capabilities than previously understood or considered. In this comprehensive analysis of the treatment of enhanced soldiers, various international law issues are considered, such as the use of weapons in armed conflict, the treatment of detainees, and the prohibition against torture and cruel, inhuman or degrading treatment. This Article argues that, in most cases, enhanced soldiers should not be treated differently than unenhanced soldiers, even if their capabilities are significantly advanced when compared to conventional soldiers. More broadly, the case of enhanced soldiers brings new insights to the notions of formal and substantive equality in international law. This Article offers a one-directional approach to the subjective application of international law, especially in the context of the prohibition against torture. Under this approach, subjective factors may not be used to treat individuals and groups with better capabilities more harshly but can be used to improve the protection of vulnerable individuals and groups. Applying a one-directional approach is an important tool to prevent the abuse of legal rules by states and other international actors while enabling the protection of those who need it the most. This is a critical point in time where legal scholarship has a unique opportunity to shape the legal regulation of a transformative technological change as it occurs.

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I. INTRODUCTION

In many cases (and for obvious reasons), papers that focus on new technologies begin with references to science fiction or fantasy to spark the interest of their readers.¹ Instead of mentioning Robocop, Captain America or the Six Million Dollar Man, this Article starts by going back more than a hundred years.² In 1899, the use of expanding bullets was prohibited. Britain was one of only two countries that opposed this ban, arguing that the use of such bullets was necessary in colonial wars. In a much-quoted paragraph, Sir John Charles Ardagh, who served as the military technical adviser to the British delegates at the first Hague Conference, explained this necessity:

In civilized war a soldier penetrated by a small projectile is wounded, withdraws to the ambulance, and does not advance any further. It is very different with a savage. Even though pierced two or three times, he does not cease to march forward, does not call upon the hospital attendants, but continues on, and before anyone has time to explain to him that he is flagrantly violating the decision of the Hague Conference, he cuts off your head. It is for this reason that the English delegate demands the liberty to use projectiles of sufficient efficacy against savage populations³

This argument cites the alleged characteristics of a specific group of people to justify unequal and harsher application of the laws of armed conflict. Ardagh's argument was strongly condemned by the next speaker, Arthur Raffalovich, who stated that "[i]t is impermissible to make a distinction between a savage and a civilized enemy; both are men who deserve the same treatment."⁴ Beyond the blatant racism of Ardagh's statement, it contradicts one of the basic principles of the laws of war—equal application of the rules to all parties to the conflict.

It is very likely that soon, however, similar arguments will be used towards another distinct group of people—enhanced soldiers.⁵ Specifically, this Article addresses soldiers that undergo procedures to enhance their capabilities beyond the capabilities of regular soldiers. While enhanced

1. See, e.g., Heather A. Harrison Dinniss & Jann K. Kleffner, *Soldier 2.0: Military Human Enhancement and International Law*, 92 INT'L L. STUD. 432, 433 (2016); Ira S. Rubinstein, *Voter Privacy in the Age of Big Data*, 2014 WIS. L. REV. 861, 862; Rebecca Crotoof, *The Killer Robots Are Here: Legal and Policy Implications*, 36 CARDOZO L. REV. 1837, 1839 (2014).

2. Although, I admit that I also follow this tendency and refer to popular media articulations of human enhancement, such as Wolverine, in Part IV of this Article.

3. THE PROCEEDINGS OF THE HAGUE PEACE CONFERENCES 343 (James B. Scott ed., 1920), <https://archive.org/details/proceedingsofhag1899inteuoft>.

4. *Id.*

5. As demonstrated in Part IV, some arguments are already used in the literature on military human enhancement.

soldiers are clearly not one of the suspect classifications recognized in relation to the prohibition against discrimination⁶—such as the people under colonial domination, discussed above—treating them differently than regular soldiers raises challenging legal and ethical questions.

The importance of the use of enhanced soldiers in the battlefield is receiving significant media coverage.⁷ The emerging phenomenon of enhanced soldiers, which is explored in detail in Part II of this Article, will create soldiers with abilities that are significantly different from other soldiers. These differences might be relevant to the laws that govern the treatment of soldiers. For example, consider changes that will affect the need of enhanced soldiers to sleep, or entail a significant resistance to pain. Should these changes affect the application of the prohibition against torture and cruel, inhuman and degrading treatment for such enhanced soldiers? Or, consider the legality of the use of expanding bullets, mentioned at the beginning of this section. Should such a prohibition apply when the bullets are used against enhanced soldiers who feel much less pain? These questions, regarding the application of existing legal frameworks to enhanced soldiers, are the focus of this Article.

The deployment of enhanced soldiers seems to be just around the corner. The Defense Advanced Research Projects Agency (DARPA) invests significant resources in various projects intended to increase the capabilities of soldiers.⁸ A recent report from the U.S. Department of Defense (DOD) study group on bioethics describes the near future of enhanced soldiers. The report suggests that the military will soon be able to deploy soldiers with diverse enhancements, including “ocular enhancements to imaging, sight, and situational awareness; restoration and programmed muscular control through an optogenetic bodysuit sensor web; auditory enhancement for communication and protection; and direct neural enhancement of the human brain for two-way data transfer.”⁹ These developments were also recognized by the NATO Science and Technology Organization, which stated in a recent report that enhanced soldiers will soon “change our very

6. For a discussion on discrimination and suspected classifications under international human rights law, see *infra* Part III.

7. See, e.g., Shashank Joshi, *Welcome to the Battlefield of the Future*, SUNDAY TIMES (May 14, 2019), <https://tinyurl.com/y5mtkh34>; Michael Hanlon, *‘Super Soldiers’: The Quest for the Ultimate Human Killing Machine*, INDEPENDENT (Nov. 17, 2011), <https://tinyurl.com/y3wq4dwm>.

8. See, e.g., Michael Joseph Gross, *The Pentagon’s Push to Program Soldiers’ Brains*, ATLANTIC (Nov. 2018), <https://tinyurl.com/yafvz7a>; Maddie Stone, *DARPA’s Mind-Controlled Arm Will Make You Wish You Were a Cyborg*, GIZMODO (May 12, 2016), <https://tinyurl.com/y4uacrhx>; Abby Phillip, *A Paralyzed Woman Flew an F-35 Fighter Jet in a Simulator—Using Only Her Mind*, WASH. POST (Mar. 3, 2015), <https://tinyurl.com/y64nr2b>.

9. PETER EMANUEL ET AL., *CYBORG SOLDIER 2050: HUMAN/MACHINE FUSION AND THE IMPLICATIONS FOR THE FUTURE OF THE DOD*, at v (2019).

definition of what it means to be a soldier,”¹⁰ and by the U.K. Ministry of Defence’s recent Global Strategic Trends report, which described human enhancement in the military context as a fast-evolving area that needs legal and ethical evaluation to inform its development.¹¹

Military human enhancement is beginning to receive attention in legal and ethical literature. So far, the literature on enhanced soldiers has followed past trends and has asked questions similar to those of other emerging technologies such as drones, autonomous weapons, and cyber warfare.¹² However, questions regarding the differentiated treatment of enhanced soldiers have not received significant scholarly attention under international humanitarian law (IHL)¹³ and international human rights law (IHRL), which are relevant to this inquiry.

This Article addresses several legal areas where there appear to be *prima facie* reasons to justify the differentiated treatment of enhanced soldiers, such as the treatment of detainees and the principle of proportionality under IHL. Most of the discussion in this Article focuses on two key areas: (i) the laws on weapons, means and methods of warfare, and (ii) the prohibition against torture and ill treatment. These two areas of law have been briefly discussed in the existing literature, much of which explicitly supports the legality of different treatment for enhanced and unenhanced soldiers.¹⁴ For example, Heather Dinniss and Jan Kleffner argue that sleep deprivation of enhanced soldiers who require less sleep will likely not be regarded as a prohibited technique constituting inhuman treatment.¹⁵

By contrast, this Article argues for a one-directional approach that favors the application of the notion of equality to enhanced soldiers. A one-directional approach allows for different treatment when it improves the situation of individuals and groups based on relevant factors that differentiate those individuals and groups from other individuals and groups. But it prohibits imposing harsher treatment on individuals and groups with better capabilities based on similar arguments regarding relevant differences between those with better capabilities and those with lesser capabilities. In the context of this Article, this one-directional approach allows for consideration of the specific vulnerabilities of enhanced soldiers—to improve their treatment—but prohibits the infliction of harsher treatment, such as using coercive interrogation methods, which are

10. NATO SCI. & TECH. ORG., SCIENCE & TECHNOLOGY TRENDS 2020-2040, at 21 (2020).

11. U.K. MINISTRY OF DEFENCE, GLOBAL STRATEGIC TRENDS: THE FUTURE STARTS TODAY 17 (6th ed. 2018).

12. See *infra* Part II.

13. IHL is also referred to as “the laws of armed conflict” and *jus in bello*. I use these forms interchangeably throughout the text.

14. See Dinniss & Kleffner, *supra* note 1, at 440-43, 462-63.

15. *Id.* at 463.

prohibited when used against unenhanced soldiers. This one-directional approach follows the notion, articulated by prominent scholars, of substantive equality.¹⁶ It is based on second-order arguments developed throughout the Article that focus on the danger of states abusing legal rules as well as various uncertainties regarding military human enhancement. In addition, this Article suggests that the one-directional approach, relied upon most notably in the context of torture, provides a value that extends beyond the context of enhanced soldiers to all uses of coercive measures in interrogation.

Part II of this Article describes the phenomenon of enhanced soldiers. It focuses on three types of military enhancement: biochemical, cybernetic and prosthetic. These are advanced technologies that will soon become realities on the battlefield. In addition, it provides a brief overview of the main points raised up until now in legal discussions of this issue, dividing these discussions into three stages: the development of military human enhancement technologies, the use of enhanced soldiers, and ex-post accountability for international law violations committed by enhanced soldiers. Part III explores the notion of equal treatment in the laws of armed conflict and norms derived from IHRL that are relevant to armed conflicts. Part IV discusses the subjective application of the laws of armed conflict and human rights law in the context of enhanced soldiers. It engages with two specific issues: the legalization of weapons and the prohibition against torture. Collectively, I argue that both the *lex lata*, the law as it exists, and the *lege ferenda*, the law as it should be, point in the same direction—against subjective application of the law that would impose harsher consequences for enhanced soldiers. Part V concludes with a call for more engagement with the emerging phenomenon of enhanced soldiers.

II. ENHANCED SOLDIERS AND INTERNATIONAL LAW

The rules that regulate violence in the international arena were mostly created in the nineteenth and twentieth centuries, and the latest significant general treaties date back to the 1970s.¹⁷ Inevitably, new technologies generate novel questions and discussions regarding the application of old rules to new situations. With limited prospects of creating new binding treaties to regulate these new technologies, different international actors—

16. See discussion *infra* Part III.

17. The modern codification of the laws of armed conflict is usually associated with the 1864 Geneva Convention for the Amelioration of the Condition of the Wounded in Armies in the Field and the 1863 Lieber Code. The latest significant general treaties are the 1977 two Additional Protocols to the Geneva Conventions. See Yahli Shereshevsky, *Back in the Game: International Humanitarian Lawmaking by States*, 37 BERKELEY J. INT'L L. 1, 8-10 (2019) (discussing the modern development of the laws of armed conflict and the lack of significant treaty making initiatives in the last decades).

with different agendas and preferences—often engage in a continuous debate over the proper interpretation and application of the existing rules.¹⁸ Usually, various non-state actors, including scholars, initially try to interpret the law in the context of new technologies; states enter the picture later, in the rare cases where they explicitly take a position in the debate.¹⁹ Cyber warfare and autonomous weapons are two examples of new technologies that have drawn significant attention from states, scholars, and other international actors.²⁰ Enhanced soldiers are the next chapter in this discourse. This Article is part of the initial stages of this debate. Currently, the issue of enhanced soldiers is explored much less than other technologies; only a few studies discuss the application of international law in this context, and states have not addressed the application of the law to enhanced soldiers. Therefore, before delving into the specific questions that this Article explores, this Part starts with a brief overview of the subject.

A. *Enhanced Soldiers*

No formal definition of enhanced soldiers exists in international law. For the purposes of this Article, I use the definition provided by Patrick Lin et al., which holds that enhanced soldiers are soldiers that undergo efforts to “improve performance, appearance, or capability besides what is necessary to achieve, sustain, or restore health.”²¹ This aligns with other definitions offered in the general literature on human enhancement as well as the specific exploration of military human enhancement.²² These discussions regarding enhanced soldiers are evolving, but they often focus

18. *Id.* (discussing the role of states and non-state actors in the contemporary lawmaking battle over the law of armed conflicts between states and non-state armed groups).

19. *Id.*

20. The amount of legal literature on both issues is enormous and a single footnote cannot do justice to this body of work. *See, e.g.*, AUTONOMOUS WEAPONS SYSTEMS: LAW, ETHICS, POLICY (Nehal Bhuta et al. eds., 2016); Dan Efrony & Yuval Shany, *A Rule Book on the Shelf? Tallinn Manual 2.0 on Cyberoperations and Subsequent State Practice*, 112 AM. J. INT’L L. 583 (2018); Rebecca Crootof, *War Torts: Accountability for Autonomous Weapons*, 164 U. PA. L. REV. 1347 (2016); Michael N. Schmitt & Sean Watts, *The Decline of International Humanitarian Law Opinio Juris and the Law of Cyber Warfare*, 50 TEX. INT’L L.J. 189 (2015); Eric Talbot Jensen, *Cyber Warfare and Precautions against the Effects of Attacks*, 88 TEX. L. REV. 1533 (2010).

21. Patrick Lin et al., *Super Soldiers (Part 2): The Ethical, Legal, and Operational Implications*, in GLOBAL ISSUES AND ETHICAL CONSIDERATIONS IN HUMAN ENHANCEMENT TECHNOLOGIES 139 (Steven J. Thompson ed., 2014).

22. *See, e.g.*, Eric Juengst & Daniel Moseley, *Human Enhancement*, in THE STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed., 2019), <https://tinyurl.com/yycykx9o> (using similar definitions but limiting it to biomedical enhancement); Ioana Maria Puscas, *Military Human Enhancement*, in NEW TECHNOLOGIES AND THE LAW IN WAR AND PEACE 182, 184-85 (William H. Boothby ed., 2019); Dinniss & Kleffner, *supra* note 1, at 434; Rain Liivoja, *Biomedical Enhancement of Warfighters and the Legal Protection of Military Medical Personnel in Armed Conflict*, 26 MED. L. REV. 421, 434 (2017).

on the distinction between enhancement and therapy or correcting an impairment. For example, they explore the difference between the use of glasses or contact lenses, which merely restore vision, and an implant that improves vision beyond normal human capabilities. Additional questions are asked regarding what types of improvements can be regarded as enhancements. Is there, or should there be, a distinction between substances regularly consumed to improve performance, such as drinking coffee, and a biochemical drug that allows soldiers to stay awake for many hours? And is there a distinction between military training and biomedical enhancement?²³ In many cases, the distinction between therapy and enhancement is obvious, especially when enhanced soldiers acquire unique capabilities, as discussed in more detail below. Regardless, these fascinating definitional questions have limited implications for the normative discussion in this Article, as demonstrated in Part IV, which discusses the broader question of the treatment of soldiers with different capabilities, even outside the scope of enhanced soldiers.

There is a wide spectrum of enhanced soldiers, ranging from Robocop-type soldiers who undergo transformative changes to soldiers with metal implants that replace an injured organ. The near future of human enhancement will be closer to the latter. This is an important point due to the tendency to associate human enhancement with transformative changes and super humans. DARPA leads the research on human enhancement in the military context and invests significant resources in various projects with the intention, as described by DARPA's former director, to "make the individual warfighter stronger, more alert, more enduring, and better able to heal."²⁴ Among the potential typologies of human enhancement, the categorization into biochemical, cybernetic and prosthetic enhancements is the most useful.²⁵ Notably, the following overview of the different paths for

23. See Puscas, *supra* note 22, at 184-87; Juengst & Moseley, *supra* note 22; Rain Liivoja, *Being More than You Can Be—Enhancement of Warfighters and the Law of Armed Conflict*, in *THE FUTURE LAW OF ARMED CONFLICT* (Matthew Waxman & Thomas W. Oakley eds., forthcoming 2021) (distinguishing between training and biomedical enhancement). For an article that treats psychological training as enhancement, see Alison Howell, *Resilience, War, and Austerity: The Ethics of Military Human Enhancement and the Politics of Data*, 46 *SEC. DIALOGUE* 15 (2015).

24. *Research, Development, Test and Evaluation: Hearing Before the Subcomm. on Terrorism, Unconventional Threats and Capabilities of the H. Armed Services Comm.*, 108 Cong. 244 (2003) (statement of Dr. Tony Tether, Dir. of DARPA); see Puscas, *supra* note 22, at 190-92 (describing DARPA's role in the study and development of human enhancement).

25. Dinniss & Kleffner, *supra* note 1, at 434; Heather A. Harrison Dinniss, *Legal Aspects of Human Enhancement Technologies*, in *NEW TECHNOLOGIES AND THE LAW IN WAR AND PEACE* 230, 240 (William H. Boothby ed., 2019). For alternative typologies, see Puscas, *supra* note 22, at 190-91 (dividing enhancement to physical and cognitive enhancements); Liivoja, *supra* note 23 (using occupational typology that divides enhancement to the areas of cognitive physical, psychomotor and sensory abilities).

human enhancement is not conclusive as other directions for military human enhancement are still being explored.²⁶

Biochemical enhancement of soldiers involves the use of drugs or other pharmaceutical agents to enhance performance.²⁷ Drugs are used for various purposes, including to increase a soldier's ability to be active for long periods of time and to reduce fear. Notwithstanding recent advancements, biochemical enhancement has a long history. Militaries have often used drugs to achieve desired results among their soldiers.²⁸ For example, during World War II (WWII), both Allied and Axis forces used amphetamine-type stimulants to increase fighting capabilities.²⁹ Currently, the use of modafinil by various armed forces receives considerable attention.³⁰ Modafinil is used to maintain the performance of soldiers near baseline levels, even after long hours of sleep deprivation.³¹ Reportedly, modafinil was approved for operational use in some circumstances by various militaries.³²

Cybernetic enhancement of soldiers (also referred to as brain-machine interfaces) involves technologies that enable seamless two-way interactions between soldiers and machines as well as between humans. Such an interaction is achieved through brain implants or electrodes placed on the scalp or skull. Cybernetic enhancement is the cutting edge of human enhancement and much of its potential applications and implications are not fully known. Nonetheless, the DOD study group on bioethics estimated that in the relatively near future, the U.S. military will use brain-machine interfaces that will enable soldiers to directly control assets, such as drones, and interact with other humans.³³

Prosthetic enhancement involves physical improvements to the human body. While a wide range of prosthetic enhancements already exist, this is still a rapidly developing area of research. The DOD study group on bioethics mentions three specific examples of prosthetic enhancement. The first example is ocular enhancement, which will enable individual soldiers to enjoy enhanced vision beyond the normal range including, for example, into infrared regions. The study group estimates that enhanced soldiers will be able to receive "data feeds of all types and across all spectra including those

26. For example, the typology in this Article does not include genetic human enhancement, a significant part of other typologies.

27. Dinniss & Kleffner, *supra* note 1, at 434.

28. *See generally* LUKASZ KAMIENSKI, SHOOTING UP: A HISTORY OF DRUGS IN WARFARE (2017) (describing the vast historical use of drugs in militaries to improve the performance of their soldiers).

29. Liivoja, *supra* note 22, at 422-23.

30. *Id.* at 426.

31. *Id.*

32. *Id.*; Nayef Al-Rodhan, *Transhumanism and War*, GLOB. POL'Y (May 18, 2015), <https://tinyurl.com/yyfwyypa>; William Saletan, *The War on Sleep*, SLATE (May 29, 2013), <https://tinyurl.com/mmoekag>.

33. EMANUEL ET AL., *supra* note 9, at 7.

previously not capable of being visualized by humans” in the foreseeable future.³⁴ The second example of prosthetic enhancement is muscular control. This will increase the physical capabilities of soldiers by allowing the soldiers’ bodies to “perform complex tasks for which they are not accustomed.”³⁵ The final example is auditory enhancement, which will enable soldiers, for example, to “expand the range for sensory perception to what are currently infrasonic and ultrasonic levels.”³⁶

B. *The Application of International Law to Enhanced Soldiers*

Military human enhancement forms part of the broader legal and ethical discussions regarding general human enhancement.³⁷ Until recently, discussions regarding military human enhancement only appeared in practical ethics literature.³⁸ As the relevant literature has only begun to evolve, essential questions remain unaddressed. While several studies offer an overview of various legal questions,³⁹ only a small number of articles deal with specific legal questions.⁴⁰ Of course, in the next few years a significant growth in the literature is expected—similar to the growth in literature that occurred with other technological advancements, such as cyber warfare and autonomous weapons.

Most of the literature on law, technology, and armed conflict focuses on the potential adverse implications of the use of such technologies.⁴¹ A small part of the literature addresses the potential benefit of such technologies and their potential ability to minimize human suffering in warfare.⁴² However, human enhancement is a unique technological development in which humans are present at both ends of the discussion. Therefore, the literature on human enhancement discusses the potential negative impact on the adversary that uses enhanced soldiers as well as the legal protection of the enhanced soldiers themselves. This is important due to the tendency to think of emerging technologies in the context of power variances between

34. *Id.* at 4.

35. *Id.* at 5.

36. *Id.* at 6.

37. See, e.g., HUMAN ENHANCEMENT (Julian Savulescu & Nick Bostrom eds., 2009); Allen Buchanan, *Moral Status and Human Enhancement*, 37 PHIL. & PUB. AFFS. 346 (2009); Michael H. Shapiro, *The Technology of Perfection: Performance Enhancement and the Control of Attributes*, 65 S. CAL. L. REV. 11 (1991).

38. See, e.g., Fritz Allhoff et al., *Ethics of Human Enhancement: 25 Questions & Answers*, 4 STUD. ETHICS, L. & TECH. 1 (2010).

39. See, e.g., Dinniss & Klefner, *supra* note 1; Dinniss, *supra* note 25; Puscas, *supra* note 22; Liivoja, *supra* note 23.

40. See, e.g., Liivoja, *supra* note 22; Stephen E. White, *Brave New World: Neurowarfare and the Limits of International Humanitarian Law*, 41 CORNELL INT’L L.J. 177 (2008).

41. See, e.g., *supra* note 20 and accompanying text.

42. See, e.g., Oren Gross, *The New Way of War: Is There a Duty to use Drones?*, 67 FLA. L. REV. 1 (2016); Christopher B. Puckett, *In This Era of “Smart Weapons,” Is a State under an International Legal Obligation to Use Precision-Guided Technology in Armed Conflict?*, 18 EMORY INT’L L. REV. 645 (2004).

different states and between states and non-state actors. The protection of enhanced soldiers is a humanitarian consideration that should be considered in addition to the evaluation of the influence of technologies on power dynamics as well as battlefield risk allocation that is often discussed in relation to new technologies.

In this brief overview of the legal writing on enhanced soldiers, I do not intend to mention all the questions the literature discusses but rather to offer different categories of the discussion. The legal exploration of military human enhancement can be divided into three types of questions: discussions regarding the development stage, discussions relating to the use and treatment of enhanced soldiers in the battlefield, and questions regarding accountability for violations of the law by enhanced soldiers. Each of these phases raises questions that focus on both protection of the adversary as well as protection of the enhanced soldiers themselves.

Discussions regarding the development stage of military human enhancement include bioethical discussions on the developments of enhanced soldiers as well as discussions on the legality of their development under IHL. An example of such a discussion in the development phase considers the legal importance and implications of consent; for instance, do soldiers willingly accept the particular enhancement that is intended to increase their capabilities?⁴³ Questions of legality, under the laws of armed conflict, resemble similar discussions on other emerging technologies, such as the use of drones or autonomous weapons.⁴⁴ As Part II.A demonstrates, there is a large spectrum of human enhancement; therefore, it is important that discussions on the legality of enhanced soldiers occur on a case-by-case basis in relation to each type of enhanced soldiers.

The use of enhanced soldiers on the battlefield raises many questions regarding the application of the laws of armed conflict and human rights law. For example, one study explores the targetability of medical personnel that provide pharmaceutical enhancement to soldiers.⁴⁵ Another analogous example questions the potential obligation to use enhanced soldiers if their deployment will help to minimize civilian casualties.⁴⁶ This relates directly to the subject of this Article and will be further developed in Part III through discussion of the notion of equality under the laws of armed conflict. Another area that raises many questions is the treatment of enhanced

43. See, e.g., Efthimios Parasidis, *Human Enhancement and Experimental Research in the Military*, 44 CONN. L. REV. 1117 (2012).

44. See, e.g., Guglielmo Tamburrini, *On Banning Autonomous Weapons Systems: From Deontological to Wide Consequentialist Reasons*, in AUTONOMOUS WEAPONS SYSTEMS: LAW, ETHICS, POLICY 122 (Nehal Bhuta et al. eds., 2016); Hin-Yan Liu, *Categorization and Legality of Autonomous and Remote Weapons Systems*, 94 INT'L REV. RED CROSS 627 (2012).

45. Liivoja, *supra* note 22.

46. Dinniss & Kleffner, *supra* note 1, at 444.

soldiers during detention.⁴⁷ The main focus of this Article, equal application of the law to enhanced soldiers, belongs in this phase of the discussion. In this context, the question from the first phase, regarding the legality of the use of enhanced soldiers, transforms into a question on the legality of the use of prohibited weapons against enhanced soldiers. This question will be discussed in detail in Part IV.

Finally, legal questions regarding accountability for violations committed by enhanced soldiers focus on the developers of military human enhancement, on command responsibility, and on the enhanced soldiers themselves. Discussions on the accountability of the developers for international law violations by enhanced soldiers also follow the pattern of discussions on accountability in the context of other emerging technologies.⁴⁸ Although enhanced soldiers, contrary to other technologies, constitute another link in the chain of accountability, the additional link does not dramatically change the discussion regarding criminal responsibility of the developers of new technologies.

Interesting questions that have not been sufficiently explored in the literature involve the two other links in the accountability chain: commanders and enhanced soldiers. The issue of command responsibility has received minimal attention in the context of enhanced soldiers. One issue, briefly mentioned in the literature, appertains to the relationship between individual responsibility and command responsibility. It was suggested that through human enhancement, commanders might be able to remotely control their subordinates.⁴⁹ In such circumstances, individual criminal responsibility would not likely be assigned to the soldier but to the commander.

Another issue, with more implications regarding the obligations of commanders for enhanced soldiers, has not been discussed in the literature. Under the Rome Statute, command responsibility is dependent upon the ability to determine that the commander “either knew or, owing to the circumstances at the time, should have known that the forces were committing or about to commit such crimes.”⁵⁰ However, it is likely that the larger flow of human-to-human data between enhanced soldiers and commanders will significantly increase the number of cases where commanders “should have known” that their soldiers committed war crimes and, thus, will help in the quest to end impunity for war crimes.

47. *Id.* at 446-51.

48. See, e.g., Tim McFarland & Tim McCormack, *Mind the Gap: Can Developers of Autonomous Weapons Systems be Liable for War Crimes?*, 90 INT'L L. STUD. 361 (2014).

49. Dinniss & Kleffner, *supra* note 1, at 477-78.

50. Rome Statute of the International Criminal Court art. 28, July 17, 1998, 2187 U.N.T.S. 90 [hereinafter Rome Statute].

The main question regarding individual criminal responsibility relates to notions of free will and, more specifically, to the mental element of criminal responsibility. This has been discussed in relation to human enhancement generally, as well as in the context of military enhancement specifically.⁵¹ The question regarding the mental element of criminal responsibility is relevant to two types of military enhancement. The first is pharmaceutical enhancement, which might affect the mental state of the soldiers to a degree that poses questions regarding their criminal culpability. The second type of enhancement is a brain-machine interface that directs machines through sub-conscious mental processes and poses similar questions regarding the mental element of criminal responsibility. While this question was briefly discussed in the literature, there remains room for its future development.⁵²

III. INTERNATIONAL HUMANITARIAN LAW, INTERNATIONAL HUMAN RIGHTS LAW, AND THE QUESTION OF EQUAL APPLICATION

This Article focuses on the equal treatment of enhanced soldiers under IHL and IHRL. Since enhanced soldiers have qualitatively better capabilities, it is expected that the obligation to provide them treatment similar to typical soldiers under IHL and IHRL will be questioned. Before addressing the specifics in relation to enhanced soldiers, however, this Part explores the notion on equality in IHL and IHRL, and the extent to which the different treatment of individuals and groups is accepted under these two branches of international law.

The literature on equality often differentiates between formal equality and substantive equality.⁵³ The former focuses on like treatment—the application of the rules similarly to everyone without considering potential differences between individuals and groups.⁵⁴ While there are several approaches to substantive equality, all share the common goal of considering individual or group differences and attempting to minimize the gaps in society.⁵⁵ Most accounts of substantive equality focus on historically

51. See Susan W. Brenner, *Humans and Humans+: Technological Enhancement and Criminal Responsibility*, 19 B.U. J. SCI. & TECH. L. 215 (2013).

52. See White, *supra* note 40; Rain Liivoja, *New Technologies Symposium: Human Enhancement Technologies and the Law in War and Peace*, OPINIO JURIS (May 8, 2019), <https://tinyurl.com/y5hbzcy4>.

53. See, e.g., Sandra Fredman, *Substantive Equality Revisited*, 14 INT'L J. CONST. L. 712 (2016); Catharine A. MacKinnon, *Substantive Equality: A Perspective*, 96 MINN. L. REV. 1 (2011); Martha Albertson Fineman, *The Vulnerable Subject: Anchoring Equality in the Human Condition*, 20 YALE J.L. & FEMINISM 1 (2008); Catherine Barnard & Bob Hepple, *Substantive Equality*, 59 CAMBRIDGE L.J. 562 (2000); Michel Rosenfeld, *Substantive Equality and Equal Opportunity: A Jurisprudential Appraisal*, 74 CALIF. L. REV. 1687 (1986).

54. See, e.g., Fredman, *supra* note 53, at 713.

55. *Id.*; see also Barnard & Hepple, *supra* note 53; Catharine A. MacKinnon, *Substantive Equality Revisited: A Reply to Sandra Fredman*, 14 INT'L J. CONST. L. 739 (2016).

disadvantaged individuals and groups to facilitate substantial improvement of their current situation.⁵⁶

A. International Humanitarian Law and the Equality of Belligerents

IHL has traditionally promoted a doctrine of formal equality.⁵⁷ According to this traditional approach, formal equality is applied under IHL regardless of significant differences between the parties to a conflict—including differences in the relative strength and differences in relation to the legal and moral justifications for the use of force.⁵⁸ For example, IHL applied equally and without differentiation to Russia and Georgia during their 2008 conflict, notwithstanding the fact that the former is a much more powerful state.

While the question regarding equal application of IHL has many faces, the main discussion—on equality between the parties to a conflict—is related to the separation between *jus in bello* and *jus ad bellum*, between the laws of armed conflict and the laws of the use of force. It is well accepted that IHL applies equally to both sides of the conflict regardless of their potential responsibility for the aggression that started the conflict.⁵⁹ This is true even in uncontroversial cases in which one of the parties is an aggressor. For example, in WWII German soldiers still enjoyed the same protections as Allied soldiers under *jus in bello*. The Just War Theory literature has been engaged in recent years in a constant debate where revisionists argue against the traditional separation between *jus ad bellum* and *jus in bello*.⁶⁰ However, these arguments are often focused on the moral discussion, and even prominent revisionist voices do not necessarily argue for a change in the law.⁶¹

Several scholars support the introduction of substantive equality in the context of IHL, most notably in relation to conflicts between states and non-state actors and the development of new technologies.⁶² Some suggest that, in some circumstances, certain rules should apply differently between

56. Fredman, *supra* note 53, at 713.

57. For a discussion of formal and substantive equality in IHL, see Rene Provost, *The Move to Substantive Equality in International Humanitarian Law: A Rejoinder to Marco Sassoli and Yuval Shany*, 93 INT'L REV. RED CROSS 437 (2011).

58. See Yahli Shereshevsky, *Politics by Other Means: The Battle Over the Classification of Asymmetrical Conflicts*, 49 VAND. J. TRANSNAT'L L. 455, 458-59 (2016). See generally Michael N. Schmitt, *Asymmetrical Warfare and International Humanitarian Law*, 62 A.F. L. REV. 1 (2008) (describing various potential asymmetries between parties to an armed conflict).

59. See Robert D. Sloane, *The Cost of Conflation: Preserving the Dualism of Jus ad Bellum and Jus in Bello in the Contemporary Law of War*, 34 YALE J. INT'L L. 47 (2009).

60. Seth Lazar, *Just War Theory: Revisionists Versus Traditionalists*, 20 ANN. REV. POL. SCI. 37 (2017).

61. See, e.g., Jeff McMahan, *Laws of War*, in THE PHILOSOPHY OF INTERNATIONAL LAW 493 (Samantha Besson & John Tasioulas eds., 2010).

62. See, e.g., *infra* notes 65-68.

parties to a conflict. These considerations suggest that the stronger parties should be obligated to use weapons that minimize civilian casualties. This argument initiated around the use of precision-guided munitions but has also been discussed in relation to other weapons.⁶³ If enhanced soldiers will be able to better comply with IHL rules due to their capabilities, as some suggest, there might be an obligation under this approach to deploy them in certain circumstances.⁶⁴ In this context, Gabriella Blum examines the principle of common-but-differentiated responsibilities and its potential application to IHL, focusing on the responsibilities of powerful states.⁶⁵

More broadly, as mentioned in the discussion of IHL and new technologies, it could be asked whether IHL should allow the development of new weapons that can increase the power differences between parties to armed conflicts as part of the general criticism of IHL as a legitimate legal regime.⁶⁶ This is an important issue that raises significant challenges to the naïve perception of the regulation of war as merely an attempt to minimize suffering in warfare, and it should be taken into account in the discussion of the legality of new technologies.⁶⁷ Nonetheless, this Article focuses on the treatment of enhanced soldiers when deployed rather than the development stage. While the laws that govern the use of new technologies can clearly affect the incentives to use these technologies, I believe that in contrast to other technologies, there is a unique factor in the use of enhanced soldiers that should be taken into account and dramatically changes the calculation—the human factor. Enhanced soldiers are, after all, humans, and they are protected by the law. It is important to differentiate between the individual soldier and the collective when considering broad questions such as the equality between the parties to the conflict. Due to the implications of the rules on individual soldiers, I believe that the appropriate way to address the legality and desirability of the use of enhanced soldiers is the area of the law of weapons and bioethics rather than the indirect potential implications of the law that governs their use.

In addition to the context of new technologies and the power differences between the parties to a conflict, some suggest that IHL norms should apply differently to non-state armed groups.⁶⁸ Such an approach

63. See sources cited *supra* note 42.

64. See discussion *supra* Part II.

65. Gabriella Blum, *On a Differential Law of War*, 52 HARV. INT'L L.J. 164 (2011).

66. See, e.g., Jochen von Bernstorff, *Is IHL a Sham? A Reply to Eyal Benvenisti and Doreen Lustig*, 31 EUR. J. INT'L L. 709 (2020).

67. However, discussion of the effectiveness of international law in limiting the development and deployment of new, highly-effective technologies from a military perspective is rather limited. See *infra* note 107.

68. See, e.g., Marco Sassòli, *Introducing a Sliding-Scale of Obligations to Address the Fundamental Inequality between Armed Groups and States?*, 93 INT'L REV. RED CROSS 426 (2011) (exploring five potential areas in which a different application of the rule to states and to non-state armed groups might be justified).

influenced the creation of Article 44(3) of the First Additional Protocol to the Geneva Conventions regarding the requirement that combatants distinguish themselves from the civilian population in the context of guerrilla warfare.⁶⁹ Some argued that the obligation to wear uniforms in order to receive prisoner of war (POW) status and enjoy combatant immunity poses too much burden on what was then called guerilla fighters (now mostly referred to as non-state armed groups), since they base their tactics on blending in with the civilian population. As a result, Article 44(3) enables guerilla fighters to distinguish themselves from the civilian population in a very limited way that differs from other combatants.⁷⁰ Due to its deviation from equality, it is not surprising that the Article was one of the most controversial parts of the First Additional Protocol,⁷¹ and its customary nature is questionable.

One of the closest examples in the IHL literature to the main discussion of this Article is the debate over the ability to calculate the proportionality test differently between the parties to the conflict based on alleged cultural differences.⁷² This question was discussed mainly in relation to the 2014 Gaza conflict, and specifically the events around a lethal incident dubbed “black Friday.”⁷³ Michael Schmitt and John Merriam argue that “the acute casualty aversion in Israeli society writ large, coupled with a pervasive fear of [Israeli Defense Forces] soldiers being taken prisoner and used to exert strategic leverage over Israel”⁷⁴ are legitimate factors in the proportionality equation, due to the significance that the adversary assigns to these factors.⁷⁵ What follows is that subjective cultural criteria, such as the previously mentioned factors that lead to a willingness to release many detainees in

But see Yuval Shany, *A Rebuttal to Marco Sassòli*, 93 INT’L REV. RED CROSS 432 (2011) (advocating for the application of the equality of belligerents principle but recognizing the potential benefits of a common-but-differentiated responsibilities approach).

69. INT’L COMM. OF THE RED CROSS, COMMENTARY ON THE ADDITIONAL PROTOCOLS OF 8 JUNE 1977 TO THE GENEVA CONVENTIONS OF 12 AUGUST 1949, at 521 (Yves Sandoz et al. eds., 1987) [hereinafter API COMMENTARY].

70. Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I) art. 44(3), June 8, 1977, 1125 U.N.T.S. 3, 21 [hereinafter API].

71. *See* API COMMENTARY, *supra* note 69, at 521.

72. The principle of proportionality is articulated in API, *supra* note 70, art. 51(5)(b) (“[A]n 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 anticipate.”).

73. AMNESTY INT’L, ‘BLACK FRIDAY’: CARNAGE IN RAFAH DURING 2014 ISRAEL/GAZA CONFLICT, <https://blackfriday.amnesty.org/> (last visited July 26, 2020); Isabel Kershner, *Israeli Military Clears Itself of Wrongdoing in 2014 Gaza War’s ‘Black Friday,’* N.Y. TIMES (Aug. 15, 2018), <https://www.nytimes.com/2018/08/15/world/middleeast/gaza-israel-imports.html>.

74. Michael Schmitt & John Merriam, *A Legal and Operational Assessment of Israel’s Targeting Practices*, JUST SECURITY (Apr. 24, 2015), <https://tinyurl.com/y6mq92kf>.

75. Michael Schmitt, *The Relationship Between Context and Proportionality: A Reply to Cohen and Shany*, JUST SECURITY (May 11, 2015), <https://tinyurl.com/y4aura6d>.

exchange for a very small number of captive soldiers, can lead to differentiation in the legal obligations of different states under a legal principle of proportionately. Schmitt and Merriam receive some support from other commentators,⁷⁶ but are also the subject of (justified) strong criticism.⁷⁷ Indeed, as will be further discussed in relation to enhanced soldiers, such cultural-based assessments open the door to state abuse and are detrimental to the clarity needed in the effort to ensure respect for IHL in the fog of war.

A less controversial aspect in relation to the proportionality principle is the ability to assign more weight to the military advantage of targeting high-ranking officers than the targeting of low-ranked soldiers. The former allows more collateral damage.⁷⁸ This will be further discussed in relation to the military advantage of targeting enhanced soldiers in Part IV of this Article.

Finally, the laws of armed conflict specifically refer to groups, such as women and children, that have special protection. For example, Article 76 to the First Additional Protocol states that “women shall be the object of special respect,”⁷⁹ and Article 77 to the same Protocol states that “children shall be the object of special respect.”⁸⁰ This was recognized in Rules 134 and 135 of the International Committee of the Red Cross (ICRC) customary international humanitarian law study, which addresses the protection of women and children respectively.⁸¹ The ICRC added a note to its articulation of the customary norm regarding the protection of women that reflects the exceptional nature of the differentiation between groups. The note stresses that international humanitarian law affords women and men equal protections. But in light of women’s “specific needs and vulnerabilities,” international humanitarian law grants women protections and rights beyond those it affords men.⁸²

76. Pnina Sharvit Baruch, *The Report of the Human Rights' Council Commission of Inquiry on the 2014 Operation In the Gaza Strip – A Critical Analysis*, 46 ISR. Y.B. ON HUM. RTS. 29, 78-81 (2016); Elad David Gil, *Trapped: Three Dilemmas in the Law of Proportionality and Asymmetric Warfare*, 18 Y.B. INT'L HUMANITARIAN L. 153, 164-65 (2016).

77. See Amichai Cohen & Yuval Shany, *Contextualizing Proportionality Analysis? A Response to Schmitt and Merriam on Israel's Targeting Practices*, JUST SECURITY (May 7, 2015), <https://tinyurl.com/y2yaweoh>.

78. INT'L COMM. OF THE RED CROSS, *THE PRINCIPLE OF PROPORTIONALITY IN THE RULES COVERING THE CONDUCT OF HOSTILITIES UNDER INTERNATIONAL HUMANITARIAN LAW* 21 (Laurent Gisel ed., 2016) [hereinafter ICRC Proportionality].

79. API, *supra* note 70, art. 76.

80. *Id.* art. 77.

81. 1 JEAN-MARIE HENCKAERTS & LOUISE DOSWALD-BECK, INT'L COMM. OF THE RED CROSS, *CUSTOMARY INTERNATIONAL HUMANITARIAN LAW: RULES*, r. 134-35 (2005), <https://tinyurl.com/y4lsyh7j>.

82. *Id.* For a discussion of the benefit and potential burden of the explicit reference to the protection of specific groups, see R. Charli Carpenter, “*Women, Children and Other Vulnerable Groups*”: *Gender, Strategic Frames and the Protection of Civilians as a Transnational Issue*, 49 INT'L STUD. Q. 295 (2005). For a discussion of the potential usefulness of a gender perspective on IHL, see Helen Durham &

No similar note was added to the rule that addresses the protection of children. An approach that considers subjective elements, including the specific vulnerabilities of certain groups, can also be found in the rules regarding the treatment of prisoners of war and detainees, more generally.⁸³

In any case, even with approaches that offer a more nuanced version of the equal application of the laws of war, no examples exist for differentiation between different groups of combatants within the same military, based on individual (or group) characteristics, that permit treating soldiers with greater capabilities more harshly, with the limited exception of the principle of proportionality, which is discussed in Part IV of this Article. This follows from the strong tradition of formal equality in the laws that govern armed conflicts and from the importance of improving the situation of weaker groups rather than worsening the conditions of the strong within the notion of substantive equality.

B. *Equal Treatment under International Human Rights Law*

Equality and non-discrimination are recognized as basic and general rules of international human rights law,⁸⁴ and are explicitly recognized in almost all of the main IHRL treaties.⁸⁵ For example, the First Article of the Universal Declaration of Human Rights states that “all human beings are born free and equal in dignity and rights.”⁸⁶ Article 26 to the International Covenant on Civil and Political Rights (ICCPR) determines that “all persons are equal before the law and are entitled without any discrimination to the equal protection of the law.”⁸⁷ Similar to the discussion on IHL, notions of formal and substantive equality inform the application of equality in IHRL with substantive equality receiving more weight as time progresses.⁸⁸

IHRL treaties explicitly refer to specific grounds of prohibited discrimination—such as sex, race, religion and political opinion—and, in some cases, suggest that the list of grounds is open-ended and can include

Katie O’Byrne, *The Dialogue of Difference: Gender Perspectives on International Humanitarian Law*, 92 INT’L REV. RED CROSS 31 (2010).

83. See *infra* Part IV.

84. See Human Rights Comm., CCPR General Comment No. 18: Non-Discrimination, U.N. Doc. HRI/GEN/1/Rev.9 (Vol. I), at 195 (Nov. 10, 1989) [hereinafter General Comment 18]; Daniel Moeckli, *Equality and Non-Discrimination*, in INTERNATIONAL HUMAN RIGHTS LAW 189, 189-90 (Daniel Moeckli et al. eds., 2010).

85. See, e.g., International Covenant on Civil and Political Rights art. 2(1), 16, Dec. 19, 1966, T.I.A.S. No. 92-908, 999 U.N.T.S. 171 [hereinafter ICCPR]; Convention on the Rights of Persons with Disabilities art. 5, Mar. 30, 2007, 2515 U.N.T.S. 3 [hereinafter CRPD]; Convention on the Elimination of All Forms of Discrimination Against Women art. 1, Dec. 18, 1979, 1249 U.N.T.S. 13 [hereinafter CEDAW].

86. G.A. Res. 217 (III) A, Universal Declaration of Human Rights (Dec. 10, 1948).

87. ICCPR, *supra* note 85, art. 26.

88. Moeckli, *supra* note 84, at 191-92.

other groups.⁸⁹ Cases of different treatment require determining whether the action is discriminatory or is a justified distinction based on relevant factors, including the objective of the treatment regarding its reasonableness and proportionality. In this regard, General Comment 18 of the Human Rights Committee (HRC) states that “the enjoyment of rights and freedoms on an equal footing, however, does not mean identical treatment in every instance.”⁹⁰ The Comment does not provide any guidance on how to differentiate between legitimate distinction and prohibited discrimination.

A more elaborate approach is found in the jurisprudence of the European Court of Human Rights (ECtHR).⁹¹ In *Belgian Linguistics*, the ECtHR stated that “difference of treatment in the exercise of a [Convention right] must not only pursue a legitimate aim: Article 14 is likewise violated when there is no reasonable relationship of proportionality between the means employed and the aim sought to be realised.”⁹² This formula, which was later adopted by other human rights bodies, established a two-stage test to examine the existence of a legitimate aim as well as proportionality in cases of different treatment.⁹³

In the assessment of whether a specific action is of a discriminatory nature, there is often a presumption that different treatment of one of the specific groups mentioned in human rights treaties is discriminatory—particularly in relation to the categories of gender and race.⁹⁴ This presumption mostly follows a notion of formal equality.⁹⁵ Nonetheless, different treatment of such groups can be justified when identical treatment leads to unequal results, and there is a growing tendency to allow such differential treatment on the basis of substantive equality arguments.⁹⁶ A similar approach regarding different treatment is applied in the context of the prohibition against torture.⁹⁷ This approach is highly relevant to the treatment of enhanced soldiers, and will be discussed in depth in Part IV of the paper.

89. *Id.* at 196-97.

90. General Comment 18, *supra* note 84, ¶ 8.

91. For an in-depth analysis of the ECtHR jurisprudence on discrimination with an emphasis on substantive equality, see Sandra Fredman, *Emerging from the Shadows: Substantive Equality and Article 14 of the European Convention on Human Rights*, 16 HUMAN RIGHTS L. REV. 273 (2016).

92. Case “Relating to Certain Aspects of the Laws on the Use of Languages in Education in Belgium” v. Belgium, App. Nos. 1474/62, 1677/62, 1769/63, 1994/63, 2126/64, at 31 (July 23, 1968), <http://hudoc.echr.coe.int/eng?i=001-57525>.

93. Fredman, *supra* note 91, at 278-79; Moeckli, *supra* note 84, at 201.

94. Moeckli, *supra* note 84, at 202-03. This follows the widely recognized notion of “suspect class.” See, e.g., Bertrall L. Ross II & Su Li, *Measuring Political Power: Suspect Class Determinations and the Poor*, 104 CALIF. L. REV. 323 (2016); Kenji Yoshino, *The New Equal Protection*, 124 HARV. L. REV. 747 (2011); Suzanne B. Goldberg, *Equality Without Tiers*, 77 S. CAL. L. REV. 481 (2004).

95. Fredman, *supra* note 91, at 279.

96. *Id.* at 279-81.

97. See *infra* Part IV.D.

Thus, it seems that IHRL is more supportive of substantive equality than IHL. While IHL notions on equality of belligerents are largely understood as a notion of formal equality that focuses on the effectiveness of minimizing suffering in warfare, no similar notion exists in IHRL. In addition, IHRL includes thematic treaties that address specific groups, including treaties that focus on children, women, the elimination of all forms of racial discrimination, and people with disabilities.⁹⁸ These treaties include notions of substantive equality. For example, the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) was widely recognized as promoting formal as well as substantive equality.⁹⁹ This was explicitly recognized in General Recommendation 25 of the Committee on the Elimination of Discrimination Against Women, which states:

In the Committee's view, a purely formal legal or programmatic approach is not sufficient to achieve women's de facto equality with men, which the Committee interprets as substantive equality. In addition, the Convention requires that women be given an equal start and that they be empowered by an enabling environment to achieve equality of results. It is not enough to guarantee women treatment that is identical to that of men. Rather, biological as well as socially and culturally constructed differences between women and men must be taken into account. Under certain circumstances, non-identical treatment of women and men will be required in order to address such differences. Pursuit of the goal of substantive equality also calls for an effective strategy aimed at overcoming underrepresentation of women and a redistribution of resources and power between men and women.¹⁰⁰

Similar to other areas, the notion of substantive equality in IHRL is usually applied to improve the situation of vulnerable groups rather than to justify the harsher treatment of more privileged individuals and groups. For example, as Sandra Fredman demonstrates in her four-dimensional approach to substantive equality, the ECtHR substantive equality case law focuses on improving the situation of disadvantaged groups rather than on the treatment of privileged groups.¹⁰¹

98. CRPD, *supra* note 85; CEDAW, *supra* note 85; Convention on the Rights of the Child, Nov. 20, 1989, 1577 U.N.T.S. 3; International Convention on the Elimination of All Forms of Racial Discrimination, Dec. 21, 1965, S. TREATY DOC. No. 95-18, 660 U.N.T.S. 195.

99. *See, e.g.*, Simone Cusack & Lisa Pusey, *CEDAW and the Rights to Non-Discrimination and Equality*, 14 MELB. J. INT'L L. 1, 11 (2013); Frances Raday, *Gender and Democratic Citizenship: The Impact of CEDAW*, 10 INT'L J. CONST. L. 512 (2012).

100. Comm. on the Elimination of Discrimination Against Women, General Recommendation No. 25 on Temporary Special Measures, ¶¶ 8, 12, U.N. Doc. CEDAW/C/2004/I/WP.1 (Jan. 30, 2004).

101. Fredman, *supra* note 91, at 281-300.

Finally, it is important to recognize similar discussions beyond the narrow discussion of IHL and IHRL in this Article. The subjective application of the law, or the personification of the law, is debated in various contexts of domestic laws. For example, Adam Kobler suggested that criminal punishment should consider the subjective experience of the offender,¹⁰² and Omri Ben Shahar and Ariel Porat argued in favor of a personalized negligence law.¹⁰³ Technological development and especially the use of algorithms and big data seem to have the potential to enable a greater use of personalized law. Indeed, much of the debate in favor and against the personification of law focuses on the use of big data and algorithms to personify the law.¹⁰⁴ The main concerns that are raised regarding the personification of the law in these debates focus on the notion of equality, similar to the discussions in this Section, and in addition on the collection of information.¹⁰⁵

An inquiry regarding the personification of IHL and IHRL is beyond the scope of this Article. However, the above-mentioned discussions of big data and the personification of law are relevant for the discussion in this Article in two respects. First, vast data collection and predictive algorithms might improve the ability to accurately assess the capabilities of individual soldiers. Second, it is likely to shift the discussion to the application of personalized law to all soldiers rather than just enhanced soldiers. It is important to remember in this regard the context of our discussion. In contrast to many areas of domestic law, the laws that regulate armed conflicts are designed to operate in an extremely challenging environment—under the fog of war—where there is a significant danger of abuse by states. Under these circumstances, it is important to rely on clear rules and distinctions to increase the effectiveness of the law and limit the discretion of the parties to the conflict.¹⁰⁶ Thus, it seems that in the context of armed conflicts the danger of allowing the personification of the law might be greater than in other legal areas. Without a clear mechanism that can effectively protect against the danger of abuse, there is a significant doubt whether the personification of IHL will lead to desirable results.

The next Part of this Article focuses on two areas where equal application of the rules faces the strongest challenge in the context of

102. Adam J. Kobler, *The Subjective Experience of Punishment*, 109 COLUM. L. REV. 182 (2009) (presenting the argument for subjective punishment while acknowledging the possibility of strong consequentialist arguments against such form of punishment).

103. Omri Ben-Shahar & Ariel Porat, *Personalizing Negligence Law*, 91 N.Y.U. L. REV. 627 (2016).

104. The *University of Chicago Law Review* published a symposium on the personalization of law. See Symposium, *Personalized Law*, 86 U. CHI. L. REV. 217 (2019); see also Ariel Porat & Lior Jacob Strahilevitz, *Personalizing Default Rules and Disclosure with Big Data*, 112 MICH. L. REV. 1417 (2014).

105. See Andrew Verstein, *Privatizing Personalized Law*, 86 U. CHI. L. REV. 551, 554-63 (2019).

106. See, e.g., Naz K. Modirzadeh, *The Dark Side of Convergence: A Pro-Civilian Critique of the Extraterritorial Application of Human Rights in Armed Conflict*, 86 INT'L L. STUD. 349, 356 (describing the importance of clear rules to the compliance with IHL rules during conflict).

enhanced soldiers, as reflected in the limited literature on the subject. The first relates to the example at the beginning of this Article—the prohibition on the use of certain weapons under international humanitarian law. The second is the prohibition on the use of torture as well as the use of cruel, inhuman and degrading treatment. With both issues, a strong case could be made for a different application of the rules to enhanced soldiers due to their unique abilities. In addition, it briefly addresses the principle of proportionality and the treatment of detainees.

IV. EQUAL TREATMENT OF ENHANCED SOLDIERS UNDER INTERNATIONAL HUMANITARIAN LAW AND INTERNATIONAL HUMAN RIGHTS LAW

One qualification is required regarding the one-directional subjective approach that is promoted in this section. The following discussion of the rules governing enhanced soldiers is focused on the relatively near future of enhanced soldiers as described in Part II.B. It assumes a more realistic incremental change rather than considering militaries consisting of a majority of super soldiers that underwent drastic changes to their natures. It tries to engage with the real future battlefield rather than what is currently still a very distant imagined future. The arguments in the discussion are dependent, to a large extent, on this reality and will merit reconsideration in the face of qualitatively different contexts.

A. The Legality of Weapons Under the Law of Armed Conflict

Application of the rules regarding the regulation of weapons, along with the prohibition against torture and cruel, inhuman and degrading treatment, is one of the two main areas where differences between enhanced and unenhanced soldiers might be relevant to the application of the law, as the example regarding expanding bullets and colonial wars in the Introduction demonstrates. The regulation of weapons is one of the most challenging areas of the law of armed conflict and it often faces questionable success, specifically in relation to the general prohibition against weapons causing unnecessary suffering.¹⁰⁷ The discussion below begins with a general description of the rules that regulate weapons and then focuses on the

107. See, e.g., David Turns, *Weapons in the ICRC Study on Customary International Humanitarian Law*, 11 J. CONFLICT & SEC. L. 201, 211-12 (2006) (suggesting that there are very few examples in which the general principle had an impact on positions of states regarding the legality of weapons). For a general critical look on the historical regulation of weapons, see Chris af Jochnick & Roger Normand, *The Legitimation of Violence: A Critical History of the Laws of War*, 35 HARV. INT'L L.J. 49 (1994) (suggesting that, in many cases, the banning of specific weapons is a direct result of the limited military effectiveness of those weapons).

general prohibition against weapons that cause superfluous injury and unnecessary suffering, as well as the specific ban on blinding laser weapons.

1. *The Regulation of Weapons in International Law*

The regulation of weapons under the law of armed conflict is divided into general prohibitions on the use of certain types of weapons and the means and methods of warfare, as well as prohibitions on specific weapons.

The general prohibitions can also be divided into two main customary law norms: a prohibition on the use of weapons that cause superfluous injury and unnecessary suffering and a prohibition on the use of indiscriminate weapons. The latter lies mostly outside the scope of this Article. Most of the discussion in this Section focuses on the prohibition on the use of weapons, as well as means and methods, that cause superfluous injury and unnecessary suffering. Specifically, this Section explores the relevance of individual and group subjective factors in the assessment of suffering and injuries in relation to the prohibition on the use of certain weapons.

The origins of the customary prohibition on weapons that cause superfluous injury and unnecessary suffering dates back to the St. Petersburg Declaration of 1868.¹⁰⁸ The current expression of the norm is found in Articles 35 and 36 of the First Additional Protocol to the Geneva Conventions (Additional Protocol I or API).¹⁰⁹ Article 35(2) states that it is prohibited “to employ weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering.”¹¹⁰ Article 36 establishes an obligation to review new weapons, stating that:

In the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by this Protocol or by any other rule of international law applicable to the High Contracting Party.¹¹¹

War causes much suffering and death. Clearly, adoption of the prohibition was not intended to prohibit any type of suffering or even great suffering.¹¹² The focus of the prohibition is on the use of weapons that are expected to

108. Declaration Renouncing the Use, in Time of War, of Explosive Projectiles Under 400 Grammes Weight pmbl., Nov. 20, 1868 (entered into force Dec. 11, 1868). For a description of the historical development of the prohibition, see WILLIAM H. BOOTHBY, WEAPONS AND THE LAW OF ARMED CONFLICT 46-48 (2d ed. 2016).

109. API, *supra* note 70, art. 35-36.

110. *Id.* art. 35.

111. *Id.* art. 36.

112. BOOTHBY, *supra* note 108, at 50.

cause more suffering than what is needed to achieve the objective of combat. This is a highly opaque standard and, indeed, it is hard to find a weapon that was recognized as a prohibited weapon based on Article 35(2) alone.¹¹³ Most of the prohibited weapons that appear to fall under the scope of the prohibition on superfluous injury, including the previously discussed expanding bullets,¹¹⁴ were banned as part of an explicit treaty-based prohibition.¹¹⁵

The core of the challenge to restrict the prohibition on the use of weapons based on Article 35(2) lies at the limited ability to determine what constitutes “unnecessary suffering” as well as to compare the suffering to the expected military advantage.¹¹⁶ The difficulty in determining the suffering that a specific weapon causes, including the potential significant differences between (unenanced) individuals, has been long recognized. For example, at the second session of the Conference of Government Experts on the Use of Certain Conventional Weapons, the informal working group of medical experts issued the following statement:

Unnecessary suffering is a term implying numerous medical parameters. From a strictly medical standpoint it seems impossible at the present stage of medical knowledge to objectively define suffering or to give absolute values permitting comparisons between human individuals. Pain, for instance, which is but one of many components of suffering, is subject to enormous individual variations. Not only does the pain threshold vary between human beings: at different times it varies in the same person, depending upon circumstances.

It was the opinion of all medical experts that instead of:

‘suffering’, *the wound or injury* caused by a weapon offered a better but still very complex way of defining the effect of that particular weapon. It is still very difficult to compare an injury in one part of the human body with one in a different location. Likewise, general effects caused by a local injury are subject to many variables and make comparison between different individuals difficult.

113. Lances with barbed heads and bayonets with serrated edges are exceptions to this tendency. See Turns, *supra* note 107, at 212.

114. For an elaborate discussion of the prohibition on the use of expanding bullets, see Robin Coupland & Dominique Loye, *The 1899 Hague Declaration Concerning Expanding Bullets: A Treaty Effective for More than 100 Years Faces Complex Contemporary Issues*, 85 INT’L REV. RED CROSS 135 (2003).

115. BOOTHBY, *supra* note 108, at 51.

116. BOOTHBY, *supra* note 108, at 51-52, 61.

However, if such parameters are taken into consideration, it seemed to the medical experts preferable to use *injury instead of suffering*.¹¹⁷

In an attempt to mitigate this difficulty, the ICRC initiated the Superfluous Injury and Unnecessary Suffering (SIrUS) Project to define and quantify the notions of superfluous injury and unnecessary suffering.¹¹⁸ The SIrUS Project adopted an effects-based approach focusing on four medical criteria: (1) Specific disease, specific abnormal physiological state, specific and permanent disability or specific disfigurement; (2) Field mortality of more than twenty-five percent or a hospital mortality of more than five percent; (3) Grade 3 wounds as measured by the ICRC wound classification; and (4) Effects for which there is no well recognized and proven treatment.¹¹⁹ The project was the subject of strong criticism and was ultimately abandoned by the ICRC in 2001.¹²⁰ Much of the criticism focused on the effects of weapons rather than their intended design, as well as on the futility of assessing the suffering element independently rather than in relation to considerations of military necessity.

Under both the effects-based and intended-use approaches, the prohibition on the use of weapons, means and methods that cause unnecessary suffering or superfluous injury have not been applied in a way that considers the subjective capabilities of individual or groups of soldiers. Indeed, as the Introduction demonstrates, subjective arguments were presented initially in the colonial context, and in some contexts were even explicitly endorsed, such as a prohibition on the use of the crossbow that excluded wars against “infidels.”¹²¹ Given their racial origins, however, the modern attitude towards such arguments is clearly negative. These origins might have affected the reluctance to adopt similar subjective arguments in other contexts.¹²² Indeed, since the colonial era, it is impossible to find

117. INT'L COMM. OF THE RED CROSS, COMMENTARY ON THE CONVENTION (III) RELATIVE TO THE TREATMENT OF PRISONERS OF WAR, GENEVA 12 AUGUST 1949, at 154 (Jean Pictet ed., 1960) [hereinafter 1960 Commentary].

118. The project was founded by Dr. Robin Coupland who published several articles that describe the potential of the project. See, e.g., Robin M. Coupland & Peter Herby, *Review of the Legality of Weapons: A New Approach*, 81 INT'L REV. RED CROSS 583 (1999); INT'L COMM. OF THE RED CROSS, THE SIrUS PROJECT (Robin M. Coupland ed., 1997) [hereinafter The SIrUS Project].

119. The SIrUS Project, *supra* note 118, at 23-25.

120. See, e.g., BOOTHBY, *supra* note 108, at 55-56, 66; W. Hays Parks, *Conventional Weapons and Weapons Reviews*, 8 Y.B. INT'L HUMANITARIAN L. 55 (2005); Donna Marie Verchio, *Just Say No! The SIrUS Project: Well-Intentioned, But Unnecessary and Superfluous*, 51 A.F. L. REV. 183 (2001).

121. Parks, *supra* note 120, at 62. For the use of similar positions regarding the prohibition on exploding bullets in the St. Petersburg declaration, see Emily Crawford, *The Enduring Legacy of the St Petersburg Declaration: Distinction, Military Necessity, and the Prohibition of Causing Unnecessary Suffering and Superfluous Injury in IHL*, 20 J. HIST. INT'L L. 544, 560-61 (2018).

122. For the effect of history on weapons regulation in this context, see Joshua F. Berry, *Hollow Point Bullets: How History Has Hijacked Their Use in Combat and Why It is Time to Reexamine the 1899 Hague Declaration Concerning Expanding Bullets*, 206 MIL. L. REV. 88, 109-110 (2010) (describing the role of

examples of interpretations of the customary prohibition on weapons that assign normative weight to potential differences between distinct types of soldiers. Nevertheless, this could also be attributed, to a large extent, to the tendency to prefer an absolute ban on certain weapons rather than efforts to examine their use in specific circumstances.

As mentioned, a second type of prohibition is specific: treaty-based prohibitions. In addition to the prohibition on the use of expanding bullets, specific prohibitions of certain weapons include, *inter alia*, the prohibition on chemical weapons,¹²³ the prohibition on the use of blinding laser weapons,¹²⁴ and the prohibition on the use of booby-traps.¹²⁵ Here, the relevant question for the purposes of this Article is whether the prohibitions on any of these weapons differentiates between enhanced and unenhanced soldiers. As explained below, it seems that the most relevant prohibition, in addition to that on expanding bullets, is the prohibition on the use of blinding laser weapons.

2. *Applying the Rules Regarding Weapons Regulation to Enhanced Soldiers*

Within the context of enhanced soldiers, weapons-regulation questions surrounding the legality of deploying and using enhanced soldiers and the legality of using weapons against them arise. The first question, which is outside the scope of this Article, has been addressed by several authors.¹²⁶ They examine two questions in this regard. The first is whether enhanced soldiers could be seen as weapons, means, or methods of warfare. The second focuses on the implications of a positive answer to the first issue. While the literature on the subject is generally in agreement that enhanced soldiers should not be regarded as weapons,¹²⁷ it presents a more nuanced approach to the question of qualification of enhanced soldiers as means or methods.¹²⁸

Ardagh's argument regarding war against "savages" in the negative framing of proponent of expanding bullets). Interestingly, Berry's paper calls to reexamine the prohibition in light of a contemporary conflict against "the other"—the conflicts in Afghanistan and Iraq. I discuss the notion of otherness in more detail in Part IV.D.

123. Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, Jan. 13, 1993, T.I.A.S. No. 97-525, 1974 U.N.T.S. 45.

124. Additional Protocol 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 (Protocol IV, entitled Protocol on Blinding Laser Weapons), Oct. 13, 1995, T.I.A.S. No. 09-721.2, 1380 U.N.T.S. 370 [hereinafter Protocol IV].

125. Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices as amended on 3 May 1996 (Protocol II, as amended on 3 May 1996) art. 7, May 3, 1996, S. TREATY DOC. NO. 105-1A, 2048 U.N.T.S. 93.

126. Rain Liivoja & Luke Chircop, *Are Enhanced Warfighters Weapons, Means, or Methods of Warfare?*, 94 INT'L L. STUD. 161 (2018).

127. *Id.* at 166-72; Liivoja, *supra* note 23, at 10; Dinniss & Kleffner, *supra* note 1, at 438.

128. Liivoja, *supra* note 23, at 10; Dinniss, *supra* note 25, at 240.

i. The general prohibition

The second question, which focuses on the use of weapons, means, and methods against enhanced soldiers, lies at the heart of this Article. Dinniss and Kleffner briefly discuss this question and suggest that some weapons might be considered lawful if those weapons are specifically designed to counter enhanced soldiers, even if their use against regular soldiers would be considered unlawful.¹²⁹ They differentiate in this regard between effects-based and design-based approaches to the prohibition on unnecessary suffering and superfluous injury, and suggest that such weapons could be legal under the latter but not the former.¹³⁰ According to this argument, the intended design does not consider potential undesirable effects, such as the use of these weapons against unenhanced soldiers. Dinniss and Kleffner endorse an approach that takes into account “the intended design and normal effects of the weapon,”¹³¹ which seems to be a more accurate articulation of the design-based approach.¹³²

By contrast, I argue that the relevant prohibitions should apply similarly to enhanced and unenhanced soldiers under all approaches. This position is mainly based on the potential adverse effect of the alternative approach on unenhanced soldiers as well as the effect on enhanced soldiers with enhancements not related to the ability to resist pain. While Dinniss and Kleffner accept the possibility of a weapon that is designed to be used solely against enhanced soldiers, the general purpose and intended design of a weapon is a matter of interpretation. There is no other example in the context of weapons where the design or general purpose of a weapon was recognized as targeting specific members of the armed forces. An interpretation of the intended design, general purpose, and normal effect of a weapon should consider what is feasible during combat under the current laws of armed conflict.

For example, William Boothby alludes to the example of a weapon that is designed to be used as a non-lethal weapon from a certain range to demonstrate the notion of normal use.¹³³ It could be expected that, in most cases, it will be used according to its design. Yet, it is unlikely that weapons that are designed to be used against enhanced soldiers will be able to be limited in their normal use to enhanced soldiers alone. As long as there is no obligation under the law of armed conflict for enhanced soldiers to

129. Dinniss & Kleffner, *supra* note 1, at 440, 442; Dinniss, *supra* note 25, at 240.

130. Dinniss & Kleffner, *supra* note 1, at 442.

131. *Id.*

132. See Parks, *supra* note 120, at 86 n.123 (“The ‘effects-based’ theory looked solely at a potential, generally worst-case, wounding effect rather than the intended (design) or normal effect, that is, if x (the extreme case) can occur at all, however remote the likelihood, x is the basis for determining legality.”).

133. BOOTHBY, *supra* note 108, at 54.

distinguish themselves from unenhanced soldiers, and it is unlikely that such an obligation will be created in the near future,¹³⁴ it seems infeasible to use such weapons while limiting their use to enhanced soldiers only. Under these circumstances, the design of such weapons could not be regarded as solely the targeting of enhanced soldiers, rather than the targeting of soldiers more broadly. This approach is analogous to the discussion on the prohibition of indiscriminate weapons, which focuses on the use of means and methods that cannot be directed at a specific military objective.¹³⁵ In this case, it is the inability of the weapon to be directed at a distinct target (the enhanced soldier) that will allegedly not experience unnecessary suffering from its use that makes the use of the weapon illegal.

In addition, as explained in Part II, not all enhanced soldiers are similar. The argument regarding the prohibition on weapons that cause unnecessary suffering is relevant only to those enhanced soldiers that can endure pain better than regular soldiers and not to other types of enhanced soldiers, such as those with enhanced vision. This strengthens the previous argument on the unrealistic assumption that these weapons will be able to be used only against their intended targets. Finally, even for those soldiers that feel less pain, it is reasonable to assume that such an ability is diverse and differs between soldiers and militaries. In light of the problematic nature and history of unnecessary suffering assessments, as reflected in the SIrUS Project and the informal working group of medical experts, it is doubtful that reviews of such weapons can yield an accurate result to adequately address the varied and dynamic nature of military human enhancement.¹³⁶ Indeed, even now some unenhanced soldiers feel less or more pain than others.

ii. Specific prohibitions

Since, as mentioned, the general customary norm has limited practical implications, a discussion of specific weapons prohibitions might be more significant in the context of enhanced soldiers. The first example of a possible difference in treatment is the prohibition on the use of expanding bullets. According to this argument, if enhanced soldiers do not feel pain or recover more quickly from injuries, it is not prohibited to use expanding bullets, which would otherwise cause unnecessary suffering to unenhanced soldiers, against them. However, while there is a continuous debate over the contemporary scope of application of the prohibition, its status and its

134. For a discussion about the limited prospects of new IHL treaties to regulate new technologies, see *supra* Part II.

135. See API, *supra* note 70, art. 51(4)(b); see also BOOTHBY, *supra* note 108, at 65-69 (discussing the API prohibition).

136. See BOOTHBY, *supra* note 108, at 342-55 (discussing the weapons review process).

justification in relation to all combatants,¹³⁷ there is no explicit exception in the prohibition on expanding bullets regarding enhanced soldiers or any other individuals and groups. Therefore, the discussion of the general customary rule in the previous Section seems sufficient to cover the issue of expanding bullets. It is important to note, in relation to expanding bullets and other similar prohibitions, that separating the suffering from the injury dimension of the prohibition is difficult. While enhanced soldiers might suffer less, it is not clear to what extent the nature of the injuries of enhanced soldiers will be different.

In contrast to expanding bullets, the text of the prohibition in relation to blinding laser weapons could be interpreted as excluding enhanced soldiers. As a result, Dinniss and Kleffner argue that, according to Protocol IV to the Convention on Certain Conventional Weapons (CCW), it is unlikely that the use of blinding laser weapons is prohibited if it targets soldiers with enhanced vision.¹³⁸ This argument is based on Article 1 of the Protocol, which limits application of the Protocol to weapons where their combat function is intended to cause permanent blindness to “unenhanced vision, that is to the naked eye or to the eye with corrective eyesight devices,”¹³⁹ and on Article 3 of the Protocol, which excludes incidental damage as a result of the use of weapons against optical equipment.¹⁴⁰ The position of Dinniss and Kleffner is based exclusively on textual interpretation of the relevant articles and their explicit reference to “unenhanced vision.” A deeper look into Protocol IV, as well as the discussions that preceded its adoption and the main works that interpret the Protocol, leads to a different conclusion.

The text is just a part of the treaty interpretation process, which also includes, *inter alia*, consideration of the purpose of the relevant treaty.¹⁴¹ Protocol IV’s purpose is to prevent permanent blindness, which is a “severe life-long incapacitation,”¹⁴² and might have “long-term social and economic effects [from] increased numbers of permanently blinded veterans.”¹⁴³ This

137. *See, e.g.*, Coupland & Loye, *supra* note 114; Berry, *supra* note 122; BOOTHBY, *supra* note 108, at 142-44; Parks, *supra* note 120, at 89-90.

138. Dinniss & Kleffner, *supra* note 1, at 442-43.

139. Protocol IV, *supra* note 124, art. 1.

140. *Id.* art. 3.

141. Vienna Convention on the Law of Treaties art. 31-32, May 23, 1969, 1155 U.N.T.S. 331. For a discussion of the application of the treaty interpretation rules, see RICHARD K. GARDINER, *TREATY INTERPRETATION* (2015).

142. BOOTHBY, *supra* note 108, at 202–04. *But see* W. Hays Parks, *Memorandum of Law: Travaux Préparatoires and Legal Analysis of Blinding Laser Weapons Protocol*, 1997 *ARMY LAW*. 33-34 (suggesting that the longstanding United States position is that laser weapons do not violate the general prohibition on the use of weapons that cause unnecessarily suffering). However, even Parks acknowledges that the purpose of the protocol is “to prevent systematic, intentional blinding of combatants.” *Id.* at 36.

143. Burrus M. Carnahan & Marjorie Robertson, *The Protocol on “Blinding Laser Weapons”: A New Direction for International Humanitarian Law*, 90 *AM. J. INT’L L.* 484, 486 (1996); *see also* Louise Doswald-

purpose supports an expansive interpretation of the relevant articles to include permanent blindness of enhanced soldiers. Moreover, it is unlikely that the possibility of soldiers with enhanced vision was considered by the drafters, which further supports a limited role for a strict textual reading in this context. While Articles 1 and 3 of the Protocol are extensively discussed in the literature, none of these works discusses the possibility that the relevant Articles were drafted to exclude enhanced vision that is an inseparable part of the soldier's body.¹⁴⁴ To the contrary, the main approaches in the literature seem to support the opposite conclusion. For example, Boothby suggests that "if it can be shown that the weapon will necessarily cause blindness when used in the circumstances for which it was procured, it may be difficult to show that it was not designed for that purpose."¹⁴⁵ This differentiates between weapons that are applied with a legitimate aim and those which necessarily cause blindness in their regular use. This is further supported by the emphasis on the exclusion of laser weapons that "would not normally involve injury to eyesight."¹⁴⁶ Specifically, target marking lasers and range finding lasers were meant to be excluded.¹⁴⁷

Indeed, Article 1 explicitly refers to "unenhanced vision"—a term included in order to exclude laser weapons that are used against optical devices.¹⁴⁸ However, it was also intended to prohibit laser weapons that are dual use—countering optical devices and causing permanent blindness—which seems to be the main issue regarding weapons that are used against enhanced soldiers due to the inevitability of the injury.¹⁴⁹ Article 3 complements Article 1 and seems to exclude laser weapons used against optical equipment, but it foresees only the use of optical devices rather than the possible reality of soldiers with enhanced vision.¹⁵⁰ This exclusion, as Burrus Carnahan and Marjorie Robertson explain, was the result of insufficient evidence to conclude that such attacks would "increase the incidence of permanent blindness in war."¹⁵¹ The delegates were concerned by cases of the *systematic* use of lasers that cause permanent blindness,¹⁵²

Beck, *New Protocol on Blinding Laser Weapons*, 312 INT'L REV. RED CROSS 272, 277 (1996) (referring also to the broad effects of using blinding laser weapons).

144. See e.g., BOOTHBY, *supra* note 108, at 203-05.

145. *Id.* at 203.

146. *Id.* at 211 (quoting Professor Greenwood).

147. *Id.* at 211; see Carnahan & Robertson, *supra* note 143, at 487; see also Doswald-Beck, *supra* note 143, at 280 (addressing the intent to exclude range finders).

148. Doswald-Beck, *supra* note 143, at 288.

149. See *id.* at 288-89.

150. Parks, *supra* note 142, at 37 (describing the exception as referring to the use of binoculars, telescopes and similar optical devices).

151. Carnahan & Robertson, *supra* note 143, at 489.

152. Parks, *supra* note 142, at 36.

which seem to include systematic use of lasers designed to be used against soldiers with enhanced vision in a way that causes permanent blindness, in contrast to incidental injuries of enhanced soldiers that are similar to injuries of regular or unenhanced soldiers that use optical devices. Finally, concern over the development of blinding laser weapons was developed in relation to the harmful effect of laser weapons when directed against soldiers who used optical devices,¹⁵³ which further suggests that the Protocol was not intended to exclude enhanced soldiers. No evidence demonstrates that enhanced soldiers or differentiated soldiers were considered by delegates. In fact, Louise Doswald-Beck, the main figure behind the ICRC's efforts to ban laser weapons, seems to have supported a position that the exception in Article 3 does not cover cases where laser weapons target optics but inevitably damage the soldiers' vision. As Doswald-Beck explains:

The provision speaks of “incidental or collateral effects” when lasers are used against optical equipment. If the optics concerned are systems which view the battlefield and do not involve the laser passing through them directly into the eyes of the person making use of them, then the use of that laser can be seen as an anti-materiel use and certainly not an anti-personnel use. In this case, incidental blindness might indeed be caused in an individual who happened to be in the path of the beam but was not intentionally targeted. However, if lasers were used against direct optics, such as binoculars, the lasers would have no effect at all on the binoculars but would certainly blind the individual holding them. Such blindness could hardly be called “incidental or collateral” as it would be deliberate and direct. It is submitted, therefore, that according to a normal interpretation of Article 3 the phrase “including laser systems used against optical equipment” could not be used to legitimize the deliberate blinding of persons using binoculars or other direct optics.¹⁵⁴

Therefore, I believe that a better interpretation of the treaty is that the prohibition includes laser weapons that, by design, will inevitably cause permanent blindness to visually enhanced soldiers as part of its intended use. This approach aligns with the previous discussion on the regulation of weapons and the discussion in Part IV.D of the application of the prohibition against torture as well as cruel, inhuman or degrading treatment of enhanced soldiers.

153. Carnahan & Robertson, *supra* note 143, at 484-86.

154. Doswald-Beck, *supra* note 143, at 294.

B. *Proportionality and Enhanced Soldiers*

1. *The Principle of Proportionality in IHL*

It is widely accepted that more weight can be assigned to high-ranking targets than to low-ranking combatants in the proportionality equation.¹⁵⁵ This means that more collateral damage is acceptable when targeting high-ranking officials. This has largely been recognized in relation to the targeting of the leaders and commanders of non-state armed groups, like Hamas or ISIS,¹⁵⁶ but has also been recognized more broadly in relation to high-ranking military commanders.¹⁵⁷ This is because, under the proportionality equation, there is good reason to believe that killing a commander will lead to more concrete and direct military advantage than the targeting of low-ranking soldiers. By contrast, the value of low-ranking soldiers within traditional proportionality assessments do not appear to be as significant.¹⁵⁸ One area where weight is assigned to low-ranking soldiers is the notion of “force protection” as proponents of the approach argue that the attacking force can assign weight to its own soldiers’ lives in the proportionality analysis.¹⁵⁹ Notably, minimal attention is afforded to potential intermediate positions between low-ranking and high-ranking soldiers.¹⁶⁰

2. *Applying the Principle of Proportionality to Enhanced Soldiers*

On the one hand, it seems that the proportionality assessment recognizes the relevance of the target value in relation to the concrete and direct military advantage part of the proportionality test. Therefore, it might be possible to assign more weight to enhanced soldiers as long as their contribution to the military effort is greater than regular soldiers. Targeting

155. See, e.g., ICRC Proportionality, *supra* note 78, at 21.

156. See Gregory S. McNeal, *Targeted Killing and Accountability*, 102 GEO. L.J. 681, 750 (2014). See generally Valerie Epps, *Civilian Casualties in Modern Warfare: The Death of the Collateral Damage Rule*, 41 GA. J. INT’L & COMPAR. L. 307, 340-41 (2013) (accepting the higher value of leaders but acknowledges the difficulty of exact calculation of the legitimate collateral damage); Gary Solis, *Targeted Killing and the Law of Armed Conflict*, 60 NAVAL WAR COLL. REV. 127, 141 (2007) (addressing also both the higher value of leaders and the challenges of accurate calculation).

157. See ICRC Proportionality, *supra* note 78, at 21; Rogier Bartels, *Discrepancies Between International Humanitarian Law on the Battlefield and in the Courtroom: The Challenge of Applying International Humanitarian Law During International Criminal Trials*, in ARMED CONFLICT AND INTERNATIONAL LAW IN THE SEARCH OF HUMAN FACE 339, 348 (Mariëlle Matthee et al. eds., 2013); Michael N. Schmitt, *Unmanned Combat Aircraft Systems and International Humanitarian Law: Simplifying the Oft Benighted Debate*, 30 B.U. INT’L L.J. 595, 616 (2012).

158. See ICRC Proportionality, *supra* note 78, at 21; Schmitt, *supra* note 157, at 616.

159. See, e.g., Ziv Bohrer & Mark Osiel, *Proportionality in Military Force at War’s Multiple Levels: Averting Civilian Casualties vs. Safeguarding Soldiers*, 46 VAND. J. TRANSNAT’L L. 747 (2013); Robin Geiss, *The Principle of Proportionality: Force Protection as a Military Advantage*, 45 ISR. L. REV. 71 (2012).

160. However, there is a limited discussion in the ICRC experts meeting of a potential difference in the value of different commanders. See ICRC Proportionality, *supra* note 78, at 21.

them will create a more concrete and direct military advantage. In addition, the enhancement's cost as a weapons system could potentially add to the proportionality equation. However, even under such an approach, several issues limit the value that is assigned to such soldiers. First, the value of enhanced soldiers depends on their military value, which relies to a large extent on the specific context. For example, a situation where many enhanced soldiers are on one or both sides of the conflict and each one of them could be replaced rather easily is different than a situation where enhanced soldiers are extremely rare and expensive.¹⁶¹ Second, different types of enhancement have different levels of military advantage. Some types of enhancement that do not entail significant military advantage, such as some prosthetic enhancement that moderately increases the soldiers' strength, might not allow a different calculation even under an approach that would support a different calculation in other cases. By contrast, some forms of cybernetic enhancement that significantly increase the capabilities of the military might be easily assigned more weight.

More significantly, there are strong reasons not to assign more weight to enhanced soldiers within proportionality calculations. Most of the discussion regarding the different value of individuals focuses on targeted killings and high-ranking commanders and leaders; minimal attention is given to intermediate categories. This approach, which focuses on specific, high-value targets could be justified when the inherent problems with proportionality assessment are considered. Unlike many other IHL rules, the application of the principle of proportionality is vague and leaves much room for the subjective assessment of different actors. This stems mainly from the difficulty in providing an accurate formula that could objectively compare between the damage to civilians and civilian objects and the military advantage.¹⁶² The complicated nature of proportionality assessments resembles the skepticism regarding the effectiveness of the general customary prohibition on weapons that cause unnecessary suffering.

Taking into account these inherent problems, some could argue that giving wider discretion to states in the assessment of the military value of individual soldiers will significantly increase the difficulty of assessing proportionality and will open the door for potential abuse of the legal principle. While targeted killings of specific, high-ranking commanders are generally accepted as contributing more to the military advantage side of the

161. *But see id.* (discussing the replaceability of the commander as a factor in the proportionality assessment).

162. On the challenges of applying the principle of proportionality, see, e.g., EMANUELA-CHIARA GILLARD, PROPORTIONALITY IN THE CONDUCT OF HOSTILITIES: THE INCIDENTAL HARM SIDE OF THE ASSESSMENT 5 (2018); FRITS KALSHOVEN & LIESBETH ZEGVELD, CONSTRAINTS ON THE WAGING OF WAR: AN INTRODUCTION TO INTERNATIONAL HUMANITARIAN LAW 46 (2001); ICRC Proportionality, *supra* note 78, at 8; Jason D. Wright, 'Excessive' Ambiguity: Analyzing and Refining the Proportionality Standard, 94 INT'L REV. RED CROSS 819 (2012).

equation, it is much more problematic to apply this approach to all individual soldiers who hold a wide range of military roles. For example, it seems extremely difficult to assess the difference between a sniper, a scout, and a sergeant in relation to the acceptable collateral damage from targeting one of these soldiers. In addition, it is unclear how to accurately differentiate between enhanced and unenhanced soldiers and between different types of enhanced soldiers. It is unlikely that states will have an incentive to distinguish between these types of soldiers if there is no legal obligation, especially if it will have adverse legal implications on the ability to target these soldiers. In a situation of significant uncertainty regarding the role and capabilities of specific soldiers, a legal rule that allows differentiation between enhanced and unenhanced soldiers potentially gives rise to concern regarding its adverse effects, which outweighs the potential benefit of allowing the differentiation.

In contrast to other sections in this Article, I do not offer a conclusive position on applying the principle of proportionality to enhanced soldiers. In part, this is because the positive law here is vaguer than the other areas that are discussed in the paper, most importantly regarding the level of specificity of the military advantage assessment in the targeting of individual soldiers. I tend to believe that due to the significant danger of abuse of the proportionality assessment, with the exclusion of high-ranking commanders, soldiers, including enhanced soldiers, should be given similar value in the proportionality assessment. However, in some circumstances, such as the creation of distinct units of enhanced soldiers that offer significant military advantage, assigning more weight to their targeting would be legitimate. It is yet to be seen how enhanced soldiers will be deployed in combat. In any case, it is highly important to address the potential adverse effect of allowing some differentiation.

C. Treatment of Prisoners of War and other Detainees

1. Equality and the Treatment of Prisoners of War

The treatment of prisoners of war raises questions about the need to differentiate between individuals and groups based on their needs and capabilities. The Third Geneva Convention (GCIII) establishes a detailed regime for the treatment and protection of POWs.¹⁶³ As mentioned in Part III of this Article, women and children are recognized in international

163. *See* Geneva Convention Relative to the Treatment of Prisoners of War, Aug. 12, 1949, 6 U.S.T. 3316, 75 U.N.T.S. 135 [hereinafter GCIII]. Here, I focus on enhanced soldiers as POWs rather than the broader category of detained individuals. A broader discussion that takes into account the detention of enhanced civilians or the detention of enhanced soldiers in non-international armed conflicts will not significantly change the discussion.

humanitarian law as groups that enjoy special protection. In the context of GCIII, specific rules address the needs of women POWs. For example, Article 25 of GCIII requires separate dormitories for men and women.¹⁶⁴ GCIII also recognizes the need to provide adequate treatment for POWs with special medical needs.¹⁶⁵ In addition, GCIII is unique in considering the importance of a soldier's rank for the treatment of soldiers.¹⁶⁶ Finally, Article 16 of GCIII presents a general approach to equality in the treaty and recognizes explicitly the ability to differentiate between POWs in line with the rules that address "rank and sex" as well as privileged treatment based on "state of health, age or professional qualifications."¹⁶⁷

Recently, the ICRC published a new commentary on the third Geneva Convention. In the new commentary, the ICRC further developed the subjective application of the treatment of different vulnerabilities. While Article 16 of the previous commentary, from 1960, acknowledges that different treatment is not incompatible with the prohibition on discrimination when based on relevant factors,¹⁶⁸ the 2020 commentary takes another step forward and explicitly refers to substantive equality as informing the treatment of POWs.¹⁶⁹ Such an explicit reference to substantive equality is in line with increasing calls for the introduction of more substantive equality, as described in Part II. The commentary continues to describe developments in understanding the needs of different groups that were not sufficiently addressed in the text of the treaty and the 1960 commentary. For example, it emphasizes the need for adequate educational and recreational activities and facilities for children, women and people with disabilities under Article 38 GCIII.¹⁷⁰

The preceding discussion demonstrates how POWs enjoy a one-directional subjective approach to their treatment that recognizes the need to address special vulnerabilities and improve conditions but does not treat prisoners with superior capabilities more harshly. This follows the previously mentioned tendency of substantive equality to focus on improving the situation of specific groups rather than decreasing the conditions for stronger individuals and groups. The most notable exception to the focus on those with special needs or vulnerabilities is differential

164. *Id.* art. 25.

165. *Id.* art. 30.

166. *Id.* art. 43-45.

167. *Id.* art. 16.

168. 1960 Commentary, *supra* note 117. The 1960 Commentary contains a list of about twenty articles in GCIII that contain differentiation in treatment.

169. INT'L COMM. OF THE RED CROSS, COMMENTARY ON THE CONVENTION (III) RELATIVE TO THE TREATMENT OF PRISONERS OF WAR, GENEVA 12 AUGUST 1949 ¶¶ 1740-43 (2020), <https://tinyurl.com/yy7fnq7l> [hereinafter 2020 Commentary].

170. *Id.* ¶¶ 1755, 2471.

treatment based on rank.¹⁷¹ In this case, those with a position of power receive more favorable treatment in comparison to less powerful soldiers. Nonetheless, it should be seen as an exception influenced by two particular factors that do not necessarily apply to the broader discussion of equal treatment. First, it is based on a long historical tradition unrelated to the notion of equality but rather to notions of honor and the historic economical value of high-ranking officers.¹⁷² Second, it is based on an assumption of the practical value for both sides in a conflict maintaining the hierarchical military order in the POW camps.¹⁷³ In any case, GCIII grants more favorable treatment, above the baseline requirement, to officers rather than allowing harsher treatment of low-ranking soldiers. As generally explained in the 2020 commentary on Article 16, “the term ‘privileged’ makes clear that such distinctions may only be beneficial to that person. Privileged treatment of some prisoners may never serve as an excuse for the Detaining Power to treat other prisoners below the standards required by the Convention.”¹⁷⁴

2. *Treatment of POWs and Enhanced Soldiers*

The main issues regarding the application of GCIII to enhanced soldiers relate to the potential obligation to address their unique medical needs, both in terms of the treatment in the camp and the possible obligation of early repatriation if their special needs cannot be addressed in the camp.¹⁷⁵ While debate continues regarding the proper application of the relevant norms to enhanced soldiers, there is a general agreement on addressing their special needs.¹⁷⁶ For example, consider enhanced soldiers that need constant care of their enhancement to maintain proper function. This follows the notion of one-directional substantive equality featured within the 2020 commentary as it privileges enhanced soldiers rather than exposes them to adverse treatment.

In contrast to the issue of privileged treatment of enhanced soldiers, this Article is concerned with efforts to differentiate between enhanced and

171. Other exceptions are physicians, religious ministers, and, more generally, those with professional qualifications. See GCIII, *supra* note 163, art. 33, 35; 2020 Commentary, *supra* note 169, ¶¶ 1756-58. However, as explained in relation to rank, it does not seem to affect the general tendency or, more importantly, the direction of differential in treatment in its focus on privileged treatment of those groups rather than adverse treatment of other groups.

172. 2020 Commentary, *supra* note 169, ¶¶ 2559, 2582. See generally Sibylle Scheipers, *Introduction, in PRISONERS IN WAR 1-16* (Sibylle Scheipers ed., 2010) (describing the history of prisoners of war, including the different treatment of high-ranking officers).

173. 2020 Commentary, *supra* note 169, ¶ 2588.

174. *Id.* ¶ 1751.

175. GCIII, *supra* note 163, art. 15 (regarding medical attention), art. 109(1) (addressing the early repatriation of seriously wounded or sick soldiers).

176. See, e.g., Dinniss & Kleffner, *supra* note 1, at 451-52; Liivoja, *supra* note 52.

unenanced soldiers in ways that allow or justify the harsher treatment of the former. For POWs, such harsher treatment is mostly relevant to the general protections of POWs including the prohibition against torture,¹⁷⁷ and the obligations to treat POWs humanely,¹⁷⁸ and to show respect for their persons and their honor.¹⁷⁹ These obligations raise challenging questions regarding their application to enhanced soldiers, which are discussed in detail in the next Section, focusing on the general prohibition in international law against torture and cruel, inhuman or degrading treatment.

D. The Prohibition against Torture and Cruel, Inhuman or Degrading Treatment

1. The Subjective Application of the Prohibition against Torture and Cruel, Inhuman or Degrading Treatment

The prohibition on the use of torture as well as cruel, inhuman and degrading treatment appears in various areas of international law including IHL, IHRL and international criminal law (ICL). The definition of torture and cruel, inhuman or degrading treatment has been discussed by various bodies and is the subject of a vast literature.¹⁸⁰ General discussion of all the elements that define torture or the distinction between torture and cruel, inhuman or degrading treatment is outside the scope of this Article.¹⁸¹ For

177. GCIII, *supra* note 163, art. 17(4), 130.

178. *Id.* art 13.

179. *Id.* art. 14.

180. Every element of the definition of torture has been the subject of extensive discussion. *See, e.g.*, Michael W. Lewis, *A Dark Descent into Reality: Making the Case for an Objective Definition of Torture*, 67 WASH. & LEE L. REV. 77 (2010); Julianne Harper, *Defining Torture: Bridging the Gap Between Rhetoric and Reality*, 49 SANTA CLARA L. REV. 893 (2009); Paola Gaeta, *When is the Involvement of State Officials a Requirement for the Crime of Torture?*, 6 J. INT'L CRIM. JUST. 183 (2008); Manfred Nowak, *What Practices Constitute Torture?: US and UN Standards*, 28 HUM. RTS. Q. 809 (2006); Jeremy Waldron, *Torture and Positive Law: Jurisprudence for the White House*, COLUM. L. REV. 1681 (2005); Nigel S. Rodley, *The Definition(s) of Torture in International Law*, 55 CURRENT LEGAL PROBS. 467 (2002).

181. While the focus of the analysis in this Article is the “pain and suffering,” it is possible that the requirement of “special intent,” relevant to some versions of the prohibition against torture in international law, could be raised in the context of enhanced soldiers. I will briefly address the issue in this footnote. As Hathaway, Nowlan and Spiegel demonstrate, the requirement to prove special intent has rarely been addressed as an independent question. *See* Oona A. Hathaway, Aileen Nowlan & Julia Spiegel, *Tortured Reasoning: The Intent to Torture Under International and Domestic Law*, 52 VA. J. INT'L L. 791 (2012). In almost all of the cases where intent was discussed by various human rights bodies and international tribunals, it was sufficient to establish that the relevant acts were “committed by or with the acquiescence of public officials” to establish the sufficient intent of torture. *Id.* at 827. This also applies to cases in which the conduct resembles acts discussed here, such as sleep deprivation. *Id.* This strengthens the position that the focal point of the discussion is the element of “pain and suffering” for determining whether an act constitute torture in the case of enhanced soldiers. It also follows the same logic of the main arguments regarding the danger of abuse. Moreover, it opens the door for arguments regarding the subjective assessment from the perpetrator’s perspective of the impact of their actions on the person that was subjected to the investigative measures, which will create another, significant, barrier for accountability. Another aspect of the element of intent is that the Convention

instance, the infamous “Torture Memos” invoked voluminous literature on torture that I do not aim to significantly engage with in this piece.¹⁸² The focus of this Article is the severity of the pain and suffering element of torture and cruel, inhuman or degrading treatment rather than other elements of torture that are less relevant for the potential different application of the rules to enhanced soldiers, such as the identity of perpetrators or their intent.¹⁸³ Specifically, this Article discusses the role of subjective individual criteria in the assessment of pain and suffering. Nonetheless, the one-directional approach to the subjective element of the pain and suffering element that I promote in this piece has significant implications beyond the narrow question on the application of the prohibition to enhanced soldiers.

The Convention Against Torture (CAT) defines torture as acts that cause “severe pain or suffering, whether physical or mental.”¹⁸⁴ The Rome Statute of the International Criminal Court (ICC) adopted a similar definition and added a prohibition against other acts that cause “great suffering, or serious injury to body or to mental or physical health.”¹⁸⁵ The convention does not specify whether “severe pain or suffering” should be objectively or subjectively determined. Other treaties that address torture, such as the ICCPR, the European Convention on Human Rights (ECHR) and the Geneva Conventions do not define the acts that constitute torture or cruel, inhumane and degrading treatment, except for reference to non-consensual medical or scientific experiments.¹⁸⁶

As previously mentioned, this Section focuses on instances where the subjective definition of torture under international law was discussed.¹⁸⁷

against Torture explicitly refers to the intention of discrimination of any kind as fulfilling the intent requirement. In our case, it might be relevant to cases in which the attitude towards enhanced soldiers is influenced by their identity; however, in most cases it seems that the main intent will be the result of the purpose to obtain information, which is the most common intent in the context of torture. *See* Convention Against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment art. 1, Dec. 10, 1984, T.I.A.S. No. 94-1120.1, 1465 U.N.T.S. 85 [hereinafter CAT].

182. *See, e.g.*, DAVID LUBAN, TORTURE, POWER, AND LAW (2014); Michael P. Scharf, *The Torture Lawyers*, 20 DUKE J. COMPAR. & INT’L L. 389 (2009).

183. It should be noted that at least one version of the definition of torture explicitly recognizes torture even in some cases that do not involve physical or mental pain. *See* Organization of American States, Inter-American Convention to Prevent and Punish Torture art. 2, Dec. 9, 1985, O.A.S.T.S. No. 67 (“Torture shall also be understood to be the use of methods upon a person intended to obliterate the personality of the victim or to diminish his physical or mental capacities, even if they do not cause physical pain or mental anguish.”).

184. CAT, *supra* note 181, art. 1.

185. Rome Statute, *supra* note 50, art. 7(2)(e), 7(1)(k).

186. ICCPR, *supra* note 85, art. 7; Convention for the Protection of Human Rights and Fundamental Freedoms art. 3, Nov. 4, 1950, 213 U.N.T.S. 221, E.T.S. No. 005; GCIII, *supra* note 163, art. 130.

187. *See, e.g.*, Fionnuala Ní Aoláin, *The European Convention on Human Rights and Its Prohibition on Torture*, in TORTURE: A COLLECTION 213 (Sanford Levinson ed., 2004); Michelle Farrell, *Just How Ill-treated Were You? An Investigation of Cross-fertilization in the Interpretative Approaches to Torture at the European*

Several international tribunals and treaty bodies, as well as scholars, have taken the position that the “severe pain or suffering” element should be understood subjectively to consider the experience and circumstances of the person subjected to such treatment.¹⁸⁸ For example, in General Comment 20 on the prohibition of torture, or other cruel, inhuman or degrading treatment or punishment, the HRC states that “article 7 protects, in particular, children, pupils and patients in teaching and medical institutions.”¹⁸⁹ In *Brdanin*, the International Criminal Tribunal for the Former Yugoslavia (ICTY) reaffirmed the position that in the assessment of torture subjective criteria, “the physical or mental condition of the victim, the effect of the treatment and, in some cases, factors such as the victim’s age, sex, state of health and position of inferiority” should be taken into account.¹⁹⁰ Similarly, in the *Selmouni* case, the ECtHR stated that “severity” is a relative term, which is dependent on “all the circumstances of the case, such as the duration of the treatment, its physical or mental effects and, in some cases, the sex, age and state of health of the victim, etc.”¹⁹¹ This position represents the long standing approach of the ECtHR since its controversial *Ireland v. United Kingdom* decision.¹⁹² To demonstrate the application of the subjective assessment, in *Soering v. United Kingdom*, the ECtHR considered the age and mental state of the applicant in deciding that extradition to face the death penalty violates Article 3 of the ECHR.¹⁹³ Finally, in *Vuolanne v. Finland*, the HRC used similar language, stating that:

[T]he assessment of what constitutes inhuman or degrading treatment falling within the meaning of Article 7 depends on all the circumstances of the case, such as the duration and manner of the treatment, its physical or mental effects as well as the sex, age and state of health of the victim.¹⁹⁴

Court of Human Rights and in International Criminal Law, 84 NORDIC J. INT’L L. 482 (2015); Alice Edwards, *The ‘Feminizing’ of Torture under International Human Rights Law*, 19 LEIDEN J. INT’L L. 349, 366-67 (2006); Christoph Burchard, *Torture in the Jurisprudence of the Ad Hoc Tribunals — A Critical Assessment*, 6 J. INT’L CRIM. J. 159 (2006); Anthony Cullen, *Defining Torture in International Law: A Critique of the Concept Employed by the European Court of Human Rights*, 34 CAL. W. INT’L L. J. 29 (2003).

188. See, e.g., Cullen, *supra* note 187, at 33.

189. Human Rights Comm., CCPR General Comment No. 20: Article 7 (Prohibition of Torture, or Other Cruel, Inhuman and Degrading Treatment or Punishment), U.N. Doc. HRI/GEN/1/Rev.9 (Vol. I), ¶ 5 (Mar. 10, 1992).

190. Prosecutor v. Brđanin, Case No. IT-99-36-A, Judgement, ¶¶ 242, 252 (Int’l Crim. Trib. for the Former Yugoslavia Apr. 3, 2007).

191. *Selmouni v. France*, App. No. 25803/94, ¶ 100 (July 28, 1999).

192. *Ireland v. United Kingdom*, 23 Eur. Ct. H.R. (ser. B) (1978).

193. *Soering v. United Kingdom*, 161 Eur. Ct. H.R. (ser. A) ¶¶ 108-09 (1989).

194. Human Rights Comm., Decision on Communication No. 265/1987 (*Vuolanne v. Finland*), U.N. Doc. No. CCPR/C/35/D/265/1987, ¶ 9.2 (May 2, 1989).

The new ICRC commentaries on the Geneva Conventions recognize a similar subjective approach to torture and inhuman treatment. The commentary on common Article 3 states, in relation to cruel treatment, that “in order to assess the seriousness of the suffering, the individual circumstances of each case have to be considered, both the objective elements related to the severity of the harm and the subjective elements related to the condition of the victim.”¹⁹⁵ A more elaborate position is given in the commentary on the definition of torture in common Article 3 and includes many subjective factors, such as the “physical or mental condition of the victim, cultural beliefs and sensitivity, gender, age, social, cultural, religious or political background, or past experiences.”¹⁹⁶ Finally, in its discussion of the obligation to provide POWs with humane treatment, the commentary stresses that “the type of treatment required is context specific and dependent on a wide range of factors, including the prisoner’s cultural, social or religious background, gender and age.”¹⁹⁷

Thus, it seems that the current dominant position considers subjective factors in assessing the severity element of torture as well as cruel, inhuman or degrading treatment.¹⁹⁸ Ostensibly, the differences between individuals and groups should be considered. Acts that are severe enough to be considered torture or cruel, inhuman or degrading treatment of regular people will not necessarily be the same for enhanced soldiers. However, when examining the literature and the actual application of this approach in court decisions, it is clear that the subjective approach focuses almost exclusively on widening rather than limiting the scope of the prohibition.¹⁹⁹ For example, the unique abilities of an individual to endure pain or to demonstrate unique strength are not usually arguments for limiting the scope of the prohibition on torture and cruel, inhuman or degrading treatment. As explained in the next part, this difference should be explicitly acknowledged as there are strong justifications for maintaining a one-directional application of the subjective assessment.

195. 2020 Commentary, *supra* note 169, ¶ 655.

196. *Id.* ¶ 670.

197. *Id.* ¶ 1573.

198. There could be competing approaches regarding the level of subjective analysis. For example, it could be argued that it is justified to focus on the subjective assessment of groups (e.g. women) rather than individuals. *See, e.g.,* Valiulienė v. Lithuania, App. No. 33234/07 (Mar. 26, 2013) (concurring opinion of Judge Pinto de Albuquerque); Natalie R. Davidson, *The Feminist Expansion of the Prohibition of Torture: Towards a Post-Liberal International Human Rights Law?*, 52 CORNELL INT’L L.J. 109, 127-28 (2019).

199. Cullen, *supra* note 187 (referring to subjective assessment as a tool that widens the scope of the prohibition).

2. *The Case for a One-Directional Subjective Assessment of the Prohibition against Torture and Cruel, Inhuman or Degrading Treatment for Enhanced Soldiers*

One aspect of torture, and, more broadly, the right to bodily integrity, that is relevant to the development of enhanced soldiers—but outside the scope of this Article—is the prohibition of medical experiments, specifically, the requirement for consent.²⁰⁰ Here, instead I focus on the acceptable and unacceptable coercive interrogation techniques that could be used on enhanced soldiers. Dinniss and Kleffner briefly discuss the application of the prohibition against torture and ill treatment torture to enhanced soldiers.²⁰¹ They specifically address the question of sleep deprivation, a practice that was widely recognized to constitute inhuman and degrading treatment (at a minimum). Dinniss and Kleffner acknowledge subjective elements, referring to two ECtHR cases that were discussed previously—*Ireland v. United Kingdom* and *Soering v. United Kingdom*.²⁰² They suggest that reliance on subjective criteria might lead to the conclusion that sleep deprivation does not constitute torture if the enhancement allows the soldiers to stay awake for a long time without significant adverse effects. Dinniss offers a more nuanced approach later, suggesting that the risk of insufficient knowledge regarding parameters of the enhancement by the relevant state might lead to an assumption that the soldiers are more resilient than is in fact the case.²⁰³ The example of sleep deprivation could be expanded to many different types of enhanced soldiers, and especially to the soldiers' ability to endure pain, which is often mentioned in the literature as one of the paths of military enhancement.²⁰⁴

This approach to the subjective element of pain and suffering does not apply a one-directional subjective approach to the different capabilities or situations of the enhanced soldiers in question. It equally considers the strengths and weaknesses of the person subject to coercive interrogation. A strong case can be made in favor of the adoption of such an approach. If a person feels much less pain, or needs to sleep significantly less than other people, then it seems intuitive that these measures should not be considered as grave as they are perceived when used against people who suffer much more.

200. Dinniss & Kleffner, *supra* note 1, at 459-61; Parasidis, *supra* note 43; Daniele Ruggiu, *Implementing a Responsible, Research and Innovation Framework for Human Enhancement According to Human Rights: The Right to Bodily Integrity and the Rise of 'Enhanced Societies'*, 10 LAW, INNOVATION & TECH. 82 (2018).

201. Dinniss & Kleffner, *supra* note 1, at 462-63.

202. *Ireland v. United Kingdom*, 23 Eur. Ct. H.R. (ser. B) (1978); *Soering v. United Kingdom*, 161 Eur. Ct. H.R. (ser. A) ¶¶ 108-09 (1989).

203. Dinniss, *supra* note 25, at 249.

204. See, e.g., Janet Kourany, *Human Enhancement: Making the Debate More Productive*, 79 ERKENNTNIS 981, 993 (2014); Parasidis, *supra* note 43, at 1129; Catherine L. Annas & George J. Annas, *Enhancing the Fighting Force: Medical Research on American Enhancing the Fighting Force: Medical Research on American Soldiers*, 25 J. CONTEMP. HEALTH L. & POL'Y 283, 286 (2009).

However, as mentioned, application of the subjective analysis is usually one directional. It helps to expand the protection of the prohibition rather than limiting its scope. This also aligns with the general approach to the treatment of detainees and, more generally, to the application of substantive equality in international law. As explained in detail in the rest of this Section, a one-directional approach is justified in applying the prohibition against torture in the context of enhanced soldiers, and more broadly in relation to the prohibition against torture and the treatment of detainees. This is mostly based on second-order arguments that take into account the implications of an approach that allows harsher treatment of individuals with better capabilities than the average person.

The second-order arguments discussed in this Part resemble some of the arguments used in relation to the prohibition against torture and the “ticking bomb” scenario.²⁰⁵ The controversial “ticking bomb” scenario imagines a situation where torture is the only option to alleviate a great deal of suffering—e.g., a ticking bomb is about to explode in a crowded area, and it is only possible to locate the bomb and neutralize it through the immediate use of torture. The “ticking bomb” scenario is used to challenge the absolute ban of torture; yet clear differences exist between the discussion here and the “ticking bomb” scenario. On the one hand, the “ticking bomb” scenario often assumes that the torture in question will be more detrimental to the individual than the cases that are the focus of this Article, those in which the individual suffers less than a typical case of torture. On the other hand, the “ticking bomb” scenario assumes a significant and immediate risk that will usually be greater than the typical interrogations of enhanced soldiers that are discussed in this Article. Still, as I try to demonstrate in the following discussion, some of the arguments used in the “ticking bomb” debate are relevant to the question of the means used while interrogating enhanced soldiers. Similar to the “ticking bomb” debate, the danger of false positives, the expressive effect of allowing coercive interrogation and the danger of a slippery slope, weighs heavily against allowing harsher treatment of enhanced soldiers.

Much of the debate over torture and the “ticking bomb” scenario takes place around the notorious Jay Bybee “Torture Memos” and the U.S. interrogation practices under the Bush administration.²⁰⁶ As mentioned, I do not intend to discuss this debate in depth or to offer my own approach. Similarly, I will not explore all the possible arguments regarding the “ticking

205. Here, I mainly refer to the discussion of torture in the legal literature rather than the vast philosophical discussion of torture. For an example of philosophical inquiries of the issue, see, e.g., Henry Shue, *Torture in Dreamland: Disposing of the Ticking Bomb*, 37 CASE W. RESERVE J. INT'L L. 231 (2006).

206. See sources cited *supra* note 182.

bomb” scenario including, for example, arguments that question the existence of “real ticking bomb” situations, or deontological positions in favor of an absolute prohibition of torture even in “ticking bomb” scenarios.²⁰⁷ Instead, I focus on second-order arguments to support the prohibition of torture even while accepting the possibility of a “ticking bomb” scenario.²⁰⁸ Such arguments are even more important in this case. The “ticking bomb” scenario is often called the “notorious” or “infamous” “ticking bomb” scenario²⁰⁹ because it is associated with the licensing of horrible acts. Even in a pure “ticking bomb” scenario, the act of torture seems extremely problematic. However, as mentioned, the infliction of some levels of pain on enhanced soldiers that feel much less pain is not as intuitively wrong as a paradigmatic act of torture. Therefore, the following second-order arguments are crucial to demonstrate that enhanced soldiers should be treated equally.

The following sections apply second-order arguments that were used in the context of the “ticking bomb” scenario to support an absolute legal ban on torture and demonstrate that the same logic applies to enhanced soldiers.²¹⁰ Specifically, they employ the main arguments raised in the much-quoted article on the subject by Oren Gross. The discussion emphasizes several unique issues that are relevant to the different treatment of enhanced soldiers. Gross offers six pragmatic arguments that support an absolute prohibition on torture.²¹¹ Following Eric Posner and Adrian Vermeule, I divide these arguments into three groups.²¹²

i. False Positives

The first, which Gross calls “setting general policy, accommodating exceptional cases,” addresses different aspects where the exceptional case might lead to similar behavior in cases where such a behavior is not justified due to insufficient information and mistakes—the danger of false

207. See, e.g., BOB BRECHER, *TORTURE AND THE TICKING BOMB* (2007); Vittorio Bufacchi & Jean Maria Arrigo, *Torture, Terrorism and the State: A Refutation of the Ticking-Bomb Argument*, 23 J. APPLIED PHIL. 355 (2006).

208. See, e.g., Oren Gross, *Are Torture Warrants Warranted? Pragmatic Absolutism and Official Disobedience*, 88 MINN. L. REV. 1481 (2004).

209. See, e.g., Shue, *supra* note 205, at 231; Jeff McMahan, *Torture in Principle and in Practice*, 22 PUB. AFFS. Q. 111, 114 (2008); Christopher Kutz, *Torture, Necessity and Existential Politics*, 95 CALIF. L. REV. 235, 238 (2007).

210. See EYAL ZAMIR & BARAK MEDINA, *LAW, ECONOMICS AND MORALITY* 163 (2010) (describing the centrality of second-order arguments in the context of torture); see also Yuval Shany, *The Prohibition against Torture and Cruel, Inhuman, and Degrading Treatment and Punishment: Can the Absolute Be Relativized under Existing International Law*, 56 CATH. U. L. REV. 837, 844 (2007) (addressing the importance of second-order arguments more broadly in relation to IHL and IHRL).

211. Gross, *supra* note 208.

212. Eric A. Posner & Adrian Vermeule, *Should Coercive Interrogation Be Legal?*, 104 MICH. L. REV. 671 (2005).

positives.²¹³ This is the main argument applied by those who support an absolute ban on torture and it is a central argument for the purposes of this Article as well.²¹⁴ In the “ticking bomb” scenario, there are many areas of potential incomplete or inaccurate information—for example, perhaps the police are mistaken in their assumption that the person knows the location of the bomb, that the interrogational methods will be effective, or that there are no less harmful means to achieve the desired result. Under such circumstances, the danger of false positives is greater than the benefits of the extremely rare genuine “ticking bomb” scenario. A related argument is Gross’s fourth argument, which he calls “the imbalance of balancing.”²¹⁵ This suggests that the complicated task of balancing is extremely difficult in the context of torture when there is a need to balance between the expected damage to the potential victims and the torture of the suspect. In this context, according to the argument, inherent biases are expected to lead to more, rather than less, torture.

The false positives argument also applies in the military human enhancement context. Similar to the “ticking bomb” scenario, several areas of ambiguity can potentially lead to false positives. First, it resembles the previously mentioned argument by Dinniss: the risk that insufficient information regarding the enhancement might lead to an excessive infliction of pain and suffering on enhanced soldiers. More generally, there could be insufficient information or mistakes regarding whether the particular soldier is enhanced, or what types of enhancement the soldier underwent. As Part II demonstrates, there are numerous potential paths of military human enhancement, and different soldiers will likely be enhanced differently. Finally, it is unclear how effective the use of a specific coercive technique is in relation to enhanced soldiers. Moreover, since the argument here also addresses the broader subjective element, the previously mentioned ambiguities are much stronger when it comes to differences between regular or unenhanced soldiers. It is extremely challenging to know exactly the relative resistance to pain of a specific individual without resorting to illegal medical tests, which themselves would constitute inhuman or degrading treatment.

213. Gross, *supra* note 208, at 1501; *see also* Shue, *supra* note 205, at 233. Posner and Vermeule, who are skeptical regarding the facts of the claim, call these arguments “rules and standards.” *See* Posner & Vermeule, *supra* note 212, at 683.

214. *See, e.g.*, Sherry F. Colb, *Why is Torture Different and How Different Is It?*, 30 CARDOZO L. REV. 1411, 1467 (2009); David Luban, *Liberalism, Torture, and the Ticking Bomb*, 91 VA. L. REV. 1425, 1440-45 (2005).

215. Gross, *supra* note 208, at 1507.

ii. *The Expressive Function of Law*

Gross's second argument addresses what he calls "symbolism, myths, and education."²¹⁶ It focuses on the expressive function of the prohibition against torture.²¹⁷ Gross suggests that an absolute ban on torture serves important symbolic goals aimed at strengthening the importance of human rights and condemning the abhorrent act of torture among the population.²¹⁸ Thus, the expressive value of the ban rests in protecting against the erosion of human rights norms. Similarly, Jeremy Waldron describes the rule against torture as an archetype in American law and warns against a "domino effect," an unraveling of surrounding law from tampering with the torture prohibition.²¹⁹ These arguments resemble a specific form of slippery slope argument that focuses on the expressive function of the law. But there is something unique about the expressive function that warrants a separate discussion.²²⁰ The expressive function is also related to Gross's sixth argument, titled "the identity of those subjected to torture." Gross suggests that it is much easier to use torture against the "other" when the intended attacks constitute a risk to the "us" but the price of torture affects the "other."²²¹

The expressive argument and the notion of otherness are strong arguments for equal application of the law to enhanced soldiers. First, it is important to consider the expressive effect of an act that, if committed on the vast majority of people, would be prohibited. Imagine a video, without sound or context, that shows a police officer beating an enhanced person that feels less pain. The viewers are likely to assume that the behavior of the officer is unlawful. It could be argued that beating a person, even if that person does not feel pain, has a broad expressive effect beyond the specific case. It makes the act of beating more legitimate for those who participate in it, while it might negatively affect the reputation of the relevant institutions involved in the example above. Arguments regarding the normative implications of similarities between a prohibited act and the act in question were raised in different contexts. For example, Immanuel Kant stated that, while there are no direct moral duties towards animals, there are

216. *Id.* at 1504; see Posner & Vermeule, *supra* note 212, at 690 (referring to these arguments as "symbolism").

217. See generally Cass R. Sunstein, *On the Expressive Function of Law*, 144 U. PA. L. REV. 2021 (1996); Joel Feinberg, *The Expressive Function of Punishment*, 49 MONIST 397 (1965).

218. Gross, *supra* note 208, at 1504.

219. See Waldron, *supra* note 180, at 1728, 1734.

220. It was also discussed in separate sections by Gross, *supra* note 208, at 1504-05, and Posner & Vermeule, *supra* note 212, at 690-93.

221. Gross, *supra* note 208, at 1509-11.

indirect duties towards animals that prohibit harming them.²²² According to Kant “he who is cruel to animals becomes hard also in his dealings with man.”²²³ This example is a useful analogy to the aforementioned expressive argument regarding the potential effect of using coercive interrogation techniques on enhanced soldiers, although I hold the position that the main justification against harming animals is based on direct obligations towards animals as moral subjects.²²⁴

A second expressive argument particularly relevant to enhanced soldiers, relates to the danger that different treatment will color enhanced soldiers as a group distinct from regular soldiers.²²⁵ This relates to the aforementioned argument by Gross on otherness. Of course, there are many different “others” in the international community,²²⁶ but it is not an exaggeration to suggest that enhanced soldiers have the potential to be a paradigmatic “other,” since even their humanity might be questioned.

This relates to a deep concern reflected in many popular culture representations of human enhancement and other technological developments. For example, consider the society presented in the film *Gattaca*, where there is an enormous tension between the regular humans and the enhanced ones.²²⁷ While *Gattaca* focuses on eugenics, the concerns expressed in the film equally apply to enhancement in general. While popular culture representations usually focus on discrimination against the unenhanced, they also often show resentment towards the enhanced and even involve discussions that question their humanity. For example, in the different versions of X-Men, a constant theme is the tension between humans and mutants, including mutants like Wolverine who is a creation of human enhancement.²²⁸ This includes, inter alia, instances of legal discrimination against mutants.²²⁹

222. Immanuel Kant, *Duties Towards Animals*, in *BIOETHICS: AN ANTHOLOGY* 527, 527 (Helga Kuhse et al. eds., 3d ed. 2016).

223. *Id.*

224. There are many philosophical accounts that treat animals as direct moral subjects. *See, e.g.*, TOM REGAN, *THE CASE FOR ANIMAL RIGHTS* (2004); PETER SINGER, *ANIMAL LIBERATION* (1995).

225. This notion of otherness could also be explored in relation to soldiers more generally when comparing the treatment of soldiers with protected groups under the laws of armed conflict and its potential implications. For a thought-provoking piece on the value of soldiers’ lives, see Gabriella Blum, *The Dispensable Lives of Soldiers*, 2 J. LEGAL ANALYSIS 69 (2010).

226. Frédéric Mégret, *From ‘Savages’ to ‘Unlawful Combatants’: A Postcolonial Look at International Humanitarian Law’s ‘Other,’* in *INTERNATIONAL LAW AND ITS ‘OTHERS’* 265 (Anne Orford ed., 2006) (discussing both the “savage” in the introduction of this Article and the non-state armed groups in the war on terror as the “others” in international law).

227. *GATTACA* (Columbia Pictures 1997).

228. *See, e.g.*, John M. Trushell, *American Dreams of Mutants: The X-Men—“Pulp” Fiction, Science Fiction, and Superheroes*, 38 J. POPULAR CULTURE 149 (2004).

229. JOSEPH J. DAROWSKI, *X-MEN AND THE MUTANT METAPHOR: RACE AND GENDER IN THE COMIC BOOKS* (2014).

Similar to popular media, much of the discussion in the academic literature is focused on the treatment of unenhanced humans, but concerns regarding the treatment of the enhanced are also discussed. For example, Dinniss and Kleffner address the possibility that enhanced veterans will be discriminated after their release due to a fear that they will pose a threat to unenhanced civilians' job security.²³⁰ Shulamit Almog highlighted in her discussion of *Blade Runner* the danger of emphasizing the "otherness" of sentient beings and the differences between humans and non-humans.²³¹ Ioana Puscas raises more significant concerns regarding the possibility that, within the military itself, enhanced soldiers will be perceived as "others." She suggests that the notion of honor between soldiers is based on a perception of a "common class of professionals," which might not apply in the same way to enhanced soldiers. Puscas raises the possibility of the creation of two distinct classes within the same military,²³² as well as the risk that the resentment of the unenhanced will lead to more cruelty towards enhanced opponents.²³³ More broadly, the literature on human enhancement outside the military context also discusses extensively the relationship between enhanced and unenhanced. It includes concerns that human enhancement will increase discrimination and create two distinct groups of people with resentment towards one another. Much of the discussion focuses on discrimination against the unenhanced, but the literature also addresses adverse reactions towards the enhanced.²³⁴

Allowing different treatment of enhanced and unenhanced soldiers, especially if this approach is only applied to certain groups, such as enhanced soldiers, rather than all soldiers based on their individual capabilities, might intensify tensions between the enhanced and unenhanced. Allowing different treatment emphasizes the differences between regular humans and the enhanced, even when it comes to the core human rights norms such as the prohibition against torture and cruel, inhuman or degrading treatment. If Puscas's prediction regarding an environment of potential resentment and

230. Dinniss & Kleffner, *supra* note 1, at 472-73.

231. Shulamit Almog, *When a Robot Can Love—Blade Runner as a Cautionary Tale on Law and Technology*, in HUMAN LAW AND COMPUTER LAW: COMPARATIVE PERSPECTIVES 181 (Mireille Hildebrandt & Jeanne Gaakeer eds., 2013).

232. Puscas, *supra* note 22, at 211.

233. *Id.* at 210.

234. *See, e.g.*, Juengst & Moseley, *supra* note 22 (discussing the potential of the creation of two social classes of enhanced and unenhanced); Allhoff et al., *supra* note 38, at 22, 30-31 (discussing the implications of a potential "enhancement divide"); Henry T. Greely, *Remarks on Human Biological Enhancement*, 56 U. KAN. L. REV. 1139, 1153 (2008) (discussing the potential discrimination against the unenhanced); Philip Brey, *Human Enhancement and Personal Identity*, in NEW WAVES IN PHILOSOPHY OF TECHNOLOGY 169, 180-82 (Jan Kyrre Berg Olsen et al. eds., 2008) (discussing the potential adverse effects on enhanced people of their perception as abnormal humans); Julian Savulescu, *Justice, Fairness, and Enhancement*, 1093 ANN. N.Y. ACAD. SCI. 321 (2006) (referring to the fear of discrimination against the unenhanced).

tendency for cruelty against enhanced soldiers becomes reality, differential treatment conveys a dangerous message regarding the treatment of enhanced soldiers. Since military human enhancement is mostly a future phenomenon, this expressive argument is dependent on an actual effect that human enhancement will have on society. Nonetheless, it should be considered similar to the way that distinct treatment of certain social groups is being taken into account in the assessment of policies that differentiate between enhanced and unenhanced.²³⁵

iii. Slippery Slopes

The third argument, titled the “strategy of resistance,” as well as the fifth argument, titled “slippery slopes,” are similar argument forms.²³⁶ These slippery slope arguments claim that “a particular act, seemingly innocuous when taken in isolation, may yet lead to a future host of similar but increasingly pernicious events.”²³⁷ In a more formal articulation, a slippery slope is an argument “against an action (A) that is not in itself objectionable, based on the claim that performing it will lead to the performance of . . . some other—objectionable—action (Z), *because we are liable to fail to abide by the proper distinction between A and Z.*”²³⁸ These arguments suggest that even if the use of torture might be permissible in some situations, allowing the exception is likely to expand the use of torture beyond the intended scope of the exception.²³⁹ Gross argues that the danger of slippery slopes exists even when assuming that the interrogators act in good faith due to the effects of the “creation of a constituency for torture.”²⁴⁰ The actual application of the “ticking bomb” scenario might illustrate the danger of expansion of the scope of legal exceptions. For example, the actual application of coercive interrogations in “ticking bomb” cases in Israeli law are far from the pure, hypothetical, scenario where the coercive methods are used to alleviate an immediate catastrophic danger. In the *Torture* case, Chief Justice Barak stated that the notion of a “ticking bomb” also relates to future attacks, which might take place weeks later.²⁴¹ This expresses a position

235. See Dinniss & Kleffner, *supra* note 1, at 472-73 (discussing the application of human rights law regarding the obligation to secure human rights without discrimination to enhanced soldiers).

236. Gross, *supra* note 208, at 1506-09.

237. See, e.g., Frederick Schauer, *Slippery Slopes*, 99 HARV. L. REV. 361, 361-62 (1985).

238. David Enoch, *Once You Start Using Slippery Slope Arguments, You're on a Very Slippery Slope*, 21 OXFORD J. LEGAL STUD. 629, 631 (2001).

239. Gross, *supra* note 208, at 1506.

240. *Id.* at 1508.

241. HCJ 5100/94 Public Committee Against Torture v. Israel, 53(4) PD 817, ¶ 34 (1999) (Isr.)

where the imminence of the action rather than the imminence of the threat is the crucial element in the decision to allow the use of coercive measures.²⁴²

Slippery slope arguments, in the context of torture, are common.²⁴³ Among the different slippery slope arguments some emphasize the impact of the secrecy and lack of transparency when torture is committed.²⁴⁴ This is a crucial point that is highly relevant to the discussion on enhanced soldiers. When discussing slippery slopes, it is important to demonstrate that the fear from a slippery slope is well-founded. Using David Enoch's terminology, there is a real danger of a slippery slope when using slippery slope arguments.²⁴⁵ Nonetheless, torture is an issue where these arguments are particularly convincing due to the institutional context in which torture is committed. Torture is often committed in a security-related context where secrecy governs the interrogation. In contrast to other interrogations, transparency measures that are often taken to minimize the danger of abuse, such as visual recording, are exempted in the context of torture.²⁴⁶ Two domestic law examples of alleged cases of torture and cruel, inhuman or degrading treatment illustrate how limited the accountability for torture is in security-related interrogations. In Israel, there is a continuous discussion

242. For a broader discussion of such an approach to imminence, see Yahli Shereshevsky, *HCJ 3003/18 Yesh Din – Volunteers for Human Rights v. Chief of General Staff, Israel Defense Forces (IDF)*, 113 AM. J. INT'L L. 361 (2019). Recently, the Israeli Supreme Court upheld this position in a case that was the subject of much criticism. See *HCJ 9018/17 Tbeish v. Attorney General*, ¶ 43 (Nov. 26, 2018) (Isr.), <https://supreme.court.gov.il/>. For critical accounts of the case, see, for example, Smadar Ben-Natan, *Revise Your Syllabi: Israeli Supreme Court Upholds Authorization for Torture and Ill-Treatment*, 10 J. INT'L HUMANITARIAN LEGAL STUD. 41 (2019). For a critical account of another relatively recent case, see Yuval Shany, *Back to the 'Ticking Bomb' Doctrine*, LAWFARE (Dec. 27, 2017), <https://tinyurl.com/y59kawcc> ("The court held that the necessity defense applies in cases where there is a real danger of serious injury to a legally protected interest, even if the anticipated date of realization of the threat is not immediate, provided that the measure taken is proportionate (which includes a requirement for lack of alternative preventive measure).").

243. See, e.g., YUVAL GINBAR, WHY NOT TORTURE TERRORISTS?: MORAL, PRACTICAL, AND LEGAL ASPECTS OF THE "TICKING BOMB" JUSTIFICATION FOR TORTURE 113 (2008); PHILIP RUMNEY, TORTURING TERRORISTS: EXPLORING THE LIMITS OF LAW, HUMAN RIGHTS AND ACADEMIC FREEDOM (2014); Yuval Shany, *Special Interrogation Gone Bad: The Samer Al-Arbeed Case*, LAWFARE (Oct. 10, 2019), <https://tinyurl.com/y3hhw5cf>; Alan Clarke, *Creating a Torture Culture*, 32 SUFFOLK TRANSNAT'L L. REV. 1, 13 (2008); Seth Kreimer, *Too Close to the Rack and the Screw: Constitutional Constraints on Torture in the War on Terror*, 6 U. PA. J. CONST. L. 278, 320, 321 (2003); John T. Parry & Welsh S. White, *Interrogating Suspected Terrorists: Should Torture Be an Option?*, 63 U. PITT. L. REV. 743, 763 (2002).

244. See, e.g., Hedi Viterbo, *Seeing Torture Anew: A Transnational Reconceptualization of State Torture and Visual Evidence*, 50 STAN. J. INT'L L. 281, 295 (2014) (describing the lack of transparency in the torture context including "restricting detainees' view and knowledge of their physical and mental torture; keeping interrogation and detention sites invisible and unknown to the public; destroying potentially incriminating audio-visual evidence; and denying, often categorically, the use of torture?"); GINBAR, *supra* note 243, at 150-51; Clarke, *supra* note 243, at 16-17.

245. Enoch, *supra* note 238.

246. See sources cited *supra* note 244.

about the lack of transparency in security related interrogations.²⁴⁷ While using coercive means during investigations was the subject of significant legal and institutional attention following the famous Landau Commission Report in 1987, this progress did not lead to much accountability for alleged violations of the prohibition on torture and cruel, inhuman and degrading treatment.²⁴⁸ As of 2019, out of more than 1,200 complaints since 2001 on alleged use of illegal coercive methods during investigations by the Israeli General Security Service (GSS), not a single complaint led to an indictment.²⁴⁹ The second example is even more relevant to this Paper, since it focuses on the pain and suffering element. A recent study of investigations in the United Kingdom on alleged torture and inhuman treatment committed by its soldiers in Iraq demonstrates that the Ministry of Defence closed “many hundreds of investigations” for lack of sufficient severity.²⁵⁰ These decisions are not open to independent analysis.²⁵¹

The lack of transparency in the context of torture can also explain the difference between the law governing torture and the law governing police shootings or the targeting of persons under the laws of armed conflict. The absence of an absolute ban on killing is often discussed in the literature as a significant challenge to the absolute prohibition on torture.²⁵² However, while challenges exist regarding accountability in the context of targeting, much of the mechanisms that promote accountability in the context of targeting, such as criminal penalties and especially citizen oversight²⁵³, are much weaker in the context of torture.

The slippery slope argument frequently advanced in relation to torture applies equally in the context of enhanced soldiers. The aforementioned concerns have the potential of expanding the use of coercive methods beyond cases where it may be justified. Specifically, like the expansion of “ticking bomb” arguments, assumptions that similar arguments might be advanced to justify the application of comparable methods to unenhanced soldiers with above average abilities are reasonable. As mentioned, there are two main differences between the “ticking bomb” scenario and the use of coercive interrogation in the case of enhanced soldiers. The first difference is that the use of such measures on enhanced soldiers who do not suffer as much as regular soldiers seems less objectionable than the infliction of pain on

247. See, e.g., Irit Ballas, *Fracturing the “Exception”: The Legal Sanctioning of Violent Interrogation Methods in Israel Since 1987*, 45 LAW & SOC. INQUIRY 818 (2020).

248. *Id.*; Ben-Natan, *supra* note 242 **Error! Bookmark not defined.**

249. PUB. COMM. AGAINST TORTURE IN ISR., TORTURE IN ISRAEL IN 2019: A SITUATION REPORT (2019), <http://stoptorture.org.il/2927/?lang=en>.

250. Elizabeth Stubbins Bates, *Distorted Terminology: The UK’s Closer of Investigations into Alleged Torture and Inhuman Treatment in Iraq*, 68 INT’L & COMPAR. L.Q. 719 (2019).

251. *Id.* at 720.

252. See, e.g., Posner & Vermeule, *supra* note 212, at 689; Zamir & Medina, *supra* note 210, at 163.

253. Posner & Vermeule, *supra* note 212, at 689 (discussing accountability mechanisms for police shootings).

those who suffer more. The other difference is that the stakes are also much lower, since this Article is focusing on all investigations rather than a “ticking bomb” scenario which typically consists of a unique case of an imminent great danger. The first difference is less relevant to the slippery slope argument, since the danger that is the focus of the argument relates to adverse consequences for the unenhanced. By contrast, the second difference suggests that the slippery slope argument in the military enhancement case might be stronger since the potential gain from the use of such methods is less significant than under the “ticking bomb” scenario. Indeed, much of Posner and Vermeule’s criticism of slippery slope and “ticking bomb” arguments is focused on a cost benefit analysis where the gain of “the prevention of catastrophic terrorist attacks” receives significant weight.²⁵⁴

More broadly, the second order arguments that I offer here for the treatment of enhanced soldiers should all be weighed against the potential benefits of allowing for a different treatment of enhanced and unenhanced soldiers. These include direct benefits, such as obtaining information in an investigation or gaining military advantage through the use of weapons against enhanced soldiers, as well as indirect benefits, such as negative incentives for the use of enhanced soldiers. I do believe that in most cases the costs that this Article describes are more significant and should lead to a rule that require identical treatment of the enhanced and unenhanced. However, this calculation can change over time if the situation will dramatically change.

Therefore, enhanced soldiers should not be legally subject to harsher treatment than unenhanced soldiers. In addition, all of the aforementioned concerns seem to be relevant only to subjective elements that allow more, rather than less, coercive methods during interrogation. The dangers these previously mentioned arguments address are strongly related to the significant interest of states in extracting information during investigations. Therefore, the use of more restrictions, which makes the extraction of information more difficult, is not likely to invoke similar concerns. As a result, beyond the specific case of enhanced soldiers, the discussion in this Section supports an explicit endorsement of a one-directional application of the subjective factors of pain and suffering in the assessment of torture and cruel, inhuman or degrading treatment. Namely, subjective weaknesses of individuals and groups should be considered in the assessment of pain and suffering while arguments that take into account subjective elements of individuals and groups to allow harsher treatment should be rejected.

254. *Id.* at 688.

V. CONCLUSION

When faced with the application of the law to new phenomenon there are two main routes: insisting on the ability to apply the existing norms in a similar way and acknowledging the need to rethink our rules and principles in the context of a qualitatively different reality. The choice of one path or the other can depend on the nature of the change. In the context of enhanced soldiers, as mentioned, there is a tendency to imagine a super-human that is radically different than other human beings. However, the near future of enhanced soldiers is expected to be more modest in the changes that it brings. This clearly influences the legal analysis and a radical change in the nature of enhanced soldiers will necessarily lead to reconsideration of the legal issues that are discussed here.

Whether equal application of international humanitarian law and international human rights law extends to enhanced soldiers is a challenging question, especially since it seems to test basic intuitions regarding acts that constitute torture or inhuman treatment. With a possible limited exception for the principle of proportionality, this Article argues for a one-directional subjective application of rules to enhanced soldiers. This approach prohibits the imposition of harsher rules on enhanced soldiers, but allows, in relevant cases, consideration of the special vulnerabilities of these soldiers to improve their situation.

Discussing longstanding issues in the context of emerging technologies and other contemporary developments allows reflection on the traditional approaches to these issues. Moreover, it provides potential clarification of unseen patterns within these areas of international law that were not explicitly addressed before. This Article recognizes the hidden pattern of a one-directional subjective approach in international law and calls for an explicit recognition and broader application of the one-directional approach beyond the context of enhanced soldiers. Ultimately, the approach should apply to treatment of all prisoners of war or other detainees and in relation to the prohibition against torture as well as cruel, inhuman or degrading treatment.²⁵⁵

This Article focuses on just one important aspect of the legal exploration of enhanced soldiers that has not been addressed before. It is an invitation for others to continue the conversation on this issue as the phenomenon of enhanced soldiers is expected to become much more relevant in the near future. Beyond its substantive discussion of equal

255. It is possible to think of other contexts where different treatment might be justified in all directions—for example, the adoption of progressive taxation. *See, e.g.*, Daphna Lewinsohn-Zamir, *In Defense of Redistribution through Private Law*, 91 MINN. L. REV. 326 (2006); Reuven S. Avi-Yonah, *Review: Why Tax the Rich? Efficiency, Equity, and Progressive Taxation*, 111 YALE L.J. 1391 (2002); Walter J. Blum & Harry Kalven, Jr., *The Uneasy Case for Progressive Taxation*, 19 U. CHI. L. REV. 417 (1952).

treatment, it is a call for more attention to the general discussion of enhanced soldiers, similar to the extensive discussions on other emerging technologies, such as cyber warfare, autonomous weapons, and drones. It is an opportunity to actively intervene early in a conversation with the potential to dramatically impact reality.

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