
Drone Programs Reconfiguring War, Law, and Societies around Threat Anticipation

This is a story about how war, drone technologies, and the law interact and reshape one another in the counterterrorism context.¹ This interaction between war, drone technologies, and the law constitutes what is called here a program. By conceptualizing this interaction as forming a program, this book shows how the elements surrounding and constituting these programs form a network of interrelated factors. The book draws together the technological, the military, and the legal, without centering on one of these elements as being isolated² or singular.³ This attempt to explore drone uses as a program entails compiling their textual, bureaucratic, and material traces and thus avoids reducing the phenomena surrounding drone uses to drone strikes. The book is accordingly an act of making visible the multiple textures of the socio-techno-legal phenomena related to drone technologies, from surveillance to targeting. Ultimately, this book lays bare the ways in

¹ This study focuses on aerial drones that are used for military purposes, also called “combat drones,” “military drones,” Unmanned Combat Aerial Vehicles (UCAV), or Remotely Piloted Aircraft Systems (R.P.A.S). *Oxford Essential Dictionary of the US military*: A drone is “a vehicle designed to be remotely controlled during operations on land or sea or in the air.” Human intervention is still at play. In this sense, drones have to be distinguished from autonomous weapons systems. Drone pilots, and not the drone itself, make the decision to kill. The case studies are mostly related to drones that are not only equipped with surveillance capabilities but also capable of conducting lethal strikes. This does not mean that the findings are only applicable to this type of drones. In fact, many findings apply to surveillance drones, especially when they are used in the same contexts as combat drones.

² John Law, *Aircraft Stories: Decentering the Object in Technoscience* (Duke University Press, 2002), 2: Law talks about fractional coherence as the way of “drawing things together without centering them”; “Knowing subjects, or so we’ve learned since the 1960s, are not coherent wholes. Instead they are multiple, assemblages. This has been said about subjects of action, of emotion, and of desire in many ways, and is often, to be sure, a poststructuralist claim. But I argue in this book that the same holds for objects too.”

³ *Ibid.*, 3–4. Considering these elements or factors as singular, would entail assuming that they hold together coherently.

which drone programs extend warfare in time and space, while exacerbating state power.

How can and should one write a story about such multi-textured phenomena?⁴ This book embraces and cultivates the idea that the purpose of (socio-)legal scholarship is not to clarify or simplify social phenomena, in our case, socio-techno-legal phenomena.⁵ The book identifies as many textures and elements composing such phenomena as possible – a potentially endless exercise if not delineated by time, space, and subjectivity, as it is here. In doing so, the book intends to make some of drone programs' textures visible in a meticulous way. Simultaneously, by telling this story of drone programs, the book cannot avoid performing and producing them.

Interest in drone wars is unlikely to fade for many reasons. Drone wars that reached a peak in the United States (US) in the early 2010s⁶ are now spreading. While most literature on drone wars has focused on the US drone wars, this study intends to grapple with the role that the technology plays in reshaping warfare and pushing gray legal areas to breaking points beyond the confines of US drone wars of the Obama era. It explores the UK and French case studies alongside the US drone wars under Presidents Bush, Obama, and Trump. Following the UK, which started using combat drones in 2014,⁷ France started using its first armed Reapers from its Niamey base in Niger against jihadist groups in the Sahel region in late 2019⁸ and is still involved in the Sahel region.⁹ In addition, in February 2019, Australia announced the development of a locally designed combat drone, capable of both surveillance and

⁴ This exercise in self-reflexivity about positionality when trying to make visible the different facets and elements of textured phenomena is encouraged by John Law, both in his *Aircraft Stories*, *ibid.* and in John Law, *After Method: Mess in Social Science Research* (Routledge, 2004).

⁵ Law, *After Method*.

⁶ See Database of The Bureau of Investigative Journalism on Drone Warfare, www.thebureauinvestigates.com/projects/drone-war.

⁷ See statistics of Drone Wars UK, <https://dronewars.net/uk-drone-strike-list-2/>.

⁸ Madame Florence Parly, Ministre des armées, Université d'été de la défense 2017, "Discours de clôture," Toulon, September 5, 2017, www.defense.gouv.fr/salle-de-presse/discours/discours-de-florence-parly/discours-de-cloture-de-florence-parly-universite-d-ete-de-la-defense-2017; Loi de programmation militaire 2019–2025, July 2018, see also the Annexed report; Nathalie Guibert, "La France entre dans l'ère des drones armés," *Le Monde*, March 21, 2019, www.lemonde.fr/international/article/2019/03/21/la-france-entre-dans-l-ere-des-drones-armes_5439209_3210.html.

⁹ French Ministry of Armed Forces, Opération Barkhane, www.defense.gouv.fr/operations/bande-sahelo-saharienne/operation-barkhane.

targeting,¹⁰ and the manufacturing by Boeing is being finalized at the time of writing in March 2022.

Even if this book focuses on the use of combat drones by states against non-state actors, it is interesting to note that non-state armed groups increasingly use commercial drone technology to manufacture their own home-made explosive systems of varying degrees of sophistication.¹¹ Still today, however, drones used by non-state armed groups do not share the technical capacities of state-used drones, not only in terms of strength and precision of the strikes they are capable to conduct, but also with regard to the surveillance apparatus that characterize state-used drones on which this study focuses.

The preoccupations of the book are organized around a series of questions. How do drone technologies (from surveillance to targeting capacities), legal narratives, and military strategy interact with and reshape one another? What reality does this interplay bring about? Is there anything specific to counterterrorism uses of drones and drone technologies that explains the intensification of the pressures put on the international norms regulating the use of force in the counterterrorism context?

1.1 Drone Programs as a Network of Interacting Factors: Law × Technology × Military Strategy × Enemy

Describing drone programs as a network of interacting and interdependent factors including the contemporary technological capacities of drones, law, and military strategy is one of the main aspects of this study. All chapters identify where and how these factors converge or diverge and examine the result of this interaction. This description shows that combat drone technologies facilitate anticipatory warfare – the scope of which is indefinite in time and space – and that the law is rearranged around anticipation.

¹⁰ Minister for Defense, the Rt. Hon. Christopher Pyne MP, Joint Media Release, “Australian-Designed Unmanned ‘Loyal Wingman’ Aircraft to Be Developed with Industry,” February 27, 2019, www.minister.defence.gov.au/minister/steven-ciobo/media-releases/australian-designed-unmanned-loyal-wingman-aircraft-be.

¹¹ Ash Rossiter, “Drone Usage by Militant Groups: Exploring Variation in Adoption” (2018) 34 *Defense and Security Analysis* 2, 113–26; Linda Schlegel, “Interview: Rising Drone Capabilities of Non-state Actors,” *Global Risk Insights*, April 17, 2018, <https://globalriskinsights.com/2018/04/interview-risk-non-state-actor-drone-capabilities/>.

Anticipation in a war paradigm means that the decision to use force is based not on material circumstances of armed attack or participation in hostilities, depending on the framework we are interested in. Instead, the decision to use force is triggered by the behavior of the target and elements of context, taken to reveal that the individual belongs to a transnational terrorist group. The objective to anticipate threats dictates that if there is a capacity to kill an individual who has a hostile intent and belongs to a militant group before they conduct an attack, action is taken based on available behavioral and contextual elements. The military strategy and practice of anticipation at war in the counterterrorism context can be broken down and conceptualized in two ways: first, through what the book calls individualized warfare, and second, through its corollary, the dematerialized decision to use force. Drone surveillance and strikes consist in identifying dangerous figures (*individualized warfare*) rather than responding to witnessed acts of hostilities (*material warfare*).

The studied states have crafted legal narratives to justify this individualized and dematerialized kind of warfare facilitated by drones. These states have put the laws regulating the use of force against non-state armed groups at the heart of their justification and interpreted them to accommodate anticipatory warfare. These narratives have stepped up the pressure put on the norms, by exploiting legal uncertainties such as that regarding the temporal scope of conflicts, and by offering novel legal interpretations, such as direct participation in hostilities in the form of continuous combat function, or the right of self-defense as a paradigm to tackle threats posed by individuals with hostile intent rather than by armed attacks.

Further examining the socio-techno-legal phenomena produced by drone programs, the book explores the long-term effects of drone programs over populations living under drones in particular, and over the international legal order in general. While the literature provides a thorough discussion of the different legal interpretations suggested by the US and the UK to regulate drone operations, scholarly reflections have not focused on the broader socio-legal implications of drone programs as a whole. Because it was initially ruled out that drones might play a specific role in reshaping the military strategy and practice against non-state actors and in making new legal rationales emerge, the extra step of investigating the potential long-term effects of drone programs was not made. I give a concrete account of US power rituals through the analysis of the US drone program as it is the most stable and the one that has been the object of socio-legal investigations. In a granular manner, the book

shows that once drone programs are institutionalized, they have a serious impact on state power, with an operating state that conducts rituals of sovereignty over the populations living under drones.

The book proposes an explanation for how and why states active in the war on terror use the law in more or less malleable ways depending on the actor concerned. On the one hand, third states, affected by this expansion of state power, are tamed through notions such as unwilling/unable. While such concepts derive from extensive legal interpretations, the norms so interpreted are still recognizable. On the other hand, jihadist groups – which in the last instance are the *raison d'être* of this expansion of a surveillance and targeting apparatus extraterritorially – are the object of legal rationales that push legal gray zones to breaking points to such an extent that some norms' contents and meanings are difficult to recognize, and the possibility of infinite warfare emerges.

Different theories about the law have emerged from the debate on the proposed legal rationales for drone programs. On the one hand, the US legal rationales articulated for the development of the US drone program – used to certain extents by France and the UK – have never consisted in pseudo-scientific discourses or truth claims about the law. They do not claim that there is only one possible interpretation (the one they support) of international legal norms. On the contrary, they rest on the idea that a norm can be interpreted in multiple ways as norms and their open texture provide possibilities for struggles and reasonable disagreements about the interpretation of norms. Furthermore, these legal rationales consider that such struggles and reasonable disagreements are necessarily embedded in specific contexts and depend on contemporary goals and tactics. Following this understanding of the law, the studied states propose norm interpretations in accordance with a specific context – the war against transnational jihadist groups – in accordance with a certain mode of warfare – data warfare, and precise targeted killings, through drones – and adapted to a related military strategy – anticipation of threats and individualization of war.

On the other hand, most legal scholarship against the use of drones tends to deny that the content(s) of norms have a historical trajectory and often frames absolute truth discourses about the content of the norms. They tend to neglect the room for reasonable disagreements and sound unrooted in front of states' legal rationales. This book suggests that states' legal rationales reflect a more powerful and refined theory about the law than the theory embraced by many scholars and NGOs who have argued against drone programs. As a result of weak counterarguments, the book

shows that states active in the war on terror have exploited the semantic possibilities of the norms and their uncertainties in such a way that their rationales have reset some of the limits and reshaped the contents of key conceptual differentiations and oppositions (combatant/civilian, criminal/enemy, status/conduct, battlefield/non-battlefield).

Another flaw in existing debates, exceptions aside,¹² is that most of the literature on drone uses treats drones just like any other (discriminate) weapon.¹³ Many studies on post-9/11 drone strikes against terrorists revolve around two points: first, that drones are not inherently problematic and should be treated like any other weapon; and second, for some (underexplored) reason, the way drones are used has posed an unprecedented challenge to the legal frameworks applicable to the use of force. In other words, these studies assume that there is nothing specific, or special, about drones. The report of the U.N. Special Rapporteur on extrajudicial, summary, or arbitrary executions Agnes Callamard of June 29, 2020 encapsulates this lasting hybridity, if not paradox, in how drones are studied:

A reasonable argument can be made that to single out drones is misplaced, given that many targeted killings are carried out by conventional means – e.g. Special Operations Forces. Indeed, these also raise serious concerns. The present report thus contains findings applicable to all forms

¹² See, on the contrary, studies or at least references to the potential consequences of drones' technological capacities: Mary Ellen O'Connell, "Seductive Drones: Learning from a Decade of Lethal Operations" (2011) *Journal of Law, Information & Science*, Notre Dame Legal Studies Paper No. 11–35; Laurie R. Blank, "After Top Gun: How Drone Strikes Impact the Law of War" (2012) 33 *University of Pennsylvania Journal of International Law* 3, 675; Grégoire Chamayou, *Drone Theory* (Broché, 2015); Eyal Benvenisti, "The Legal Battle to Define the Law on Transnational Asymmetric Warfare" (2010) 20 *Duke Journal of Comparative & International Law* 339–59.

¹³ Rosa Brooks, "Drones and the International Rule of Law" (2014) 28 *Ethics & International Affairs* 1, 83–103; Michael N. Schmitt, "Drone Attacks under the *Jus ad Bellum* and *Jus in Bello*: Clearing the 'Fog of Law'," in M. N. Schmitt, Mike N. Schmitt, Louise Arimatsu, and Tim McCormack (eds.), *Yearbook of International Humanitarian Law*, Vol. 12 (T.M.C. Asser Press, 2010), 313: "The article concludes that there is little reason to treat drones as distinct from other weapons systems with regard to the legal consequences of their employment." Jean-Baptiste Jeangène Vilmer, "Légalité et légitimité des drones armés" (2013) 3 *Politique étrangère* 199–32; Stuart Casey-Malsen, "Pandora's Box? Drone Strikes under *jus ad bellum*, *jus in bello* and International Human Rights Law" (2012) 94 *International Review of the Red Cross* 886, 597–625; Christian Tams and James G. Devaney, "Jus ad Bellum: Crossing Borders to Wage War against Individuals," in Steven J. Barela (ed.), *Legitimacy and Drones* (Taylor & Francis, 2016), 46; Hugh Gusterson, *Drone: Remote Control Warfare* (The MIT Press, 2016); Sarah Kreps and John Kaag, *Drone Warfare* (Polity Press, 2014).

of targeted killings, no matter their method. Nonetheless, understanding the particularities of armed drone technologies is crucial if we are to keep pace with current and expected developments impacting on the protection of the right to life.¹⁴

The intuition and persistence in considering, after nearly two decades of US drone program, that drones are not in themselves vectors of meaningful developments correspond to a vision of state actors as agents in full autonomy and control of the course of action. Yet, the perspective that only the decisions of state agents matter in understanding practice and legal change is misleading as it overlooks the power of other actors, including that of technology. State representatives, their decisions, and the legal evolutions they instigate, do not exist in a vacuum. While it is true that the legal and political discourses used to justify the way that drones are employed challenge the law, they are only some out of many components of the natural and manufactured world. State agents' choices are generated by an evolving environment within which they generate new habits and practices. The essence of a technology lies in how it encourages actors to re-perceive the world and their own practice within it.

When this book holds that the strategy of drone programs and individualized warfare would not exist as such were it not for their technological capacities, it does not mean that military drones are a brand-new tool or that their current capabilities were not sought after and progressively achieved. On the contrary, the idea of arming drones was contemplated from the onset of their development.¹⁵ The Digital Revolution, from the late 1950s to the late 1970s, fostered the development of drones for surveillance purposes. Moving from technological development to practice, the US started to use military drones to collect intelligence during the Vietnam War.¹⁶ They were followed by Russia, which

¹⁴ Human Rights Council, "Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions," U.N. Special Rapporteur Agnes Callamard, June 29, 2020, A/HRC/44/3, para. 3.

¹⁵ William Arkin, *Unmanned: Drones, Data, and the Illusion of Perfect Warfare* (Little, Brown, 2015), chapter 5; Barry D. Watts, "The Evolution of Precision Strike" (2013) Center for Strategic and Budgetary Assessments, <https://csbaonline.org/uploads/documents/Evolution-of-Precision-Strike-final-v15.pdf>, 17–18.

¹⁶ David Cenciotti, "The Dawn of the Robot Age: US Air Force Testing Air-Launched UCAVs Capable to Fire Maverick and Shrike Missiles in 1972," *The Aviationist*, March 14, 2012, <http://theaviationist.com/2012/03/14/the-dawn-of-the-robot-age/>; Ian G. R. Shaw, *Predator Empire: Drone Warfare and Full Spectrum Dominance* (University of Minnesota Press, 2016), 71.

deployed surveillance drones for military intelligence purposes in Ukraine, Belarus, and Latvia.¹⁷ In 1973, Israel used surveillance drones during the Yom Kippur War, and again in 1982 when invading Lebanon.¹⁸ During the first Gulf War and during the Kosovo War, military drones were used for intelligence, surveillance, and reconnaissance purposes.¹⁹ Yet it was between the Kosovo War and military intervention in Afghanistan that their use morphed from surveillance to surveillance *and* combat drones.²⁰ In February 2001, the US Air Force carried out the first successful experimental strike in the Nellis Air Force Base where a Predator drone successfully deployed a Hellfire missile against its target.²¹ From a fictional situation with a fictional target, combat drones were first used in real situations against real targets later the same year. US drone operators stationed in the Nevada Desert started to conduct drone strikes extraterritorially in several zones across the globe. The US was followed by the UK and Israel,²² and more recently by France.²³ From 2001 onward, drone strikes were officially conducted in Afghanistan, Yemen, Pakistan, Somalia, Libya, Syria, Iraq, and the Occupied Palestinian Territories.

While drones are not new, contemporary drones possess unprecedented capabilities. Aerial military drones are used to kill but they also have surveillance capacities. Recent technological advances have multiplied drones' operational efficiency by refining and accelerating each step of the decision-making process: orientation, observation, selection,

¹⁷ Yefim Gordon, *Soviet/Russian Unmanned Aerial Vehicles* (Midland Publishing, 2005); Océane Zubeldia, *Histoire des drones* (Perrin Editions, 2012), chapter 1.

¹⁸ Ben Hartman, "Ya'alon: IDF Cuts Revolutionary, Will Recreate Army," *The Jerusalem Post*, July 11, 2013, www.jpost.com/defense/yaalon-idf-cuts-revolutionary-will-produce-new-army-319510.

¹⁹ "Predator Drones and Unmanned Aerial Vehicles (UAVs)," *The New York Times*, updated March 5, 2012, http://topics.nytimes.com/top/reference/timestopics/subjects/u/unmanned_aerial_vehicles/index.html.

²⁰ Arkin, *Unmanned: Drones, Data*, chapter 9: "The Machine Builds."

²¹ Steve Coll, *Ghost Wars: The Secret History of the CIA, Afghanistan, and bin Laden, from the Soviet Invasion to September 10, 2001* (Penguin Books, 2004).

²² UK Drone Strikes List, Drone Wars UK, <https://dronewars.net/uk-drone-strike-list-2/>.

²³ Speech of the French Minister of the Armed Forces, Madame Florence Parly, "Discours de clôture"; Statute, LOI no. 2018-607 du 13 juillet 2018 relative à la programmation militaire pour les années 2019 à 2025 et portant diverses dispositions intéressant la défense, www.legifrance.gouv.fr/eli/loi/2018/7/13/ARMX1800503L/jo/texte, and Annexed report; Guibert, "La France entre dans l'ère des drones armés."

surveillance, engagement, and targeting.²⁴ In other words, armed drones are equipped to “find, fix, and finish” targets.²⁵ The enhancement of the military operational process is achieved because drone’s current technological capabilities have two core objectives: precision and ubiquity. The objective of precision (and related technological tools) concerns not only surveillance and intelligence collection but also the selection of the target and the lethal strike. The objective of ubiquity requires the capacity to be permanently everywhere in order to control, select, and terminate a target.

1.2 Compiling the Textual, Bureaucratic, and Material Traces of Drone Programs as Techno-Legal Machineries

As mentioned, this book can be thought of as an act of compiling the textual, bureaucratic, and material traces of these programs in order to lay bare the infrastructure that is extending warfare in time and space and exacerbating state power. The extraterritorial use of combat drones against non-state actors is not easy to study because of the lack of available information as, among other factors, much of it is classified. For this reason, when drones are used to target people on the territory of failing states, as in the case of Somalia, the affected state, and others, can remain unaware of the use of drones for a long time, or even forever. Besides, by the time suspicions arise that drones have been used, the evidence may well have disappeared. Therefore, it is difficult to obtain exact data on the number of drone strikes and the number of casualties of the strikes.

Some of the best aggregate databases on drone strikes currently available to the public has been put together by The Bureau of Investigative Journalism (TBIJ) and Drone Wars UK, independent journalist organizations, which report on US and UK drone strikes, respectively, and their related civilian casualties.²⁶ Some major think tanks, such as New America, have also reported on drone strikes.²⁷ These databases are also

²⁴ Arkin, *Unmanned: Drones, Data*; Charlie Savage, *Power Wars: The Relentless Rise of Presidential Authority and Secrecy* (Little, Brown, 2015), 240, 273.

²⁵ The Intercept, *The Drone Papers*, September 2015, <https://theintercept.com/drone-papers/the-assassination-complex/>.

²⁶ The Bureau of Investigative Journalism (TBIJ), www.thebureauinvestigates.com/; Drone Wars UK, <https://dronewars.net/>.

²⁷ New America, www.newamerica.org/.

used and fed by law clinics in order to build their own reports.²⁸ Another precious investigative and research project has been led by Forensic Architecture in collaboration with TBIJ. They set up a colossal project with an interactive cartographic web platform that presents the distribution of drone strikes, the context and composition of the area where they took place, the number of people reported killed, and the types of targets reported hit was instrumental in identifying patterns and connections between drone strikes scenarios.²⁹ Other reports, such as “The Uncounted” conducted by Azmat Khan and Anand Gopal published by *the New York Times* provide a detailed account of a drone strike in Iraq that was very helpful in tracking and confirming these patterns and connections.³⁰ Some investigations and reports also come from international organizations, such as organs of the United Nations, especially in the aftermath of a strike contested for having caused civilian casualties.³¹ Information can also be found in reports and resolutions issued by the Human Rights Council that are thematic or country-specific.³² In 2015, confidential documents of the US government and military were

²⁸ See, for example, International Human Rights and Conflict Resolution Clinic (Stanford Law School) and Global Justice Clinic (NYU School of Law), “Living Under Drones: Death, Injury, and Trauma to Civilians from US Drone Practices in Pakistan,” September 2012, www-cdn.law.stanford.edu/wp-content/uploads/2015/07/Stanford-NYU-Living-Under-Drones.pdf, vi.

²⁹ Forensics Architecture, The Drone Strikes Platform, <https://forensic-architecture.org/investigation/the-drone-strikes-platform>.

³⁰ Azmat Khan and Anand Gopal, “The Uncounted,” *The New York Times*, November 16, 2017, www.nytimes.com/interactive/2017/11/16/magazine/uncounted-civilian-casualties-iraq-airstrikes.html?_r=0.

³¹ United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA), “Rapport sur l’incident de Bounty du 3 janvier 2021,” March 2021, https://minusma.unmissions.org/sites/default/files/rapport_final_bounty_bounty9.pdf. This report followed the strike conducted by the French Barkhane forces in the village of Bounty, in Mali, in January 2021, on people who were attending a wedding at the time of the strike.

³² For a thematic report, see Philip Alston, “Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions,” May 28, 2010, Human Rights Council, A/HRC/14/24/Add6; see also Human Rights Council, “Ensuring Use of Remotely Piloted Aircraft or Armed Drones in Counter-Terrorism and Military Operations in Accordance with International Law, Including International Human Rights and Humanitarian Law,” Resolution A/HRC/25/L.32, March 24, 2014; Christof Heyns, “Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions,” April 24, 2015, Human Rights Council, A/HRC/29/37; for a country report, see “Report of the United Nations High Commissioner for Human Rights on the Situation of Human Rights in Afghanistan and on the Achievements of Technical Assistance in the Field of Human Rights in 2013,” January 10, 2014, A/HRC/25/41, §21.

leaked by The Intercept.³³ Finally, drone operators themselves can be a source of information on the military strategy implemented through drone surveillance and drone strikes.³⁴

Evidence of drone strikes provided in testimonies, reports by journalists, NGOs, international organizations but also by official statements or legislative documents at national level has allowed me to distinguish and study two different types of drone strikes: *targeted killings* and *signature strikes*. A targeted killing is “the intentional, premeditated and deliberate use of lethal force, by States or their agents acting under color of law, or by an organized armed group in armed conflict, against a specific individual who is not in the physical custody of the perpetrator.”³⁵ Therefore, an individual who is subject to a targeted killing is identified beforehand. By contrast, *signature strikes* consist of drone operators “fir[ing] on people whose identities they do not know based on evidence of suspicious behavior.”³⁶ In other words, signature strikes aim to target individuals, groups of individuals, vehicles, buildings, and so forth where it is possible to report suspicious behavior or signs of a significant threat of harmful behavior. State practice of signature strikes is the most obscure and difficult to study as major information about what criteria trigger suspicion and what elements compose the profile of an individual who is considered a legitimate target is lacking. In order to fill this gap, all available narratives on drone strikes, published and related in informal discussions, were used in order to identify a set of criteria that seemed to systematically play a role in the decision to kill. Reflections that follow are made on the basis of primary and secondary sources, and discussions with a broad range of actors from governmental officials to NGO members and journalists – discussions facilitated by my involvement as observer member of the European Forum on Armed Drones, my former

³³ The Drone Papers, The Assassination Complex, The Intercept, October 2015, <https://theintercept.com/drone-papers/the-assassination-complex/>.

³⁴ M. Drevet, L. Mieuisset, R. Mignot-Mahdavi, C. Pinel, and A. Yehiel, “Testimony of a French Drone Operator: Anticipatory Strikes in the Sahel,” *European Forum on Armed Drones (EFAD)*, February 16, 2022, www.efadrones.org/testimony-of-a-french-drone-operator-anticipatory-strikes-in-the-sahel/. The testimony can be found here: www.irsem.fr/le-collimateur/dans-le-viseur-27-frappe-de-drone-dans-le-desert-malien-09-04-2021.html and its translation into English here: www.efadrones.org/wp-content/uploads/2022/02/Drone-strike-in-the-Malian-desert_interview-in-English-2.pdf.

³⁵ Alston, “Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions,” A/HRC/14/24/Add.6, para. 1.

³⁶ Cora Currier and Justin Elliott, “Drone Warfare ‘Signature Strikes,’” *Global Research*, February 27, 2013, www.globalresearch.ca/drone-warfare-signature-strikes/5324491.

affiliation to the French Ministry of Defense's research center in 2015, and my time in New York at Columbia Law School as a Research Fellow of the Human Rights Institute in 2018. These discussions helped me corroborate and test hypotheses, but all errors remain my own.

Assembling empirical evidence to make visible the different procedures, elements, and textures of drone programs is necessary but not sufficient. While the literature is already rich with doctrinal analysis of the legal issues raised by the use of force, including through drones, doctrinal analysis had to play a role in this book, and one that is essential to the argument about the interplay between law, military strategy, and technology. Adopting the internal point of view was crucial in order to identify which available options within each legal concept have been mobilized to push for a specific use of drones. In other words, deciphering the legal narratives from within was critical in order to be precise about the features of the war they support. Without doctrinal analysis, the book would not manage to identify with depth what shape warfare is taking or how law and technology intimately affect one another. Besides, to decompose and recompose the legal narratives in all their complexity was key to showing that law is not receding in the face of transnational terrorist threats but almost at the epitome of its strength and power; to showing, more specifically, that law is rearranged around anticipatory warfare. Adopting the external point of view in the book complements this method and allows me to make sense of the institutional transformations that take place in order for drone programs' specific structures to emerge, to make sense of the new reality that drone programs bring about and of the techno-legal possibilities available in this counterterrorism space, including the new possibilities for international legal norms.

The concepts of legal gray zones and uncertainties are recurring in this book. The book adopts the viewpoint that such gray areas are inherent to legal norms. Just as it is banally human to ignore what the future holds, it is logical that behavior is regulated according to general standards alone. Such standards are then applied to particular cases that were not, and could not have been envisaged when the norm was initially created.³⁷

³⁷ While this feature of the law is commonly attributed to legal realism or critical legal studies (see Jean D'Aspremont, *Formalism and the Sources of International Law* (Oxford University Press, 2011), 138: "Legal realism had long ago proved that law is beset by indeterminacy and that its language is insufficient to provide a determinate answer to problems which it is purported to apply to, thereby endowing law-applying authorities

In order to take place, this application involves that the relevant actors of a system – in the international legal order, these actors are more often states than judges – interpret the general standard. This interpretation can remain constant and submitted to limited controversies as long as the circumstances remain unchanged. During this period of time, the norm may well appear clear and certain. Yet, when circumstances change, the norm’s inherent gray areas and indeterminacies – which had hitherto remained invisible – will be salient again and trigger discussions about any proposed new interpretation. In such circumstances, legal uncertainty leads to (reasonable) disagreement in the sense that some plausible arguments can be formulated in support of each interpretative theory. Hence, norms present a certain degree of uncertainty but also of constraint: there are only so many interpretative options and reasons for action available in a legal norm. This is precisely why the positivist idea that because we can give a norm content, we can know the “truth” about what the law exactly requires, is simplistic and inaccurate. The fact that we can give content to the norm means that the structure of concepts may *limit* the set of reasons that are available to justify action, but not that it gives us only *one* meaning on the basis of which we can criticize conduct as clearly falling within or outside the concept. What often prevents the legal debate from being fruitful is precisely when its participants do not accept that there is not only one possible interpretation of the norm and that additional reasons in support of a given interpretative theory must be mobilized for it to prevail.

In the light of the above, this study rests on the idea that despite inherent gray areas and uncertainties, international legal norms can perform constraint, albeit modest, on how states articulate their reasons

with a leeway that allows them to make decisions according to their understanding of justice”), even famous legal positivists asserted the indeterminate nature of the law (see H. L. A. Hart, *The Concept of Law*, 2nd ed. (Clarendon Press, 1997 [1961]). Hart wrote entire chapters respectively on discussing the open-textured feature of law, the inevitability of exercising discretion for applying the law and on the rule-creating powers of judges. In the same vein, Kelsen highlighted that all law is partly determinate and partly indeterminate, and that applying the law involves a cognitive and a willful act. In a similar line, Raz notes that legal authorities do not necessarily or always apply the law of a given system/legally valid rules). See for a very helpful analysis of law’s open texture and determinacy, Robert Brandom, “A Hegelian Model of Legal Concept Determination,” in Graham Hubbs and Douglas Lind (eds.), *Pragmatism, Law, and Language* (Routledge, 2014), 19–39.

for what they do.³⁸ However, another phenomenon – related to law’s content and limited determinacy – pertains to the fact that the logical determinacy of norms rests on specific concrete presuppositions and scenarios. When the norms are applied to different scenarios than those on which they were initially premised, this book argues that states make extreme propositions about legal concepts that ultimately change their very object or make them lose any constraining function. As a consequence, it becomes very difficult to determine what the norm content is: this is what is meant by “exacerbating the pressures put on the norms regulating the use of force” or “push to breaking points uncertainties in the law.” In other words, the book suggests that while the semantic indeterminacy of a norm is not unlimited, the way in which such a semantic frame of certain legal concepts is exploited can lead to a disturbing situation where it is very hard (if not impossible) to use it in order to regulate conduct.

1.3 A Techno-Legal Machinery

A machinery is the assemblage of multiple machines, forces, and factors that altogether produce an activity, practice, or phenomena that would not have existed were it not for this assemblage and the interaction of forces set in motion.³⁹ Naming drone programs – the assemblage of a human, social, and technological elements – a “machinery” is an

³⁸ On the contrary, a legal realist or a critical legal scholar would almost always argue that the law can never perform a constraining function, and that if it does, it does not have anything to do with the norm’s semantics but rather with power relationships and political choices. See, for example, Karl N. Llewellyn, *Jurisprudence: Realism in Theory and Practice* (Transaction Publishers, 2008 [1962]): Llewellyn considers that court decisions can almost never be explained by reference to legal reasons, which are assumed to always be indeterminate, but rather by reference to the political or ideological beliefs of judges.

³⁹ My definition builds on the conceptual work done by Michel Foucault around the concept of machinery that he uses on several occasions without ever clearly defining it and sometimes as a synonym for “dispositif” or “appareil.” See, for instance, in Michel Foucault, *Surveiller et Punir: Naissance de la Prison* (Gallimard, 1975), 67, 139, 158, 165, 175, 179, 203, 205, 212, etc. See also Michel Foucault, *Les Anormaux. Cours au Collège de France. 1974–1975* (Gallimard, 1999), 34. Although he does not define the concept in a rigid manner, Foucault describes various machineries (of disciplinary power, of the justice system, or of the prison system, for instance) in a way that has accompanied and informed the description made in this book of drone programs as a set of forces and factors giving birth, through their assemblage and interaction, to infinite warfare and exacerbating state power.

invitation to trace the genealogy of this interaction of factors and what it produces. The products of the machine lie outside and within the machine. They lie in the procedures, modes, and types of interactions between these forces (here, law, drone technologies, and military strategy) and between these forces and other elements beyond the said machinery. Machineries are performative as they infiltrate, capture, or conduct human bodies, behaviors, and institutions, and shape social interactions.⁴⁰

The argument of the book that drone programs in international law are a techno-legal machinery extending warfare and exacerbating state power unfolds as follows. After going through all contexts of uses of drones by the three studied states, the US, the UK and France, in Chapter 2, Chapter 3 demonstrates how drone strikes can be progressively embedded in an institution, thereby substantiating the shared intuition that they deserve to be referred to as part of a “machinery” or a “program.” I show that the use of drones appears as an institution through the formation of a bureaucracy, the stabilizing force of the technology itself, and normalizing power of legal rationales. In Chapters 4, 5, and 6, I use both doctrinal and empirical methods to analyze the type of war that emerges from drones’ techno-legal machinery. I show how, through narratives about the law and imaginaries about drones’ technology crafted by states active in the war on terror, war is rearranged around threat anticipation to target hostile individuals (Chapter 4), how war is thus designed to combat ever-proliferating enemies/ever-expanding enmity (Chapter 5), and how war, finally, is devised to take place anywhere (Chapter 6). Finally, Chapter 7 warns about the less visible effects of an infinite warfare conducted through surveillance technologies and building on extensive legal interpretations, both for the populations living under drones and for other states in the international legal order. I argue that, beyond the extension of warfare in time and space, drone programs as a techno-legal machinery establish rituals of sovereignty over the populations living under drones. Analyzing this extension of state power and the use of legal rhetoric to make the disruption of sovereignty acceptable allows me to differentiate between malleable uses of the law and its uncertainties to tame the “other inside,” that is, states, on the one hand, and deformalization of norms to annihilate the “other outside,” that is, jihadist groups, on the other hand.

⁴⁰ Michel Foucault, *Surveiller et Punir*, 139.

The epilogue retraces the explanations, inchoate in the book, of *why* this exacerbation of state power resting on enhanced technological capacities and de-/reconstructed legal frameworks is taking place.⁴¹ It suggests that this socio-techno-legal phenomenon of extensive warfare and state power has developed because of the infinite enmity that characterizes the relationship between states and transnational jihadist groups and networks.

⁴¹ See Epilogue.