New Surveillance Technologies and Interpretive Nuances in Contemporary *Jus ad Bellum* and *Jus in Bello*

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> *The story of the transformation of the Hague/Geneva rule system into a modern vocabulary of political legitimacy can best be told against the background of a widespread twentieth century loss of faith in the formal distinctions of classical legal thought – in the wisdom, as well as the plausibility and usefulness of separating law sharply from politics, or private right shaping from public power, or, for that matter, war from peace, civilian from combatant... Developing an insider vocabulary common to humanitarian and military professionals was intended to place the new rules on a firm footing in the militarily plausible... To this day, the most significant codifications of the law in war have indeed been negotiated among diplomatic and military authorities....*
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> *Humanitarian pragmatism has also brought a deeper set of changes to the nineteenth-century law in war. The clear distinctions that provided the background for so many of the more detailed rules lost their luster. The rules themselves were transformed into – or even replaced by – broad principles and standards. Most importantly, the modern humanitarian and military professionals have come to think about the status of the law itself in new ways –* ***less as an external or ex post judge of military behaviour than as a vocabulary for arguing about the legitimacy and illegitimacy of military conduct common to those inside and outside the military profession.***
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> — DAVID KENNEDY, OF WAR AND LAW, 84-86 (2006)

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Contemporary applications of the *jus ad bellum* have had varying degrees of effectiveness in contributing to world public order. The *Nicaragua* and *Oil Platforms* cases capsulize the classical interpretation of the jus ad bellum in relation to the exercise of the right of self-defence under Article 51 of the UN Charter.[1] It could be argued, therefore, that the International Court's high threshold for the lawful use of force in Article 51 situations promotes "minimum order" or a minimization of unauthorized violence and coercion. In *Nicaragua* and *Oil Platforms,* the International Court of Justice emphasizes to States that the general prohibition against the use of force in Article 2(4) of the UN Charter is of constitutive importance to the maintenance of international peace and security in the international system. By imposing more stringent requirements and thus narrowing the permitted context in which States could use force in individual or collective self-defence, States might be substantially deterred from engaging in unauthorized violence and coercion with other States. Thus, insofar as "minimum order" is concerned, it could be reasonably contended that the contemporary jus ad bellum under the Charter era has been somewhat successful in containing the frequency of open inter-state conflicts and acts of aggression.

The post-1945 reduction of instances of international armed conflicts between States, however, does not correlatively imply that international peace and security has been achieved.[2] "Minimum order" falls far short of the "optimum order" (or the "arrangements that provide the greatest access of the individual human being to the shaping and sharing of all values of human dignity") needed for the achievement of lasting and stable peace in the international system.[3] The classical interpretation in *Nicaragua* and *Oil Platforms* of the jus ad bellum in relation to the

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[1] Military and Paramilitary Activities in and against Nicaragua *(Nicar. v. U.S.),* 1986 I.C.J. 14 (Merits, Judgment); Oil Platforms *(Iran v. U.S.),* 2003 I.C.J 161 (Judgment).

[2] See CHRISTON I. ARCHER et al., *World History of Warfare* (2003).

[3] MYRES S. MCDOUGAL & SIEGFRIED WIESSNER, *Law and Minimum World Public Order, in International Law of War* (Myres S. McDougal & Florentino Feliciano, 1994).

right to self-defence under Article 51 poses significant problems in interpretation and enforcement that derail the achievement of "optimum order."

For one, the problematic interpretation of Article 51 in *Nicaragua* and *Oil Platforms* makes it difficult for States to legitimately use force in vindication of their right to individual or collective self-defence. *Nicaragua* and *Oil Platforms* both held that an "armed attack" contemplated in Article 51 refers only to "the most grave forms of force," and patterns of low intensity attacks or transborder incursions could not be cumulated to approximate that standard. (The Court drew a similar conclusion in *Armed Activities in Congo,*[4] where the Court also held Uganda to the same high standard of an "armed attack," and declared that Uganda's incursion into Congolese territory to disable the FUNA safe havens was not a justified use of force under Article 51 of the UN Charter.) Moreover, a State exercising its right to self-defence must issue an official declaration that it is a victim State, and immediately report its action to the UN Security Council pursuant to Article 51. Finally, the victim State's use of force must <u>only</u> be made out of the "military necessity" of stopping or halting the attack. Such use of force must be "proportionate," or only that sufficient to stop an ongoing attack. These rigid conceptual thresholds for the lawful use of force under Article 51 inimitably limits the policy choices available to States facing the threat of aggression or armed attack. Under the classical interpretation of Article 51 in *Nicaragua* and *Oil Platforms,* States would have to wait to absorb the "most grave forms of force" in an armed attack before they can even begin to deploy any force in self-defence. As rightly suggested by Judge Schwebel in his dissenting opinion in *Nicaragua,* this expectation myopically disregards the *realpolitik* of international relations. States cannot reasonably satisfy their internal constituencies with static and passive approaches to security policy. Rigid insistence

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[4] Case Concerning Armed Activities in the Congo *(Congo v. Uganda),* 19 December 2005 General List No. 116, available at <http://www.icj-cij.org/docket/files/ 116/10455.pdf>.

on the classical interpretation of the use of force in self-defence thus threatens to diminish the relevance of international law to the authoritative decision-making processes of international policy-makers.

Even when the classical interpretation of Article 51 has been applied to conclude that a State's use of force is unlawful, the coarchical structure of the international system can also be prohibitive to imposing any genuine sanctions for the unlawful use of force. In the *Corfu Channel* case,[5] while the International Court of Justice declared that the United Kingdom's minesweeping operations in Albania could not be justified as a lawful use of force in exercise of the right to self-defence, the International Court did not have any enforcement powers to sanction the United Kingdom for the international violation. If the classical interpretation of the use of force for self-defence purposes is already problematically inflexible and there is no clear enforcement mechanism to ensure compliance with the classical interpretation, it is more than probable that States anticipating aggression or facing the threat of aggression would act in ways that preserve their security even if these do not always adhere to "codified" international law under Article 51.

Modern interpretations of the jus ad bellum therefore recognize acceptable variants beyond the classical reactive interpretation to Article 51. Anticipatory self-defence substitutes the objective requirement of an "armed attack" with a State's verifiable perception of a threat of such attack "that, in the sole judgment of the state believing itself about to become a target, was so palpable, imminent, and prospectively destructive that the only defence was its prevention." This reasoning hearkens back to the British position in the 1837 Caroline incident.[6] Other modern jus ad bellum variants include "preemptive self-defence" (the claim to

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[5] Corfu Channel *(UK v. Albania)*, 1949 I.C.J. 4 (Judgment).

[6] *Id.;* See also DAVID A. SADOFF, *A Question of Determinacy: The Legal Status of Anticipatory Self-Defence*, 40 GEO. J. INT'L L. 523 (2009).

a unilateral use of force without prior international authorization, involving a palpable and imminent threat, in order to "arrest an incipient development that is not yet operational, hence not yet directly threatening, but that, if permitted to mature, could then be neutralized only at a higher and possibly unacceptable cost") and its more controversial corollary of "regime change" (which is a form of pro-democracy use of force).[7]

Finally, a significant modern jus ad bellum principle which is not anchored on an Article 51 derivative (but which is also designed to achieve optimum order), is the doctrine of humanitarian intervention.[8] Humanitarian intervention is a form of unilateral action without prior Security Council authorization in order to stop genocide, torture, and other egregious human rights violations, as was undertaken in 1999 by NATO forces in Kosovo. Its most recent permutation on the "responsibility to protect" appears to redirect humanitarian intervention within the control of the Security Council through the mechanism of Chapter VII.[9]

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[7] *Id.;* See W. MICHAEL REISMAN AND ANDREA ARMSTRONG, The Past and Future of the Claim of Preemptive Self-Defense, 100 Am. J. Int'l L. 525 (2006); OSCAR SCHACTER, *The Legality of Pro-Democratic Invasion,* 78 AM. J. INT'L L. 645 (1984).

[8] W. MICHAEL REISMAN & MYRES S. MCDOUGAL, Humanitarian Intervention and the United Nations (1973).

[9] 2005 World Summit Outcome, para. 139: "The international community, through the United Nations, also has the responsibility to use appropriate diplomatic, humanitarian and other peaceful means, in accordance with Chapters VI and VIII of the Charter, to help protect populations from genocide, war crimes, ethnic cleansing, and crimes against humanity. In this context, we are prepared to take collective action, in a timely and decisive manner, through the Security Council, in accordance with the Charter, including Chapter VII, on a case-by-case basis and in cooperation with relevant regional organizations as appropriate, should peaceful means be inadequate and national authorities manifestly fail to protect their populations from genocide, war crimes, ethnic cleansing and crimes against humanity. We stress the need for the General Assembly to continue consideration of the responsibility to protect populations from genocide, war crimes, ethnic cleansing and crimes against humanity and its implications, bearing in mind the principles of the Charter and international law. We also intend to commit ourselves, as necessary and appropriate, to helping States build capacity to protect their populations from genocide, war crimes, ethnic cleansing and crimes against humanity and to assisting those which are under stress before crises and conflicts break out."

What is common among these modern jus ad bellum variants is their teleological appeal to the underlying operative bases of the use of force, and their consciousness of the importance of reserving flexibility to States in forming their security policies within the intricacies of the international system, as well as considering the limited competencies of international institutional actors such as the United Nations and its organs. These modern jus ad bellum variants' consideration for the expectations of international actors arguably presents political arrangements that aspire to achieve "optimum order," and not merely the reduction of the occurrence of hostilities in "minimum order."

Interestingly, new surveillance technologies provoke some space for rethinking on possible interpretive nuances to contemporary jus ad bellum and jus in bello. Special electronic and reconnaissance aircraft are "increasingly producing their information in realtime. Thus, whereas in the past a photographic reconnaissance had to land to enable its film to be taken to be processed and interpreted, today the information is transmitted in digital electronic form as it is gained, thus saving a great deal of time. This, in turn, enables the information to be interpreted in the hands of the operations staff much more rapidly so that they can respond in a timely and appropriate manner."[10] Examples of these new models of special and reconnaissance aircraft and their corresponding surveillance capabilities include:

- *Boeing E-3 Sentry:* "The dome contains the transmitting and receiving elements of the Westinghouse AN/APY-2 radar, which provide coverage of the earth's surface up into the stratosphere, over land or water, and out to a range of more than 250 miles for low-flying targets and much further for aircraft flying at high to medium altitudes. The radar includes Identification Friend or

[10] DAVID MILLER, *Modern American Weapons* 158 (2002).

Foe (IFF) sub-system and these sensors, in conjunction with a powerful computer, enable the operators to perform surveillance, identification, weapons control, battle management, and communications functions in real time. Tracks are classified into land, air or sea, friendly or hostile, and data downlinks enable all the information to be passed to US military command and control centers in rear areas or aboard ships, or, in time of crisis, to the National Command Authorities... E-3s are among the first assets to be deployed in any crisis. In Operations Desert Shield/Storm, for example, they flew more than 400 missions, logging more than 5000 hours of on-station time, to provide radar surveillance and control for more than 120,000 Coalition sorties. The support provided ranged from giving senior leadership time-critical information on enemy actions to participating in 38 of the 40 air-to-air kills recorded during the conflict. In addition, they provided, for the first time in the history of aerial warfare, a recording of the entire air campaign. Such a high-value system has only been released to a few, carefully selected allies: NATO (17), France (4), Saudi Arabia (5) and the United Kingdom (6), while Japan operates the same AWACS system, but installed on a Boeing 767 platform."[11]

- *Boeing E-4B:* "The Boeing E-4B uses the commercial Boeing 747-200 airframe, but with considerable internal alterations to suit it for its role as the United States' National Emergency Airborne Command Post (NEACP). This means that in case of national emergency or the destruction of ground command and control centers, the aircraft will provide a modern, highly survivable, command, control, and communications center to direct US forces, execute emergency war

[11] *Id.*, at 160-163.

orders, and coordinate actions by civil authorities. Its most recent use in this role was on 11 September 2000 when President Bush spent some hours airborne taking command of US resources until the extent of the terrorist attacks was known... The E-4B has state-of-the-art electronic and communications equipment, and is fitted with shielding against nuclear and thermal effects. Its electrical and electronic systems are also shielded against the effects of electromagnetic pulse (EMP), one of the major effects of a high airburst nuclear weapon, to which such a high-flying aircraft would otherwise be very vulnerable. The aircraft also carries advanced satellite communications systems to provide worldwide communications coverage."[12]

- *Boeing E-6A/B Mercury:* "When ballistic missile submarines (SSBNs) are on patrol the depth of water makes it difficult to pass messages to them from the National Command Authority, except by Very Low Frequency (VLF) radio, which requires an airborne relay station equipped with very long trailing-wire antennae (TWAs)... The E-6A's primary mission is to broadcast on the VLF band which requires two vertically polarized very long trailing-wire antenna (TWAs)."[13]
- *Lockheed Martin EC-130H Compass Call/Rivet Fire:* "The EC-130H Compass Call is a version of the Lockheed C-130 Hercules adapted for use as a tactical command, control, and communications countermeasures platform. Electronic attacks on hostile command and control systems provide friendly commanders with an immense advantage before and during the air campaign. Among the means the Compass Call uses is noise jamming to prevent communication or to degrade

[12] *Id.*, at 164–165.

[13] *Id.*, at 166 and 169.

the transfer of information essential to enemy command and control of weapon systems and other resources. Although the aircraft's primary mission is support of tactical operations it can also provide jamming support to ground force operations. Modifications to the aircraft include an electronic countermeasures system (Rivet Fire), air-refueling capability, and associated navigation and communications systems."[14]

- *Boeing/Raytheon RC-135V/W Rivet Joint:* "Both these Rivet Joint types are fitted with sophisticated intelligence gathering equipment, designed to enable military specialists to monitor the electronic activity of potential and actual adversaries. This involves ELINT and COMINT intercepts of hostile activity at ranges of up to about 150 miles in order to give information about the location and intentions of enemy forces. They are also required to originate voice broadcasts, the highest priorities being imminent threat warnings direct to aircraft in danger and 'combat advisories' to warn general areas. They also operate data and voice links to provide target information to ground-based US air defense forces.... the RC-135S are being constantly upgraded. Current known programs for the Rivet Joint systems include Tactical Common Data Link (TCDL), High- and Low- Band Subsystem (LBSS) various antenna improvements and installation of more advanced direction-finding equipment, and enhanced data links."[15]
- *Lockheed Martin EP-3E (ARIES II):* "The EP-3E ARIES II has a large radome under the forward fuselage, a ventral radome, numerous small antennae, and a shortened tailboom. Internally it houses direction-finding (DFI)

[14] *Id.*, at 170–171.

[15] *Id.*, at 172.

equipment; signals gathering, analysis and recording equipment; and their own real-time communications equipment... EP-3Es have been heavily engaged in reconnaissance in support of NATO forces in Bosnia, and joint forces in Korea and in Operation Southern Watch, Northern Watch, and Allied Force. Normally, these operations are shrouded in secrecy, but one hit the world's headlines on 1 April 2001 when it was involved in a major incident with two fighters of the Chinese PLA-Air Force."[16]

- *Northrop Grumman EA-6B Prowler:* "The EA-6B's ALQ-99's first task is to collect data to enable the enemy's electronic order of battle (EOB) to be complied then disseminated via a real-time downlink to the command-and-control system. The next task is to jam enemy electronic systems, particularly radar in support of friendly air and ground operations. Third, the EA-6B can contribute to the SEAD (suppression of enemy air defenses) campaign by using its HARM missiles. Atop the EA-6B's tail fin is a large pod which houses a number of Systems Integration Receivers (SIRs), with four more in bulges on the fin. The SIRs, each covering a discrete frequency band, detect hostile radar emissions at long range and the emitter information is processed by the central mission computer, with detection, identification, direction-funding, and jammer-set-on-sequence operations performed automatically or by the crew."[17]
- *Unmanned Aerial Vehicles (UAVs) such as the RQ-1 Predator and RQ-2 Pioneer:* "The RQ-1 Predator is a USAF-operated system which is normally employed in moderate risk areas. Each system comprises four

[16] *Id.*, at 176–177.

[17] *Id.*, at 191.

> airborne platforms with their related sensors, a ground control system (GCS), a satellite communications suite and fifty-five people, all of which must be collocated on the same airfield, with a hard surface runway measuring 5000 x 125 ft. The aircraft carries three cameras transmitting full motion video—one in the nose, normally used by the flight controller, a daylight TV camera, and a low light/night infrared camera—together with a synthetic aperture radar for looking through smoke, cloud, or haze. The cameras produce full motion video and the synthetic aperture radar produces still-frame radar images.... The RQ-1 can operate at 25,000 ft, but typically flies at around 15,000 ft with a normal mission involving a 400 nm transit, followed by 14 hours on station."[18]

Considering these rapid developments in electro-optic surveillance systems, radio surveillance systems and long-range satellite and video surveillance systems now available as part of modern military arsenals, should international law simply abandon the enterprise of jus in bello altogether since the determinacy of legal rules is at risk with the revolutionizing scope of war data?

The answer should be relatively straightforward. Even where technological trajectories alter military capabilities, States remain susceptible to international legal regulation on the conduct of hostilities.[19] Technologies aid in the closest possible identification

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[18] *Id.*, at 200–201.

[19] See et al: 1868 St. Petersburg Declaration Renouncing the Use, in Time of War, of Explosive Projectiles Under 400 Grammes Weight; 1899 Hague Declaration Concerning Asphyxiating Gases; 1899 Hague Declaration Concerning Expanding Bullets; 1923 Hague Rules of Aerial Warfare; 1925 Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare; 1978 Red Cross Fundamental Rules of International Humanitarian Law Applicable in Armed Conflicts; 1980 United Nations Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed Excessively Injurious or to Have Indiscriminate Effects, including

of military targets; the careful assessment of the reasonable effects of coercive action on combatants and non-combatants, properties, and potential collateral damage; and the overall implementation of a State's foreign policy objectives through the military instrument. In this sense, technologies provide factual tools that support the policy calculus of the international decision-maker, but technologies themselves cannot render immaterial the legal proscriptions and prescriptions on the conduct of hostilities. I proceed from the claim that technological developments would only call for a re-calibration of how jus ad bellum and jus in bello norms are applied. New surveillance technologies do not eliminate the rigorous task of determining nuances in the core principles of jus in bello.

The laws of war can be identified and applied to the single case of weapons of mass destruction, such as nuclear weapons. In its Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons,[20] the International Court of Justice explicitly affirmed "the applicability of humanitarian law to nuclear weapons," even if "nuclear weapons were invented after most of the principles and rules of humanitarian law applicable in armed conflict had already come into existence; the Conferences of 1949 and 1974–1977 left these weapons aside, and there is a qualitative as well as quantitative difference between nuclear weapons and all conventional arms. However, it cannot be concluded from this that the established principles and rules of humanitarian law applicable in armed conflict did not apply to nuclear weapons. ***Such a conclusion would be incompatible with the intrinsically***

1980 Protocol I on Non-Detectable Fragments, 1980 Protocol II on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices, 1980 Protocol III on Prohibitions or Restrictions on the Use of Incendiary Weapons, 1995 Protocol IV on Blinding Laser Weapons, 1996 Amended Protocol II on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices; 1997 Ottawa Convention on the Prohibition of the Use, Stockpiling, Production, and Transfer of Anti-Personnel Mines and on Their Destruction.

[20] Legality of the Threat or Use of Nuclear Weapons, 1996 ICJ 226, at paras. 85 to 89.

humanitarian character of the legal principles in question which permeates the entire law of armed conflict and applies to all forms of warfare and to all kinds of weapons, those of the past, those of the present, and those of the future..."[21] The Court considered the Martens Clause[22] as further proof of the applicability of the principles and rules of humanitarian law to nuclear weapons. (It should be stressed, however, that while it deemed jus in bello protections to be applicable, the Court ultimately did not reach a definitive conclusion on the application of jus in bello principles of distinction, neutrality, necessity, among others, in the particular case of nuclear weapons.[23]) What is implicit from the Court's reasoning in Legality of the Threat or Use of Nuclear Weapons is the understanding that technological innovation affecting the military instrument does not make legal norms regulating the conduct of hostilities inapplicable. The continuing salience of these norms depends, in large measure, on the reasonable

[21] *Id.*, at para. 86. Emphasis and italics supplied. *Note, however, that the Court expressly acknowledged here that* "the thesis that the rules of humanitarian law do not apply to the new weaponry, because of the newness of the latter, has not been advocated in the present proceedings. On the contrary, the newness of nuclear weapons has been expressly rejected as an argument against the application to them of international humanitarian law."

[22] See RUPERT TICEHURST, *The Martens Clause and the Laws of Armed Conflict*, 317 INTERNATIONAL REVIEW OF THE RED CROSS 125–134, at <http://www.icrc.org/web/eng/siteeng0.nsf/html/57JNHY>.

[23] *Id.*, at note 1, at para. 95: "Nor can the Court make a determination on the validity of the view that the recourse to nuclear weapons would be illegal in any circumstance owing to their inherent and total incompatibility with the law applicable in armed conflict. Certainly, as the Court has already indicated, the principles and rules of law applicable in armed conflict—at the heart of which is the overriding consideration of humanity—make the conduct of armed hostilities subject to a number of strict requirements. Thus, methods and means of warfare, which would preclude any distinction between civilian and military targets, or which would result in unnecessary suffering to combatants, are prohibited. In view of the unique characteristics of nuclear weapons, to which the Court has referred above, the use of such weapons in fact seems scarcely reconcilable with respect for such requirements. ***Nevertheless, the Court considers that it does not have sufficient elements to enable it to conclude with certainty that the use of nuclear weapons would necessarily be at variance with the principles and rules of law applicable to armed conflict in any circumstance.***" (Emphasis supplied.)

elasticity of each norm's substantive content, when applied by international decision-makers to particular fact patterns within situations of armed conflict.

If legal norms regulating the conduct of hostilities arguably apply to weapons of mass destruction, they apply with more reason when viewed in conjunction with new surveillance technologies. Modern surveillance techniques[24] introduce a new dimension to the expectations of international actors on the width, reach, and translation of jus in bello and jus ad bellum principles to particular conflict situations. Considering the erosion of the strict divide between jus in bello and jus ad bellum,[25] increasing the universal accessibility to new surveillance technologies should correspondingly cause conflict actors to expect a reasonable readjustment of conceptual limits within jus ad bellum tests (e.g. the definition of an "armed attack," the principle of military necessity, and the principle of proportionality) and jus in bello principles (e.g. distinction or discrimination, necessity, proportionality).[26] This should qualitatively influence both the application of the laws regulating hostilities in the specific conflict situs or controversy, while, at the same time, shape the customary content of these laws for future hostilities. If States and other conflict actors can secure access to more developed surveillance technologies that enable better scrutiny of the use of the military instrument in conflict situations, it is not unlikely that their respective margins of appreciation for the cumulative principles regulating the conduct of hostilities would be much

[24] See J.K. PETERSEN, UNDERSTANDING SURVEILLANCE TECHNOLOGIES: SPY DEVICES, PRIVACY, HISTORY & APPLICATIONS (2nd ed., 2007); JENNIFER ELSEA ET AL., MILITARY TRANSFORMATION: CURRENT ISSUES IN INTELLIGENCE, SURVEILLANCE AND RECONNAISANCE (2003).

[25] ALEXANDER ORAKHELASHVILI, *Overlap and Convergence: The Interaction between Jus Ad Bellum and Jus in Bello,* 12 J. CONFLICT & SECURITY L. 157 (2007).

[26] See however 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 (2008).

wider than currently tolerated in positivist international law and jurisprudence. New surveillance technologies will not just facilitate transparent and open contestation on the content of jus ad bellum and jus in bello principles, but the likely turnover towards more nuanced interpretations of these principles would conceivably be faster.

I submit that new surveillance technologies would empower international decision-makers to make closer cumulative assessments of legality from both jus ad bellum and jus in bello. In turn, other international actors possessing access to the same technologies could better police or challenge the subjective and objective components to these assessments. (By "subjective," I refer to the international decision-maker's policy objectives in undertaking coercive action; and by "objective" I refer to internationally accepted aspects of the legal standard regulating the conduct of hostilities.) Assuming all conflict actors have access to the same surveillance technologies, the end result should be increased determinacy of the laws regulating the conduct of hostilities, and ultimately, greater outcome-predictability. The following subsections briefly discuss possible qualitative adjustments in jus ad bellum and jus in bello principles.

Jus Ad Bellum Principles

"Armed attack" and the right of self-defence

Article 2(4) of the United Nations Charter requires "[a] ll Members [to] refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations." In the *Case Concerning Military and Paramilitary Activities in and against Nicaragua,*[27] the

[27] Case Concerning Military and Paramilitary Activities in and against Nicaragua *(Nicar. v. U.S.)*, 1986 I.C.J. 13.

International Court of Justice jointly examined the prohibition against intervention and the scope of the prohibition against the use of force. Acts constituting a breach of the principle of non-intervention could also breach the prohibition against the use of force if they directly or indirectly involve the use of force.[28] To recall in this case, the Court declared that the United States' aid to the contras in Nicaragua (specifically, arming and training of the contras) amounted to a breach not just of the principle of non-intervention but also the prohibition against the use of force.[29]

Under Article 51 of the UN Charter, however, self-defence (whether individual or collective) operates as the exception to the prohibition against the use of force.[30] According to the Court in Nicaragua, before a use of force could be characterized as a lawful act of self-defence, an armed attack must have occurred, and "it is evident that it is the victim State, being most directly aware of the fact, which is likely to draw general attention to its plight. It is also evident that if the victim State wishes another State to come to its help in the exercise of the right of collective self-defence, it will normally make an express request to that effect."[31] Moreover, where States use force in exercise of their right to self-defence, Article 51 obliges them to report their actions to the Security

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[28] See *Corfu Channel* 1949 ICJ 4 (Merits), at paras. 32-35: "The Court can only regard the alleged right of intervention as the manifestation of a policy of force, such as has, in the past, given rise to the most serious abuses and such as cannot, whatever be the present defects in international organization, find a place in international law. Intervention is perhaps still less admissible in the particular form it would take here; for, from the nature of things, it would be reserved for the most powerful States, and might easily lead to perverting the administration of justice itself."

[29] *Id.*, at para. 228.

[30] Art. 51: "Nothing in the present Charter shall impair the inherent right of individual or collective self-defence if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain inter- national peace and security. Measures taken by Members in the exercise of this right of self-defence shall be immediately reported to the Security Council and shall not in any way affect the authority and responsibility of the Security Council under the present Charter to take at any time such action as it deems necessary in order to maintain or restore international peace and security."

[31] *Id.*, at para. 232.

Council. The absence of such a report could be taken as a factor indicating "whether the State in question was itself convinced that it was acting in self-defence."[32]

Due to evidentiary insufficiency, the Court refused to conclude that the 1982, 1983, and 1984 transborder incursions into the territories of Honduras and Costa Rica were at all imputable to Nicaragua.[33] It also took into account various circumstances negating the legitimate exercise of self-defence—El Salvador's much-belated official declaration that it was a victim of an armed attack; the silence of Honduras and Costa Rica in their communications to the Court regarding the occurrence of an armed attack; and the failure of the United States to render a report as required under Article 51 that it was using force in exercise of the right of collective self-defence.[34] Consequently, the Court refused to conclude that the repeated transborder incursions amounted to an "armed attack" justifying the plea of collective self-defence within the meaning of Article 51. Notwithstanding the admittedly sequential occurrence of the transborder incursions, the Court majority refused to view Nicaragua's acts cumulatively as amounting to an "armed attack."[35]

The result of the Court's methodology in *Nicaragua* was to impose a high evidentiary and substantive threshold for a lawful use of force within the meaning of Article 51. The Court further perpetuated this threshold in the *Case Concerning Oil Platforms*,[36] ruling that *Nicaragua* had created a definitional standard of "armed attack" as one involving "**the most grave**

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[32] *Id.*, at para. 200.

[33] *Id.*, at para. 231.

[34] *Id.*, at paras. 233-236.

[35] See Judge Schwebel's dissenting opinion, paras. 6, 13-14, at 13: "I find the Court's interpretation of what is tantamount to an armed attack, and of the consequential law, inconsonant with accepted international law and with the realities of international relations. And I find its holdings as to what El Salvador and the United States actually did inconsistent with the facts."

[36] Case Concerning Oil Platforms *(Iran v. U.S.)*, 2003 ICJ No. 90 (Merits), at para. 51. Emphasis supplied.

forms of the use of force (those constituting an armed attack) from other less grave forms, since in the case of individual self-defence, the exercise of this right is subject to the State concerned having been the victim of an armed attack." In *Oil Platforms*, the Court also refused to treat cumulative Iranian attacks on United States vessels as an "armed attack." The attenuated period of time between the Iranian attacks and the United States' military response through "Operation Praying Mantis," also militated against characterizing the United States' use of force as a legitimate exercise of the right to self-defence.

As seen from *Nicaragua* and *Oil Platforms*, the Court's assessment of "armed attack" and the right of self-defence within Article 51 depends most crucially on several perception-driven factual indicators: (1) the justifiability and timing of a State's official declaration that it is the victim of an armed attack; (2) the visibly apparent "gravity" of the use of force as would constitute an armed attack; and (3) the seeming urgency of using force (whether for individual or collective self-defence) as evidenced by a report to the UN Security Council. In all three indicators, the Court lays a high bar for what constitutes an "armed attack" and a proper invocation of the right to self-defence—mainly because of a factual or perceptual discontinuity. *Nicaragua* and *Oil Platforms* problematically showed that an attacking State's (apparent) low-intensity uses of force and its repeated iterations over time, when taken together with the victim State's delay (in declaring that it is the victim of an armed attack, undertaking coercive action in exercise of its right to self-defence, and then reporting the same to the UN Security Council)—could preclude the determination that an "armed attack" occurred as would justify the lawful use of force under international law.

These neat categories, however, do not comport with the operational realities of State conduct during international hostilities. For one, there is an inevitable time lag between a State's intelligence-gathering and fact-finding before it reaches its subjective conclusion that it is the victim of an armed attack

attributable to a particular State. There is also an obvious time lag between the State's determination of the existence of an "armed attack" and the State's planning and execution of appropriate policy responses. Finally, if the victim State does undertake an Article 51 use of force, there will necessarily be an intervening period until the termination of its military operations, and the State's evaluation of whether the operation accomplished its policy objectives, before the State could even reasonably prepare and submit a report to the Security Council. All of these actions entail decision-making processes that do not coincide with the *Nicaragua* and *Oil Platforms* black-letter definitions of an "armed attack" and the rigorous processes of exercising the right to self-defence.

Following from the Court's reasoning in *Nicaragua* and *Oil Platforms,* however, there would never be a "victim State" unless an attack singularly involves "the most grave forms of force;" the victim State immediately declares that it is being attacked by a particular State; and the victim State immediately devises and executes a coercive military response while publicizing its action through a report to the Security Council. For this reason, the divergence between the Court's perceptions and that of the states involved in *Nicaragua* and *Oil Platforms* tilted the applicability of a lawful use of force under Article 51 towards a very narrow fact situation. Where the Court did not appear satisfied with the evidence before it due to these perceptual differences (or holding that the evidence appeared "inconclusive"), it instead chose to rule on the illegality of the "victim" State's use of force. This judicial policy unjustly burdens victim States who have already suffered the effects of hostile conduct (whether through iterative attacks on vessels in *Oil Platforms* or transborder incursions as in *Nicaragua*) to further bear the (likely) consequence of a (procedural) denial of justice.[37]

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[37] See JAN PAULSSON, *Denial of Justice in International Law* (2005).

In this sense, new surveillance technologies could ameliorate the perceptual differences between international adjudicators and international decision-makers on what truly constitutes an "armed attack," and what indicators show that there is a lawful exercise of the right to self-defence. Assuming all actors' access to the comparable surveillance technologies, it should be possible to justify the cumulation of low-intensity attacks as an "armed attack" (cumulation being a method that the Court did not rule out in *Oil Platforms*, para. 64), and more verifiably impute such low-intensity attacks to a particular State or non-State actor. Better surveillance technologies would enable international adjudicators to more closely discern the subjective intent of international decision-makers, particularly on the policy options available to them (e.g. strategic diplomacy, military responses, etc.) at the time of the "armed attack," and the time available to them within which to use force in exercise of their right to self-defence. Increasing access to new surveillance technologies encourages a more nuanced understanding of "armed attack" and "right to self-defence" under Article 51, by adjusting the relative expectations of the conflict parties and their respective authoritative decision-makers. Most importantly, new surveillance technologies makes it fairly easier for international adjudicators to examine both the subjective and objective factors behind the concepts of "armed attack" and the Article 51 process on the exercise of the right to self-defence. With the availability of information from new surveillance technologies, international adjudicators could be better equipped to define and apply the concepts of "armed attack" and the Article 51 "right to self-defence" within a wider zone of reasonableness[38] that coheres with the expectations in international actors.

[38] See W. MICHAEL REISMAN, *Assessing Claims to Revise the Laws of War*, 97 AM. J. INT'L L. 82, 83-90 (2003); STEPHANIE A. BARBOUR AND ZOE A. SALZMAN, *The Tangled Web: The Right of Self-Defence Against Non-State Actors in the Armed Activities Case*, 40 N.Y.U. J. INT'L L. & POL. 53 (2008).

Principles of Military Necessity and Proportionality

The 1837 *Caroline* incident (which involved a pre-emptive attack by British forces in Canada on a ship manned by Canadian rebels who were planning an attack from United States territory) is frequently cited as the initial authoritative articulation of the principles of military necessity and proportionality in relation to self-defence.[39] The principle of military necessity looks to the objective rationale for the use of force in exercising the right to self-defence, which should not be retaliatory or punitive but simply intended to halt or repel attack.[40] The principle of proportionality, on the other hand, weighs the level of force employed by the victim State to accomplish the objective of self-defence.[41] In *Armed Activities on the Territory of the Congo,*[42] the Court held that there was insufficient evidence to support Uganda's claim to self-defence in seeking to halt the transborder incursions of the Former Uganda National Army from safe havens within Congolese territory. The Court looked at the scale of FUNA attacks on Uganda, and, applying the same *Nicaragua* threshold of "most grave uses of force" to constitute "armed attacks" under Article 51, concluded that Uganda's use of force was not justified. The Court factually observed that "the taking of airports and towns many hundreds of kilometres from Uganda's border would not seem proportionate..., nor to be necessary to that end."[43]

As with the definitions of *armed attack* and the *right of self-defence* under Article 51, controversies on the scope of military necessity and proportionality of an Article 51 use of force likewise

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[39] See CHRISTINE GRAY, INTERNATIONAL LAW AND THE USE OF FORCE 120 (2004).

[40] WILLIAM V. O'BRIEN, *The Meaning of Military Necessity in International Law,* 1 WORLD POLITY 109, 113 (1957).

[41] JUDITH GARDAM, NECESSITY, PROPORTIONALITY AND THE USE OF FORCE BY STATES (2004).

[42] Armed Activities on the Territory of the Congo *(Congo v. Uganda), supra* note 5.

[43] *Id.*

depends on accurate perceptions between conflict actors (and their respective decision-makers). New surveillance technologies could thus qualitatively alter international adjudicators' margins of appreciation for what constitutes a "military necessity." In the case of low-intensity iterated attacks attributable to a particular international actor, a victim State's military response after the "Nth" iteration could be acceptably characterized as an act of "military necessity." Likewise, the proportionality of the means employed in the use of force by the Victim State could be better calibrated alongside the long-term objective of self-defence.[44] In the case of the factual observation in Armed Activities, if surveillance technologies definitively established that FUNA safe havens in Congolese territory indeed enabled the repeated transborder attacks, then a stronger argument might have been made in favour of the proportionality of Uganda's military incursion into Congolese territory for the purpose of disabling the FUNA safe havens. Proportionality in the case of jus ad bellum thus takes a more panoramic view of the Victim State's overall self-defence policy, and the minimum use of force required to effectuate such a policy. New surveillance technologies would enable international adjudicators to better contextualize the victim State's decision-making processes on the scope and duration of its use of force in relation to the overriding objective of self-defence.

Jus in Bello Principles

Principle of Distinction or Discrimination (Military v. Civilian Targets)

In their use of military force, parties to armed conflict have a duty to distinguish between combatants and non-combatant

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[44] See E. THOMAS SULLIVAN, *The Doctrine of Proportionality in Time of War*, 16 MINN. J. INT'L L. 457 (2007).

civilian targets.[45] The process of distinguishing direct military participants and valid military targets from non-combatants civilian individuals, groups, and properties, implicates international decision-makers' modalities of judgment within situations of contingency, leaving less time for deliberation than in peacetime, and mainly depending on the operative availability of reliable intelligence. New surveillance technologies can have a significant impact on the ability to distinguish between clearly lawful military targets from 'doubtful' cases where civilians effectively become "unlawful combatants." International adjudicators' qualitative assessments on an individual's direct participation in the hostilities, as opposed to merely incidental or inadvertent contributions to the war effort, could be more clearly delineated with increased universal access to new surveillance technologies.[46]

Principles of Necessity vis-à-vis Proportionality: Doctrine of Collateral Damage and Prohibitions Against Superfluous Injury and Unnecessary Suffering

Unlike the more topographic view of *casus belli* (a State's justification for its use of force under the principles of jus ad bellum), the principle of necessity in jus in bello is more microscopically understood as a concept that forestalls unrestrained barbarity among combatants, balancing fundamental needs of humanity

[45] Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, Art. 51(3), 8 June 1977, 1125 UNTS 3 [hereinafter Protocol I]; Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of Non-international Armed Conflicts, Art. 13(3), 8 June 1977, 1125 UNTS 609 [hereinafter Protocol II].

[46] On the distinctions between direct participation and mere contribution to the war effort, see Commentary on Protocol I, art. 53, in Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949 619 (Yves Sandoz, Christophe Swinarski, & Bruno Zimmermann, eds., 1987).

against the strategic desire for military victory.[47] There is, however, no strict dichotomy between jus ad bellum necessity and jus in bello necessity: "The rules of jus in bello are designed in a way measuring the advantage of the belligerent state derived from the concept of military necessity against the concepts of humanity and proportionality. The very concept of such necessity, which is the measure of the propriety of the exercise of belligerent actions, relates to the advantage that the belligerent may derive in pursuing his campaign and achieving the goals for which he is fighting. In the case of the aggressor, this is the reason for which it started the war, that is the very act of aggression. Thus, the military necessity under just in bello is by no means a free-standing concept, but is linked to the very cause of the relevant conflict and thus, is an emanation of the causes of war under jus ad bellum. This is yet another confirmation that the complete separation of the two bodies of law is impossible. There can be no two sets of rules one of which says that the aggressor state is responsible for its aggression and damage caused thereby, and another says that the same state is not responsible for that damage which it caused during the same aggressive war through its actions within the military necessity."[48] Finally, in much the same way that military necessity and proportionality are tested jointly in jus ad bellum, the principle of necessity is generally understood in conjunction with the principle of proportionality.

Proportionality in jus in bello looks at the consistency or fit between the means and methods of warfare, and the military objective sought to be accomplished. With respect to objects, military objectives "are limited to those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total, or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage."[49] The principle of proportionality

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[47] See CRAIG J.S. FORREST, *The Doctrine of Military Necessity and the Protection of Cultural Property During Armed Conflicts,* 37 CAL. W. INT'L L. J. 177 (2007).

[48] *Id.*

[49] Art. 52 of Additional Protocol I to the Geneva Conventions of 12 August 1949.

animates precautionary measures and the duty of care required under Article 57 of Additional Protocol I to the Geneva Conventions:

> ***Article 57.—Precautions in attack***
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> 1. In the conduct of military operations, constant care shall be taken to spare the civilian population, civilians, and civilian objects.
> 2. With respect to attacks, the following precautions shall be taken:
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>   (a) Those who plan or decide upon an attack shall:
>   (i) Do everything feasible to verify that the objectives to be attacked are neither civilians nor civilian objects and are not subject to special protection but are military objectives within the meaning of paragraph 2 of Article 52 and that it is not prohibited by the provisions of this Protocol to attack them;
>   (ii) Take all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians, and damage to civilian objects;
>   (iii) Refrain from deciding to launch any attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated;
>
>   (b) An attack shall be cancelled or suspended if it becomes apparent that the objective is

not a military one or is subject to special protection or that the attack may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated;

(c) Effective advance warning shall be given for attacks which may affect the civilian population, unless circumstances do not permit.

3. When a choice is possible between several military objectives for obtaining a similar military advantage, the objective to be selected shall be that the attack on which may be expected to cause the least danger to civilian lives and to civilian objects.
4. In the conduct of military operations at sea or in the air, each Party to the conflict shall, in conformity with its rights and duties under the rules of international law applicable in armed conflict, take all reasonable precautions to avoid losses of civilian lives and damage to civilian objects.
5. No provision of this Article may be construed as authorizing any attacks against the civilian population, civilians or civilian objects.

Significantly in *Beit Sourik Village Council v. Israel,*[50] the Israeli Supreme Court declared that proportionality is recognized as a "general principle of international law" which applies even to the duties of a military occupier: "the means that the administrative body uses must be constructed to achieve the

[50] HCJ 2056/04, Israeli Supreme Court, 30 June 2004; See also Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, 2004 I.C.J. No. 131 (Advisory Opinion).

precise objective that the administrative body is trying to achieve. The means used by the administrative body must rationally lead to the realization of the objective." Moreover, "the means used by the administrative body must injure the individual to the least extent possible. In the spectrum of means that can be used to achieve the objective, the least injurious means must be used." Finally, "the damage caused to the individual by the means used by the administrative body in order to achieve its objectives must be of proper proportion to the gain brought about by that means." These principles, as applied by the Israeli Supreme Court, analogously refer to the jus in bello principle of proportionality in relation to the doctrine of collateral damage and the prohibitions against superfluous injury and unnecessary suffering.

Access to new surveillance technologies may thus call for a different necessity-proportionality metric than has been traditionally conceptualized in conventional warfare. An international adjudicator's after-the-fact assessment of a military action (e.g. its achievement of a specified military objective, inflicting the least possible collateral damage, if any, and carefully avoiding the infliction of superfluous injury and unnecessary suffering) could more realistically be aligned with the expectations of the conflict actors within the specific time and fact horizon in which the military action is undertaken.[51]

In sum, the above subsections on jus ad bellum and jus in bello principles illustrate the possible qualitative adjustments that an international decision-maker could foreseeably make with the introduction of new surveillance technologies. Technological advances, where comparable among international actors, make these kinds of fact-based contextual calibrations possible for international adjudicators. Asymmetries in access to these new surveillance technologies, however, could be "dangerous" in the sense meant by international lawyer Charles

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[51] See W. MICHAEL REISMAN, *The Lessons of Qana*, 22 YALE J. INT'L L. 381 (1997).

De Visscher when he alluded to a restatement of the laws of war by international jurists.[52] Aggressors may be paradoxically held to a lower evidentiary threshold than victim States. Victim States may also end up assuming conversely disproportionate evidentiary burdens in jus ad bellum and jus in bello. While a victim State with access to cutting-edge surveillance technology could find itself enabled to make a better case that an "armed attack" has transpired under which it can lawfully exercise its Article 51 right of self-defence, it may also end up hampered by more restrictions to the available means and methods of warfare that it can legitimately use in a theatre of war.

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[52] CHARLES DE VISSCHER, THEORY AND REALITY IN PUBLIC INTERNATIONAL LAW (1968).