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Drone warfare and the metamorphosis of battlefield: security, space and technology

"It is the role of people like us to change the parameters of rationalities, 'cause it is not enough to have a moral critique of [Western] militarism, we need something deeper. We have to pull it out from its roots because militarism has become more than a habit, it has become essentialto the [Western] political economy".

Professor Vijay Prashad, Boston (2017)

CHAPTER ONE

1. Introduction

Places as houses, street markets, urban areas, bedrooms, or rooftops, neither were projected nor thought to be as varied asspaces of politicized violence. With the advent of drones it has become possible to bring control, death and war even there, with incredible precision and minimized effort. HughGusterson (2016)argues "drones have re-spatializedthe concept of war". Likewise,Derek Gregory(2011a)states that with drones new "spatialities of exception" have emerged in ordinary life.Grondin (2013) and similarly Graham (2009a) think the traditional battlefield has not disappeared, but rather it has become enormously fragmented and has escaped from traditional geographical and temporal constraints.Thus, it seems reasonable to problematize such assumptions and to look further atdrones and the geopolitical spaces where they interact with humans. Three concepts will be essential for disentangling the complex relationship between drone warfare and "geo-politics": first, a space, the battlefield (1); second, an object, the drone (2); and third,a practice of security, surveillance and targeted killing (3).

First (1), the research is interested in understanding and deconstructing a specific social space, the battlefield.According to theOxford English Dictionary (2018),the "battlefield or battleground is the piece of ground where a battle is or was fought". As noticeable, in this proposition the battlefield is not defined as anindeterminate space(i.e. a neutral interval), but rather as a precise and localized place, presumably located on the earth, since the Oxford definition speaks of a "piece of ground". Moreover, the verbs' tenses express that the battlefield is a reality relegated to a specific timeframe, which can be either in the past or the present, but forcefully requiresalimited temporal configuration.It can be said that the battlefield has not an autonomous or natural existence, but rather it is a constructed space, which ownsfirst of alla political and legal significance. As a matter of fact, through the inter-subjectivegeographical definition of the battlefield, war has beencategorized, distinguished and constrained. The traditional battlefield, like the one of Napoleonic wars, has been, over the centuries of military history, a place subject to continuous transformations. As reminded by VanCreveld(2008), only in the twentieth century the places where battles have been fought are multiples and polymorphous; from the Marne valleys of

the First World War to the German cities in the Second, to the forests in Vietnam's Waruntil the urban battles in Iraq; the battlefield has seen enormous metamorphoses and so have the modes of fighting too. Indeed, over the years, new participants have populated the traditional battlefield, both human (un-lawful combatants, terrorists, partisans, etc.) and non-human (horses, artillery, Panzer, airplanes, drones, etc.). The traditional battlefield has been also transferred onto new dimensions, as the maritime, the aerial and the digital ones. Thus, it seems inappropriate to think the battlefield as a fixed and established location. The battlefield is primarily a conceptual category, and as such it operates a communicative distinction (rooted both in practice and language) that in the understanding and in the conduct of armed confrontations is a crucial one. Such distinction is between the condition of war and that of peace, or between allowable patterns of violence and non-allowable patterns of violence. The battlefield is also an "imaginary arena" (Megret, 2012), a space where individuals or groups of individuals have projected their political entities and power ambitions.The battlefield is the place where politics is exceptionally suspended, but it is not absent as in the Hobbesian state of nature.The battlefield is a contested and contestable space as humans reciprocally project power over it. This is probably the reason why the military literature is rich of references as"the domination", "the control" or the "possession" of the battlefield(Megret, 2012).Hence, the prism of the battlefield has important implications for the understandingof the interrelation between actors, space and violence. Indeed, as held by Frederic Megret (2012) "[…] the definition of the battlefield has always been central to the genesis and evolution of the laws of war, and the idea of the battlefield captures more of what constitutes war as an activity than many other indicators".

Second (2), the security object under enquiry is the military robotic flying technology (UCAV or RPA), also known more commonly as drone (the male of the bee). A military drone is generally endowed with cameras for reconnaissance and surveillance operations and equipped with missiles (Scorpion and Hellfire types) for targeting missions. Armed drones, so far, have been successfully deployed in theatres of asymmetric war, most of the times in the frameworkof counterinsurgency (COIN) or counterterrorist (CT) missions. The Israeli Heron and the U.S.-made Predator and Reaper models have been the most common used in military operations;even though,recently, a plethora of new similar versions of Medium Altitude Long Endurancedrones (MALE I and II) have been proliferating around the world (the Chinese Wang II, the Iranian Fotros, the Turkish TAI Anka, etc.(Gettinger, 2016)). The Predator drone has been firstly deployed by theU.S. army during the Kosovo War in 1999 for preliminary ISR tests(Calhoun, 2016, p. 31). Few later, with the beginning of the GWoT, Predator has been weaponized and employed even for target

acquisition and killing(Kaag and Kreps, 2014, p. 12). As reported, the U.S., Israeli Defense Forces and to some extent the U.K., have made an unparalleled use of drones, especially if compared to the sorties of manned aircraft in the same range of time. According to the Stanford & NYU Law School archive (2012) only under the first Obama administration drones have made 5162 sorties, during whom they have carried out 563 missile strikes. While second Obama's administration has been reported having deployed The Bureau of Investigative Journalism (2017) has estimated that drones have killed around 9000 people since 2003, among whom at least a thousand of civilians.

It can be assumed that drones operated for ISR and targeting missions in contested areas between rival states have proven to be poorly effective and in some occasions have been promptly downed by anti-aircraft systems(BBC, 2017; Kershner, 2018). Indeed, among strategists, it is broadly acknowledged that a great-powers war fought with drones is barely imaginable(Freedman, 2016). Drones are slow aircraft; they are easy to detect even with unsophisticated radar systems and they can carry only relatively small weapons. The offensive potential of small weapons carried by a military drone, as the Hellfire missile, cannot endanger but a small building or at most an urban block. Drones indeed are not mass destruction weapons, but precise and silent killing systems. So, it seems misleading to conceive drones as an absolute military breakthrough, because in manycritical situations they cannot replace manned airplanes and helicopters. As a mater of fact, traditional strategies as manned patrolling, tank invasion and boot on the ground troops, still dominate the entire framework of operations and still define the physical existence of a place of battle, otherwise called battlefield.

Rather, it can be held that drones representthe technical accomplishment of the radicalization of air power at distance. Indeed, as antecedently recognized by the U.S. Lieutenant General Deptula, "drones allow to project power, without projecting vulnerability" (Gusterson, 2016, p. 22). Endowed with precision, endurance and wide geographical projection, drones can primarily target single individuals or small groups of individuals with unique accuracy.Drones are the tangible and operational extremity ofa new transforming kind of war,whichis maneuvered through a center that connects a network of humans and non-humans.Humans(pilots, data inspectors, analysts) and non-humans (sensors, cameras, drones, computers) are all interlinkedviasatellites communications, information software, and visual technologies, and constitute an operational network where human soldiers are no more physically engaged on the battlefront. Labeled by the U.S. Vice Admiral Cebrowskias "Network-centric" (P. W. Singer, 2009, p. 16), this warfare is recognized as capable to "translate[s] information superiority into combat power by effectively linking knowledgeable entities in the battle-space" (Hammes, 2006). Network centric warfare has emerged under the momentum of great technological prompt, the latest

Revolution in Military Affairs (RMA). The availability at possessing technological tools as robots and software has allowed isolating and defining security threats in an almost scientific manner. The environment where securitythreats could displace and move has become the scientific "laboratory" of security professionals.

Third (3), the emergence of net-war or network-centric warfare has been the symptomatic side-effect of a constant mutation of security practices,manifested progressively since the end of the Cold War. Indeed, if on the one hand, information technology has opened up new possibilities formaking war more sophisticated, on the other hand the surge of asymmetric conflicts after the end of the Cold War has required a re-conceptualization of traditional patterns of security (Holmqvist-Jonsäter and Coker, 2009, p. 27). Network-centric war has been thought to create an "architecture of tools for common situational awareness" to overcome the chaos and "fog of war" typical of the asymmetric conflicts(Smith, 2001).Arquilla and Ronfeldt (2001) hold that net-war differs from traditional war as it implies using a network of tools for targeting the constellation of infrastructures that sustain the socio-logistical enemy's power, rather than conquering enemy's territory.In such a context, as Dillon(2007a)explains, 9/11 has marked a radical shift, as the U.S. and its allies have had the possibility to deploy an array of advanced technological tools (Balzacq et al., 2010). Control cameras, biometric parameters, social-media inspection, algorithmic data analysis,are just few among the many instruments of security for scientifically categorize and securitize the enemy. They have been tested and extensively applied by the U.S. after 9/11,following the mantra of "countering terrorism". One of the common denominator of all these practices of CT has been the increasingly visible transferring of control and violence from national threats to individual threats(Dillon, 2002).Similarly, in the Arab-Israeli conflict, technology has allowed to map and create an architecture of spatial security all over the Palestinian territory with the aim of securitizing each single potential terrorist(Weizman, 2007, p. 241). Since 2004, in the framework of the second intifada (after 2000), Israeli Forces have been reported to have used drones in Gaza, Golan Heights and West Bank, both for ISR and target acquisition (Currier and Moltke, 2016).

In the almost hysteric process of distinguishing ordinary men from extremely dangerous individuals, the hunt for the "suspected", the "terrorist" or the "illegal" has brought military practices to permeate and invade ordinary life in Western countries, reinforcing the materialization of what is identified as the "military-police nexus" (Bachmann et al., 2014). As Didier Bigo claims, 9/11 has marked the advent of a process of blending between military and police strategies, where police tactics have been adopted as war tacticsin international environments. Accordingly, the differentiation between "inside" and "outside" spaces of security has beengradually eroded by

thenecessity of the "U.S. and its closest allies […] to globalize security" (Bigo and Tsoukala, 2008a, p. 25).

In this landscape, droneshave proven to be a fundamental element for data gathering, target acquisition and finally quick and silent elimination of the enemy.Drones have demonstrated to combine the extraordinary features of robotic weapons for war at distance with theunique "ordering capacity" of air power(Neocleous, 2014). It seems, according to Neocleous,that drones have beenconceived in the logic of filling the "weapon gap" between war means and international police capacity. Drones have thus reflected the increasing necessity to fight "silent"or "shadow" wars, small and short segments of COIN and CT displaced across the planet; and most of all to focus on individuals, rather than state threats.

2. Methodology

2.1 Research question and research objective

The research objective is to analyse how those on the ground (the targeted people) have perceived a change in the concept of the battlefield with the advent of drones. If most of the researches have devoted more attention to the networks existing between professionals of security and objects of security, the present research will seek to focus on the role of targets in the network.

Hence, the research in a first stage will question if with the advent of military drones the battlefield has changed and which forms has assumed such a transformation.Then, in a second stage, the research will ask which consequences are in play with the transformation of the battlefield and what power relations can be uncovered through an approach that highlights the active role of objects.

2.2 Method

The research will interpret drones as "security tools" (Balzacq et al., 2010)through a socio-material analysis, in order to include material elementsin the analysis of the social process of re-configuration of thebattlefield(Salter and Mutlu, 2013, p. 423). The goal is to inscribe the study of drones and their use by humans as "technologized practices of security" into a relational framework, with the aim of evidencing the "relationality" between things and representations (Aradau et al., 2014, p. 62). Thus, drones are not considered merely for their kinetic effect of lethality, but rather for their power of shaping humanactionsand representations.

Firstly, the research will study drone warfare as a security practice. The research will trace the main element of change that drones bring to the battlefield with their capabilities. Then,the research will focus on how the people on the ground conceive drones warfare. It is indeed practice that constitutes the main theoretical focus of the present research. Practice, as a form of patterned competent performance, is understood as the "explanans" of material and ideational processes that "enable structures to remain stable or to evolve, and agents to reproduce or to transform structures" (Adler and Pouliot, 2011, pp. 5–11). As explain Adler and Pouliot(2011, pp. 17–21) "Practice develops, diffuses and becomes institutionalized allowing competent performances; it generates transformation and sustains or undermines existing power relations". This choice is justifiable as the necessity to provide a comprehensive understanding of the impact of drones on the "geo-political" representation of the battlefield, avoiding the rigiddualism between "objectivism" and

"subjectivism" (Adler-Nissen, 2012; Bigo, 2011). Comprehensive is interpreted here as not only limited to the mere material, technical and tangible effects of drone on the battlefield; rather, it is thought to include also the agency of drones on the conceptual, discursive and representational transformations occurring in the battlefield, seen by those on the ground(Bigo, 2011). The research will analyze the testimonies of those on the ground (militants and civilians), experiencing drone warfare. Due to the complexity of achieving a completeset of dataand to the theoretical nature of the research, the data sources will be twofold.On the one hand, data will be gathered through structured interviews with Palestinian citizens living under Israeli drone surveillance in Gaza Strip. The data will be collected through twostructured ethnographic interviews directly carried by the author via Skype. The interviews will be conducted through a set of "standardized open-ended questions" related to the impressions, perceptions and representations that people living under drones power have about the battlefield(Leander, 2008; Turner, 2010). The author will try to provide a co-produced interpretation of practice in combination with the subjects of the interviews (Bueger, 2014).On the other hand, nominal qualitative data, will be gathered within academic analyses and secondary on-line sources as "field reports" (as the ones ofNew America Foundation Data Site (2016), and the Stanford & NYU Law School Report (2012)). As a matter of fact, the overwhelming and nowadays crucial presence in the debate of non-traditional sources, mostly coming from open on-line platforms, is a sign and symptom of an actual digital shift occurring in the overall production of knowledge, especially in relation to "science and technology" topics. It is possible to assume that digital knowledge effectively corroborateseven traditional academic studies, due to the ineluctable importance ofpictures, video feeds, fictions, official documents and three-dimensional reconstructioninrepresenting contemporary high-techwarfare.

Secondly, for operationalizing the analysis of security practices and their political significance, the research will deploy Actor Network Theory (ANT) toolkit. The researcher will act as a "translator" between the events told by the "people on the ground" and theory (Yanow, 2015, p. 401). Accordingly, the research will construct its argument through a semiotic-materialist understanding of drone warfare, analysing drones intermediating "agency" on human behaviour, thoughts and representation.This choice is motivated by the necessity to overcome the analytical hiatus, dominating in IR theories, that distinguishes rigidlybetween material and social forces.The research will argue that drones as objects have the power to exercise agency upon the humans on the ground as they allow "to enroll or inscribe" such subjects in the network of drones, computers, pilots and operators (Latour, 2005, p. 76).Studying drones as "actants" allows avoiding to stigmatize the difference between objects and humans and placing both within a common social field that ANT calls "network" (Latour, 2005). Technology indeed is not merely passive, but it has

"agency" as it has the power to shape social structures and the interactions therein(Leander, 2013). As Latour (2005) points out "technology and things can authorize, make possible, encourage, make available, allow, influence and suggest" as they have performativity effect that escape human intention and control (Leander, 2013). Indeed, even if technology has a defined purpose, this does not confine it to serve only that purpose; drones generate new meanings and new knowledge through their material agency on human practices and discourses. Drawing from Latour's (2005)ANT, Grondin (2011) assumes that "objects have a social life that expands beyond their material existence"; indeed objects, despite their material character and their dependence on human will, have a "thing-power" (Salter and Mutlu, 2013). Therefore, drones will be studied here as "objects", owing an "agency" capable of affecting human behaviors, power relations, strategies and programs for security(Bueger, 2014). The research will identify "the associations ("translation") between "mediators" (human and non-human) for "tracing transformations" occurring in the network (Latour, 2005, pp. 102–109). Thus, the research will take drones as the "actants" in a framework (or network)of drone warfare practice, for explaining the power "agency" of drones in shaping the battlefield from the viewpoint of targets(Amicelle et al., 2015; Salter and Mutlu, 2013). This will ultimately serve to uncover the power relations lying in such a re-shaped space: the battlefield.

2.3 Theoretical framework

The present research will mainly draw from critical theory as opposed to problem-solving based approaches (Fierke, 2015). It is assumed that critical theory challenges traditional approaches to security as it takes new and broader referent objects and different sources of insecurity, problematizing the conventional understanding of the term "security" (Buzan and Hansen, 2009, p. 189; Collective, 2006). Indeed, the research will resort particularly to the post-positivist (or post-naturalist) scholarship focused on drones andgeo-politics, which can be ultimately (and artificially) grouped under the critical security studies anthology (Salter and Mutlu, 2013, p. 423).The research will analyze the potential transformative impact that drones can have on the traditional battlefield through a lens allowing to problematize the objects (drones) as effective social "actants"(Peoples and Vaughan-Williams, 2010, p. 61). The overall objective is to contribute to the existing literature related to geopolitics and drone warfare, with a deeper focus on the concept of the battlefield and the perspective of those passive to drone warfare. It is the problem of a "change" or a "controversy" in a certain practicethat the critical sensibility of critical security studies captures better than other

approaches (Aradau et al., 2014, p. 21). Indeed critical analysis is not limited to identifying problems, but rather to deconstruct the ways in which things come to be treated as security problems.

3. Organization of the research

The research is organized in four chapters: an introduction, a literature review chapter, a third chapter exploring the effective transformations of the battlefield, and finally a fourth chapter analysing the political effects of the transformed and reshaped battlefield.

The first chapter sets out the introductory elements of the research. The second chapter of the research seeks to briefly illustrate the existing literature on drone warfare. The third chapter descriptively looks at how the battlefield has changed with the advent of drones with the support of the data gathered through the Palestinians'interviews. While the fourth chapter bydeploying ANT toolkit analyses the "agency" power of drones and their performativity in military-security practices. Itultimately attempts to illuminate the consequent physical and conceptual change of the contemporary battlefield.

CHAPTER TWO

1. Literature review

Drones'seeminglyfuturistic and revolutionary character of killer objects endowed with artificial intelligencehas attracted a wide and popular attention. It can be said that, if the prominent international newspapers while reporting news from the GWoT have somehow obsessively fetishized drones as the expression of the Western techno-military superiority, many among policy-makers, journalists, activists and academics have engaged in analytical and critical publications about military drones.The majority of the literature is characterized by policy-oriented and problem-solving approaches. Whilst the problematization of drones as objects detached from human agency, has only recently been developed by an IR critical stream, which has deployed sociological and philosophical theories.

The "Great drone debate", as Etzioni (2013) calls it,can be schematically divided in two different branches that approach drone warfare through two distinct ontological lenses: a positivistor empiricist one(I), seeing drones more as a war tactic, and post-positivistone (II)(Hasian, 2016). The state-of-the-artis relatively new and thus focuseschiefly on the empirical cases of the GWoTnon-conventional battlefields(Mazzetti, 2013).While, little has been written about the shift in the Israeli policy of "extra judicial killing" with drone strikes.

The positivistapproach (I) to drone warfare is overall constituted by three main theoreticalsub-debates: drones strategic efficiency (1), drone strikes legality(2) and dronestrikesethical implications (3).

1.1 The strategic efficacy debate

The first one (1), close to traditional security studiesscholarship,by and large,sees drones as revolutionary weapons,conceiving deterministically technological development as a forcefully progressive element in war. This debate discusses with a strong anthropocentric view drone actual efficacy in counterterrorism (CT) and counterinsurgency (COIN) strategies (Plaw et al., 2015, pp. 65–70). Scholars as Cortright(Cortright et al. 2015) andByman (2013) intend the emergence of drones as the mark of a positive transformation of classical COIN paradigms and think drones can become in a short time the "humanitarian weapon par excellence" (Byman, 2013; Freedman, 2016).

Less favorablescholars,as for instance Peter Singer (2009)with his precursory book "Wired for War", fear robotic weapons can lead to an uncontrollable capacity of the military to kill everywhere. Experts as Johnston and Sarbahi (2016)and Bergen and Rothenberg (2014, p. 89)instead warn that, despite drones' precision, the extensive use of "signature strikes" (targeting individuals in accordance to behavioral patterns) can likely promptnew terrorist sympathyamong civilians and boost recruitments.On a similar track,Boyle (2010),Kilcullen and Exum (2009)think that dronestrikes in the GWoThave been a tactic by the time turned into a strategy, which primarily relies on the disconnection from the actual battlefieldand from the local populations,fully missing the "hearts and minds" goal. Theyreport that drone strikes in Afghanistan and Pakistanhave excited a visceral opposition among public opinion towards the U.S.resulting in a strong terrorism recrudescence (Kilcullen, 2005). This debate, notwithstanding it providescritical viewsabout the strikes' effects on ground people, evidences the "unperceptive acceptance of the way the world works" (Booth, 2005, p. 11). Trying to provide explanatoryanswers to empirical problems, those scholars tend to propagate a vision of politics that accepts the employment of advanced technology for military ends as a natural consequence of human search for security. Traditional security studies static view of conflicts as a resultantmanifestation of selfish human nature, compels to see technology as a "neutral and unmediatedmeans"(Bigo and Tsoukala, 2008b; Walters, 2014).Technology is interpreted as an ahistorical force determining straightforward power relations only in a mechanic and rational way: those who possess technology are naturally advantaged by it and its use. This visionindirectly replicates existing power dynamicsand eventually leads to the unchallengedacceptance of drones as the technical by-product of states' strive for more power and security.

1.2 The legal debate

The second sub-debate (2)questions drone strikespermissibility from alegal angle. This debate identifies controversial legal issues connected to the deployment of drones outside the conventional battlefieldfor extrajudicial operations. Indeed, legal scholars are primarily interested in debating if the policies of drone extraterritorialkilling comply with the principles of Armed Conflict Law (LOAC)(Bergen and Rothenberg, 2014; Brooks, 2013; Cortright et al., 2015; Mazzetti and Apuzzo, 2015).Two main intertwined controversies are central to this discussion: one related to the status of combatants and the other one to character of the conflict.

The first controversy revolves aroundthe status of those targeted by drones in countries where no armed conflict isdeclared. Indeed, so far, targeting individuals outside hot zones of war has been made possible through Special Forces (JSOC and CIA) and exceptional authorizations (AUMF) issued by the U.S. government(Plaw et al., 2015, p. 115). This still causesharsh disagreement in the scholarship. Supporters of drones strikes legality, as the former CIA director John Brennan and the scholar KennethAnderson (2009), maintain that the use of force of the U.S. is "consistent with the inherent right of national self-defense against (unlawful) combatants" against Al-Qaeda and its affiliates (Plaw et al., 2015, p. 113).By contrast,critics as Quigley,Plaw et al., (2015, p. 114) argue, for instance, that extrajudicial killings evidently conflict with U.S. Domestic Law Executive Order 12333 prohibiting U.S. government representatives "to engage in assassinations".Other scholars as Brooks(2013),O'Connell(2009), Evangelista and Shue (2014) are convinced thatdrone strikes undertaken outside declared battlefields are absolutely unlawful,because for prosecuting terrorist in peacetime the only applicable law is criminal lawalongside Human Rights norms.Calhoun (2016) and Cortright et al. (2015)insist that, especially in the so-called "personality strikes"(high-value targets), the lives of dozens or more civilians are endangered for killing one suspected, completely disregarding *in Bello* principles of necessity,proportionality and distinction.

The second controversy relates to theterritorial nature and character of the armed conflict the U.S. has fought against Al-Qaeda and its affiliates. As the Geneva Convention recognizes two kinds of armed conflicts: an international in character and non-international one, it seems that the GWoT to some extent falls under both (Plaw et al., 2015, p. 130). It is indeed doubtful whether the conflict is "non-international", since the U.S. is the only "State or High Contracting Party" fighting a rival non-state armed group,or "international" since the hostilities are in effect not limited to the internal territory of one of the parties(Schmitt, 2014).Daskal (2012)conteststhat,given the mobile and transnational nature of the enemy (Al-Qaeda),the U.S. has wrongfully applied LOAC even to areas other than conflict zonesextending war where the opponents could hide.

Legal analyses represent the cornerstone of the drone debate as they solidly challenge the commonplace that drones are "clean" and "humanitarian" weapons. However, the effect of the "interpretative dilemma" on the drone controversies is that hostilities are increasingly unrestricted and "the battle-space is expanding" as theorized by Schmitt(2014). Legal approaches to drone warfareare limited to the limits that law itself encounters on the international stage. Since international norms are often easily distorted to serve politico-military purposes, legal scholars find themselves entrenched in the "trap" of differently interpreting law.Indeed, the legal debate strict relationship with empirical cases often forces legal scholars totake law as a fixed element. The

fixity of law and of its socio-political underpinnings (as the state, combatants and non-combatants, sovereignty, institutions), if un-problematized, represent an obstacle to a wider understanding of the forces acting in the social world and behind the observable reality.

1.3 The ethical debate

The third sub-debate (3) is concerned with the ethics ofdrone warfare. Even if guided by an anthropocentric vision of war as a "human against human" activity, this literature raises some crucial points of critique. There are indeed three central objections against supporters of dronewarfare as Strawser and McMahan (2013), that frame theethical debate. First, drones radicalize essential concepts of traditional war such as reciprocity and mutual risk, making it more a police action than a political confrontation (Kahn, 2002). Hence, warfare is turned into an absolutely asymmetric activity(Finkelstein et al., 2012), whose sense becomes debatable because just one side takes all the risks of combat (Calhoun, 2016; Cortright et al., 2015). In this case the problem, according to Kahn (2002), lies in the idea that drone warfare is fought with no geographical limits as a form of international police. Second, drones effortless and quick killing capability can lead politics to mechanisms comparable to a revisited conception of Arendt's "Banality of Evil" (Kaag and Kreps, 2014, p. 121). As a matter of fact, Galliott (2015), Kreps and Kaagand to a similar extent the Just War Theorist MichaelWalzer(Cortright et al., 2015), fear thatby lowering the barriers of violence and by making war cheap, the likelihood of an ever spreading techno-mediated violence is on the horizon. This,in particular, contributes to create an altered-mindset effect in decision-makers of total reliance on technology, so that the policy of targeted killing can soon become not the last resort, but the fastest and "cleanest" choice. Third and last, drones are related to the emergence of the so-called soldier PlayStation-mentality. Indeed, technology generates a number of intermediations by obscuring the causal chain of responsibility and so professional warriorscan convert into alienated operators with a cognitive dissonance from the material act of killing(Galliott, 2015, p. 228; Kaag and Kreps, 2014).

Such a debate seems to incisively enter into unexplored issues about drones and seems to follow an important path for deconstructing the taken for granted vision of war of traditional security studies. Though, the policy-making oriented approach leads scholars as Kahn and Galliot to place drone warfare in a schematic and rigid system of meanings where objects are seen as neutral elements only responding to human will. Indeed, those authors see war in a relativized and partial way, where the social forces in play are only these enacted by traditional social agents: humans and

humanorganizations. Therefore, the debatefails to place and analyze the social role of objects within drone warfare, completely underestimating the active capacity of technological toolstoshape human representations, identities and sensorial capacities. Moreover, the conception of morality and justnessis set in an aseptic reasoning of Just War tradition and this leads to exclude a multitude of socio-political variablescomposingcontemporary war.It is indeed informed only by the self-evident, visible and "objectifiable" power relations existing in war.Hence, moralityappears to be the outcome of a logical and mechanisticunderstanding of war operated only through the tools provided by the Western (Anglo-American) philosophicalvalues on ethics(Allinson, 2015).

1.4 Drones problematized as objects

The recently grownpost-positivist approach (II), instead,engages with the issue of drones, problematizingtechnology, violence and society as intermingling elements of political power. Technology results not merely as the sum of a certain tools or as a passive element, rather it is understood as it is capable to re-define modes of power and able to shape thoughts, discourses and social entities (Bousquet, 2007).This strand of literature deals with the emergence of drones in warfare through two distinct objects of analysis: "security discourses" (1) and"security practices" (2).

Analyses related to "discourse"(1)aimpredominantly at understanding how the languages about the use high-tech assemblages have served asconstitutor of systems of meaning for justifying extraterritorial targeted killing within public opinion.This literature analyses how specific techno-political narratives have acted as key elements in legitimizing the tendency of war to assume more and more an "anthropic-focusedcharacter". In particularHasian(2016, p. 91), author ofan ample research on the narrativessurrounding what he defines the "Post-heroic warfare", explains how the Obama administration has addressed the issue of individual assassinationsas "immunizer and sanitizer"for the Westernaudiencefrom the damaging effects of the use of deliberate force.Hasian goes further by pointing out that terrorists in such a view represent the pathological "Others", and through a set of codified identifications of them as a "illness", as the CIA "Orientalist neologism *AfPak*" (Afghan-Pakistani) or "MAM" (Military Age Male), the Western military has constituted the "drone speech-act" for performing its power of euphemistic "control and care" (Hasian, 2016, p. 93). Likewise, the scholar Schwarz (2015)tackles the discourse of U.S."surgical strikes" and criticizes it as the expression of an almost "medical" conception of security, of whom "surgical"

isnot only a metaphor, but also crucial constructing element of atherapeutic-militarist languagejustifying mechanisms oftechno-bio-politics.

Resorting to Mbembe (2006) concept of "necro-politics" (administration of politics through the binomial of death and life) as an essential "method of life distinction", Allinson (2015)assumes that drones operate on the basis of racial discourses which allow the sovereign powertoapply a "racial objectification" of the target. According to Allinson (2015) the purpose ofthis "racial objectification" is dominatingthe enemy andadministering the continuation of good forms of life by eliminating the dangerous ones. In a slightly different vein, Kyle Grayson (2016), focusing on the concept of assassination, tries to understand how the Western politico-cultural system, "in which culture operates combined with technology", has shaped the contemporary strategies of political violence,leading to an internalization andneutralization of the policies of targeted killing within the public opinion. For Grayson (2016), the Western dominant body of culture,made of scientific calculation, statistics andhigh-tech precision, embeds a discourse of perfect and scientific security,which renders acceptablewithin Western societies drone warfare. Hence, Grayson interprets the language associated to drones as the essential ground for the "problematisation" of "insecurity elements" as humanpopulations, human places and human objects. This is why Graysonframes the crucial idea of the GWoT as a war where,thanks to technological development discourses,the whole conglomeration of violence has beendramatically transferred onto the human body(Grayson, 2012). Such a vivid debate, however, misses to entirely catch the material and practical aspects that surround and compound drone warfare, limiting the analysis just to a discursiveinterpretation of it.

A different strand of the debate(2) deals with the "practices"associated with theuse of drones in ISR and targeted killing. In particular, it discusses how effectively contemporary practices of political violence enabled by drones have determined a decentralization of warfare from conventional battlefield straightly to human beings, human environments and virtual dimensions (Der Derian, 2009; Ignatieff, 2000). In such a literature, anyway, it is possible to artificially tracea fundamental distinction between two branches,which differently understand and reconstruct drones'origin. If most of the authors agree that, with the advent of drones and network-centric warfare, violence has been increasingly transferred onto human beings and their intimate environments, there exist two different groups that embrace contrasting views on the "genesis" of drones.

Keener to the first branch (a), Dillon and Reid (2009, p. 146) believe that liberal regimes have resorted to symptomatic levels of scientific knowledge to organize and transform their strategies for exercising power on human specie threats. Indeed, through "informationalized" matrixes of control for the administration of violence, the GWoT has marked "the passage from sovereign to disciplinary power" (Allinson, 2015).Somewhat differently, RosiBraidotti (2013) sees in the operational dimension of drone warfare the materialization of a "post-human" war, becausethe role of technology is essential in allowing to extend violence beyond the body and the mind of soldiers, thus escaping temporal and geographical limits of traditional wars. Accordingly, drawing from Braidotti's cyborg-feminist perspective,Wilcox (2016) and Bourke (Blaagaard and Tuin, 2014, p. 29)identify in the contemporary acceleration of technology the emergence of more functional mechanisms of "bio-political governmentality".It isprobably from this ground of reflections about a "specie life violence"and post-human warfare, that thescholar Weberand the philosopher Chamayou (2015) come to define drone warfare as "cynegetic",namelythe expressionof adyadic relationshipbetween"prey" and "hunter"(Weber and Falk, 2017, p. 178).Analyzing the performativity of drones as objects,Chamayou and Webercontend that the battlefield in drone warfare is reduced to a screen, where pilots visualize an image of the prey, and a mobile "kill box", i.e. the human body of the prey(and herthree-dimensional contingent environment).Such a debate opens up new frames for looking at drones. Nonetheless, it can be argued that authors as Dillonand Reid or the Post-Human fellowsdo not push their analysesbeyond a brief description of the impact of drone warfare on geo-political representations, missing an analysis of power relations inside it. The effort of stigmatizing the liber-capitalist political contextwithin which drone warfare has been conceived, seems to underestimate the historical role of objects in affecting human practices, evenoutside the liberal-capitalist paradigm.

In the second branch (b)authors asGregory(2011b), Grondin (2011), Akhter (2017), Shaw (2016) Parks and Kaplan (2017) look at drones warfare practiceexploring the different spatialities on which the intermediation of technologypermits to displace power, war and violence. The battlefiled, thus, in this scholarship is a central concept, whose declinations are divergent and fluid. For instance, Derek Gregory, one of the pioneer in exploring the interconnection between drone warfare practices and geography, theorizes that the battlefield has been re-shaped by drones as they have allowed to create "punctuated spaces"where the"exception is permanent" and violence exceeds any legal and political constraint. Similarly,Shaw (2016) holds that drone warfare as a geographically uncontainable activity, has brought "the boundaries of war and politics to collide".It can be said that those authorsshed light on the potential capacity that drone warfare owns in

deforming the conventional geographical Cartesian links between sovereignty and territory,which have marked the classical geo-politicalcomprehensionofspace over the last centuries(Shaw, 2016).

In the same branch authors such as Adey et al. (2014), Graham (2009) and Coward, stressmore the idea thatstate violence,since the last century, has been subjected toa radical shift towards the vertical dimension. Drones representthe latest techno-development in what the architect Weizman(2017)defines the "politics of verticality".In particular, Graham (2009)believes that it is exactly in the new anti-terrorist military doctrine adopted by Western states in urban spaces,that drones can serve"permanent, vertical, ubiquitous and pre-emptive" patternsof surveillance. And, Graham goes on, military practices invade "prosaic and everyday sites of urban life", transforming cities and intimate environments into potential targets of violence. This is the turn of the traditional battlefield into something deeper, wider and more simultaneous, thatGraham (2009b) prefers to call "boundless and unending battle-space". The research will seek to follow this strand andcontribute tosuch critical geopolitical literature,precisely focusing on the concept of "battlefield".

CHAPTER THREE

In a first section the chapter will try to briefly outline howmilitary drones have impacted the traditional concept of battlefield. While, in the second section, the chapter will use the testimonies of "people on the ground" from Gaza Strip, Palestine, for delineating representations and conceptions ofthe battlefieldin drone warfare. This will help to understand how people are involved in the practice of drone warfare and which relations of power are embedded in that practice.

1. Drones at work:tracing the impacton the battlefield

How is it possible totrace the impact of drones on the battlefield? Assuming as valid the analytical recommendation that Actor-Network theorists make, namely "follow the object!" (Latour, 2005), drone warfare and the battlefield can be studied through the object itself (the drone and its technical capabilities). Drones represent a "crisis of intelligibility" or, sociologically, a"change", a "controversy" in the spatial practice ofair power. This, of course, reflects also on the way the people on the ground experience of the battlefield(Basaran et al., 2016, p. 16).Borrowing from GregoireChamayou's analysis, it is possible to distinguish five main characters of drones that explain their impact on the traditional battlefield.First,drones are a technology that enables a new "politics of verticality"(Weizman, 2007, p. 239).Second,drones "endurance" means an extraordinary persistence in terms of surveillance and control on the ground; third,drones and the network of tools working with them enable an unparalleled precision in targeting the enemy; fourth, drones fully automatic nature distances the attacker and the attacked in a radical way; fifth, drones'network implies a substantial problem of distinction between civilians and combatants.

1.1 Verticality

Verticality is a spatial dimension, empowered and mediated by aerial technology. As Adey et al. (2014, p. 3) write "seeing from above accounts for the aerial position as an imagined rational, scientific and epistemological space: it is a domain of testing, analysis, experimentation and exploration". Verticalityenables two specific modalities of political power: firstly, the power of sight, control andsurveillance and, secondly,the power ofperpendicular attack.

Firstly, as indeed admitted by British Air Secretary Lord Thomson in 1924, verticality allows a vantage point of observation, denying it to all the others(Neocleous, 2014, p. 14). The extraordinary power of the "gaze from above"offersa panoptic observational point of view on the social life on the ground(Shaw, 2016). The verticalview is revelatory about the essenceof what lies below, as it produces a unique knowledge that enables "mastery of space"(O'Tuathail, 1996, p. 19). Such point of view from above radically distances the "observer" and the "observed", putting them in an incontrovertible relationship of knowledge asymmetry(O'Tuathail, 1996, p. 8). Asymmetry means domination;hence, seeing from above can be translated intoan implicit form of control power.As a matter of fact, airplane prototypes proved to be a powerful and cheap method when colonial empires tried to map the economic development and the political configuration of the "subjugated populations"(Williams, 2013). For instance, at the beginning of the twentieth century,the British Royal Flying Corps used aerial photography to improve their geographical knowledge of colonial lands.In the Arabian peninsula the "vertical gaze" allowed to re-write the geographical representation of unknown large desert areas, where the "pioneer, heroic spirit of Victorian explorations" revived with aerial observation and photography(Satia, 2006). Since then, throughout the twentieth century, photography and observation from above have represented an essential element in "geo-political" knowledge production for governmental scopes. In that sense, aviation became a bureaucratic technology for imperial powers. As Edward Said notes "Imperialism is after all an act of geographical violence through which virtually every space in the world is explored, charted and finally brought under control" (O'Tuathail, 1996, p. 11).

Secondly, whenin 1911 the Italian Lieutenant Gavotti armed for the first time its biplane for dropping grenades on the Ottomansin Libya, it appeared immediately evident how verticality could work as an extremely functional dimension for coercion (Evangelista, 2016).On the one hand, verticality showeda wider way the enemy and the battlefield could be envisioned. Verticality allowed to challenge the "planar […] two-dimensional, flat conception of the battlefield", enlarging the battlefield towards a free volumetric three-dimensional space (Adey et al., 2014, pp. 99–113). On the other hand,perpendicular attack renderedvain any reaction by those targeted,producing demoralization and annihilationon the ground. Indeed, the people on the ground, before the development of anti-aircraft artillery, had no means to effectively fightagainst airplanes. Therefore, bombing from above acquired an ever-prominent role in countering insurgent populations, especially in the colonies. Satia, describing British policies in Iraq in the 20s, reminds that the aerial practices of "surveillance" and then of "punishment" through bombardments "were intended as a permanent everyday method of colonial administration" (Adey et al., 2014, p. 224; Satia, 2006). Accordingly, as Sven Lindqvist (2012, p. 16) and Ingram and Adey et al. (2014, p. 248)aptly

demonstrate, the vertical projection of power on the ground with the use of bombs is inseparable from a history of intentional production of terror all along the twentieth century. The purpose of targeting the enemy's morale with terror was to provoke a psychological effect of hopelessness and impotence. Using aviation has allowed toever morepenetrating places inaccessible to traditional ground forces.Air power has permittedthe military to "appropriate"new places as cities, social-infrastructural "nodes", and populated areas (Graham, 2004).In a Foucauldian sense, verticality has served the specific role of administering and ordering populations through fearanddeath(Adey et al., 2014, p. 260; Neocleous, 2014, p. 22).As the philosopher Sloterdijk (2009, p. 109) puts it, when in the twentieth century "*atmo*-terrorism" was discovered and tested, "the air totally lost its innocence".

Drones are emblematic technologies for performing the "geo-politics" of violent verticality(Graham, 2004; Weizman, 2007). Drones wholly exploit their vertical powerprojection on the ground asthey can fly at high altitude(around 24000 feet),enjoying high levels of steadiness and escaping the reach of anti-aircraft artillery. From that high altitude they cannonetheless precisely attack and use their cameras for surveillance. The drone dominates the fluid volume of air and utilizes it as a dimension where freely manoeuvring and offending(Adey et al., 2014, p. 111).

As Pain (2010) suggests "verticality as a geopolitical site of fear" is impossible to leave in oblivion even nowadays. "Geopolitical fears" have historical continuities and reproduce over time through certain practices. The verticaldimensionhas often been a collective site of "geopolitical fears" constructed and reproduced throughout the twentieth century,with practices of perpendicular attack.Drones violent verticality thus does not only imply a mere act of lethal violence; but it also implies what Holmqvist (2013) calls the "sensory, affective and embodied practices" that exceed the kinetic nature of war. Drones are, therefore, in strict continuity with the history of bombing for their strong "fear-impact" on human perceptions and representations of vertical violence: as unpredictable, unstoppable and enduring (Sparke, 2008).

After all, drones have a further capability than other aerial platforms have. Networked technologies and drones have used verticality to bring "geo-political" violence straightforward into what Pain (2010) defines "micro-scale and everyday sites". Indeed, when drones are deployed, as it has happened on a daily basis in the skies of Afghanistan, Pakistan and Palestine, drones build a vertical architecture of constant fear. Such constant fear is not only "geopolitical", but it also penetrates everyday places and quotidian life (80% of strikes in Pakistan hit houses, 70% in Gaza(Forensic Architecture Project, 2014, p. 411)). With drones it seems that "geopolitical fears" slip into and merge with "everyday fears", constituting an exceptional space of "everyday

geopolitical fears"(Gregory and Pred, 2006, p. 206; Pain and Smith, 2008, p. 18). As Chamayou (2015, p. 57) assumes "The conflict zone now goes where they [the preys] go irrespective of geography; and the boundaries of the battlefield are not determined by geopolitical lines, but rather by the location of the participants in an armed conflict".

1.2 Persistence

Manned airplanes have for a long time showed their capacity of producing violence only on asituational basis. The outcome of airborne attacks has always depended on multiple variablesand circumstances. Drones and technologies operating withindrones' networksreverse the "situational" and "temporary" nature of traditional manned aerial warfare. Drones enable unprecedented levels of persistence and endurance in security practice, as they are (almost) never tired of flying. Their capacity to loiter over targeted areas for 25 hours, as the U.S. *Reaper*, or for 40 hours, as the Israeli *Heron*, make drones indefatigable combatants. Moreover, increased research in technology, especially coming from Israeli Aerospace Industry(IAI) and U.S. Defence Advanced Research Project Agency(DARPA), has brought to build a structure of constant control through the interexchange of information among station centres, satellites and drones. Indeed, drones have been recently equipped with highly precise systems of camera controlprocessinglive stream video through satellite signals.Camera'sWide Area Surveillance Persistence (WASP) achievements as the U.S.*Gorgon-Stare* project or its Israeli twin *SkEye*,have been developed by military research teams properly to render drones omniscient objects, capable to spot and track activities on the groundwith images of billion pixels (Adey et al., 2014, p. 61; Eshel, 2017). Such programs are systems of multiple cameras (around 12-16 single optics) permitting an overall 360 degrees view on the ground. WASP systems are able to enact "magnification" (zoom in-out) of the target in an area of interest up to 80 square kilometres large, even by night. Israeli *SkEye* in particular has the singular capability to detect human minimal movements also within buildings. While the U.S. WASP*Gorgon-Stare*, with the implementation of sensor *ARGUS-IS*, has recently augmented its coverage capability to an area of 100 kilometres square.

Such systems enable operators (who work for hours focused on a single target) to overcome temporal barriers. They allow to trace back tothe origin each movement of the target, registering data automatically through a so-called "backtracking capability"(Eshel, 2017; Gregory, 2013). For instance, U.S. operators at the Control and Management Centre in Creech, Nevada,can enter with powerful zoom toolswithin "multiple areas of interests recorded by the drone simultaneously, without neglecting the general area"(Eshel, 2017). Those systems are also equipped with "fully-

programmable alertingmechanisms" that notify operators unusual or suspicious events through a specific "Human Tracking Reliever Software"(Eshel, 2017).As acknowledges U.S. Major General Barclay, persistence of control directlyresponds to "a persistence status of threat that requireswhat is known as a *Full Spectrum Dominance* of the battlefieldin [this] era of persistent conflict" (U.S. UAS Roadmap, 2010; Shaw, 2016, p. 16).

1.3 Military Precision

It is widely recognized that drones are precise killers, as they depend on precise networks of intelligence and they use high-tech weaponizedsystems. Dronesprecision, nevertheless,is a form of illusoryprecision. It is embedded in the military logic of cyclical, rational and computational analysis of data. It is hence not a comprehensiveform of precision, since mistakes and miscalculations often occur; but, rather, it is a standardizedform of precision that works along chains of repetitive actions.Such military drone precisioncan beexplained throughthree different operative patterns that work in drone networks.First,the way targets are researched and listed;second,the way targets are shownand seen through visual technologies; and, third, the way targets are attacked.

First, for identifying potential targets the U.S. CTapparatus has used a complex web of inter-operative tools. U.S. CT since 2009 has disposed of a compound of Security Agencies for scientifically enlist terrorists, affiliates and potential militants, following the doctrine of "find, fix finish the target"(Scahill, 2016, p. 40).Sophisticated interrogations, cyber spying and surveillance practices (as "Cyber-Hawk", Dirt-Boxes", "Eavesdropping software" on calls and messages, etc.) have empowered algorithmic systems for definingstatistical regularities, patterns and correlations among thedata gathered on suspected people(Scahill, 2016, p. 31; Shaw, 2016).The precision of such methods of investigation has led to track entire transnational terrorist networks and focus not only on high rank figures, but also on mid-low rank militants.The outcome has been the construction of digital archives of names all interconnected and constantly uploaded. For instance, in the U.S. CT such kind of database,known as "Disposition Matrix", has been compiled by NSA, CIA and JSOC with shared information(Gettinger, 2015). A constant monitoring of mobile phones cells (through surveillance of SIM cards geo-location) and inspection of social media with "Nexus Topography",have contributed to locate individuals and trace their quotidian activities(Dodson and Officer, 2006). This, explains the journalist Scahill (2016, p. 36), over the years has led theU.S. intelligence to compose a "killable terrorist watch list" comprising around 680,000 names globally.IsraeliIntelligence and Defense Forces (IDF) have worked similarly. Since the beginning of

the Second Intifada Israeli ISNU ("U8200" department)hasre-organized the way of operating. It has specialized in conducing whatin Hebrew are known as "*Sikum*" or "preventive, offensive counter-terrorist tactic surgical by definition of targeted killing" (David, 2003; Stahl, 2010). ISNU has combined HUMINT methods, as interrogations and espionage, withSIGNT methods as control of phone-calls, movements, bank transactions,and behavioral patterns in orderto enlist Hamas leading figures(Falk, 2015; Reed, 2015).

Second,the available technology allows high levels of precision in terms of visualization of the enemy during the phase of "fixing the target". High-techvisual technologiesbroadcast real time video and can be so accurate that the battlefield for U.S. operators is wholly transferred on a virtual dimension.In effect, networked military technologies turn the battlefield into a screen-sized video-feed (Der Derian, 2009, p. 281). On the screen, operators have the power to pause or rewind the events of war and to scan them with extreme precision.The visualization of waris completely reshaped, since the battlefield is visualized as a footage sequence corroborated byindicators, temporal indexes and spatial coordinates. With such avant-garde "visuality", operators acquirean almost totalized knowledge of the battlefield, as they can scientificallyfollow and pinpoint targets, makingextremely precisedamage assessments(Adey et al., 2014, p. 104).

Third,when it comes to "finishing the target". Drones network relies on an unprecedented precision due tothe interaction between GPS satellites systems and laser-guided ammunitions as JDAM systems (Locatelli, 2010, p. 120). AsMALE drones are extremely steady platforms, for operators it is possible to calibrate with almost micro-scale precision the expected targetedarea and the potential impact of the missile. U.S. "Hellfire","Scorpion", and Israeli "Spike"are relatively small guided missiles with an overall limited range of blast.As demonstrated by Forensic Architecture Project (2014, p. 409), GPS laser-guided missileshave different radiuses of fragmentation and this allows drone operators to esteem precisely the effect of strikes. They can target even people and objects moving at high speed, as missile radar signal is interconnected with the network GPS signal (Keller, 2017).

Consequently, thebattlefield is not only relegated to be the place where kinetic violence materializes. But rather it is stretched and displacedin different locations.The battlefield indeed extends at the CIA, NSA or ISNU headquarters, at Ramstein satellite uplink European Center in Germany, at the bases where drones are piloted, on computer screens and all along the chains that compound the CT network(Scahill, 2016, p. 73). In effect, the battlefield beginswhen intelligence operators start suspecting about an individual and put him on the "killable watch list". And, probably,itends right on the body of the targeted individual when the body is obliterated.Eventually, Grondin (2011) thinks the GWoT security practices have distanced and decentralized violence from

the "traditional planar battlefield" and brought it to different places"where control and precisionhave been more efficient, scientific and, paradoxically, less visible".

1.4 Distance

By transferring part of the combat on the screens of operators it is possible to assume that traditional"reciprocity of war" ceases completely to exist in a physical sense in drone warfare(Chamayou and Clausewitz, 2006, p. 82). What drones do is to radicalize distance between combatants. They make war available from safe places afar from the real battlefield.Human presence is completely mediated by the network of technologies; and alsodeath, sufferance and fearare no more a collective experience, but rather a lonely moment for the targeted and its relatives. Drones operators' perceptions about death, destruction, sounds of explosion and bombardment are transposed by visual technologies. Ignatieff (2000,pp. 163–169)says that when in 1999 in Kosovo the U.S. could use high levels of accuracy from an exceptional geographical distance, the nature and objective of combat changed. There, the advent of RMA,consisting in visual and networked technologies, allowed to surgically target only "society's nervous centers", making Kosovo the embryonic form of what Ignatieffterms "virtual war".Technology reports with extreme speed a re-elaborated virtual reality, where the sensorialexperiences of war are completely re-shaped and presented to humans under a new form. Bodies are reduced to small dark figures (resembling videogames characters); houses and districts account as the undistinguishable backdrop of a picture; and the effect of a bomb blasting is just a small fading smoke cloud. Technology sets off what Agius (2017)defines a "techno-cultural" operation of spatial-temporal compression between the observer and the observed. On the one hand, indeed, thanks to the network, operators are so close to the area they are "fighting" within that they know scientifically the most intimate details of the battlefield.On the other hand, they are physicallydetached from the space where violence is liberated. This breaks down the logical causality of violence and its social significance. In this manner technology does not only operate a mediation ofthe material reality; but also operates on a conceptual scale, mediating the action-reactionrelation between violence and its producer. Graham defines this process an effect of "distantiation proximity"; in other words the fact that operators are connected to the battlefield, but are simultaneously detached from the battlefieldsocial reality.The networkprovokes a rupture on the chain of causality of violence. Thisrupture between "watcher" and "observed", "killer" and "killed" makes the distance not only a physical distance, but also a social distance. The final effect is to distance the centre of violent power and the subjects of suchviolent power and put them into separate social realities.

1.5 Distinction

Even though praised by some Military Ethicsscholars as "humanitarian weapons", drones, as data support,have procured high numbers of civilians and "unidentified" causalities(Evangelista, 2016). The "grey area" of law that defines what constitutes a military target remains still vague and misinterpreted even with the advent of drones(Evangelista, 2016). Drones are indeed part of the CT "weaponry assemblage" of the epoch of terror(Dillon, 2007b).As the effort of CT has been to find potential individual terroristicthreats, drones have served the purposes of CT policies. CT has thus centred its aims at distinguishing in a pre-emptive way between threats and non-threats. Pre-emption has been the overarching criterion of functioning for CT. Terrorism indeed exploits the possibility to merge and confuse with the civilian realm and to penetrate societal vulnerabilities only when a contingency opens up (Dillon, 2007b). The main rationale of CT network, of which drones are an integrative part, has been to target threats before they could become effective. Identifying a "terrorist threat" has meant analysing behaviours, personal ties, relationships, ideological positioning, potentiality of offense and a multitude of other criteria. Therefore, in order to be as much functional as possible, CT network has forcefully overcome the distinction between civilians and combatants that could be ontologically an obstacle for finding pre-emptively the terrorist. Thus, with CT policiesthe actor to securitize has shifted from the soldier intended in a geo-political sense (as the hostile agent of an opposing territorial actor) to the "individual bio-political threat"(i.e. the terrorist). Being a combatant has ceased to be recognized as a reciprocal status. In the war on terror it has been a competence of CT apparatuses to unilaterally decide who was a "threat" and who was not a "threat" according to certain criteria. Certainly, one may argue that when a militant decides to affiliate or join a terrorist group that is known for illicit activities, he makes an aware choice to be a terrorist and thus a potential target. The issue, however, is much more complex than it seems if explained so. What constitutes a "bio-political threat" is different from what constitutes a "geo-political enemy". The definition of enmity/amity is limited to a spatial-temporal geo-political area, namely the area of the battlefield. Instead, being a "bio-political threat" means "being a threatening form of life", as Dillon (2007b) puts it. Or it means being a "killable person" in drone jargon. Consequently, as life is taken as the referent object of such "bio-political" practice for securitizing terror, life itself must be extinguished in the name of positive life survival against terror (Dillon, 2007b). As a matter of fact, John O. Brennan (2012), Chief of CT under first Obama's presidency, once said "TheAmerican people expect us to use advanced technologies […] to remove terrorists from the battlefield". It seems that such Brennan wanted to mean that in CT the battlefield is no more the place of combatants;but it has potentially become the

place of everyone.And the purpose of CT is not targeting the "geo-political enemy", but removing the "bio-political threat" from the battlefield. And in this conception, the battlefield is not limited to the place where the enemy is geographically present. Rather, the battlefield is an indefinite "geo-political"space wherethe objective is to remove "bio-political threats" (i.e. terrorists).

In drones warfare"geo-politics" and "bio-politics" are not separated forms of power. Rather, bio-politics is organized and exercised in a reshaped territoriality, where the geo-political distinction between combatants and civilians no longer applies. Drones practices of securityaim to transform the "geo-political" action into a form of "bio-political" control. This is probably the reason why "high value targets" are so important that for destroying them the U.S. CT and even IDF have been disposed to disregard the basic principles of LOAC. Indeed, for catching high-rank figures of Al-Qaeda and Hamas, the potential death of their relatives, children, women and neighbors has been deemed as a "necessary" security measure. Women, children and relatives have been often obliterated in drone strikes and have been calculated as "legitimate collateral damage", or, even worse, "as willing human shields"(Weizman, 2007, p. 245).

Eventually, the battlefield is no more limited to military places. The battlefield is where the threat is still alive. This is why networks enable drones to get so close to the "everyday life" of the target that they "compulsorily" hit houses, urban districts and civil buildings. Terror is essentially different from war as a category. As Dillon (2007b) explains, "in a terror age the logic of threat installed by liberal bio-politics of security is ultimately not that of an externalized enemy. Neither another competitive state, nor an existential other form of life, the threat to life in the liberal struggle bio-politically to secure life becomes life itself, the very means which lifelike properties circulate and propagate".

It is in through this new formulation of securitizing actors (i.e. terrorists) that drones have found their logical rationale for being increasingly deployed. Such logic has transformed death into a pre-emptive justified security measure. As Chamayou (2015, p. 146) provocatively asserts "the targets are presumed guilty until they are proved innocent – which however can only be done posthumously". This is the reason why the research in the following pages will not distinguish between civilians and combatants, but rather it will write about "the people on the ground".[1]

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[1]Calling generically "people on the ground" may appear as an imprecise definition, lacking of academic accuracy. The research, however, wittingly chooses such a definition for two reasons. First, distinguishing between civilians and combatants is a hard task in drone strikes due to the blend between those presumed as militants and those not (data confirm such controversy), and there exists the risk to politicize the issue. Second, the research has the purpose to insist on the concept that the battlefield is a moving-stretchable space that can involve everyone if deemed target.

2. Drone battlefield from the peopleon the ground perspective

Attention has been devoted to the perceptions of"the people on the ground" in relation to the cases of Afghanistan and Pakistan drone strikes. As the "Living Under Drones" report tells, civilians of Afghan-Pakistani border regions, where most of theGWoT strikes between 2008 and 2013 have taken place,describe experiences of injuries, destruction and fear(Knuckey et al., 2012, p. 66). The interviewees evoke the impact that strikes have had upon their quotidian life. Their testimonies drawa much more different picture of drone warfare, than what is generally depicted in ethical and juridical publications. On the one hand, testimonies recount the disruptive effect of strikes on the life of survivors. Injured people, including children, are mostly excluded from education and working life, as their disability prevent them from moving. Widows and orphans are relegated to a status of extreme poverty, as their household cannot continue without men. Injured often cannot afford specific surgical treatments for their severe wounds. Similarly, prostheses and cares for people mutilated by drones are too expensive for public health care systems and people are so poor that cannot pay by themselves. On the other hand,interviewees speak of the constant levels of fear that drone strikes witnesses should face everyday.Adults, teenagers and even children are all frightened to be the "next victim of a drone attack, especially by night" (Knuckey et al., 2012, p. 66). Indeed, the hovering of drones for hours over the villages of North Waziristan or FATA regions, Pakistan, cause mental diseases and psychological disorders to those on the ground. The testimonies tell of an enduring status of anxiety, in particular for the people who physically attended a strike. The tremendous sense of helplessness and despair affects in a pervasive way ordinary life and social activities. As one of the youngest testimonies says "We were all busy. But since drones have started […] everyone is terrorized […] you feel death is so close that you don't want to study" (Knuckey et al., 2012, p. 149).A psychiatrist treating people with drone post-traumatic disorders and stress says that the people suffer from forms of "anticipatory fears", common in conflict zones due to the"uncontrollability" of future events (Knuckey et al., 2012, p. 81). Such people, in most of the cases teenagers and women, feel to be included into a "never-ending battlefield" as potential targets. As a matter of fact, they explain that drones are different from traditional military forces, as they seem a "*deus ex machina*", acting independently and unpredictably from political will. The activist Medea Benjamin (Ehrenreich, 2013, p. 102) writes that the greatest fear that people feel in Pakistani FATA region is that drones can target anyone wherever he is, even in houses, workplaces or medical clinics.

Lesser attention has been however dedicated to Palestinian territories as a case of vertical architecture of drone surveillance and attack. Even in Gaza Strip,indeed, "drones shape life beneath them" (Wilson, 2011).As Weizman (2007, p. 237)points out in studying Israeli occupation of Palestine, even if soldiers are out from Gaza since 2005, IDF fully controls Palestinian aerial sovereignty. This, in the context of the outbreak of the second Intifada, resulted in the emergence of a new dimension of war in the Israeli-Arab conflict: aerial space. As Israelis have retained exclusive control upon Palestinian skies, formalized during Oslo agreements, IDF has had the possibility to vertically dominate Palestinian territories and the life below(Weizman, 2007, p. 239; Wilson, 2011).

Culminated with the establishment of an "iron dome", IDF has used the aerial dimension and specifically drones for a range of different security practices(Human Rights Watch, 2009).Israeli security apparatus has deployed drones as multirole operatorsin surveillance, protesters dispersion and finally targeted killing.Israeli authorities still claim secrecy for IDF drone program, but many independent groups and journalists are convinced and have proofs that IDF drones have constantly fired missiles both in West Bank and Gaza Strip (Currier and Moltke, 2016; Human Rights Watch, 2009).

2.1 Testimonies from Gaza Strip

The author of the present research has carried out the interviews with structured questions about drones and the battlefield to Palestinians, currently resident in Amman, Jordan. The first interviewee, named *Ahmed*(2018) is a 25 years old Palestinian male.[2] When asked about his knowledge concerning IDF drones, and how he did come to know drones, Testimony One (*Ahmed*) answer is that he only knows that drones have powerful cameras and some are lethal. While, when asked which is the general knowledge among his relatives and friends about drones,Testimony One (*Ahmed*) refers:

> *We don't know much about IDF arms, sometimes new weapons are deployed and we notice it lately.We knew more when Palestinian students were killed in 2008's incident. We know anyhow that the one that flies high and you can hear the propeller, is lethal. A peasant friend of my friend was killed [in BeitHanun] close to his farm and since then we all fear drones. He was found in small flash pieces, there was no doubt it was a small missile coming from adrone. [...]People complain that drones shape life in Gaza Strip. In effect they cause a lot of fear and they also interfere often with TV signal and smartphones. They are also used for firing trees, plants and agriculture becausemissiles pollute land. We discovered pieces of small projectiles close to olives*

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[2]He did not specify his current work position; he only reported that in Gaza he was employed.

and other trees. They surely belonged to armed drones. They [IDF] target plants because they know chemicals present in the missile affect the land.

Testimony Two *Nabil* (2018), 31 years old male, blogger and journalist, explains that the general and popular consideration about drones among his friends, relatives and neighbors is that they are noisy and dangerous,"as unknown animals". Testimony Twoin relation to the feelings of being under drone controlreports that he perceives to be under constant pressure due to unawareness of the unbound spatiality of potential drone attacks. He cares about the color of clothes he wears, the way he walks in the street, the places to go at certain time and even if using his car or not. All the testimonies agree in saying that "hearing the buzz of a drone is strictly associated with an unconscious and uncontrollable feeling of fear" (Ahmed and Nabil, 2018).

If Testimony One says that he tries not to really care about drones at the end of the day, since he hopes drones just spy; Testimony Two reports to beafraid as drones enact a constant status of threat. He recognizes that drones effectively build an "architecture" of control that humans are forced to live with. And he tells:

When you hear a drone you cannot sleep or work, you just think "In Shaa Allah" not to be hit. When you are in the street you know you should walk under balconies. [...]My children when hear "buzz" come to our [parental] room because they are afraid. You don't know; maybe they [Israeli forces] have confused you. Or your identity with the neighbour and then you become the terrorist just because you walk alone in the countryside. Maybe you don't know what your brother did, maybe a friend of him is linked to wrong people. Especially now, everyone needs to be controlled, with protests all Palestinians are always [deemed] dangerous in advance. If you are a male, then you have to have really fear. [...] In 2014 escalation of conflict, drones were used to target the roof of buildings as an advertisement before F-16 strikes demolishing houses. After that, drones have always been associated with the terror of "my house can be the next".

As the story of Testimony Two explains, the CT network continuously looks for potential "life threats". And every male in military age (codified by theIDF and U.S. Air Forcewith theacronym MAM) is a potential target when a drone is looking for "life threats". On the point, there is arelevantissue raised by Testimony One. IndeedAhmed(2018)believesthat ordinary people cannot know how to protect themselves because there is no actual "safe place" in Gaza. In relation to "the spatiliaty of drone control"he asserts:

When you hear drones flying you think that they can make fire wherever they want because they are just iron airplanes and they have no fear. Well, F-16s are more scaring and more powerful, but drones are more insidious, like mosquitos they persecute you. Drones follow people. I'm certain of this. You have no power to fight drones, I'm certain they know everything of us. The "spatiality of drone" is not easy to describe; anyway even when you don't hear the "buzz", you know they are there. The "buzz" makes only fear more real, but drones are always there in the sky because they are cheap for IDF.[Referring to the drone] In the sky you can go everywhere in few seconds, you are faster than people. This is what frightens people. Children are so, so afraid at

school. They report that when hearing the "buzz" they do not feel to be in class anymore and feel to be in another place.

On the same point,Testimony Two *Nabil* (2018) then reports:

The perception is that anyone can be targeted, even "pure civilians". You think that they can see everything and you fear to do something wrong that the drone can see. It's exactly like they Eye of God. You are afraid to talk to people by the street, to help people, to have friends, to go to some places. Israelis say that you have to behave well if you want to live well. We feel controlled. It's not a matter of privacy (privacy is luxury in Palestine), [rather] it's matter of people freedom.

Testimony Two effectively explains that it is drones verticality and persistence that make them a permanent presence among people in Gaza Strip. Their omniscient capacity is frightening and they continuously bring people under the inspection ofIDFCT network. People on the ground are unaware of the drone network of control, as it is a sort of military-policearchitecture of surveillance. This eventually makes people living on a permanent social-edge of insecurity and impotence. The edge is an indefinite space where they do not enjoy a real status as"civilians" or "combatants", but rather they are simply people on the ground, constantly under surveillance. What emerges is a sense of routinized alienation with respect to the networked technologies that enable drones to control Gaza Strip. What the testimonies talk about is not a securitized or controlled urban area, but rather a form of urbanized battlefield. The battlefield shouldbe, on the contrary, an exceptional space. While, instead, it is brought into a quotidian spatial-temporal dimension with whom people on the ground are forced to coexist everyday.

CHAPTER FOUR

The final chapter will interpretatively analyze the data gathered with interviews. Here Actor Network Theory (ANT) core tenets will be deployed not as a mere framework for analysis, but rather as a lens for looking at the web of interconnections between humans and objects present in drone warfare.

1. What is Actor-Network Theory?

In a nutshell, ANT is a sociological theory of relationalassociation,which studies the intermediating effect of technology in social activities(Crawford, 2005). However, as ANT proponents strongly recommend,[3]ANT should not be intended simplistically as a theory,since it is not properly "hierarchical" to the empirical reality as other theories are. Indeed, ANT does not provide with a real framework wherein putting data and from which obtaining interpretive results. It rather is a "way for lookingfrom a different perspective", that should bealways adapted to each empirical case under enquiry. As Latour (2005, p. 126) writes, each empirical case that involves the presence of a network is not necessarily an example of how ANT works.Rather,ANT is an occasion to spot a "controversy"in the structures of the social world where "materialities" (or objects) play a relevant role into network formations. For ANT there is not an ontological fixed reality, but infinite complex social formations made out of "associations".

Accordingly, what is remarkable with ANT is the focus on"materialities"presentin the social world. ANT is rooted in a "relational"traditionthat establishes a symmetrical ontological understanding of humans and non-humans entities(Balzacq and Cavelty, 2016).The cardinal principle of ANT is the principle of "generalized symmetry", which means "that non-humans and humans should be integrated in the same conceptual framework and assigned equal amount of agency" (Cressman, 2009). Indeed, ANT conceives that technology does not exist outside the social world as an autonomous entity; but rather it impacts and shapes the social world as an active participant(Latour, 2006, p. 128). ANT is a practical optic to liberate the analysis of the social from human-agency focused approaches and from the strict dichotomies "nature/society" and "agency/structure" (Balzacq and Cavelty, 2016).

"Actors"and "networks" are key elements of ANT. Every "actor" is not simply the function it performs; but it can entail in itself other performances, other networksand other

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[3]The present research draws mainly from ANT insights coming from the works of Bruno Latour (2005) and John Law (1999).

association(Latour, 1996).There are,nonetheless,specific types of "actors" that are defined by ANTas "actants". "Actants"are"actors" that can change practices and can render performances more visible. "Actants" are "mediators" or "translators" of practices in network formations(Latour, 2005, p. 65). Whereas, a"network"is every kind of relational structure of the social world in which "actors" are interconnected. A "network" is a heterogeneous social aggregation of "actors" that have a common end and are empowered by their connections. The expression "heterogeneous"aims at implying in ANT every element that exists both in nature and society. Examples can bebodies, signs, electromagnetic waves, ideas, natural features, devices or forms of violence.

Furthermore, there is an essential concept for studying "actors" and "networks"that ANT employs: the concept of "translation". "Translation" refers to the process of "modification throughconnections", or,put simply, to the process of performance that an "actor"enactsin a "network"(Barry, 2013). It consists of creating "convergences and homologies" between two actors, explainsLatour (2005, p. 22). In other words, when a technical practice is performed, a meaning is translated from an actor to one another. Consequently, the technical and the social co-constitute each other with new translated meanings. "Translation" is a form of power in which an "actor" transports a meaning, an impulse, "inducing two mediators into coexisting and connecting" practices (Latour, 2005, p. 57).Indeed, "translation" is the concept through which ANT can disentangle power relations (Müller, 2015). "Translation" is a process that can occur at any scalar level, from the "micro" to the "macro" and can circulate along "networks" from the "micro" to the "macro" and vice-versa. The multiple scalability of ANT allows tracing"networks" aggregations at many different spatial levels simultaneously. Hence, ANT does not conceive temporal or geographical traditional constraints. "Translation" is concept that transcends the boundaries of subjective knowledge.

Even if not thought as a geographical theory, ANT has an inner proclivity to be instructive in terms of the relation between space and "actors"(Murdoch, 2006, p. 79).ANT permits to get rid of the tyranny of traditional geopolitics and its main concepts as distance, proximity, landlocked, and others (Law and Hassard, 1999, p. 16). For ANT space is nor social neither real. Space in ANT (in order to be mapped and defined) is the by-product of "association". Indeed, one essential point stressed by Latour (1996)is that the "network" functions through the circulation of competences, actions or more generally knowledge. The power relations that ANT wants to study as "associations" are traceable within movements across space. ANT defines the objects within the "network"as "immutable mobiles", as they don't change, but they move and need spaces to perform their ends. In ANT space becomes not a "container" of "actors" but a "relational product" of

"actors" associations (Murdoch, 2006, p. 16). From this starting point, ANT indirectly questions the *a priori*geographical scales (as state, region, sovereignty, global, local, etc.) used for instance by IR and Security Studies for looking at "spatialities of power". Therefore, ANT assumes that space is simply "made out of the flows that involve objects through interconnectivity" (Müller, 2015). As Murdoch (2006, p. 15) points out "relational space is power-filled space where some alignments come to dominate […] while other come to be dominated".

Such perspective is useful to show how "networks" come into existence out of certain associations that transport power impulses. Therefore, ANT can be seen as a lens through which studying relations, connections and transformations occurring in networked structures where even objects have agency. Even if objects cannot be at the origin of social activities, they at least "express power relations, symbolize social hierarchies, reinforce social inequalities, transport social power and reify gender relations" (Latour, 2005, p. 72). Finally ANT, asit can serve to see from a different perspective the associations of elements, is a theoretical instrument to explore how networks generate effects of order, disorder, power, organization or inequality (Law, 1999). As matter of fact, in a Foucauldianguise, power is interpreted by ANT as an effect rather than a cause of social processes (power understood not as*in potentia*, but *in actu*). Nevertheless, differently from Foucault, ANT focuses more on material or empirical processes of spatial translation of power, rather than on discursive processes of spatial translation(Murdoch, 2006, p. 29).

2. Applying Actor-Network Theory to drone warfare

ANT can be applied to drone warfare, as drones are crucial objects of security in networkswhere technologies and humans operate together. ANT, however, should not berelegated to be a descriptive tool of how a dronenetwork is structured. Indeed, using ANT just to highlight that drones operate in technological networks where humans and non-humans can be studied symmetrically,seemsto be obvious and redundant. Similarly, saying that the CT apparatuses that employ drones work in a networked fashion, is not something new.

ANT, instead, encourages to dig deeper in order to study the "network"as a concept and not as a thing(Latour, 2005, p. 131). ANT provides a different way for understanding power relations functioning within"networks" and focuses on the unconventional spaces where the "network" works. It is the geographical configuration that makes the techno-human "network" something worth to be studied. Therefore, drones can be analyzed as "actants"or mediators in the spatial "network"where pilots and the people on the ground are inscribed together. Drones are capable to

circulate practices from long distances and across diverse scales, intimately connecting operators to the people on the ground in real time. It appears here clearer than before, how technology is not neutral, but rather fully political, as it is a mediator that "translates" certain meanings and actions into political practices(Barry, 2001, p. 16).

The drone battlefield can be studied with ANT through two stages.In the first stage, dronesshould be looked though the association they create withthe "translation" of impulses. While, in thesecond stage, dronesshould be studied for the new"spatialities" theydefine. Drones, in effects,create new object-defined spaces, where certain actions are rendered possible and certain power relations are reproduced. Such spaces are not the flat places that pertain to our traditional geographical understanding. Rather, such spaces are "translation zones" where political processes are rendered possible by objects (Barry, 2013).

2.1 The concept of "association"

Starting from the assertions made by Palestinians during the interviewsthat they feel to be excluded from drones network and that they fear dronesas they don't know their intentions, it is possible to deploy ANT concept of "association" (Müller, 2015). The concept of "association" or the French version of "agancement" (coined by Deleuze in relation to "assemblages") express the way the "network" expands through an extension of its "agency"power towards another actor (Müller, 2015).

When Palestinians *Ahmed* and *Nabil* (2018)tell that drones spy with cameras their private life, creating unprecedented levels of fear and intrusion, they implicitly say that they are associated by objects in a "network" through circulationof knowledge and power. Such an association is a form of "agancement" of passive "actors"in the "network" (the people on the ground). "Agancement" is made possible only by the mediator agency power of the "actant" that is the drone. Operators without the intermediation of technology would not be able to search terrorists and would not be able to penetrate the personal life of the people on the ground.Drones"agance"physically and conceptually Palestinians in the"network"of IDF CT apparatusfor securitizing, dominating and exerting power over them.On the one hand, conceptually, when cameras spy the people on the ground and enroll them in the CT apparatus in order to "profile" them, the people on the ground is "aganced" in the "network" through a circulating knowledge. While, on the other hand, when drones launch missiles, they "agance"the people on the ground physically through translation of material violence. Drones "agance" the people whenever necessary, by exploiting their robotic capabilities.As the CT apparatus is continuously in search of

potential terrorists the "network" continuously expands and contracts, associating and disassociating the subjects on the ground.

2.2 The re-shaped "spatialities" of the battlefield

The social-edged margin on which Palestinians feel to be relegated can be seen as ANT "translation zone". A "translation zone" is a space not defined by territorial boundaries, but defined by the shifting of scientific and technical practice. It is, in other words, an object-defined space, or a topology created by the circulation and flows of the"translation" of power impulses(Barry, 2013).Indeed, when the "network" extends to the people on the ground thanks to drone agency, it constructs and defines new "spatialities".Such "spatialities" are defined by the extent that drones reach with their power of sight and attack into the life of the people on the ground.

Therefore, drones enact the creation of new political topologies of (in)security. These topologiesof (in)securitythat the Palestinians aptly describe in their testimonies, are the places where fear and violenceare exported and circulated by the drone. Such topologies are nevertheless invisible to the sight of those who look at political spaces following a traditional political scale. As a matter of fact, the spaces of (in)security created by drones are hardly visible from a geopolitical perspective; but they are, nonetheless, fully political spaces because they are filled with power relations. Indeed, the mediating effect of technology renders those spaces power-filled of asymmetrical dynamics of fear, domination and violence.Indeed, they are not neutral spaces, butthey are created by mono-directional and univocal practices. Drones affect the people on the ground by translating impotence, fears, anxieties and a status of threat. As Murdoch (2006, p. 17) recognizes "power relations across network space are inevitable double-edges; they can use space to facilitate movements and access; equally they can entrench confinement and exclusion". Drones thus reproduce the asymmetric impulses that circulate through the network, fromCT operators down to the people on the ground. Such object-defined spacesare controllable spaces where power is exerted on an almost scientific basis. Objects, in this case especially drones (but not only drones), translate the enormity of state violence into small scalar spaces: the places of everyday life. The process of "translation" occurs through different "spatialities" that become what previously in war was known as the battlefield. Such "spatialities" can be conceived as a form of re-shaped battlefield.Therefore, drones enable operators to fight in an "object-defined" space that is the "drone-network battlefield". Such a re-shaped battlefield has no traditional geographical correspondence and is univocally built by the drone CT network alongthe rationalities that regulate thecontinuous search for potential terrorists.

3. Conclusion: the battlefield as a scientific laboratory

In conclusion, it seems that the battlefield in drone warfare is a discontinuous space: contracted and extended through the use of technological associations. The battlefield becomes an ever-expanding"zone of translation", that is decided by technologicalcapabilities and human willingness. In this zone traditional military reciprocity evidently ceases to exist. Such drone battlefield is not always visible and does not pertain to a single geographical scale available. The battlefield is place of combat where the associated subjects cannot use "negotiating or resistance" tools, as the power exerted is univocal(Murdoch, 2006, p. 80).This is because objects produce meanings, practices and effects depending on how they are related to forms and circumstances of their use and the sites they are situated (Barry, 2001, p. 21). The battlefield is no more limited to be the place where two combatants encounter each other and fight. The battlefield is not the Calusewitizan place of "friction and uncertainty", where the outcome of the battle is tied to unpredictable variables of "extreme human decision"(Chamayou and Clausewitz, 2006, p. 84). And, the battlefield is no more a contestable space where the rational capacity of the "prince" instructed by Clausewitz is the ultimate instrument to win the enemy.

The battlefield, on the contrary, becomes a multi-topology, dis-placed along the chains where violence scientifically circulates and through which technology precisely translates it into political practices. The battlefield is reduced, circulated, extended and finally concentrated on the human body and its civil, domestic or public surrounding environment. From practices of surveillance to practices of killing, objects (drones) allow operators to safely preserve their life by dis-placing political violence and bringing it to new topologies, where violence is intimately tested, practiced, and, finally, liberated on the people on the ground. IDF targeting of olive tress, as *Ahmed* and *Nabil* (2018)tell during the interviews, or IDF endowing drones with tear gas to use it against civilians, are just few of the examples of how drones are continuously deployed asexperimental ways of control and violence. As GregorieChamayou, (2015, p. 203) reminds: "This iswhat Marx called a scenario of "war (being) developed earlier than peace": certain social and economic relations are initially developed for military purposes, and only later are they reintroduced and developed in order to function ordinarily within civil society. The army serves as a center of invention a laboratory experimentation for new political technologies". Chamayou thinks that from such Marx'spostulation it is possible to deduce that armed conflicts are for society "phases of experimentation and trial" or, put differently, "social laboratories" where technological processes are accelerated and tested for being brought back to society later. In effect, seen as a hybrid network

of machines and man, the drone battlefield resembles, thus, a scientific laboratory(Grondin, 2011). A space where technologies and humans work hand in hand enacting hybridized forms of precise, restricted and continuously experimented violence.A place wherenatural processesare framed and encapsulated within technological zones, in order to renderpractices of control, violence andpower more and more rapid, precise and scientific.

Words' count: 15091

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