The Geography of Drone Warfare

An explorative research on the changing spatial dynamics of warfare as a result of the increased use of armed drones

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Thesis supervisor, Radboud University: Bert Bomert
Thesis supervisor, NLDA: Frans Osinga

Student number: 4065751
Executive Summary

This research aims at the step-by-step development of new theoretical insights by combining existing theories, concepts and ideas. Therefore it builds upon Derek Gregory’s concept of the ‘everywhere war’, and entangles it with the globalization of terrorism, counterinsurgency (COIN) and the ‘manhunt approach’. By linking this collection of theories to the deployment of armed drones, a comprehensive conceptual framework regarding the ‘geography of drone warfare’ is formed.

What the concept of ‘everywhere war’ in short means, is that since the Global War on Terror has commenced, the battlefield has become borderless. Acts of violence occur inside, as well as outside ‘hot battlefields’. Two major underlying processes can be identified. The most visible process is the so-called deterritorialization of the enemy in the Global War on Terror. Al’Qaeda and its affiliates, the enemy of the West in this conflict, are not bound to a specific country.

The second process is in fact the Western reaction to the first process. Counterinsurgency and counterterrorism are changing as a result of the changing enemy. Contemporary military strategies focus on the targeting of individual actors and nodes in networks. Modern counterinsurgency is based on the destabilization of terrorist networks, which in part is done through the elimination of individuals. This process has been called the manhunt approach. The war goes wherever Al’Qaeda and its affiliates are believed to be hiding and this could theoretically as well as practically be anywhere.

Al’Qaeda and its affiliates are characterized by the fact that they fight for reasons based on religion, ideology and beliefs. This results in a fluid geography of the enemy, since they commit themselves to a cause instead of a country. Therefore, terrorists and insurgents are potentially present everywhere, which is why the War on Terror has become a war that spans the globe.

The seeds for the creation of a globalized battlefield are planted by violent non-state actors that choose to wage war on their terms. In the context of the War on Terror, the entire globe could be recognized as the battlefield. At the same time, however, this leads to a battlefield without a fixed geography, the concept becomes deterritorialized. They thereby move beyond the classic notion of insurgency, as the phenomenon has generally been limited to the national level. David Kilcullen therefore speaks of a global insurgency.

A new form of warfare, wherein a different kind of enemy is fought, asks for a different approach. Armed drones have taken an important place in the context of counterinsurgency, that aims to defeat the global Jihad of Al’Qaeda and its affiliates. Unmanned Aerial Vehicles (UAV’s) are the weapon of choice for targeted killings, the final phase of man-hunting.

During the 1990’s a small unmanned airplane, known as the Predator, was further developed into a hunter-killer platform. The platform was a combination of sensor and shooter, which proved to be a suitable answer to the increasing threat of transnational terrorism.

The arming of UAV’s and the deployment of this new type of weapon above the battlefield has been a large step forwards in modern warfare. The core characteristics of the weapon are the combination of ‘precision’ and ‘persistence’. The relatively small payloads and modified warheads of the weapons carried by drones, result in a higher precision in the sense that due to their use collateral damage
numbers have decreased. It is a relatively precise way of taking out individual targets. Drone strikes are therefore arguably less indiscriminate than other types of aerial bombing. Targeted strikes that involve at most a handful of relatively small missiles are a far more precise and less destructive way of attacking from the air than methods of the past.

Combining the sensor and the shooter into one platform enabled the US to effectively hunt for a fluid and fleeting enemy. Since then, drones have become the main workhorses in modern counterinsurgency and counterterrorism. Drone warfare, a form of transnational warfare, has been an important part of the answer to transnational terrorism. The ‘everywhere war’, which originally has been a terrorist campaign, has been adopted by the West. The strategic strength of Al’Qaeda and its affiliates had been that they could strike anywhere at any time. The introduction of armed drones resulted in the fact that the US was suddenly able to do so as well. This balanced the asymmetrical war to a certain extent, making the use of drones an effective answer to transnational terrorism.

The possibilities of drone warfare have been seamlessly integrated into the modern vision of COIN. A key strategy of counterinsurgency, patrolling, has been adjusted to the changing dynamics of the modern global insurgency. Although patrolling at first glance sounds rather low tech and basic, it has always been a foundational strategy in COIN. The counter-insurgent confines a certain geographical entity (a village, a town, a district, a square on a map) and realizes a situation in which he prevails in terms of intelligence and military force.

However, a distinctive and recurring factor of the global insurgency is the use of improvised explosive devices, IED’s. This makes it difficult to patrol areas of the battlefields in the War on Terror on foot. Within modern COIN, drone surveillance has taken over the classic tactic of patrolling. The targeting of individuals and consequently the manhunt doctrine developed out of the initial role of unmanned patrolling aircraft. The role of the hunter-killer platform is therefore a mere extension of a classic COIN strategy.

Man-hunting has also become a central strategy in fighting transnational terrorism. The strategy is used to degrade terrorist networks, it is part of counter-network warfare. Two types of man-hunting can be distinguished, target-centered and geo-centered man-hunting. In target-centered man-hunting a certain individual is hunted down, wherever he may hide. Geo-centered man-hunting is more an evolution of patrolling, since it is focused on the spatial domination, striking ‘targets of opportunity’ in selected areas. The main difference between the two types of man-hunting lies within their geographical scope. The assassination of designated targets can take place anywhere. Instead of the area surrounding the target, the target itself is seen as a miniature battlefield. A target-centred war is therefore a much more fluid concept than a geo-centred war.

The spatial dynamics of warfare have been radically altered since the introduction of the first armed Predator. Initially, the spatial dynamics had been changed by the self-proclaimed enemy of the West, the global Jihadists. They started their everywhere war on September 11, 2001. However, the introduction of drone warfare to the battlefields of the Global War on Terror meant the arrival of a transnational weapon. Hovering drones were able to spatially dominate an area and strike targets from a geo-centred perspective, thereby reterritorializing a war that had been deterritorialized in the first place. By doing so, the asymmetry which was a central characteristic of the war, was rebalanced and the conflict became to a large extent symmetric. The Global War on Terror was, from a Western
perspective, turned into a global man-hunting campaign, a consequence of the everywhere war and modernised counterinsurgency tactics.
Chapter 1 - Introduction

Like many other modern processes and events, war is affected by globalization. Confrontations between nation-states have seen a decrease, while the influence of decentralized violent non-state actors in conflicts has been increasing over the last decades. ‘The enemy’ in the Western Global War on Terror comprises of a variety of international terrorist organizations, which role has steadily become more important in the worldwide balance of power. Although governments and its military organizations have benefited from the growing interconnectedness that globalization brings, criminal and terrorist organizations have done so as well and arguably to a greater extent. For terrorist organizations such as Al’Qaeda, the ‘death of distance’ has proven to be an enormous advantage. Those organizations are no longer hindered by constraints caused by distance, such as economic costs and time, and they are thereby evolving into global networks, a collection of communities spread across the world utilizing terrorist activities in order to influence populaces (MacKinlay, 2009, in: Ford, 2012). This opens up more windows of opportunity for them to carry out their plans (Buhaug & Gleditsch, 2006).

In the War on Terror stateless actors that fight for a cause, rather than a country or territory, are opposed by military organizations from sovereign states. In this sense it is an asymmetric conflict and this has been a disadvantage for Western forces. Insurgents are able to take advantage of national borders, by finding shelter just across them. As Admiral Mullen, former Chairman of the US Joint Chiefs of Staff, has stated: “We’re living in a world now where targets are fleeting” (Warrick & Wright, 2008, in: Ford, 2012, p.119). Western troops, however, are bounded by traditional notions of sovereignty and territoriality. The metamorphosis of the enemy calls for a different approach, as classic strategies and tactics often do not longer apply in a war without a clearly demarcated battlefield.

The War on Terror differs from former wars. In the classic sense war has been a duel between two enemies, one side had to kill or would get killed. Nowadays, insurgents do not wear uniforms and prefer to blend in among the population. They choose the times and places where combat takes place, “to avoid a battle of annihilation” (Smith, 2005, in: Ford, 2012, p.115). Smith also emphasizes that a paradigm shift has taken place “from armies with comparable forces doing battle on a field to a strategic confrontation between a range of combatants, not all of which are armies, and using different types of weapons, often improvised” (Smith, 2005, in: Gregory, 2010, p.155). War has transformed from the classic accumulation of grand battles between armies comparable in size and tactics, to the hunt of a technologically superior army for a low-tech, dispersed and hidden enemy. The engagement between forces of the same power has shifted to the confrontation of very unequal forces. This inequality, as Sloterdijk (2009) argues, is what has resulted in the use of terrorism as a modus operandi. In order to successfully fight a superior opponent, insurgents use hit-and-run tactics and a strategy based on surprise.

The networks of terrorists, the enemy in the War on Terror, are a global threat. However, because of the nomadic lifestyle of the loose cells within those networks, the enemy has become completely de-territorialized. It is therefore believed that the Western world is “threatened by geographically and legally amorphous Al’Qaeda ‘affiliates’ in regions that stretch from North and East Africa to the Arabian peninsula, and beyond” (Shaw, 2013b, p.540). There is no geographic clarity on the whereabouts of Al’Qaeda and it thus remains unclear where interventions could be made in order to
stop the organization (Bahgat & Medina, 2013). The position of the US in this, brought forward by the US military, is that “we need […] to smoke out the terrorists from their hiding places” (Mustafa, 2005, p.83). Basically, the strategy is based upon denying Al’Qaeda a safe haven (Shaw, 2013b).

The global character of the terrorist threat makes that the process of denying safe havens has also become global. Individuals, nodes in networks of terrorism, have been eliminated in various places. In Afghanistan and Iraq, both ‘official warzones’, the Global Insurgency has been combated (Kilcullen, 2005). However, terrorist targets have also been taken out in other places, such as Pakistan, Yemen and Somalia, countries the United States is not officially at war with (Kaplan, 2013; Scahill, 2013). Concepts that used to be clearly demarcated, such as ‘warzone’ and ‘battlefield’, are becoming increasingly vague. Especially the spatiality of these notions has altered to a great extent during recent years.

The classic battlefield is constructed by the implicit agreement of parties involved to engage in a battle, as this will only occur when both armies are willing to fight and thus agree to do so. This process can change any space into a place, an idea. A certain space then gains some sort of meaning for the actors who utilize it as a battlefield and therefore any space could become the geographically limited area upon which a battle takes place – the battlefield. However, “in modern war the idea of the battlefield has been transformed into one of complex, multiple, overlapping spaces of violence” (Shaw, 2003, in: Mégret, 2012, p.142). Grondin (2011, p.255) argues it would be false to state that the battlefield has disappeared, it is rather “dis-placed, re-designed, re-shaped and rethought” and war is currently fought beyond the battlefield.

Terrorism is characterized by the will of at least one of the adversaries in conflict to wage war in an expanded battle zone (Sloterdijk, 2009). Therefore the seeds for the creation of a globalized battlefield are arguably planted by violent non-state actors that choose to wage war on their terms. In the modern day War on Terror the entire globe could be recognized as the battlefield in reaction to Al’Qaeda, that shows a “commitment to a cause that redefines the concept of the battlefield, at once globalizing and deterrioralising it” (Ralph, 2010, in: Mégret, 2012, p.148). By committing to a cause instead of a country, Al’Qaeda takes the classic geographical aspect out of war (Naim, 2010). This to a large extent differs from older terrorist organizations such as the IRA or the ETA, which became violent actors because of their strong connections to certain geographical entities.

This means warfare is no longer about the direct confrontation of two parties (the West versus ‘the terrorists’), instead war is now structured as a (man)hunt wherein one side flees and the other pursues. War has, in that sense, increasingly taken on the form of a (man)hunt. Aarons (2013, n.p.) argues that “the manhunt involves a radical asymmetry of forces, in which the hunter sets out in pursuit of a disadvantaged target, and avoids any exposure to death through the use of intermediaries such as dogs or robots.” The importance of those ‘intermediaries’ has strongly increased in the last decade. Unmanned Aerial Vehicles (UAV’s), popularly referred to as ‘drones’, are now important weapons against enemy forces on the battlegrounds of the War on Terror.

This also affects the meaning of ‘battlefield’. Because the goal in the War on Terror seems to be to hunt down and neutralize individual terrorists around the globe, the battlefield is no longer “defined by the locatable space of an effective combat zone, but by the simple presence of the hunted individual who carries with him everywhere a kind of little halo denoting a personal hostility zone” (Chamayou, 2011, p.3). The combat zone therefore follows the movements of the enemy, as the
body of each individual enemy combatant now is the battlefield. Al’Qaeda, a worldwide terrorist network, thereby automatically forms a worldwide battlefield.

The early phases of the War on Terror in Afghanistan marked the beginning of a permanent war against an enemy that was referred to as ‘the terrorists’. Although the term did and does it well in the media, analytically speaking it is of little value. More specifically, the war is directed towards the defeat of a Global Jihad, an insurgency spread across the globe. It originates from interconnected networks of transnational terrorism, referred to as ‘Al’Qaeda and its affiliates’. This new type of warfare has been named the ‘endless war’ by Keen (2006, in: Gregory, 2011) and the ‘forever war’ by Filkins (2008, in: Gregory, 2011). Gregory emphasizes that it is important to not only look at the timescale of the War on Terror, but also at the spatiality of it, as it now takes place over the entire world. Throughout the years the war has been extended to other countries such as Pakistan, Somalia and Yemen. Gregory refers to this phenomenon as ‘the everywhere war’. Terrorists have struck from Madrid to Moscow to Mumbai and this violence has been answered by the West from Afghanistan to Somalia to Mali. “The conventional ties between war and geography have come undone”, he argues, as war itself is subject to change because of the “slippery spaces within which and through which it is conducted” (p.239). In global conflicts it is impossible to tell where the front lines are. Is the War on Terror fought in Afghanistan or Yemen, or is New York perhaps the real theatre of war?

The role of drones in postmodern warfare

As all social processes, warfare has evolved ever since it was invented. Sticks and stones became swords and spears and the introduction of the longbow, the rifle, the machinegun and the airplane onto the battlefield changed the process even further. Technological revolutions have shaped the way of war throughout history (Coker, 2004). These days drones are becoming the weapon of choice in the Western style of waging war, as well as the symbol for the postmodern and asymmetric warfare that has been the norm for the last two decades (Osinga, 2013). With their capabilities of developing “real-time depictions of social networks that can potentially make up for any gaps in knowledge that might stem from the difficulties of foot patrolling or limitations in the numbers of appropriately skilled analysts” (Ford, 2012, p.118), drones have proven to be the ultimate contemporary intermediary weapons, as they are suited for the manhunt tactics required in the War on Terror. Technologies have been changing the nature of the battlefield for ages, but the influence that drones have on this process is of another level. It is argued that, in response to the alteration of the battlefield through the increased role of international terrorist organizations, drones moved violence from the battlefield to somewhere else. Drone warfare has been labeled as “not-battlefield-at-all type violence” (Mégret, 2012).

On the contrary, it is also arguable that the drone is nothing more than just another new technology, utilized as a weapon in armed conflicts. The UAV could be seen as the next step in the evolution of weaponry and as the continuation of a process started by the invention of artillery, gunboats and manned aircraft.

However, the capabilities of unmanned aircraft have resulted in a changing way of engaging terrorists and insurgents worldwide. The globalisation of the battlefield has resulted in a major shift in the capabilities, origins, symmetry and rationales of armed conflict (Woodward, 2005). UAV’s are an ideal tool within this new way of waging war. They have the capabilities to examine large areas for a long period of time and it is this “aeromobility” that strongly reduces the difficulties caused by the
geographic distance (Adey, 2008, in: Shaw, 2013b). Also, the same platform that is used to search for targets is able to destroy them when deemed necessary. Therefore, the drone has emerged as the weapon of choice to hunt down insurgents “everywhere” (Gregory, 2011; Shaw, 2013b). Their main purpose is to find and neutralize the enemy, a goal that resembles that of many earlier weapons of war. However, UAV’s combine those two separate elements. Drones function both as the surveillance sensor and as the means to strike a target at the same time. The sensor and the shooter have been combined into a single platform. Drones thereby create an entirely new reality in armed conflict (Chamayou, 2013, in: Gregory, 2013a). Their presence over a certain area results in a situation that brings asymmetrical warfare to a new level. This is also perceived as such by people that live in war affected countries, both combatants and non-combatants. UAV’s reconfigure everyday lives, as it is unknown whether a drone hovers above people’s heads or not. This results in a structural climate of fear, as found in interviews with the people of Waziristan, Northern Pakistan, an area that has to deal with a large number of drone strikes annually (International Human Rights and Conflict Resolution Clinic & Global Justice Clinic, 2012). Chamayou (in: Gregory, 2013c) and Dunlap (2008) both point out the similarities between the use of drones and terrorist tactics. Especially the element of surprise and the inducement of a climate of fear by both are noted. Chamayou even refers to the UAV as a ‘weapon of state terrorism’, as he considers the use of drones as a modern kind of terrorism.

US strategies transform alongside the rise of the drone as a weapon system. Western (most notably US) military strategies are more and more focused on intelligence collection and the use of special forces and drones for pinpointed attacks against “insurgent cells, infiltration routes, or leadership targets” (Long, 2011, p.182) based on the intelligence collected earlier. The US has rebalanced its military capabilities to meet the needs of the present time. A modern military should excel in counterterrorism, counterinsurgency (COIN) and stability operations. Kilcullen (2006, p.111) states that COIN offers the “best fit framework” for dealing with the threat of transnational terrorism. The Global War on Terror, as he argues, has to be regarded as a global counterinsurgency campaign. Long, however, concludes his research with the statement that although counterinsurgency is a vital contribution to the War on Terror, it should not be regarded as a decisive factor. Counterinsurgency operations can be very effective, but due to the often relatively small scale of those operations, they tend to merely help to win battles, not wars. This reasoning is applicable to drone strikes as a counterinsurgency tactic, as these are by definition small scale strikes directed at a select number of targets.

The nature of this research

The evolution of warfare seems to have made rapid progress since the beginning of the War on Terror and this tendency is likely to continue over the coming years. Therefore, it is of considerable importance that the collection of processes that contribute to this is unraveled. The focus of this research will be on the role of drones in this process, as it is one of the more manifest and significant dimensions of the evolution of warfare nowadays. It seems the effect works both ways and the changing dynamics of war influence the development of unmanned aerial vehicles, but the existence of these type of weapons possibly also affects existing strategies and tactics. This research will contribute to the understanding of this process. Understanding the changing way wars are fought and the role of drones in this process, will contribute to future policymaking regarding military operations, as well as help with the problems that Western governments face today in “the Long
War” (Steinmetz, 2013). With regard to the current developments in Syria and Iraq, where the role of Islamic fundamentalists is increasing, and the indications that Western interference in Afghanistan is not over after all, these topics remain relevant. Also, since the Netherlands contributes to the latest military operation in the Middle-East and Northern Africa (the MENA region), Mali, such an analysis might prove useful in the near future for the domestic public. The intervention directly links with one of the subtopics of this thesis. It is directed towards halting the increasing importance of Al’Qaeda and affiliated groups in the country, in order to ensure the stability of the entire Northern African region. To some extent these goals are comparable to those in Afghanistan a decade ago. Also in this case the enemy is a violent non-state actor and tactics used in other theaters of the War on Terror could be used here as well. This includes the role of drones as a weapon.

The Dutch armed forces already use smaller types of drones for reconnaissance and recently purchased four unarmed MQ-9 Reapers (De Volkskrant, 21 November 2013). At the time of writing, there are no known plans for purchasing armed drones or arm the MQ-9’s. However, since military technologies are always evolving, there is no reason to assume that this will remain the Dutch policy. The outcomes of this thesis could therefore be of use for the Dutch military with regard to their future policies concerning UAV’s.

The growing numbers and importance of UAV’s has resulted in quite some debate in the media (Gross, 2013; Haddou, 2014; Mazzetti & Schmitt, 2014). Although armed drones are hitherto only used by military organizations, the use of drones per se is not limited to the military. Organizations like the police, but also journalists, researchers and other civilians use the new technology. Although the type of drones used is often limited to portable flying cameras, it does show the increasing importance of unmanned technologies in our society. For this reason it is necessary to shed more light on the consequences of an increased use of drones, especially since the fear of new technologies and the technological changes in society are quite prominent among citizens of Western societies (Lawson, 2011). Presenting a ‘neutral’, objective vision on the use of this particular new technology can therefore be helpful for a wider audience.

In the existing literature on drone warfare quite a lot has been written about the events themselves. Human Rights Watch has, for instance, published numerous reports regarding drone strikes in general and targeted killings in particular. These reports and other articles focus to a large extent on the legal and ethical dimensions of drone warfare and are generally quite critical (Human Rights Watch, 2012; Human Rights Watch, 2014). Although these themes are important and should be addressed extensively, the phenomenon of ‘drones’ can – and should – be looked at from many more perspectives.

Warfare and conflict have been extensively researched for millennia (by Aristotle, Tacitus and Sun Tzu, to name just a few). Because of the rapid way in which those concepts and processes have changed due to globalization and the resulting changing realities of warfare, it is of the utmost importance to keep up theoretically. Again, Gregory (2011) states that the conventional ties between war and geography have changed completely. Therefore new research is a sheer necessity, as this evolution of war(fare) simply requires an evolution of theory. In addition, in the discussion about the way wars are fought in the shadows of ‘9/11’, the geographical dimensions have to a large extent been underexposed (Gregory, 2011). Diving deeper into these dimensions might shine a different, but useful light on postmodern warfare. Moreover, an academic debate on this issue is emerging,
triggered by Gregory’s publications, and therefore this would be the right moment to step into this discussion. This thesis will build further upon Derek Gregory’s concept of ‘the everywhere war’. The theory is entangled with Chamayou’s ideas regarding the ‘manhunt approach’ and Kilcullen’s views on counterinsurgency. Although drone warfare is not necessarily a key component of these theories, they offer useful perspectives for the analysis of the origins and outcomes of drone warfare. The aim of this thesis is to explore the geographical aspects of drone warfare in a broad sense. By doing so new viewpoints and insights regarding the theoretical background of the theme can be found. Furthermore, the link between drone warfare and the rise of transnational terrorist organizations and their fluid character will be discussed. By bringing together multiple discussions and viewpoints regarding the geographical aspects of the use of UAV’s as weapons of war and enriching the debate by connecting various theories, this thesis will be of use for academia to gain more understanding of the geographical side of drone warfare as a whole.

Where necessary ethical and legal issues will be addressed; they will however be connected to the geographical dimensions, as those geographical dimensions are the prime focus of this theory oriented thesis. By doing so, it should become more clear how and to what extent the battlefield as an entity has been altered by the relatively new technology that drone warfare has brought to the process of waging war. Has war lost its geographical aspects, and if so, to what extent? Or has an entirely new geography of war appeared?

The research aims to answer the question what role drone warfare plays in the contemporary changes that warfare is going through. This leads to the following research question:

To what extent has the increased use of armed UAV’s changed the spatial dynamics of warfare in the context of the Global War on Terror?

In order to answer this central question, the dimensions and dynamics of drone warfare have to be laid out. Also the concepts of ‘everywhere war’ and ‘manhunt approach’ will be extensively elaborated upon. It will be made clear in what ways these theoretical concepts fit within the counterinsurgency framework that is so basic to modern warfare. In the process of answering these questions, the focus will be on the role of drone warfare, although other processes of change or evolution within the Western military might have contributed to the changing dynamics of war as well. However, taking all military processes of the last two decades into account in the search for an answer would result in a research that has no focus and would be too broad. Therefore the choice has been made to focus primarily on the impact of the introduction of UAV’s as weapons.

For the same reason this thesis will heavily draw on US sources and therefore particularly examine ‘American’ drone warfare. This is not necessarily bad, since the US “has the world’s largest and most sophisticated fleet of weaponized UAV’s” (Abizaid & Brooks, 2014, p.23). Therefore, researching just the policies of the US on UAV’s would still ensure the covering of a large part of the theme. However, the Israeli military has played a major role in the development of the UAV and continues to be one of the leading states in drone technology today, although the US has taken the lead. Their ‘side of the story’, the Israeli perspective on drone warfare has been left out of this research.

These factors may limit the value of the research, as it does leave aspects of drone warfare untouched. However, in order to remain focused on answering the central question and to avoid ending up with a runaway research, such choices are necessary to make. Important is, that the
limitations of the research are acknowledged. After all, the questions that remain after the concluding chapter of this thesis might be answered in future research papers.
Chapter 2 - Method

This research has been carried out as a desk research. The thesis for a large part consists of an extensive explorative literature study, including an analysis of a variety of policy papers. The required data has thus been collected from earlier scientific work and policy documents, complemented by newspaper and background articles.

The research has been carried out in the context of writing a Master’s thesis for the Master track ‘Conflicts, Territories and Identities’, as part of the Human Geography Master of Radboud University Nijmegen. The thesis has been written in the light of a research internship at the ‘Military Operational Sciences’ department of the Netherlands Defense Academy in Breda.

Character of the research

This research is of an explorative character. From the start it has aimed at a step-by-step development of new theoretical insights by combining existing theories, concepts and ideas. The thesis builds upon Derek Gregory’s concept of the ‘everywhere war’, and entangles it with the ‘manhunt approach’, which has been covered on both a theoretical (Chamayou, 2013; Gregory, 2011) as well as an empirical level (Crawford, 2009; Marks, Meer & Nilson, 2005). In addition, theoretical insights concerning counterinsurgency, by David Kilcullen for instance, have been included in the research. The concept of ‘everywhere war’ has been chosen as a foundational theory for this thesis for two reasons. On the one hand, it offers a number of interesting and new insights regarding drone warfare, by directly linking the phenomenon to the enemy in the Global War on Terror, transnational terrorism. However, on the other hand, while Gregory touches upon several interesting topics, he fails to delve deeper into them. In his publication on the ‘everywhere war’ he hints at possible links to other theories and concepts, but does not elaborate on these. Therefore, the choice has been made to pick up the possibility and move beyond the original theory by connecting it to other theories, as mentioned above. What this particular research tries to add to earlier publications, is that it directly connects this collection of theories to drone warfare. The primary aim of this thesis is to explore the concept of drone warfare on a more theoretical level and approach it from the point of view of the academic discipline of geography.

In the end this collection of theories forms a comprehensive conceptual framework regarding the ‘geography of drone warfare’, that sheds a new light on the question of how and why drones have become such an important weapon in the Global War on Terror. The goal has been to generate ideas, which can form a basis for future research and policymaking. In order to ensure that the presumed relations between the various concepts are adequate, multiple sources of data have been used. Concepts, assumptions, possible trends and ideas have been derived from academic writings, policy documents and newspaper and background articles. A variety of sources has been analyzed in order to ensure the validity of the research (Baarda, De Goede & Teunissen, 2009). Theoretical concepts and ideas, and links between them, that came forward during the initial literature study were further developed in the analysis, by also using policy papers from governments and armed forces. In this way, this approach resulted in a solid linkage between the theory and the empiricism with regard to drone warfare.
Over the past few years thousands of scientific papers and books, newspaper articles and policy documents have been written about the use of drones in today’s war zones. A selection of these writings has been used to collect the data that is necessary for this research. Collecting useful data has not been problematic to any extent. Various branches of governments and armed forces, as well as independent think tanks, have published useful studies and reports. Based on these readings, the impact of drone deployment on the spatial dimensions of warfare came forward. Throughout the research the existing concepts and the connections between them have continuously been reflected upon. If necessary, during the research process earlier made assumptions or ideas were revised, if and when the finding of new ideas or perspectives required the researcher to do so (Wester & Peters, 2004).

Qualitative research like this is sometimes characterized as subjective or even unscientific. It is indeed not as easy to carry out this type of research in exactly the same way as is the case in quantitative research. However, especially in research aimed at the development of new theory, qualitative methods are essential. Although this research is qualitative in character, throughout the process the disadvantages of the methods used have been taken into account. By doing so, both the validity and the reliability of the research are ensured (Baarda et al., 2009). The analysis is based on textual sources. In order to ensure proper levels of both validity and reliability the sources are analyzed by looking for recurring themes, terms and concepts. These could come forward both implicitly and explicitly. An example of one of those themes is man-hunting. Obviously this comes up in the academic literature on the subject, but also in policy papers wordings like ‘taking out individuals’, ‘hunting for terrorists on the global level’ etc. are often used. Although these papers therefore not necessarily directly refer to man-hunting, it is clear that when terms like these are used, the texts are indeed of analytical value for this research.

Many publications about drones have been written from either a strong for or against perspective. During the research and analysis of publications and documents this had to be taken into account, as working with biased sources in an uncritical way would have negatively influenced the reliability of the analysis. The sources are therefore all judged on their own merits. Also, their position in the debate with regard to other writings is looked at critically, to ensure a common thread throughout the entire research. By doing so, it is prevented that the research would have been influenced too much by particular research papers, newspaper and background articles or policy papers with divergent content.

Altogether, the research aim is to give a proper and objective vision of drone warfare. Negative and positive sentiments are avoided, thereby ensuring an appropriate academic work.
Chapter 3 - Theoretical framework

In this chapter multiple theories and concepts will be integrated into a single theoretical framework. Various contemporary theoretical debates will be linked and combined into a set. This comprehensive collection of concepts will help to clarify the complex theoretical context in which drone warfare is embedded. It is important to see and understand the whole network, which functions as the context. The individual concepts should therefore not be looked at as freestanding, but as a network of theories which explains the changing way in which modern wars are fought. Only in relation to each other, the concepts can be used to gain a better understanding of the role of drones in the contemporary theatres of war. When used individually, they can only explain a part of drone warfare, Western military doctrines, or the Global War on Terror, and relate only indirectly to the use of UAV’s. This approach will allow for a sharper analysis of the topic, as it is not looked at as if it were an isolated phenomenon.

The use of armed UAV’s is a distinct new feature in the Western way of war. It also plays a central role in Derek Gregory’s theoretical conception of modern war, which he dubbed the everywhere war (Gregory, 2011a; 2013). His theory consists of a selection of various concepts, combined into one theory. As his original article is rather short and just a first attempt to formulate a new theory, he only briefly mentions and touches upon the surface of the concepts which he brings up. He successfully makes the combinations and does raise interesting ideas, but fails to delve deeper into the connections.

This research framework uses ‘the everywhere war’ theory as a basis. It will, however, expand the theory, thereby strengthening Gregory’s ideas by firmer embedding them into existing theory. Furthermore, the aim of this chapter is to further develop the concept of ‘the everywhere war’ by connecting it to the manhunt approach. This concept embodies the transition of the classic war into an asymmetrical ‘hunt’ on individual terrorists by Western military organizations. Implicitly, it is already part of the everywhere war theory, but it will be more explicated in this framework.

The development of global terrorism and the Western reaction to it, which has resulted in the manhunt approach and an increasing role of drones in modern warfare, are all part of the everywhere war machinery. It is the broad theory in which all the other concepts have their own place. Therefore, in order to sketch the theoretical context regarding drone warfare, a start will be made with addressing the concept of the everywhere war. Before the underlying concepts can be brought to the table, the overarching theory will have to be thoroughly discussed.

In Gregory’s outline of the everywhere war theory, two major underlying, interconnected processes can be identified. The most visible process is the deterritorialization of the enemy in the Global War on Terror. Al’Qaeda and its affiliates are not bound to a specific country. An extensive analysis of the deterritorialization of ‘the enemy’ in modern conflicts fought by Western countries will be presented. This is important, especially with regard to the fact that the increasing importance of armed drones for Western military forces is believed to be directly connected to the rise of global Islamist terrorism (Shaw, 2013a).

The emergence of global terrorist networks has dramatically altered the contours of warfare and the understanding of where war takes place. The second major process that is part of Gregory’s theory is
in fact the Western reaction to the first process. Counterinsurgency and counterterrorism are increasingly moving away from classic war strategies. A different enemy has resulted in different sets of strategies used by Western military forces. Contemporary military strategies focus on the targeting of individual actors and nodes in networks. Modern counterinsurgency is based on the destabilization of terrorist networks. In order to disrupt networks, individual terrorists and cells are targeted. Multiple authors, both within the military and the academic world, have approached this development and called it the manhunt approach (Marks, Meer & Nilson, 2005; Crawford, 2009; Chamayou, 2011).

3.1 The Everywhere war

The early phases of the War on Terror in Afghanistan marked the beginning of a permanent war against a new kind of enemy, transnational terrorism. Throughout the years, this war has been expanded outside the initial theatres of war, Iraq and Afghanistan, into other countries such as Pakistan, Somalia and Yemen. Gregory (2011a, 2013) refers to this phenomenon as ‘the everywhere war’. He thereby sees the use of armed UAV’s in modern theatres of war as an essential factor with regard to the War on Terror becoming the everywhere war. The specific manner in which armed UAV’s radically alter the way in which wars are fought, will come forward in the next paragraph about the manhunt approach and will be extensively discussed in Chapter 4. The goal of this paragraph is merely to elaborate on the concept of everywhere war itself and point at its connection to drone warfare.

The use of armed UAV’s has strengthened the disconnection between geography and warfare (Gregory, 2011a), since this new technology has enabled military organizations to carry out targeted strikes “across diverse geographies” (Niva, 2013, p.186). The central aim of the US strategy in the Global War on Terror is delivering “targeted, surgical pressure” (Schmitt & Mazzetti, 2011, in: Niva, 2013, p.197) onto “irregular and networked opponents anywhere in the world” (Klare, 2010, in: Niva, 2013, p.198). Therefore “war has lost its well-defined contours” (Münkler, 2005, p.3, in: Gregory, 2011a, p.239).

Gregory argues that over the recent years particularly the US has shown that it is capable and willing to commit acts of war, whenever and wherever it deems necessary. This has led to the vanishing of the contours of armed conflicts. On many occasions sovereignty has been bypassed in the name of the Global War on Terror and the hunt for terrorists has been extended to places far outside Afghanistan. Or as Flint states: “... a strategy of targeting nodes of terrorist networks requires the violation of national sovereignties” (2003, p.57). To a large extent this is made possible through the use of armed drones, since UAV strikes remain a legally vague concept. Both the Bush and Obama administrations legitimized targeted killings outside declared zones of combat as acts of self-defense. The attacks are carried out against an enemy that is engaged in a transnational armed conflict and seeks sanctuary across the borders of the battlefield. Terrorist attacks against the United States and other Western countries are said to be prevented. Thus, to Western policymakers and the military extra-juridical assassinations seem to be a viable solution in countering global terrorism.

However, this reasoning suggests that the battlefield could be extended infinitely. Indeed, post 9/11 the West has become very keen on preventing terrorism. For instance, drone strikes on people, of whom it is not always clear whether they are an imminent threat, are generally seen as acceptable.
The War on Terror is thus likely to continue well into the future. The ease with which drones seem to be deployed could also lower the threshold to expand the war across borders (Osinga, 2013). Somehow, striking insurgents with drones seems easier than sending special forces or manned aircraft. The everywhere war in a way functions as a self-reinforcing mechanism, since every new extension of the battlespace outside declared zones of combat legitimizes the next extension. In the most extreme scenario, Gregory argues, this would lead to a global battlefield “in a literal sense, allowing lethal force to be used, in accordance with the laws of war, against a suspected terrorist in an apartment in Paris, a shopping mall in London, or a bus station in Iowa City” (Human Rights Watch, 2010, in: Gregory, 2011a, p.242).

As a side note, however, it would be fair to argue that Gregory seems to mix up assumed, improbable possibilities with the contemporary reality of the War on Terror. Drones are indeed deployed over areas where the US is not officially waging war. However, the governments of Yemen, Pakistan and Somalia approve the strikes on their territory, albeit not always openly (Scahill, 2013). It is therefore unlikely that the US will literally expand the War on Terror beyond the region where the war is fought already. Also, history shows us that war as a cross border phenomenon is not that new at all. The US has for instance bombed areas in Laos and Cambodia, while fighting the Vietcong and the North Vietnamese Army in Vietnam. Gregory’s concept, which is rather critical towards current US policies, is therefore not entirely in line with historic events. The everywhere war, the expansion of the battlefield, is introduced as an entirely new concept, while national borders have been breached earlier in times of war. A fluid expansion of the battlefield is not as new as the everywhere war suggests. However, Gregory does succeed at molding several empirical processes and more theoretical concepts into a tangible theory. His vision on drone warfare is interesting and approaches the subject from a new angle. The one-sided character of his writings, however, makes that they should be read critically.

Although a worldwide expansion of the War on Terror into an actual everywhere war is not likely to unfold, the current situation is that war is increasingly brought to the global borderlands. Western military operations are almost solely conducted in relatively remote regions of the world, especially operations specifically based on the use of UAV’s. Everywhere has for now been limited to the “wild zones’ of the global South” (Gregory, 2011, p.239), because when a war is waged ‘everywhere’ it also has to be waged ‘somewhere’. The war goes wherever Al’Qaeda and its affiliates are believed to be hiding and this could theoretically be anywhere. This issue will be further elaborated upon in the next paragraph.

9/11 was the starting signal for an era of increased militarization of the planet. To ensure a secure situation in the West and prevent it from ‘event-ful’ terrorist violence that could take place anywhere and without warning, worldwide military measures were undertaken. The US led the way in this process of military neo-liberalism, with their “planetary garrison” (Gregory, 2011a, p.238). Against an enemy that was able to attack anywhere (from US embassies in Tanzania and Kenya to the center of New York City and a commuter train in Madrid), there was no point in just defending ‘the Homeland’. Gregory argues that contemporary war strongly differs from classic war. The phenomenon of ‘event-ful’ violence exists simultaneously with our everyday lives and these lines intersect occasionally. An unevenly spread ‘state of violence’ has replaced the classic notion of war, and thereby radically changed the geography of war. The globalness of the state of violence reveals the geography of the everywhere war. Instead, a switch was made from the concept of the battlefield to a multi-

dimensional battlespace, “with no front or back” (Graham, 2009, p.389; 2010, p.31, in: Gregory, 2011b, p.239).

Modern wars are characterized by uncertainty. It is unclear what the battlespace is and where it begins and ends. Another factor of uncertainty is the difficulty to distinguish combatants from non-combatants. Through this the classic battlefield has transformed into a subject of interpretation, a multi-interpretable space, the battlespace. This space should no longer be seen as a fixed entity, since space became a verb, a “‘doing’, precarious, partially open and never complete” (Gregory, 2011a, p.239). In the everywhere war space is actively created. Different actors give different meanings to certain spaces.

The “widespread and widening militarization of our world” (Gregory, 2011a, p.247) has strongly increased post-9/11. Many countries have become involved in the Global War on Terror over the last decade and the possibility remains that this particular conflict continues to spread. The battlespace is in that sense an organic entity that adjusts to the global situation, it can grow or shrink accordingly. The resulting uncertainty within the framework of war, makes that it certainly has become a global phenomenon. In the next paragraphs the underlying processes that together make up the everywhere war will be discussed.

3.2 The Deterritorialization of Transnational Terrorism

Global terrorism

The enemy in the War on Terror is transnational terrorism. On the individual level, the terrorist is the enemy. However, the enemy is more an insurgent that uses terrorist tactics, than a terrorist in its classical sense. When the terms ‘insurgent’ or ‘terrorist’ are used in this thesis, they refer to members of ‘Al’Qaeda and its affiliates’. Although differentiating between the two concepts might be of great importance in other researches, since the meanings of both concepts do differ from one another, it is not significant for answering the research question of this particular thesis. When ‘terrorists’ or ‘insurgents’ are mentioned in this thesis, they both refer to members of an organization involved in the global Jihad. They fight a global insurgency and therefore the term ‘insurgent’ is appropriate (Kilcullen, 2005). However, since they make use of terrorist tactics, the term ‘terrorist’ is also applicable to them.

The influence of decentralized violent non-state actors in conflicts has been increasing over the last decades. ‘The enemy’ in the Western Global War on Terror comprises of a variety of international terrorist organizations, which role has steadily become more important in the worldwide balance of power. Many of those organizations are characterized by the fact that they fight for reasons based on religion, ideology and beliefs. The territorial aspect always has been of great importance to actors in conflict settings in the past, whether these were state or non-state. To a large extent, however, territory as such has lost much of its importance for organizations like Al’Qaeda. By committing to a cause instead of a country, Al’Qaeda takes the classic geographical aspect out of war (Naim, 2010). As Admiral Mullen, former Chairman of the US Joint Chiefs of Staff, stated: “We’re living in a world now where targets are fleeting” (Warrick & Wright, 2008, in: Ford, 2012, p.119).

After 9/11 Al’Qaeda sympathizers more than once claimed that their acts were legitimzed as opposition against US intervention in the ‘Islamic World’. This is an undefined, borderless, and in a
sense deterritorializing concept, although it is not always perceived as such by the variety of violent non-state actors (Murphy, 2003). The territory as such has lost its classical meaning. The symbolic dimensions of those areas are the factors which give meaning to the cause of transnational terrorists. Flint (2003, p.53) characterizes the initial attacks on the World Trade Centre and the Pentagon as a “reaction to the norms and geographies of the global geopolitical system”. The events therefore marked the end of terrorism motivated by nationalism and can be seen as the beginning of terror based on norms and ideas that find their roots in globalism. This process means quite a radical transformation for terrorist organizations, compared to older ones. The IRA, FARC or the ETA, for instance, became violent actors because of their strong affiliation with certain geographical entities.

Historically ‘territory’ and ‘terrorists’ were strongly connected concepts. The word ‘territory’ has its roots in the Latin words ‘terra’ – land – and ‘territorium’, a place from which people are warned. ‘Territorium’ and ‘terrorist’ both come from the word ‘terrere’, to frighten away (Connolly, 1995, in: Elden, 2007, p.822). Although the terms are thus intertwined on a semantic level, terrorism and territory no longer share this strong connection.

Smith (2006) emphasizes that a paradigm shift has taken place “from armies with comparable forces doing battle on a field to a strategic confrontation between a range of combatants, not all of which are armies, and using different types of weapons, often improvised” (in: Gregory, 2010, p.155). The enemy’ in the Western Global War on Terror comprises of a variety of violent non-state transnational organizations, whose role has steadily become more important in the worldwide balance of power. Al’Qaeda plays a pivotal role in this, as many organizations are linked to it. They could either be a component of Al’Qaeda, co-operate with it or share its central ideas.

Al’Qaeda and its affiliates fight for a cause, rather than a country or territory, but are opposed by military forces from sovereign states. It should, therefore, be considered a new form of insurgency. Al’Qaeda and its affiliates seek to transform the Islamic world and spark a global Islamist revolution (Kilcullen, 2005; 2006). They thereby move beyond the classic notion of insurgency, as the phenomenon has generally been limited to the national level. David Kilcullen (2005) therefore characterizes the global Jihad waged by Al’Qaeda as a global insurgency, rather than global terrorism. The organization uses religion to link a variety of conflicts together and integrate them into a broader framework of Jihad. Al’Qaeda thereby functions as a sort of umbrella organization, providing funding and assistance for a number of allied groups.

Insurgents by definition seek to undermine or overthrow “established governments or societal orders” (Kilcullen, 2005, p.603). In order to reach these goals they employ a variety of strategies, for instance subversion, guerrilla warfare and terrorism. The War on Terror is therefore directed against an insurgency that employs terrorist tactics, not against terrorism in the proper sense of the word. The different theatres of war in the War on Terror share a number of characteristics through the globalisation of insurgency. Since individual Jihadists from all over the globe fight for the same cause, it happens that the same person sees combat in Bosnia, Chechnya and Afghanistan (Kilcullen, 2005). This results in a global exchange of tactics and strategies, for instance the proliferation of Improvised Explosive Devices (IED’s).

Terrorism is characterized by the will of at least one of the adversaries in conflict to wage war in an expanded battle zone (Sloterdijk, 2004). In a context of terrorism two or more parties fight each other and at least one of those parties resorts to alternative tactics, generally described as acts of
terror. Those actions can be aimed against armed forces, but also against non-combatants or even property and infrastructure (Bahgat & Medina, 2013; Mustafa, 2005). Their whole strategy is based on invisibility, flexibility and surprise (Kahn, 2013). The terrorists willingly create an asymmetry within the conflict, by posing a threat to anyone, anywhere and at any time. Terrorists thus by definition choose to fight their battles away from the battlefield. The motivation for this unorthodox type of ‘warfare’, if warfare at all, is that by doing so a numerically or technologically superior adversary can still be opposed successfully (Mégret, 2012).

The attacks of 9/11 in New York and Washington make clear that the expanded battle zone should be seen as a very broad concept. The disappearance of strong connections to certain territories has resulted in a decentralization of terrorist organizations. They are often structured as a network of multiple, highly autonomous cells and subgroups. These characteristics make organizations as Al’Qaeda “nimble, flexible and adaptive” entities (Hoffman, 2004, in: International Human Rights and Conflict Resolution Clinic & Global Justice Clinic, 2012, p.130). This affects the types of threat posed by the enemy and the ways in which they must be fought, as the nature of adversaries is transformed. The Jihadist networks are seen as “complex adaptive systems, [...] that coalesce and self-organize in a decentralized fashion” (Canals, 2008, p.898). This makes it difficult to combat them effectively and thus an entirely different approach is needed (Kilcullen, 2005).

**Networks**

Complex operations with large numbers of personnel and hardware will no longer automatically lead to a desired outcome. Classic strategies and tactics that have proven their effectiveness in past conflicts, might turn out to be ineffective in modern theatres of war. To fight a complex and flexible enemy, complex and flexible strategies are needed. “It takes networks to fight networks” and it may therefore be necessary for Western military forces to adopt organizational designs and strategies like those of their adversaries (Arquilla & Ronfeldt, 2001, p.31). Striking targets with UAV’s already is an important aspect within this new approach and it will probably grow in importance over the coming years (Sauer & Schörnig, 2012). This will further be elaborated upon in the next paragraphs. The networks of violent non-state actors are spread throughout the entire globe, since their members “live in all countries of the world”, or at least have the opportunity to do so (Ali Khan, 2006, in: Mégret, 2012, p.150). The ‘shrinking world’, caused by globalization, brings people from all over the world relatively closer together. Long distance travelling and communication have become easier and cheaper. Globalization thereby also contributes to the spreading of, among many other processes and phenomena, transnational terrorism. In a sense power has shifted from state actors to non-state actors, because they are able to adapt to new possibilities enabled through globalization and organize into networks. Their power lies more in their organizational form than in their tactics or technology. This development has led to a discourse wherein Western armies seem to solely challenge irregular adversaries.

Terrorists and insurgents are potentially present everywhere, which is why the War on Terror has become a war that spans the globe. The organizations are structured as networks, their reach is unlimited and due to the speed in which they operate and their liquidity it is difficult to grasp their spatial distribution – they are diffuse in space (Bahgat & Medina, 2013; Elden, 2007). The human networks formed by individual terrorists and loosely connected terrorist cells are structured in a different way when compared to regular military organizations (Canals, 2008). The networked
organizational form is based on their “social, religious and kinship ties” (Arquila & Ronfeldt, 2001, p.23). Marks, Meer and Nilson (2005, in: Crawford, 2009, p.9) criticize defense analysts for attempting to “project the network within the ‘Cold War’ military hierarchy framework rather than the flattened links and nodes of interpersonal relationship between radicals and criminals...”.

The networks are less hierarchical in design and more accurately characterized as horizontal rather than vertical organizations. These networks are to a large extent decentralized, which results in much room for local initiatives and autonomy. This means there is no central leadership that can be taken out. There is “no precise heart or head that can be targeted” (Arquila & Ronfeldt, 2001, p.27). For instance, although Osama bin Laden, the founder and head of Al‘Qaeda, has been killed by US Navy SEALs, experts believe his role within the organization was to a large extent symbolic and his organizational role was of minimum importance for the existence of the Al‘Qaeda network (Baker, Cooper & Mazzetti, 2011). Instead of a strategy of decapitation, multiple individual parts of the network have to be targeted. These individual nodes are bound to a certain geography and therefore targetable, in contrast to the network as a whole. The networks are so large, complex and widespread that they have to be considered as a global phenomenon. Just taking out the central node or a number of individual cells, is unlikely to result in the collapse of the entire system. This can only be achieved by structurally destroying important nodes inside the network and by disrupting it to such an extent that it eventually disintegrates (Crawford, 2009).

Since the networks are considered complex and widespread, Islamic terrorist organisations in general are structurally portrayed in the West as “an omnipresent terrorist threat as evil as it is widespread—from Bosnia to the Philippines, from Chechnya to Pakistan, from Libya to Yemen” (Todd, 2003, in: Elden, 2007, p.831). Transnational terrorism is conceived as a global threat with instant reach (Bahgat & Medina, 2013). This narrative of fear works as a legitimization for the USA to take action against this particular enemy on a global scale. Global violence is met with global violence. UAV’s are used to fire their rockets at certain targets outside conventional areas of operation as Iraq and Afghanistan. These actions take place in a protracted battle zone and in that respect resemble the attacks carried out by the terrorists themselves. The polarity of an asymmetric war created by the terrorists, has been reversed by the Western high-tech war (Kahn, 2013; Chamayou, 2013). In order to defeat a highly networked enemy, new networked strategies have to be applied. Military power aimed at the defeat of transnational terrorist organizations should therefore become more focused on reforms in the fields of organization and doctrine, rather than in trust in advanced technologies. In his report on the implementation of the manhunt approach, Crawford (2009), commissioned by the Joint Special Operations University, also touches upon this issue. He states: “On the one hand, we do not want to adopt the standards of an enemy in order to defeat him. Combating terrorism, [...] tempt[s] the US to abandon ideals the nation’s founders and citizens hold dear” (p.15). However, he argues that protecting the greater population from harm weighs heavier than the ethical issues concerned with targeted killings.

**Global battlefield**

As explained in the previous paragraph, the wars fought by Western states have changed into asymmetrical conflicts over the last decades. These wars are unlike classic wars, which in a sense resembled a duel between two enemies in a particular situation (the battlefield) in which one had to kill in order to avoid getting killed (Chamayou, 2013). In today’s wars, however, insurgents do not
wear uniforms and prefer to blend in among the population. They choose the times and places where combat takes place, “to avoid a battle of annihilation” (Smith, 2006, in: Ford, 2012, p.115). The disappearance of frontlines and basic knowledge of enemy positions is caused by the fluidity of transnational terrorist organizations. This development makes it difficult for Western forces to determine whether the situation is improving or degrading. The fluidity of the conflict situations results in unclear criteria for progress or victory (Sauer & Schörnig, 2012). Conflict has become a borderless phenomenon. Instead of a demarcated physical area within which battles between comparable armies take place, “in modern war the idea of the battlefield has been transformed into one of complex, multiple, overlapping spaces of violence” (Shaw, 2003, in: Mégret, 2012, p.142).

The classic battlefield is constructed by the implicit agreement of parties involved to engage in a battle, as this will only occur when both armies are willing to fight and thus agree to do so. This process can change any space into a place, an idea. A certain space then gains some sort of meaning for the actors who utilize it as a battlefield and therefore, any space could become the geographically limited area upon which a battle takes place – the battlefield (Mégret, 2012). Grondin (2011, p.255) argues it would be false to state that the battlefield has disappeared, it is rather “dis-placed, re-designed, re-shaped and rethought” as war is currently fought beyond the battlefield.

The seeds for the creation of a globalized battlefield are planted by violent non-state actors that choose to wage war on their terms. In the context of the modern day War on Terror, the entire globe could be recognized as the battlefield. This global battlespace is a reaction to Al’Qaeda, that shows a “commitment to a cause that redefines the concept of the battlefield, at once globalizing and deterritorialising it” (Ralph, 2010, in: Mégret, 2012, p.148). The broadness and diffusion of terrorist networks are the result of the evolution they have gone through, since these types of organizations are no longer centered around a specific spatial entity. This results in the globalization of the battlefield, making the whole world a possible battlefield. At the same time, however, this leads to a battlefield without a fixed geography, in fact the concept is deterritorialized. The changing nature of terrorist organizations into global terrorist networks thereby cause two important, but contradicting geographical processes.

Since the Global War on Terror has commenced, the way in which war is waged has undergone a major shift into “postmodern warfare” (Osinga, 2013, p.243). This means warfare is no longer about the direct confrontation between two parties (the West versus ‘the terrorists’). Instead, war is now structured as a (man)hunt wherein one side flees and the other pursues (Crawford, 2009; Marks, Meer & Nilson, 2005). The US Department of Defense states in its strategic guidance (2012), that an active approach will be maintained in monitoring and, when necessary, striking ‘non-state threats’ for the foreseeable future. This implies that the US strategy remains centered around hunting dangerous individuals and groups of terrorists. This also affects the meaning of ‘battlefield’. Because the goal in the War on Terror seems to be to hunt down and neutralize individual terrorists around the globe, the battlefield is no longer “defined by the locatable space of an effective combat zone, but by the simple presence of the hunted individual who carries with him everywhere a kind of little halo denoting a personal hostility zone” (Chamayou, 2011, p.3). The combat zone thus follows the movements of the enemy, as the body of each individual enemy combatant now is the battlefield. Al’Qaeda, as a worldwide terrorist network, thereby automatically forms a worldwide battlefield.
**Terrorist strategies**

Finally, a brief overview of the pivotal tactic of contemporary terrorism will be discussed. The term most commonly used for the explosives used by terrorists and insurgents in contemporary conflicts is Improvised Explosive Device (IED). IED’s have become more than just a weapon. Terrorist organizations combating Western forces heavily rely on these improvised weapons (Bahgat & Medina, 2013). Their use increasingly resembles a broad strategy, rather than a tactic. The IED, a relatively simple tool of destruction, has become a fundamental factor in asymmetrical warfare.

Therefore the following paragraph will discuss the pivotal tactic of terrorists and insurgents, the use of explosives, over the last two decades. A distinction will be made between IED’s with a non-suicidal character and those that involve the deliberate death of the bomber. Although both non-suicide bombings and suicide bombings result in an explosion aimed at a certain target and share many characteristics, the two tactics should not be considered to be entirely the same. Therefore the analysis is split up in two parts. The following paragraph ‘Non-suicide IED’s’ will be on non-suicide, or ‘roadside’, explosives, whereas in the paragraph ‘Suicide IED’s’ the attacks will be discussed wherein the bomber deliberately dies together with his or her victims.

**Non-suicide IED’s**

As the wars in Iraq and Afghanistan continued, the amount of IED-related casualties increased annually (iCasualties.org, n.d.). The weapon’s popularity grew as it proved its effectiveness. IED attacks have had a great impact on coalition forces on the battlefields where the War on Terror is fought. The weapon is considered very functional due to its versatile employment and the relative ease with which it is constructed and used. Often times the devices consist for a large part out of household items. The only limitation in the IED’s design therefore is “the imagination of the ‘bomb maker’” (Martin, 2009, p.23). The weapon is relatively easy to construct, especially in conflict ridden countries where explosive material is relatively easy to come by. Another advantage is that it is a very cheap weapon; even large IED’s can often be constructed for under $100. This results in a situation wherein multi-million dollar equipment, such as the variety of armoured vehicles used by coalition forces, is successfully opposed by weapons that are thousands of times cheaper. This huge difference in operational costs makes clear the asymmetric character of the War on Terror.

The effectiveness not only comes from the destructive power the weapon has on a targeted unit and the military value of the personnel and equipment it destroys. Along with the destruction of personnel, buildings or infrastructure caused by IED’s, they arguably have an even greater psychological effect. The physical damage that an IED causes is only a fraction of the weapon’s utility. It is considered a “symbolic weapon” (Martin, 2009), because the effects of a blast reaches much further than the blast radius. It causes feelings of fear and terror, the exact result terrorists wish to achieve with their actions, on military units, locals and political leaders. As retired four-star US Army general Meigs stated: “[...] unlike conventional artillery, IED’s have profound strategic consequences, because the bomber’s intent is to bleed us in a way that attacks American political will directly and obviates the advantages we have in military forces [...]” (Martin, 2009, p.26). Not only the morale of military personnel on the ground is negatively affected. Also the political leadership ‘back home’, even the overarching ‘international community’ could lose its faith. More importantly, public support could disappear. The general feelings of terror, fear and hopelessness spread from the bottom-up and can reach the highest echelons. The systematic use of IED’s therefore theoretically has the
power to bring even the best trained and best equipped army to its knees. The overall morale of an army could erode and reach a low point or the political and public support for a mission disappears. The use of this low-tech weapon in a strategic way could have far reaching results.

Since the weapon, hidden underneath or next to a road, intrinsically holds the element of surprise, it is ideally suited for terrorists and insurgents. It minimizes their need to expose themselves, while gaining maximum results. The balance of costs and benefits are perfect for an actor engaging in asymmetric warfare against a "numerically, militarily, or industrially superior opponent" (Colbert, 2007, in: Martin, 2009, p.35). The IED holds multiple asymmetric advantages, the cost-benefit advantage and the psychological advantage. This makes the IED more than just an 'improvised explosive', it is a symbolical weapon.

**Suicide IED’s**

The event that sparked the War on Terror, the attacks of 9/11, was a suicide bombing of a scale and with a complexity that was previously unseen. During the War on Terror suicide attacks have been carried out against coalition forces and civilian targets on numerous occasions, both in Afghanistan and Iraq, but also in Spain (2004) and the United Kingdom (2005). The suicide bombing has been the modus operandi of choice for Al’Qaeda in their war against ‘the infidel’ (Moghadam, 2006). Iraq, for instance, has encountered more suicide attacks between 2003 and 2007, than all countries combined where suicide attacks have taken place in the 25 years prior to that. Afghanistan and Pakistan are also places where this type of attacks has seen a strong increase (Moghadam, 2008). Explosive vests carried by individuals on foot, in cars, or on motorcycles and trucks loaded with explosives, boats packed with bombs and in the specific case of 9/11 even airliners full of jet fuel have been used to attack a variety of targets worldwide. Al’Qaeda has developed the suicide attack into a deadly “terrorist and insurgent tactic” that can be employed “by air, land, and sea”. It both symbolises the “tenaciousness” of the organization and functions as a source of inspiration for future “martyrs” (Moghadam, 2008, p.78). Apart from the symbolic value, it has also proven to be an effective strategy. Like IED’s, suicide attacks are cost-effective, very deadly and accurate.

Suicide vests or vehicles carrying explosives could be considered “the ultimate smart bomb” (Moghadam, 2008, p.32). The perpetrator chooses the exact time and location of the blast, he or she can adjust the time and place of the explosion to maximize the impact. A second tactical advantage of suicide attacks is that, in contrast to normal operations carried out by operatives, there is no need for planning an escape route. This difficult aspect of an operation can be completely left out, since the perpetrator cannot survive a successful operation.

Both non-suicide IED’s and suicide IED’s have several tactical advantages, mainly costs, lethality and ease of use. The employment of both varieties seem to be more aimed at the psychological effects of the weapons than at the direct effects of the initial blast. Especially a campaign of suicide IED’s should be considered psychological warfare. It shows the dedication of the organization behind it and works as a recruitment mechanism for future martyrs. Also, the same psychological effects on troops and politicians result from suicide attacks as from non-suicide attacks with IED’s, probably even to a larger extent (Moghadam, 2008).
3.3 The Man-hunting Approach

Counterinsurgency

As presented in the previous paragraph, threats to Western nations mainly originate from violent non-state actors. Those actors operate (semi)independently from governments and large hierarchical organizations and are therefore able to move and act quickly. According to the US Army’s Field Manual No. 3-24 (2006), which extensively elaborates on the topics of asymmetrical warfare and counterinsurgency (COIN), the US led War on Terror should be seen as a grand counterinsurgency campaign. Al’Qaeda and comparable organizations are portrayed as insurgent organizations, since they are “organized, protracted politico-military” actors, which have set “[weakening] control and legitimacy of an established government, occupying power, or other political authority” (US Army, 2006, p.1-1) as their goal in the global Jihad (Kilcullen, 2005; 2006). It should, however, be considered a new form of insurgency. Al’Qaeda and its affiliates seek to transform the Islamic world and spark a global Islamist revolution (Kilcullen, 2005; 2006). They thereby move beyond the classic notion of insurgency, as the phenomenon has generally been limited to the national level. Modernised counterinsurgency tactics therefore provide the “’best fit’ framework” for fighting the enemy in the War on Terror (Kilcullen, 2006, p.111).

An engagement between forces with a comparable level of power has shifted to the confrontation of very unequal forces. This inequality, as Sloterdijk (2004) argues, has resulted in the widespread use of terrorism as a modus operandi. Terrorist organizations are forced to resort to unconventional warfare in order to counter the military and technologically superior Western armed forces. Modern technology is combined with age-old methods of insurgency and terrorism to oppose coalition forces in Afghanistan, Iraq and numerous other places worldwide. In response, Western armed forces also have to adapt to new strategies and tactics in order to cope with this specific type of enemy. Capabilities required for successfully waging traditional warfare, often prove inefficient or even counterproductive in these cases. Therefore, the US counter-insurgency approach, for example, went through a major transformation during the last decade (US Army, 2006). In answer to the asymmetrical type of warfare that is brought to them by Al’Qaeda and its affiliates during the War on Terror, Western armed forces switch to quick and flexible methods (Marks, Meer & Nilson, 2005). As a result, the West increasingly fights its wars on a micro scale. In the war against Al’Qaeda tactics no longer involve large concentrations of enemy troops, the targeting of communication links, radar installations or airfields (Lewis, 2011). Instead of waging war on a macro level, which has been the focus in armed conflicts for several decades, the focus has scaled down. War has transformed from the classic accumulation of grand battles between armies comparable in size and tactics, to the hunt of a technologically superior army for a low-tech, dispersed and hidden enemy.

The networks of terrorists that are considered to be ‘the enemy’ in the War on Terror are a global threat. However, because of the nomadic lifestyle of the loose cells within those networks, the enemy has become completely de-territorialized. The American way of life is therefore believed to be “threatened by geographically and legally amorphous Al’Qaeda ‘affiliates’ in regions that stretch from North and East Africa to the Arabian peninsula, and beyond” (Shaw, 2013b, p.540). There is no geographic clarity on where interventions should take place in order to stop Al’Qaeda and its affiliates (Bahgat & Medina, 2013). However, the narrative which is brought forward by the US military, is that “…we need […] to smoke out the terrorists from their hiding places” (Mustafa, 2005,
This strategy is based upon denying Al’Qaeda safe haven (Shaw, 2013b). Denying sanctuaries to enemies and isolate them from support has been the aim of counterinsurgency warfare since its beginning, as classic tactics already focused on this (Kilcullen, 2005).

COIN is a complex set of strategic and tactical considerations used in contemporary wars. “In many ways, the conduct of COIN is counterintuitive to the traditional U.S. view of war...” (US Army, 2006, pp.1-26). This rethinking of war has resulted in what has been called ‘the manhunt approach’.

**Manhunt approach**

Since geographic clarity regarding the positions of terrorist networks in time and space is meagre, it becomes more difficult to implement the specific strategy of ‘smoking out the terrorists’. Instead of targeting entire networks, the US military targets nodes within these networks. These nodes can be individual insurgents or terrorist cells. By breaking up the networks node by node, Western armed forces try to disintegrate them until they finally collapse. This strategy has been explicated by Marks, Meer & Nilson (2005) in their methodology on man-hunting. Their report is used as the basis for Crawford’s report on man-hunting as the answer to irregular warfare (2009), which built further on the initial ideas and in which they were further developed. In a sense the manhunt approach as presented by Crawford and Marks et al. is a contemporary approach based on the theories, assumptions and approaches of classic COIN. Military force now increasingly focuses on finding individual targets in order to capture or kill them (Lewis, 2011). Therefore, war has taken the form of a (man)hunt. Aarons (2013, n.p.) argues that “the manhunt involves a radical asymmetry of forces, in which the hunter sets out in pursuit of a disadvantaged target, and avoids any exposure to death through the use of intermediaries such as dogs or robots.” The importance of those ‘intermediaries’ has strongly increased over the last years due to technological improvements. Unmanned Aerial Vehicles (UAV’s), popularly referred to as ‘drones’, are an important weapon against enemy forces on the battlegrounds of the War on Terror. A number of terrorists is killed each week in places like Pakistan, Yemen and Somalia by drone strikes, although none of these nations is at war with the US or any other Western country.

The new approach could in a sense be compared with the hunt for game in the wild. Its success depends on deliberation and patience and the ‘hunter’ has to wait for the perfect, or most optimal, opportunity to strike. Instead of violently engaging the ‘hunter’, as a classic enemy would, the goal of the ‘hunted’ is not being captured (Marks et al., 2005). This changes the entire concept of waging war, turning it into a life-and-death version of hide and seek. Terrorists try to remain undetected for their pursuers. This differs from normal military combat, in which combatants of both sides are actively involved in the battle. Both sides must confront the other to win. In a manhunt scenario each side has its own particular strategy. The aim of the hunter is to find the target and engage it, so it can be captured or killed. The hunted, however, wants to avoid capture and its goal within a manhunt therefore is to evade the hunter. This might seem as a minor change when compared to classic warfare, but it has major implications.

When a party’s central aim is to avoid capture, offensive strategies are unlikely to be used. Instead, the hunted avoids and evades his pursuers. This changes ‘the rules of the game’ entirely, as the hunted cannot *win* a manhunt, *not losing* becomes the best possible outcome. This changes the underlying concepts of war. The competition between the different parties remains, but the aims and thus the strategies of the warring parties differ to a large extent. The manhunt approach should
therefore be seen as an entirely new approach in warfare, rather than the continuation of existing strategies. Notwithstanding its roots in classic counterinsurgency, the manhunting approach is a new chapter in post-modern warfare.

Avoiding direct offensive strategies has not prevented terrorists from inflicting damage and suffering to coalition forces. Instead, a shift has occurred towards the employment of indirect tactics. Using improvised explosive devices (IED’s) has become the absolute strategy of choice for insurgents in contemporary theaters of conflict. These devices are generally inexpensive, a low risk to the terrorist and relatively easy to use. Also timed detonation and careful placement enables the terrorist to control the type and number of casualties to a certain extent. Before the War on Terror commenced (between 1983 and 1996), “approximately half of all terrorist incidents worldwide involved the use of explosives” (US Army, 2006, pp.3-23). During the War on Terror the importance of the use of IED’s as tactic seems to have increased even further. From 2008 to 2011 IED’s alone have accounted for more than half the fatalities suffered by coalition forces in Afghanistan, with numbers peaking as high as 368 in 2010 (iCasualties.org, n.d.).

Terrorist tactics have forced changes in COIN tactics. The use of hidden, indirect weapons has seriously affected the possibilities of patrolling an area, a key strategy in COIN. Patrolling is seen as essential to dominate an area, disrupt insurgent plans and actions and gather intelligence. However, patrolling both on foot and by vehicle has become harder and more dangerous because of the use of IED’s. Kilcullen states that although “… the purpose of patrolling remains valid, … classical patrol tactics may require substantial modification” (2006, p.121). Since the purpose remains valid, but the manner in which patrolling is carried out is made increasingly difficult, a new form of patrolling could take an important place in the COIN framework.

Man-hunting has become an important aspect of operations aimed against “irregular warfare adversaries” (Crawford, 2009, p.1). In the military sphere, the manhunting approach has been hailed as a precise, discrete and effective employment of firepower, that in many cases makes the deployment of major military formations unnecessary. For that reason, Crawford argues that man-hunting should become “a foundation of US national strategy” (p.vii). Manhunts are not an entirely new phenomenon in the military sphere. Historically, man-hunting operations have taken place on multiple occasions. However, it always were unique operations for specific purposes. During the current War on Terror, however, the use of the specific tactic has seen an enormous increase in frequency. Its use has become America’s tactic of choice in countering terrorism (Chamayou, 2011).

Chamayou (2011) directly links the manhunting approach to the increased use of drones in various areas of operation. In this he slightly differs from Marks et al. (2005) and Crawford (2009), who also go into the possibilities of raids and the use of special forces. Chamayou argues that the use of armed drones has resulted in war reaching a stage of perfect asymmetry: “to be able to kill without being able to be killed; to be able to see without being seen” (p.4). The hunter has become invulnerable, whereas the hunted “is placed in a state of absolute vulnerability” (p.4). UAV’s are the weapon of choice for targeted killings, the final phase within the manhunting approach. There is a heated discussion taking place whether the use of armed drones is ethical or not. This thesis will not address this issue in-depth, as the focus is on other aspects. It is arguable that having the option to kill a target without any chance of being harmed is in itself unethical. However, as Kilcullen argued, international terrorist organizations are a military, rather than a law enforcement issue. A strategy for countering them
should therefore be based on defeating their strategies instead of capturing “perpetrators of specific acts” (2005, p.605). Following this line of though, the manhunt approach should not be seen as a series of extra-juridical assassinations, but as rational strategy in a war without borders. Arbitrary executions are not a goal in themselves. Those are only the means through which enemy networks are disrupted and eventually destroyed. In that sense it is “just another new tactic” in modern warfare, which makes it not more unethical than attacking enemy armour from the sky or shooting down an enemy aircraft, for instance. It has also been explicitly noted in the Field Manual (2006) that killing insurgents, although necessary in some situations, cannot be an objective in itself, as this will never end an insurgency. Also the type and amount of force have to be proportional. A strategically valuable strike on a handful of terrorists will immediately lose its meaning if collateral damage turns dozens of young boys into freshly trained insurgents.

Geographical implications

The manhunt approach is embedded in a broader framework of COIN, which can be placed in the ongoing process of the changing geographies of war. Instead of focusing on the geographic positions of the enemy within the demarcated space of the battlefield, the geography of the enemy itself is now the factor that is analyzed. The position in time and space of individual nodes within terrorist networks are the units of analysis and indicate the validity of a target. Action against a target is justified by the extent of the threat the target poses and whether it is located in a space suitable for the hunter to strike, where and whenever that might be.

Within the framework of man-hunting, providing a dynamic and complete map of a target in terms of time and space is essential (Marks, et al., 2005). Geospatial intelligence (GEOINT) is intelligence derived from geospatial imagery. It is used to visualize physical features and activities in an area of operations (US Army, 2006). Modern technology has enabled the possibility of real-time GEOINT. There no longer is a delay between the gathering of intelligence and the execution of a military operation. This is especially fundamental within the framework of the manhunt approach. Since targets are always persons and not infrastructure or institutions, the possibility of displacement is present at any time. Real-time tracking of targets results in an increased accuracy in the process of targeting both High Value Targets (HVT’s) and low-ranking individuals. Also “the longer loiter time of drones” makes it possible to follow targets for an extended period of time, thereby increasing the level of confidence that indeed the right (group of) individual(s) is being monitored (Lewis, 2011, p.297). As a result of these developments, collateral damage is likely to decrease to a minimum, since the right time and place can be picked for a strike (Crawford, 2009).

Armed UAV’s contribute to these developments to an even greater extent, as they combine the sensor and the weapon within the same platform. Real-time GEOINT could lead to the decision whether or not to proceed to striking the target. In that scenario a missile can be released, without any delay to speak of, except maybe the flight time of the Hellfire missile.

Western forces, oftentimes operating in large numbers and using sophisticated technologies, have been opposed by small, low-tech units in a protracted battlespace. The possibility of violence erupting anywhere and the absence of an explicit front makes the geography of the conflict unclear. The asymmetrical warfare as chosen by the insurgents was considered disadvantageous for Western forces and thus the asymmetry had to be reversed. The reaction of Western military organizations to the deterritorialization of both terrorist organizations and warfare as such has been one of
reterritorialization. In order to wage war on Western terms, the aspects of war that had been
deterritorialized needed to be reterritorialized again. Although the classic notions of the roles of
territory and geography in situations of conflict have changed entirely, this does not automatically
mean that the importance of those concepts has decreased. They have shifted – they have become
something else. Therefore, those concepts should be rethought, rather than replaced.

Transnational, ‘un-geographic’ networks are impossible to strike directly. The process of identifying
and locating terrorist networks, thereby making them vulnerable for disruption or destruction has
evolved beyond geography. The network consists of individuals and terrorist cells of various sizes
which are connected through some sort of infrastructure. This infrastructure is partially made up out
of phone and internet connections, making it impossible to see the network with the naked eye
(Grondin, 2011). The network as such is difficult to trace, since it cannot always be pointed out in
terms of longitude and latitude. In that sense the networks do not have their own fixed geographies.
Instead, individual parts of those networks have to be made geographic again, making the locations
of them visible and thus vulnerable for attack. Although militant Islam groups consist of multinational
networks, this does not mean that they do not need bases of operation and other facilities “placed in
particular locales, which can be targeted” (Elden, 2007, p.828). The manhunt approach therefore
focuses on the disruption of larger networks by finding, influencing, capturing or, when necessary,
killing individual actors within the specific network (Crawford, 2009). Armed drones, for instance, are
used to attack those reterritorialized parts of transnational terrorist networks.

In order to conclude this chapter, it will be once more brought forward that the discussed theories all
link together into one framework. The combination of the everywhere war, transnational terrorism
and man-hunting will be used in the next chapter to shed light on the empirical reality of drone
warfare. By analyzing drones from this particular theoretical standpoint, certain factors will come
forward that otherwise could have been missed.
Chapter 4 – Drone Warfare

In this chapter the realities of drone warfare will be analysed in the light of the theoretical framework as presented in the previous chapter. The format of the analysis resembles that of the theoretical framework, in order to ensure a proper level of comprehensibility. It will be explored to what extent drone warfare relates to the different theoretical concepts, on the basis of policy papers, reports, newspaper and background articles.

The chapter will start with an overview of the role of drones in contemporary conflicts. The development of the armed UAV will be discussed. Furthermore, the precise way in which the unmanned aerial system is used and how this has impacted warfighting will be addressed. This empirical introduction to drone warfare will then be connected to the theories as discussed. When all these parts are brought into the equation, the actual analysis will be presented.

4.1 The Background on Armed Drones

The drone, an unmanned aircraft, is defined as: “an aircraft or balloon that does not carry a human operator and is capable of flight under remote control or autonomous programming” (United States Air Force, 2014, p.13). These types of aircraft, also referred to as unmanned aerial vehicles (UAV’s) or remotely piloted aircraft (RPA’s), play an increasingly important role in the Global War on Terror, waged by the US and its allies against transnational terrorism, or ‘Al’Qaeda and its affiliates’. This thesis focuses on armed UAV’s. These larger drones differ from their unarmed counterparts in that their larger size enables them to carry a higher payload – more sensors and even more crucial: weapons. The most widespread armed drones, the ‘Predator’ and its successor, the ‘Reaper’, have received increasingly important roles in contemporary wars since the first deployment of this type of UAV’s over Kosovo in 1999. Although remote technologies are not new to high-tech Western military organizations, the deployment of drones as offensive weapons is. Originally, the role of UAV’s has been one of gathering intelligence and carrying out surveillance and reconnaissance (ISR) tasks. Pilotless aircraft were already used for surveillance missions during the Vietnam war. However, some radical changes have been implemented since their first arrival onto the battlefield. The following paragraph will elaborate on how a number of coincidental factors eventually led to a revolutionary new weapon system.

Birth of the armed drone

Drones have been used for military purposes for many years. Improvements in remote technologies and the changing environments of armed conflicts, however, have resulted in a strongly increased usage over the last fifteen years. Armed drones have proven to be the ideal type of weapon against the dispersed and hidden enemy that Western forces face in today’s wars. The developments in this field are therefore not accidental. It is even argued that the growing role for non-state actors in armed conflicts has been one of the driving forces behind the recent evolutions in unmanned systems (Shaw, 2013a).

The evolution of the Predator drone into a hunter-killer platform started directly during its first deployment, over Kosovo in 1999. Predators, originally designed to carry out reconnaissance missions, were used to identify hostile forces from the sky and direct fighter pilots to their positions.
This method soon proved to be far from ideal. It was problematic to describe the exact location of targets to pilots. The Predator lacked the possibility to send its imagery directly to other aircraft and the video-feed also was not featured with coordinates, so it remained difficult for the operators to accurately describe enemy positions to pilots. Boyne (2009) writes that “pilots spoke of being told to use a building with an orange roof as a landmark, while they were flying over a figurative see of orange-roofed buildings” (p.43). Therefore, the Air Force began experimenting with attaching laser designators to the UAV, so it could ‘paint’ enemy locations for sorties. When the war in the former Yugoslavia ended, the improved Predator had flown only one, albeit successful, mission in its new role of airborne Forward Air Controller (FAC). However, the outcomes of earlier tests and the successful mission had by then resulted in enthusiasm among several highly positioned Air Force officers. Therefore, further development of the Predator continued after the end of the conflict in Kosovo (Whittle, 2011).

During the same period of time, the post-Cold War era, the US detected a growing threat of transnational terrorist organizations. In the late 1990’s the hunt commenced for an Islamist terrorist leader who was based in Afghanistan. Within US intelligence circles it was believed that he had been the mastermind behind the attacks on the American embassies in Kenya and Tanzania in 1998 (Shaw, 2013a). However, these were not the attacks that provided him with the status of the world’s most notorious terrorist. That status he would gain only a few years later, after the attacks of 9/11 (Bergen, 2012). The name of this individual was Osama bin Laden.

The pre-emptive strategy the US used against this new threat was one of decapitation. It was believed that by timely eliminating key terrorist leaders, their organizations would collapse before they would become a threat to the West. The embassy attacks of 1998 were therefore retaliated by the Clinton administration (Shaw, 2013a). The US launched several Tomahawk cruise missiles onto an Al’Qaeda training facility in the Afghan desert where Bin Laden was believed to be hiding. Although multiple terrorists were killed in the strike, the Al’Qaeda leadership remained unharmed. They had left the area before the camp was bombed.

This made clear a crucial problem to the US, the length of the ‘kill-chain’, the steps between locating a target and striking it. It takes some time to go through the required protocols before cruise missiles can be launched or fighter jets can lift off. Also the flight time of missiles and jets to the target has to be taken into account. These factors result in a gap between the completion of the gathering of information required to strike a target and the strike itself (Boyne, 2009). This had already been a problematic factor during the SCUD-hunt of the Gulf War and in the wars in Bosnia and Kosovo. Western forces had access to high-tech smart bombs and were able to surgically strike any target, but the long sensor-to-shooter time remained a problem. The importance of the problem was only growing larger, as the fluidity of the new type of enemy simply did not allow such a time gap. There was a good chance HVT’s or concentrations of insurgents would have disappeared at the time a strike could be carried out.

In order to shorten the ‘kill-chain’ dramatically, the sensor used for ISR had to be combined with a weapon system capable of taking out selected targets. The need had arisen for a surveillance platform, that that had the possibility to engage a target when necessary. The USAF were looking for a possibility to “take immediate advantage when perishable, high-value targets were spotted” (Boyne, 2009, p.44). A radical reduction of the kill-chain, shortening it from several hours to a few
minutes would greatly improve the effectiveness of the evolving manhunt campaign. At that time the RQ-1 Predator (‘R’ for reconnaissance) was already in use by the US Air Force for some years, but it lacked the important capability that was becoming increasingly vital in the changing environment of warfighting. The Predator was used to gather intelligence on transnational terrorists, the emerging enemy. The platform had proven its value in the search for HVT’s. It was capable of covertly following targets, such as Bin Laden, for extended periods of time (Whittle, 2011). It is believed that he was spotted by a Predator at least two times pre-9/11, but at the time the UAV was not capable of strike missions. The possibilities that a slow moving, long loitering and armed reconnaissance aircraft would offer were in that sense obvious, the chances for a potential target to escape would strongly diminish. Until this point, when a UAV had a target in its sights the only thing it could do was shoot a film, not a missile. Although equipping it with a laser designator in 1999 was a large improvement, it still was not a sensor-shooter platform. A program to research whether it would be possible to arm the Predator was started in 2000 (Whittle, 2011). In September 2001 the Air Force completed its tests with the armed Predator. After a series of successful tests, the original ISR system had transformed into the requested platform with hunter-killer capabilities. Two air-to-ground anti-armour Hellfire missiles were fixed to the UAV, providing it with the firepower needed to strike designated targets if and when necessary. The missiles were modified for a greater lethality on ‘soft targets’, as they were originally designed to penetrate the armour of a tank. Since Hellfire missiles attached to Predators would not be used against this type of target, the warheads were altered. It became a “fragmentation weapon with a larger lethal radius” (Whittle, 2011, p.24). The weapon became more lethal for human targets and could be used both in and outside structures.

From that moment on the Predator became the MQ-1, a multi-purpose (the ‘R’ for ‘reconnaissance’ became an ‘M’) UAV, capable of finding a target as well as striking it. Although tests had been completed, legal issues prevented the US from deploying the new type of weaponry abroad. Policymakers and legal advisers were still debating whether the armed Predator could fit in the existing legal framework of international humanitarian law. However, this suddenly changed after 9/11. Although the growing threat from Bin Laden’s organization had played a role in the development of the Unmanned Combat Aerial Vehicle(UCAV), the daring attack on US soil functioned as the catalyst for the deployment of the newly developed weapon system. The MQ-1 and a team led by its developers, were directly transported to Uzbekistan to fly missions over neighbouring Afghanistan.

During the following wars in Afghanistan and Iraq, the success of the Predator, not only in its role as a hunter-killer, but also as ISR and FAC platform, led to a strong increase in production numbers. The popularity of the UAV grew amongst all layers of the US military and also within foreign armed forces. Several allies of the US have purchased Predators and/or Reapers, or are in the process of doing so, although these are in most cases unarmed (House of Commons Defence Committee, 2014). Tasks where the RQ-1 was initially designed for, ISR and in a later stadium FAC, are still carried out successfully by the MQ-1. A variety of ground forces, from tank crews to special forces, have greatly benefited from the video stream they can view in real time from ‘the eye in the sky’. The possibility to strike targets, however, has also been developed further. The successor of the Predator, the Reaper, has been primarily developed as a hunter-killer. Essentially it is a larger, more sturdy Predator. The improved strength of the frame enables the UAV to carry more weapons and sensors (General Atomics, n.d.). The concept of the sensor-shooter has proven its military value over the last fifteen years and it is highly unlikely that further development will cease anytime soon.
**Effects**

The arming of UAV’s and the deployment of this new type of weapon above the battlefield has been a large step forwards. The key element of the weapon that has in a way revolutionized warfare is the combination of ‘precision’ and ‘persistence’ (Dunlap, 2008; Abizaid & Brooks, 2014). As described earlier, the relatively small payloads and modified warheads of the weapons carried by drones, result in a higher precision in the sense that due to their use collateral damage numbers have decreased. Drone strikes are therefore arguably less indiscriminate than other types of aerial bombing.

Precision is also found in the collection of more precise information, due to persistence over an area of operation. The long-loitering capabilities of unmanned aerial platforms provide the opportunity to follow individuals or groups of possible targets. Drones can examine large areas for extended periods of time, and it is because of this ‘aeromobility’ that possible targets can be followed and watched (Adey, 2008, in: Shaw, 2013b). The intelligence that is provided in this way is also more likely to be accurate. The ‘precision accuracy’ and ‘reduced collateral damage’ that characterize drone warfare are summarized by retired Army General Barry McCaffrey, as quoted by Charles Dunlap (2008, p.57):

“We have already made a 100-year war-fighting leap-ahead with MQ-1 Predator, MQ-9 Reaper, and Global Hawk. Now we have loiter times in excess of 24 hours, persistent eyes on target, micro-kill with hellfire and 500-pound JDAM [Joint Direct Attack Munition] bombs, synthetic aperture radar, and a host of ISR sensors and communications potential that have fundamentally changed the nature of warfare”.

However, increased accuracy has not resulted in absolute clarity of the battlefield. There is not a total absence of civilian casualties and although new bomb designs could help, the phenomenon will probably not cease to exist in the near future. Even the large quantitative and qualitative increase in sensors inside a conflict zone, will not automatically lead to an omniscient battlespace awareness (Wall & Monahan, 2011; Work & Brimley, 2014). Technology, although perhaps very helpful in clarifying situations, will never eliminate the fog of war entirely. Complex situations, as seen in armed conflicts, will always evoke problems when actors attempt to fully understand them. This is only strengthened when the decision making is a time-sensitive process, which is more often than not the case in warfighting.

**Collateral damage**

Enthusiasm about the capabilities of UCAV’s exists mainly in military circles. Various human rights and international law organizations have severely criticized armed drones. Especially the specific way in which the platform is used for targeted killings is considered unlawful. Like attacks with cruise missiles or by manned aircraft and essentially any other weapon system, drone strikes sometimes cause civilian casualties, which is a second point of criticism (International Human Rights and Conflict Resolution Clinic & Global Justice Clinic, 2012). However, critics should keep in mind that wars are not fought on remote ‘Napoleonic’ battlefields anymore. During the 20th and 21st century wars have been fought among the people, in towns and cities. Although most armies attempt to minimize ‘collateral damage’, civilians will fall victim to violence from time to time. Especially in situations wherein it is extremely difficult to distinguish non-combatants from combatants, which has been the case for Western forces in contemporary conflicts, civilians will sometimes accidentally be killed. Besides, although it might sound crude, collateral damage is accepted within the Laws of Armed
Conflict. Obviously, the loss of civilian life must not be excessive compared to the military advantage of an attack. However, to a certain extent collateral damage is acceptable in war, as long as civilians are not the object of attack and the loss of civilian life weighs up to the strategic advantages of the attack (International Committee of the Red Cross, n.d.).

Critics claim that International Humanitarian Law is breached and that drones inflict an unacceptable number of civilian casualties. The numbers of civilian deaths caused by drone strikes brought forward by various human rights organizations vary between a few hundred to several thousand (Byman, 2013; Roggio & Mayer, 2013; New America Foundation, 2014). These organizations should, however, be careful with citing high numbers of casualties. The information tends to be unverifiable and could for instance emanate from militant groups, for whom it is advantageous to exaggerate the amount of civilian deaths. Osinga (2013) notes that “most strikes occur in inaccessible and dangerous territory where independent verification of data, identification of casualties, and assessment of collateral damage are infeasible” (p.260). The US government, in a stark contrast to the critics, believes no civilians have been killed thus far. This claim, however, is strongly based on the official assumption that all military-aged males in the blast area of a drone strike are combatants, unless proven otherwise afterwards. The assumption that not one civilian has fallen victim to a drone strike also seems unlikely, as it has proven difficult to distinguish non-combatants from combatants. Although it is highly improbable that drones have not killed a single civilian, sources claiming collateral damage in the thousands should also be treated with caution. More importantly, if a weapon causes collateral damage, that cannot be a reason for banning it from the battlefield. Sadly, it is something weapons have done and will continue to do. It is certain that a number of civilians have fallen victim to drone strikes. However, as tragic as it is, when combating an enemy that hides among the people it is impossible to completely prevent civilian casualties.

When intelligence is based on incorrect information, the wrong person could be targeted. It also happens that visual feeds from armed UAV’s are wrongly interpreted and that individuals, thought to be insurgents, are killed. On the other hand, targeted strikes that involve at most a handful of relatively small missiles are still a far more precise and less destructive way of attacking from the air than methods of the past. This is an argument effectively used by proponents (Osinga, 2013). During World War II the general bombing strategy of the USAF and the RAF was to level entire cities. Also in Vietnam large parts of the jungle were carpet bombed, because it was difficult to detect enemy positions and movements underneath the canopy. By indiscriminately bombing whole areas, targets were indeed destroyed, together with everything in their proximity (Gregory, 2012). In drone warfare “the precision and discretion with which firepower is employed takes on tremendous significance” (Crawford, 2009, p.11). Eliminating important targets can often be accomplished through the use of a single laser-guided missile. This is a major improvement in comparison to tactics used in the past, which entailed far more ordnance. Marc Garlasco, a Human Rights Watch senior military analyst describes today’s airstrikes as “probably […] the most discriminating weapons that exist” (Dunlap, 2008, p.53).

Although drone strikes could be regarded as doing relatively well on the collateral damage scale, the military does recognize that this could be further improved. By making armed drones truly ‘surgical’, many problems brought forward by critics could be solved (International Human Rights and Conflict Resolution Clinic & Global Justice Clinic, 2012; Zenko, 2013). In order to decrease collateral damage the US Air Force is doing tests with the Small Diameter Bomb (SDB) to replace the Hellfire in the short
term. The SDB could very well decrease the numbers of civilians killed by drones. It could for instance be fitted with a so-called Dense Inert Metal Explosive (DIME), which produces an extremely deadly blast of micro-shrapnel at short range that quickly loses its energy (GlobalSecurity.org, n.d.). This increases the chance of killing only the intended target and leaving persons in its direct surroundings unharmed. Another research project is specifically aimed at the development of a new ‘low-collateral damage bomb’ (Tirpak, 2010).

Secondary effects

The use of drones results in more than only death and destruction. The awareness among insurgents and terrorists, as well as civilians, that the possibility always exists that they will be struck by a missile, causes a constant feeling of fear. “The buzz of a distant propeller is a constant reminder of imminent death” (Rohde, 2012, par. 8). The launch of a missile is not a necessity to influence enemy forces. Drone strikes have been taking place in numerous places for a number of years now, and Al’Qaeda and its affiliates know that they are ‘fair game’ anywhere and anytime. This sheer uncertainty inflicts stress, which negatively influences combat effectiveness. The idea alone that a strike could occur at any moment, hinders terrorists in their movements. They will be more cautious, for instance, with the placement of IED’s and with transporting people and equipment. The fear for drones in the most extreme cases might even drive insurgents into surrender or desertion. Drones “now inflict on insurgents the same kind of disconcerting sense of vulnerability that the enemy sought to impose upon US troops via improvised explosive devices” (Dunlap, 2008, p.59). These are the same effects as Killcullen (2006) mentions in his paragraph on patrolling, which is a first indication that drone warfare has the right characteristics to fit in a broader COIN framework.

It is important to note that secondary effects of drone strikes are not necessarily positive for the US or the West. Collateral damage resulting from drone strikes helps in the recruitment of new terrorists and insurgents. Collateral damage works as a multiplier of feelings of enmity towards the US. The psychological impact of drone strikes seems to be greater when they result in the death of civilians. Although the effectiveness of the strikes for a large part comes from their psychological effects on an insurgency as a whole, these effects can at the same time negatively impact the progress made. When someone loses a family member or friend, who is innocent, in an attack carried out by a UCAV, he or she becomes easier to motivate to take part in terrorist activities (International Human Rights and Conflict Resolution Clinic & Global Justice Clinic, 2012). Drone warfare has been criticized for the fact “that it kills today’s enemies but creates tomorrow’s [sic] in the process” (Byman, 2013, p.5).Although this seems plausible, the impact of drones on public anger towards the West should surely be nuanced. Some authors therefore counter this argument. Etzioni (2013) and Byman (2013) stand critical towards the automatic correlation that is assumed between drone strikes and anti-Americanism. Negative feelings towards the US and the West have been dominant in the Arab world for years. They have not risen dramatically since the increase in drone strikes. The enmity could for instance also be explained from a post-colonial point of view. Although drone strikes, those that lead to the death of civilians in particular, might influence the population in the MENA-region to some extent, the causality should not be exaggerated.

The near future of drone warfare

Another point which should not be exaggerated, is the importance of the recent evolution of unmanned technologies. Drones definitely function as risk reducing instruments (for the party that
uses them), but future wars will not be “short, sharp, clean and relatively casualty free” (Work & Brimley, 2014, p.9). In the end drones will not take the humanness out of conflict. Armed UAV’s serve a specific purpose and have proven useful against a specific type of enemy. It could, however, be unwise to put too much emphasis on the development of unmanned systems. In future theatres of conflict, with possibly a more non-permissive character towards UAV’s than Yemen, Pakistan or Afghanistan, it might be necessary to fall back on more conservative, old-fashioned strategies and tactics. The current situation is that “platforms have primarily operated in permissive environments, but in future conflicts, these assets must operate effectively in contested or denied environments” (United States Air Force, 2014, p.32). The current generation of armed UAV’s is perfectly able to operate over permissive areas of operations, however “in contested airspace, those aircraft are extremely vulnerable” (Tirpak, 2010, p.39). The importance of UAV’s in the near future should be critically analysed. The large role in counterterrorism and irregular warfare has “overshadowed efforts to determine the characteristics of future operating environments and the suitability of emerging technologies” (United States Air Force, 2014, p.13). The rise of unmanned systems should therefore not be perceived as a progress aimed at the replacement of humans. Unmanned systems rather stimulate human actors in carrying out their tasks, thereby increasing the overall effectiveness of the military apparatus. In a future scenario “people overseeing autonomous processes and systems collaboratively teamed together have the potential to revolutionize warfare, particularly when applied to RPA” (United States Air Force, 2014, p.40). As revolutionary as a new weapons system might be, it always functions within a larger framework of tools, tactics and strategies. Now, when the development of UAV’s is still in its early days, it is time to develop new COIN concepts that make use of the advantages of an integrated manned-unmanned unit (Work & Brimley, 2014). The development in unmanned technologies is taking place at a high pace. The aim of the USAF is to replace the MQ-9 Reaper with a new generation of unmanned aircraft in the 2020-22 period (Tirpak, 2010). By developing the doctrines of warfare, the strategies and tactics needed in contemporary and future wars, during this same period of time, a full integration of drone-based tactics within the larger framework of warfighting will arise.

4.2 Adopting the Everywhere War

Thus, for a number of reasons it would be beneficial for Western militaries to place UAV’s at important positions in their contemporary and future strategies, while keeping in mind that the drone is not the solution to all problems. Within the context of the War on Terror, however, giving drones a central role is a logical answer to the transnational terrorist threat. Especially the US, a first mover in unmanned technologies, is planning to increase their role, according to several reports on the use of UAV’s and the future of the US military (Department of Defense 2012; 2013; United States Air Force, 2014; Work & Brimley, 2014).

A shift in waging war

The United States has had global military superiority in the post-Cold War era and it is planning to maintain global leadership and military superiority during the coming decades (Department of Defense, 2012). In an attempt to sustain global leadership, the US will focus on “cutting edge capabilities” (Department of Defense, 2012, foreword). By doing so, the US is continuing along its path. Technological superiority in comparison to its adversaries has always been a central element of
US defense policies. The former Chief Scientist of the USAF, Werner Dahm, stated: “We must remain as committed as we were in 1945 to pursuing the most promising technological opportunities for our times […] that will allow us to maintain our edge” (United States Air Force, 2014, p.29). However, the pre-eminence enjoyed by the US and its allies and partners is eroding. Advanced military technologies are becoming available to more and more nations and, to a lesser extent, non-state actors. Work and Brimley (2014) therefore put forth that the West should move towards a warfighting regime in which unmanned systems come to play a central role. They argue that “a warfare regime based on unmanned […] systems has the potential to change our basic core concepts of defense strategy [...]” (p.6).

The focus of the US and its allies and partners should and will remain with asymmetrical warfare: irregular warfare, insurgencies and terrorism (Work & Brimley, 2014). The most important threats to a peaceful global environment are posed by transnational terrorist organizations. Until those organizations are effectively countered, the threat will persist to exist (Department of Defense, 2013). Therefore, Western military forces “will continue to take an active approach to countering these threats by monitoring the activities of non-state threats worldwide, working with allies and partners to establish control over ungoverned territories, and directly striking the most dangerous groups and individuals when necessary” (Department of Defense, 2012, p.1). These wordings are without too much imagination directly applicable to the use of armed drones. Drones are specifically used in the manner that is described to counter transnational terrorism. UAV’s monitor, hover over ungoverned territories and strike dangerous groups and individuals. Their use results in a constant pressure on Al’Qaeda and its affiliates, whether they are located in Afghanistan, or in for instance Pakistan or Somalia. Within the US strategy to defeat transnational terrorism, drones are a foundational asset. The US also aims towards a wider distribution of their counter terrorism efforts, since it is acknowledged that Afghanistan is not the only place where transnational terrorism is found. Despite capturing and killing senior Al’Qaeda members, including Bin Laden, the organization “remains active in Pakistan, Afghanistan, Yemen, Somalia, and elsewhere” (Department of Defense, 2012, p.1). Charles Pena (2006) argues that classic military presence does more harm than good: “According to a CIA assessment, Iraq may be a more potent training and breeding ground for Islamist terrorists than Afghanistan was in the 1980s. It serves as a real-world laboratory for militants to hone their tradecraft in an urban combat environment” (p.294).

Fighting terrorists with drones, takes away this opportunity. The low-tech weaponry used by these non-state actors is often incapable of bringing down UAV’s. Thus, the more drones come to play a central role within the War on Terror, the less battlefields can function as ‘laboratories for militants’. Also, it must be prevented that any of the mentioned areas will remain or becomes a safe haven for terrorism. In order to assure this, a different approach might be necessary. Drawing on Pena’s observation, an approach wherein unmanned strategies play a central role might be desirable. This could take place in “those areas beyond national jurisdiction that constitute the vital connective tissue of the international system” (Department of Defense, 2012, p.3). During recent years terrorists and insurgents were pursued in a “patient and relentless man-hunting campaign”, wherein individuals and groups were engaged by “special operations forces and progressively smaller guided munitions capable of striking individuals accurately with very little collateral damage” (Work & Brimley, 2014, p.17).
The next paragraph will further elaborate on this new Western way of war. The US Army’s Field Manual No. 3-24 (2006) states that the War on Terror should be seen as a grand counterinsurgency campaign. Also Kilcullen (2006) has argued that a COIN approach would provide the best fit framework in the War on Terror. Classic COIN strategies were developed against insurgents that fought in the wars of national liberation. Some of the “classical, proven methods”, however, have successfully been used during the War on Terror, although it also has been necessary to adjust and modernise them (Kilcullen, 2006, p.111). At the same time, however, Kilcullen (Kilcullen & Exum, 2009) has criticized the US drone strategy. Although he acknowledges that it is likely that the Pakistani press exaggerates the amount of civilian deaths, he does argue that too much collateral damage is involved with drone strikes. More importantly, Kilcullen suggests that the use of armed drones is an example of a tactic that substitutes for a strategy. He states that the sheer killing of terrorists is over-emphasized. As has been explicated in the Field Manual on COIN (2006), killing insurgents and terrorists is not necessarily a bad thing. It has, however, to be done in order to reach a higher goal, for instance dislocating a terrorist network or tackling an insurgency.

Despite this criticism, drones have taken on an important role in COIN and have in a sense contributed to adjusting and modernising existing COIN methods. Kilcullen’s vision on the use of drones therefore seems to contradict his own opinion on the development of COIN. The following paragraph will further elaborate on the role of drones within counterinsurgency. Furthermore, it will argue that drone warfare can certainly be a part of modern COIN.

Towards an everywhere war

The post-Cold War period and the rise of transnational Islamist terrorism go hand in hand with the development of the armed drone and its growth in importance. Fighting such non-state and widespread actors was new for Western armies. Although comparisons can be made between the Global War on Terror and insurgencies during colonial times, there is an important distinction between transnational terrorist organizations and nationalist insurgents. As has been extensively elaborated upon in the previous chapter, the fact that Al’Qaeda and its affiliates are completely deterritorialized makes that they strongly differ from other adversaries Western forces have fought in the past. The fight of Al’Qaeda is not based on a territory, but on a cause. Therefore transnational terrorist organizations have to be considered as a new and very specific type of enemy. Since such an enemy is to a large extent incomparable to earlier opponents, it requires a specifically different approach.

In the theoretical framework the networked character of modern transnational terrorist organizations has been explained in detail. To defeat an adversary that is constructed as a network, coalition forces in Afghanistan and Iraq used counter-network strategies. In counter-network warfare eliminating nodes is essential to eventually bring down the whole network (Crawford, 2009). The existing kill-chain had proven to be too long for successfully engaging time-sensitive ‘fleeting’ targets (Boyne, 2009). The nodes in the terrorist network were constantly moving, and counter-network tactics were, due to technical issues, too slow to keep up with the flexibility of the dynamic networks. As stated above, this problem was possible to overcome by combining the sensor and the shooter into one platform. The introduction of armed drones meant the arrival of a tool that fit very well within the new doctrine. With counter-network warfare functioning as the foundation, armed drones suddenly created a possibility for true ‘man-hunting’. The arrival of the armed Predator extended the
“span and scope of sensory, mobility, and firepower capabilities” (Crawford, 2009, p.5) in the ongoing hunt that was aimed towards bringing down Al’Qaeda and its affiliates.

US strategies thus seem to have transformed alongside the rise of the drone as a weapon system. Western (most notably US) military strategies are more and more focused on intelligence collection and the pinpointed attacks against “insurgent cells, infiltration routes, or leadership targets” (Long, 2011, p.182). The US has rebalanced its military capabilities to meet the needs of the present time. By excelling in counter-network operations, it is believed that the requirements for a modern military are met. Long concludes his research with the statement, however, that although counterinsurgency is a vital contribution to the War on Terror, it is not a decisive factor. Counterinsurgency operations can be very effective, but due to the often relatively small scale of those operations, he argues that they tend to merely help to win battles, not wars. However, several authors, including Dunlap (2008), Crawford (2009) and Marks et al. (2005), see that differently. They all place the elimination of nodes at the centre of counter-network warfare.

UAV’s in general and armed UAV’s in particular are ideal tools against a dispersed enemy such as transnational terrorists. Retired Lieutenant General David Deptula of the USAF has described it as follows: “The beauty of RPA’s is that they can be used wherever they’re needed, around the world, all the time” (Tirpak, 2010, p.42). The ‘everywhere’ notion has to be taken quite literally, as the use of armed drones has not been limited to areas that are ‘official warzones’ (such as Afghanistan), but also to countries where officially no war is going on (Pakistan, Somalia and Yemen) (Gregory, 2011). A critical side note regarding this topic, however, is that these are all countries that are to a certain extent internally troubled.

Transnational terrorism is in that sense haunted by a new phenomenon, the use of a ‘transnational weapon’. Wherever a terrorist goes, drones can follow and strike him at any given time. Drones could “project power in contested and (anti-access/area denial) environments, strike quickly from over the horizon” (United States Air Force, 2014, p.iii). This persistent threat “dislocate[s] the psychology of the insurgent” (Dunlap, 2008, p.58), in a sense mirroring the terrorists own ability to strike anywhere at any time. Modern counterinsurgency from the air is based on beating transnational terrorists at their own game by giving them some of their own medicine. The everywhere war, fought by terrorists against the West, is now effectively turned against them.

The asymmetric warfare that was started as a strategy used by non-state actors and worked enormously in their advantage, was reversed when UCAV’s came into play. They were the formerly unavailable answer to the indirect strategies (the use of IED’s) of the enemy. Terrorist tactics are by definition based on surprise (Bahgat & Medina, 2013; Moghadam, 2008; Mustafa, 2005), hitting the enemy when he is not expecting it. This same element of surprise is also what makes armed drones effective against a hidden and dispersed enemy. Arquilla & Ronfeldt (2001) were among the first to argue that Western military forces might want to adopt strategies like those of their adversaries in order to successfully fight them. Some authors compare the use of drones with the tactics used by terrorists themselves, although not necessarily meant in a negative way (Chamayou, 2013 in: Gregory, 2013c; Dunlap, 2008). However, Chamayou characterizes the armed drone as “the weapon of State terrorism” and takes a critical standpoint towards the changing character of warfare. Although his choice of words might be considered somewhat too negative, there is no denying in the
fact that the factor of surprise that weapons such as IED’s and suicide bombs hold, is in a sense also applicable to UAV’s.

**Weapon of State Terrorism?**

The goal of the following paragraph will be to give a structured, balanced and side-by-side analysis of the similarities and differences between the characteristics of drone warfare on the one hand and terrorist tactics on the other. The comparison will thereby focus on the weapons of choice within the two larger frameworks. Drones are the main workhorses in modern counterinsurgency and counterterrorism (Department of Defense, 2013), while the IED is the signature weapon within transnational terrorism (Martin, 2009). Since these weapons are also the keystones of the strategies used by both sides (respectively counter-network warfare and network warfare), the outcomes will go beyond the sheer comparison of the tools of destruction. Eventually, it will be concluded to what extent Chamayou’s notion of drones as weapons of ‘State Terrorism’ holds any value.

**Comparison**

Drone warfare and the terrorist use of explosives have both been thoroughly discussed earlier on in this thesis and it has been made clear what they entail and what their effects are. Based on these observations, a comparison will be drawn in the following paragraph on the basis of three factors taken from the descriptions as presented earlier. These factors are the place of drones and terrorism in *time and space* and the *nature* of these tactics, which both influence their effects.

**Time/space**

The power of terrorism lies in its hidden character. Uncertainty and surprise are essential elements of terrorist tactics, which are aimed at spreading the fear that anyone can fall victim to the terrorist at any place and at any time. Islamist terrorist organizations have been the first movers in waging an ‘everywhere war’ against the West. The scope of their actions was virtually infinite, which resulted in a global climate of fear; every Western country feared a terrorist attack a la 9/11. After the invasions in Iraq and Afghanistan, surprise attacks remained the *modus operandi* for Al’Qaeda and its affiliates. Western troops knew that every patrol that moved outside the gates of a base could encounter an IED. Also, every person encountered by these forces *could* be a suicide bomber. Thus, an attack on coalition soldiers was an all too real possibility at any given time and place.

This same factor is what has made drone strikes an effective tactic within counter-network warfare. The introduction of the armed drone was a turning point in the ‘everywhere war’ waged by the terrorist, the balance was tilted and the US took the offensive. The ‘everywhere war’, that can be seen as an Al’Qaeda strategy, was implemented in the American way of war. By deploying sensors and weapons everywhere, *or possibly* deploying them anywhere, Al’Qaeda increasingly came to live under a climate of fear. Documents found in Bin Laden’s compound in Abbotabad indicate that Al’Qaeda’s operations and procedures were affected by drone strikes. Meetings between leaders and transactions of goods became risky, as it was known that everything could be overseen by an UAV (Benson, 2012).
Both strategies, drone strikes and the use of IED’s, are in fact prolonged campaigns of small operations. These tactics could both be considered precision strikes. The drone strike, that delivers high-tech precision munitions onto a target is opposed by an explosive device that is either remotely controlled or detonated by a suicide bomber. Both these strategies aim at the erosion of the enemy in the broadest sense, by doing relatively low damage at a time, but to targets that matter the most for the organization.

Here the first difference between drone strikes and terrorist attacks can be seen, as ‘targets that matter the most’ vary for both sides. UCAV’s destroy terrorist networks by taking out key nodes one by one, while terrorists and insurgents try to decrease the morale of the opposing army by a protracted campaign of bomb attacks. Drones are specifically used to take out HVT’s, individuals or small groups that are essential for the organization to work properly. This can be leaders, but also members of the organization with a specific skill (for instance bomb makers, passport forgers or IT specialists) (Crawford, 2009). Basically, drones are used in the counter-network framework to decrease the operational effectiveness of terrorist and insurgent organizations. The effectiveness of precision missile strikes, performed by armed UAV’s therefore lies predominantly on the tactical level. On the other hand, the actions of terrorists are not necessarily intended to do damage to the enemy on the same tactical level. As described in the previous paragraph, acts of terrorism focus on decreasing the morale of an adversary. This is especially the case when terrorism is used as a tactic by insurgents, who oppose a superior enemy and are unable to achieve a victory in the classic sense. Instead, their attacks are delivered with the intent to strike fear into the hearts of their enemies. The symbolic value of an attack is therefore of greater importance than the outcomes on the tactical level. Terrorists for instance target checkpoints, police stations and a variety of civilian targets in order to create a climate of fear (Moghadam, 2008). The use of suicide tactics further strengthens this process.

Effects

The effects that both tactics have is to some extent comparable, while at the same time some major differences can be noted. Although the employment of a high-tech weapon system like the armed drone is much more expensive than the use of improvised explosives, both weapons are considered cost-effective. As put forward earlier, IED’s are very cheap and easy to use, while capable of doing a lot of damage. Drones on the other hand are multi-million dollar machines, but quite cheap in comparison to manned jetfighters or cruise missiles that can be used only once. Pilots are no longer exposed to danger, since the drone operator can control his aircraft from thousands of miles away. This results in a cost-effective weapon, although on another scale than the IED. Especially drones and non-suicide IED’s in that sense share a number of similarities in effectiveness, accuracy and the amount of risk for the operator. On the other hand, suicide bombings are then completely the opposite of drone strikes, since the safety of the perpetrator in that case is out of the question.

Despite the high levels of accuracy that both tactics hold, the death of innocent bystanders sometimes is a side effect. In the case of drone strikes this is termed collateral damage. Although Western forces try to minimize this factor in the wars they fight, in order to win the ‘hearts and minds’ of the people, it has proven almost impossible to prevent it completely. As brought forward earlier, it is impossible to make the fog of war fully disappear and wrong or incomplete information
can have severe consequences in the complex contexts of war. Civilian targets are not struck intentionally, but in a war amongst the people casualties among them are hard to prevent. On the contrary, terrorism is more often than not specifically aimed at civilian targets. A strong sense of terror felt by the civilian population will contribute to the climate of fear. To achieve their goals terrorists strike military and civilian targets alike. Casualties among bystanders are, in stark contrast to collateral damage, ‘a welcome bonus’. There are exceptions to this rule, of course, since terrorist organizations also need some form of popular support. Events in recent history, however, have shown that civilian deaths are not a factor terrorist organizations seem to care to much about. Herein drone strikes strongly differ from terrorist attacks. Collateral damage is an unintended consequence of man-hunting, either caused by bad intelligence, a wrong interpretation of imagery or an unforeseen outcome of a missile blast. Civilian deaths caused by acts of terrorism could also be unintended, but are in many cases beneficial for the terrorist organization. The death of civilians will lead to a situation where the population feels itself unprotected by the government and/or foreign military forces. It will therefore lead to a further weakening of the state, which is the aim of an insurgency (Moghadam, 2008).

As explained, both IED and drone strikes have a strong psychological impact. The explosion of a bomb or a guided missile logically results in physical damage, but it also has psychological effects on the opponent. At first glance both tactics are comparable in that regard. However, there seems to be an important difference. IED’s, the weapon of choice for non-state actors in the Global War on Terror, have gained their notorious status because of the fear they cause. Taking only their direct effects into consideration, IED’s are not the most impressive pieces of weaponry. A small percentage of the IED’s used in Afghanistan, Iraq and Pakistan consists of bombs large in size that contain several hundreds of pounds of explosives, but the majority of the devices is relatively small (Martin, 2009). However, all IED’s are weapons of war and should therefore not be underestimated. The weapon is capable of causing serious damage and casualties both among the military and civilians. The hidden character, however, the fact that under every road or crossroads and on every person, in every car and in any building an IED could be concealed, is what really makes the weapon effective. A weapon that needs to be hidden to be most effective, is perfectly suited for an organization that can only properly function when in hiding. The direct effect of the weapon, combined with this character, causes the psychological effect. The IED truly induces a climate of fear. The weapon thus directly connects to the goal of a terrorist organization, which is to spread fear and terror. The choice for the IED as the pivotal weapon follows from the need to psychologically influence the enemy, the government and the population.

Drones fly on high altitudes and are hard or even impossible to see with the naked eye. It also is a hidden weapon, that can strike anywhere and at any time. In that it resembles the IED. The differing factor between the two weapons is the intended effect. The IED, as described above, is aimed at harming the opponent in a psychological way. Although the drone does have psychological effects on insurgents, these have to be considered to be additional outcomes of the strategy. The strategy itself is directed towards the destruction of enemy networks through the elimination of key nodes. Thus, “[...] airpower can now inflict on insurgents the same kind of disconcerting sense of vulnerability that the enemy sought to impose upon US troops via improvised explosive devices, the most deadly weapon COIN forces face” (Dunlap, 2008, p.59). However, drone strikes are primarily meant to bring down the networks by hunting down and taking out key figures. The direct effects of drone strikes, the destruction targets, is the first and foremost reason for their deployment. The psychological
effects it thereby has on the enemy is a side-effect. The UCAV is not meant as a symbolic weapon, although critics often portray it as such. It has been developed as a piece of weaponry that offers great tactical advantages and it has successfully played that role for a number of years.

Although both IED’s and armed drones are tactical as well as psychological in nature, they do differ on this point. The drone is a weapon of great tactical value that through its effectiveness has a psychological impact on its enemies. The IED, on the other hand, is a symbolical weapon. It is employed because of the fear inducing characteristics it possesses. Its tactical value is therefore of less importance. This difference in character can be seen in the fact that terrorist attacks are extensively discussed in the media and get their status to a great extent from this public attention, while drone strikes are kept out of the media as much as possible.

Based on this comparison between terrorist tactics and drone warfare one can conclude that transnational terrorists were the first to fight an ‘everywhere war’. The Western response to this new threat has been one of counter-network warfare, wherein ‘man-hunting’ became an important approach to bring down terrorist networks. The introduction of the armed drone, a new weapon, proved valuable within the existing doctrine. Terrorists in a sense became prey and were hunted down and killed by a transnational weapon, the drone could loiter anywhere at any time. Several similarities between both tactics exist. Drone warfare, transnational warfare, has been an important part of the answer to transnational terrorism. The US, and an increasing amount of other nations, now possess a weapon and strategy that is no longer hindered by the classic confinements of the battlefield (Scahill, 2013). The ‘everywhere war’, that can be traced back to a terrorist campaign, has been adopted by the West. The strategy has been reversed (Chamayou, 2013, in: Gregory, 2013d).

“The asymmetric game-changing capabilities” that impact “all levels of conflict” have gradually become key factors in the Western way of war (United States Air Force, 2014, p.44). However, despite the superficial similarities between the IED and the RPA, designating the use of drones as a terrorist tactic would be several bridges too far. Both strategies differ at their core. The intended results of their use are completely opposite. Therefore, the use of drones should be seen as an answer to transnational terrorism and not as a resemblance.

4.3 COIN

Opposing a cause-driven and dispersed enemy has forced Western forces to use flexible and quick methods (Marks et al., 2005). Instead of manoeuvring large armies over great distances in prolonged campaigns, relatively small-scale operations against ‘nodes’ in networks are the contemporary choice of generals. War, which always has been a process of grand scale, became a concatenation of micro-events. In order to achieve objectives, “innovative, low-cost and small-footprint approaches” are employed (Department of Defense, 2012, p.3). UCAV’s are used with these factors of modern warfare kept in mind.

Firstly, they carry out selective precision strike missions against both pre-planned targets and high-value opportunities, thereby minimizing the risk of collateral damage. The targeted killing of individuals and small groups with Hellfire missiles could be considered to be an example of small-footprint approach. Maximum results are achieved with relatively small effort.
Secondly, when drones are used in an area of operations, the operators can be thousands of miles away. The necessity to expose personnel to danger has disappeared. There is thus no need for force protection and logistics within the area of operations, which strongly contributes to minimizing the footprint.

As has been discussed in the previous paragraph, the choice for an increased use of drones originates from the changed context of conflict. The focus has shifted towards small-scale operations, to an operational area wherein UAV’s are generally considered suitable tools. The Department of Defense underlines this in the justification of the defense budget for 2014: “The MQ-1 Predators and MQ-9 Reapers have been, and will continue to be, our counterinsurgency workhorses” (2013, p.30). Although the use of armed drones is still quite a new phenomenon, it has thus been fully integrated in modern COIN strategies. Drones offer new opportunities to solve the problems caused by the changed character of the insurgency.

**Global Insurgency**

David Kilcullen (2005) characterizes the global Jihad waged by Al’Qaeda as a global insurgency. The organization uses religion to link a variety of conflicts together and integrate them into a broader framework of Jihad. Al’Qaeda thereby functions as a sort of umbrella organization, providing funding and assistance for a number of allied groups. Within this role the Al’Qaeda network has become a loosely aligned confederation of several smaller, semi-independent insurgent networks; however, while connecting lines criss-cross throughout the entire network between the various insurgencies. Al’Qaeda thus functions as the connective tissue between the different regional, national and local insurgencies (ranging from Afghanistan and Iraq to Chechnya and Algeria). The interconnectedness between the widespread variety of insurgencies is a creation of Al’Qaeda and it is this factor that makes it a global Jihad. The different theatres of war in the War on Terror share a number of characteristics through the globalisation of insurgency. Since individual Jihadists from all over the globe fight for the same cause, it happens that the same person sees combat in Bosnia, Chechnya and Afghanistan (Killcullen, 2005). This results in a global exchange of tactics and strategies, for instance the IED proliferation.

Insurgents by definition seek to undermine or overthrow “established governments or societal orders” (Kilcullen, 2005, p.603). In order to reach these goals they employ a variety of strategies, for instance subversion, guerrilla warfare and terrorism. The War on Terror is therefore directed against an insurgency that employs terrorist tactics, not against terrorism in the proper sense of the word. Critics, such as Francis Fukuyama (2003), have criticized the War on Terror for being directed against a tactic instead of an enemy. Such a notion, however, oversimplifies reality. It approaches the War on Terror too straightforward. It is a war against a global entity that utilises terrorism as means to an end. Also, it is unlikely that the name ‘War on Terror’ is chosen for its analytical depth and clarification of a phenomenon. The specific term came forward for political reasons (Killcullen, 2005). In that regard the name should not be taken too literal. Other aspects of the War on Terror are more interesting to analyse than the name itself.

Countering a global insurgency strongly differs from countering a ‘classic’ insurgency, that takes place on a national level. COIN strategies have therefore been developed with the goal in mind to end such a ‘small scale’ insurgency. It has been optimised to defeat an enemy in one country. However, the current situation is that of a global insurgency, a global threat. In that regard “a fundamental
A reappraisal of counterinsurgency is needed, to develop methods effective against a globalized insurgency” (Kilcullen, 2005, pp.614-615).

A central aspect that has to be kept in mind, is that counterinsurgency and counterterrorism are two separate areas. Terrorism is generally approached as a law enforcement problem. Consequently, counterterrorism is a rather narrow approach. The perpetrators of acts of terror are criminalized and the central objective is to find and arrest them. The aim of counterinsurgency is much broader. Instead of apprehending individuals, the effort to undermine a state as a whole has to be defeated. The insurgency itself has to be defeated and therefore COIN has to be directed against the insurgent strategy instead of individual insurgents (Kilcullen, 2005). One of Sun Tzu’s wisdoms on how to wage war seems to be applicable to the broad aim of COIN: “The highest realization of warfare is to attack the enemy’s plans” (Sun Tzu, 1994, p.177, in: Peritz & Rosenbach, 2012, p.223).

Within the War on Terror, counterinsurgency offers a better mental framework than counterterrorism. Although the name suggests otherwise, it is essentially a war against a Jihad on a global scale, a global insurgency. Classic COIN might not be the ready-made solution for defeating transnational terrorism, but it does offer “the ‘best fit’ framework for strategic problems in the ‘war on terror’” (Kilcullen, 2006, p.111).

How UAV’s fill the gap

The possibilities of drone warfare have been seamlessly integrated into the modern vision of COIN. Both insurgency and counterinsurgency have developed overtime. Since the development has been rather radical, it has resulted in the fact that classic and modern COIN significantly differ from each other. Approaches that have proven their effectiveness in the past have now become obsolete. Although these approaches have functioned properly in the past, given the different contexts of COIN, they do not necessarily function in combating the contemporary global Jihad. The changing nature of insurgencies thus caused a change in counterinsurgency. A key strategy of counterinsurgency, patrolling, has been adjusted to the changing dynamics of the modern global insurgency. A distinctive and recurring factor of the global insurgency is the use of IED’s. Western forces have been forced to adjust to these weapons, since they are effectively used within every theatre of the War on Terror. The classic strategy of patrolling has not become obsolete, but it has been increasingly difficult to patrol an area on foot or with vehicles. The amount of IED’s used by terrorists and insurgents has resulted in an environment that is outright hostile towards patrols, armoured or not. Although patrolling at first glance sounds rather low tech and basic, it has always been a basic strategy in COIN. Kilcullen (2006) distinguishes four cohesive direct effects of patrolling an area: to dominate that area, to protect the population, to disrupt insurgents, and to gather intelligence. Essentially, patrolling results in the denial of a safe haven for terrorists and insurgents on the micro-level. The sheer presence of military personnel can have a major impact on a local situation. It becomes more difficult for the insurgent to carry out nefarious plans. The possibility of early detection or knowledge of their plans beforehand dramatically increases if the area is dominated by counter-insurgents. The central aim of patrolling is to reach a situation of spatial domination. Therefore, regardless of the scale of the insurgency (national or global), patrolling is an indispensable tactic. The counter-insurgent confines a certain geographical entity (a village, a town, a district, a square on a map) and realizes a situation in which he prevails in terms of intelligence and military force. The effect this has on the insurgency as a whole should not be underestimated. A
denial of safe haven for insurgents by patrolling is an important step towards ending an insurgency. COIN is the handpicked approach to counter a global insurgency (Kilcullen, 2005). It should, however, be directed towards controlling "the overall environment" instead of defeating a specific enemy (Kilcullen, 2006, p.124).

In the modern situation, wherein a global insurgency is fought, a global effort is needed to successfully defeat it. Or as Kilcullen proposes: "[...]denying the ability of regional and global actors to link and exploit local actors, disrupting flows between and within Jihad theatres [and] denying sanctuary areas[...]" (2005, p.615). The use of armed drones, with their transnational capabilities would be a fundamental reappraisal of counterinsurgency, given their capabilities of developing "real-time depictions of social networks that can potentially make up for any gaps in knowledge that might stem from the difficulties of foot patrolling..." (Ford, 2012, p.118). The technology could function as a new form of patrolling on two levels.

Firstly, UAV's can be deployed in areas of operation and do the job that soldiers can no longer carry out because of the IED threat. One of the main strengths of unmanned vehicles is their suitability for carrying out dull, dirty and dangerous missions (Neal, 2011). Their presence could substitute for boots on the ground in the sense that drones also dominate a space. The effect of the deployment of armed UAV's above an area would be to a large extent comparable to classic patrolling. As has been brought forward earlier, terrorists and insurgents are hindered in their operations by the presence of drones, or more specifically the knowledge that a drone could hover above them. This effectively denies them from feeling safe. Furthermore, patrols have been an important tactic for the collection of intelligence. It is likely that drones surpass the classic patrol in that regard. They offer infrared and thermal high-resolution imagery while hovering above an area. This should certainly be considered to be a great improvement in comparison to the vision of a group of soldiers patrolling on foot.

Secondly, the complexity of the global effort to halt transnational terrorism can decrease when drones come to play a central role. An effort can be global in the sense that governments worldwide take on the problem in a joint effort. Such an approach does, however, require a high level of commitment of the participating nations. When parts of the partnership take on a half-hearted position, the entire effort can be ruined. However, the effort can also be globalized in the sense that a strategy or tactic is used with a global reach. The transnational terrorist threat can be countered with the modern transnational weapon, the UCAV. By functioning as a sort of global patrol, drones can gather intelligence from all over the world and their strike capabilities enable them to deny safe haven for terrorists and insurgents outside the borders of ‘official’ areas of operations. Barriers almost do not exist in this new type of patrolling, that has the same effects as the classic counterinsurgency tactic, albeit of a far wider scope and with a low level of risk for the counter-insurgent.

David Kilcullen himself, however, has been critical towards drone strikes: “These strikes are totally counter-productive. It is a strategic error to personalise the conflict in this way, it’ll strengthen the enemy and weaken our friends. How can one expect the civilian population to support us if we kill their families and destroy their homes” (in: Sengupta, 2009, par. 8).

Critically reading Kilcullen’s argument against drone warfare reveals that his argument is not so much against the use of drones as such, but focuses on the negative psychological effects drone strikes have on the civilian population. What he calls ‘a strategic error’ is essentially directed towards the
collateral damage caused by drones. The critique seems fair and rather solid. However, as has been discussed in previous paragraphs, most numbers that circulate regarding collateral damage caused by drone strikes are very likely to be exaggerated. Therefore, the argument might be somewhat misplaced. The critical notions seems to be directed at the negative image that surrounds drone strikes, while it completely overlooks the advantages of the new technology. Kilcullen (2006) has suggested that “classical patrol tactics may require substantial modification” (p.121). This seems to contradict his strong rejection of drones as a useful weapon within the COIN framework. As argued above, drones can clearly be an important factor in tackling the problems that nowadays exist with patrolling. The image that critics have of UAV’s seems to block them from seeing the positive aspects that unmanned aircraft definitely offer.

Within modern COIN, drone surveillance has taken over the classic tactic of patrolling, that has become obsolete due to the widespread use of IED’s. UAV’s offer possibilities for further development, because of their versatility. The targeting of individuals and consequently the manhunt approach developed out of the initial role of unmanned patrolling aircraft. The role of the hunter-killer platform is therefore a mere extension of a classic COIN strategy. In the following paragraph these specific development and its characteristics will be discussed in detail.

4.4 UAV’s and Man-hunting

Only a few days after 9/11 a Joint Resolution passed the US Congress, titled the Authorization for Use of Military Force (AUMF) which stated the following:

“That the President is authorized to use all necessary and appropriate force against those nations, organizations, or persons he determines planned, authorized, committed, or aided the terrorist attacks that occurred on September 11, 2001, or harbored such organizations or persons, in order to prevent any future acts of international terrorism against the United States by such nations, organizations or persons” (US Congress, 2001).

The adoption of the AUMF can be seen as the beginning of the War on Terror. Closely reading the cited paragraph reveals that man-hunting intrinsically formed a part of the war. The use of force is authorized against “nations, organizations, or persons” that could be held responsible in any way for the terrorist attacks of 9/11. The specific focus on organizations and persons is what distinguishes the Global War on Terror from previous wars in the first place. It indicates a variety of dissimilarities when compared to other wars, for instance different goals, strategies and operations of another scale. As Kaplan (2013) has argued, the exact wording is kept very broad. “Nothing is mentioned about geography” (p.6), which indicates that the world is literally turned into what he calls a “free-fire zone”. The AUMF authorizes the President to hunt down operatives of Al’Qaeda and its affiliates anywhere at any time. The vision is still embedded in the military efforts of the United States, which are aimed at countering extremists and non-state threats by holding them under pressure, regardless of their whereabouts (Department of Defense, 2012).

Peritz and Rosenbach (2012) begin their book with the anecdotic description of the drone strike that ended the life of Baitullah Mehsud, the leader of the Pakistani Taliban, in 2009. The following paragraph gives a detailed delineation of the death of his successor, Hakimullah Mehsud, less than five months later. He was also killed by a drone fired Hellfire missile. These examples are used to
illustrate the capacity and willingness of the US military to hunt down and take out individuals. As has already been put forth in Chapter 3, man-hunting has become a central strategy in fighting transnational terrorism. The strategy is used to degrade terrorist networks, it is part of counter-network warfare. Man-hunting functions within the broader framework of counterinsurgency, because it targets key figures of the insurgency as a whole in order to weaken it. These figures are the so-called nodes of the terrorist/insurgent network. Taking out these individuals, a phenomenon often referred to as ‘targeted killing’, is a logical consequence of the counter-network strategy.

The death of a target is, however, not the primary goal in man-hunting. The final stage of a manhunt is the contact phase. During this the target is either arrested or killed. A target is thus not necessarily killed (Stilwell, 2012). The use of armed drones is not the only way of hunting down targets. Although in the majority of the cases the effects of a drone strike might be fatal, the use of special forces, for instance, often results in the arrest of a terrorist instead of killing him. However, since this thesis explicitly discusses the manhunt approach with regard to drone warfare, man-hunting is considered a strategy with deadly effects. What is key in understanding the practice of man-hunting, is that killing individuals is not the goal in itself. It is part of a larger counter-network campaign that seeks to disrupt terrorist networks (Crawford, 2009).

The strategy’s pitfall, however, is that it can get bogged down in “a high-tech reprise of the body-count syndrome from the Vietnam War – the illusion that there’s a relationship between the number of enemy killed and the proximity to victory” (Kaplan, 2013, p.8). However, if the military succeeds in keeping its focus on the possible results of a campaign of man-hunting, instead of on the number of kills, it is a strategy that fits well into the contemporary geopolitical conditions, while taking advantage of the lead in technology (Peritz & Rosenbach, 2012). By this, these authors mean an effective approach towards ending the global Jihad on both the strategic and tactical level.

Hunting for terrorists and insurgents in “the cracks and seams” (Peritz & Rosenbach, 2012, p.220) of countries from which the global Jihad is waged, or the “global borderlands” as Gregory calls them (2011, p.239), enables Western forces to fight the global terrorist threat without a need to go to war with countries such as Pakistan, Yemen and Somalia. Although drone strikes on the territory of other nation states do not necessarily strengthen the bilateral relationship of the US with these nations, it is a smaller footprint approach in comparison to a full scale invasion as has been the case in Afghanistan and Iraq. The choice for drones to assassinate key targets instead of special forces or manned aircraft, in the end has the same effect, the target is removed from the network. However, the juridical context remains vague. International reactions towards this policy have been of a critical character, although they have been relatively mild compared to ‘normal’ violations of sovereignty (Zenko, 2013). Therefore the widening of the battlefield of the War on Terror has taken place on several occasions and it seems to have become a structural element in the American way of war (Department of Defense, 2012; 2013).

This context, the global expansion of the battlefield, directly relates to the common thread of this thesis, the everywhere war. The globalness of the US approach to warfare is found in the USAF’s vision on the future of Remotely Piloted Aircraft:

“Building on today’s capability to find, fix and finish, future RPA, including potential unmanned versions of long-range strike platforms, must possess the ability to detect, locate, identify and engage a wide variety of targets anywhere on the globe while limiting collateral damage. RPA will conduct
SCAR [Strike Coordination And Reconnaissance] missions to detect targets and coordinate or perform attack or reconnaissance on those targets.” (United States Air Force, p.52).

In line with the current use of UCAV’s, the future of armed UAV’s will remain centred around locating and engaging various targets “anywhere on the globe”, a continuation of the manhunt approach within the everywhere war framework. The US will increasingly focus on small-footprint approaches and reducing US military presence worldwide, while retaining the overall readiness (Department of Defense, 2012). UAV’s would be a valuable asset in that future scenario, since they are ideally suited for limited COIN operations. They can also play a supporting role for coalition forces, as has already been the case in Libya (Bumiller & Shanker, 2011).

Hunting

As has been put forward earlier, the development of the drone is linked to the rise of transnational terrorism. The specific design of the armed UAV, with its capabilities to loiter above areas for extended periods of time and engage targets with a high level of accuracy, makes it a hunter-killer in every sense of the word. Within the manhunt approach, two different types can be distinguished. On the one hand there are the so-called signature strikes, wherein targets of opportunity are attacked. On the other hand there are the targeted strikes against particular individuals.

The signature strikes take place in a protracted battlezone and can be seen as the evolution of patrolling. It became a necessity, because patrols on the ground were dangerous due to a constant IED threat. Also, when an area can be dominated without the need to put boots on the ground, it becomes possible to extend the battlespace beyond classical boundaries. This is now the case in the border region between Afghanistan and Pakistan, where strikes are conducted on both sides of the border.

A widening of acceptable targets has occurred. Originally only known targets were put under drone surveillance and eventually the decision could be made to strike them with a missile. These targets were mostly HVT’s, terrorists who served an important or specific purpose for the larger organization. However, in their developing patrolling role, armed UAV’s are used for intensive aerial surveillance of areas in the protracted battlespace (Wall & Monahan, 2011). This has resulted in the increased targeting of unknown targets, targets of opportunity who are out of luck and turn up within the drone’s sphere of surveillance. The latter utilization of drones has become more and more important. As a drone operator has stated: “We spend 70 to 80 percent of our time doing this, just scanning roads” (Drew, 2009, in: Wall & Monahan, 2011, p.242).

UAV’s are thus used to provide a constant surveillance on a particular enemy or to watch certain areas of the battlespace. Their initial role as some sort of unmanned aerial assassin, a true hunter-killer, has shifted towards a role that lies somewhere between patrolling and hunting. This new role is arguably even more comparable to hunting on wild game. A hunter does not track a specific deer in the sense that he has chosen that specific animal beforehand. On the hunting ground he will take an opportunity when it presents itself, when he spots an animal that he is allowed to hunt.

The main difference between the two types of man-hunting lies within their geographical scope. The assassination of designated HVT’s can take place anywhere. The process fits within the theoretical concept of the everywhere war. Each target in itself functions as a micro-battlespace (Chamayou,
2013, in: Gregory, 2013b). A target does not necessarily have to be located inside a country with which the US is at war (Kaplan, 2013). Instead of the area surrounding the target, the target itself is seen as a miniature battlefield. This, as Chamayou argues, disconnects modern war further from geography. Instead of a geo-centred war, that takes place within certain geographical boundaries, the process becomes increasingly target-centred. Since the strategies focus is on finding, fixing and finishing the target (Peritz & Rosenbach, 2012), the geographical factor becomes merely a result of the hunt for the target. The territory of the hunt plays an subordinate role. A target-centred war is therefore a much more fluid concept than a geo-centred war. The scope of the conflict is as broad as the movements of the target. Since the West deals with a transnational threat in the Global War on Terror, the war becomes a global phenomenon. The ‘enemy-prey’ that flees for the hunter-killer drones, resulting in an organic battlespace that is constantly shape shifting.

With non-specified drone operations it is the other way around. The extended loitering time of the platform is used to its full potential and geography and war become strongly connected. These operations essentially have the same purpose as patrolling on foot or with vehicles. The keyword is ‘spatial domination’. So-called Restricted Operating Zones, as the ‘hunting grounds’ of North and South Waziristan are termed by the US military, are areas with a certain degree of insurgent activity (Chamayou, 2013, in: Gregory, 2013b). The presence, or possible presence, of UCAV’s above these demarcated battlespaces make it more difficult for insurgents and terrorists to carry out their plans.

In hunting terms, they are ‘fair game’ and thus live under constant danger. This approach is geo-centred in the sense that it specifically aims on the solid control of the area, not of a target. In the best case scenario an area becomes unpleasant to the insurgent to an extent that he chooses to move away. When that happens, full domination of the area has been achieved. In contrast to target-centred man-hunting, this is much more a continuation of existing COIN strategies, but modernised and made more fitting with regard to the possibilities of modern technology.
Chapter 5 – Coming to a conclusion

The previous chapter, the analysis, contains all the relevant information needed to answer the central question of this thesis. In this concluding chapter this information will be ordered and the individual concepts and findings will be put in place. By doing so, a concluding answer can be given to the following question:

*To what extent has the increased use of armed UAV’s changed the spatial dynamics of warfare in the context of the Global War on Terror?*

The answer to this question is not clear-cut or one-dimensional, as this chapter will show, but it covers a number of sub-answers. These answers, however, all are directly linked to each other. Therefore, this concluding chapter will offer a complete and comprehensive answer, which could serve as a stepping stone for future research.

The new geography of the enemy

The need to shorten the kill-chain came forward as it became more and more clear with what kind of threat the US (and the West in general) would have to deal in the post-Cold War era. A fluid, fleeting and perishable enemy, that spreads the globe, does not allow for a slow targeting cycle. Even a cycle of several hours was too long, a move had to be made towards a kill-chain of no more than a few minutes. Combining the sensor and the shooter into a single platform, by arming the Predator drone, resulted in a radical reduction of the time between ‘finding’ and ‘finishing’ a target. The UAV, a weapon system characterized by precision and persistence, proved to be an appropriate tool for fighting a global Jihad.

David Kilcullen (2005) characterizes the global Jihad waged by Al’Qaeda against the West as a global insurgency. Although the underlying factors are comparable to other, earlier, insurgencies, the dramatically extended scale makes that it is a different phenomenon. A method that has become leading in the context of fighting this global insurgency, is striking insurgents with armed drones. The focus of this strategy, however, is not to take out insurgents, but to defeat the insurgent strategy. There is no point in eliminating or arresting individuals just for the sake of stopping them, taking out insurgents should always be a means to an end. Since the enemy operates on a global scale, the only way in which the insurgent’s strategy could be defeated is to globalize the effort to do so. The ‘reappraisal of counterinsurgency’ therefore moved towards a strategy without a fixed geography. Classic methods were fixed in the sense that they were directed against an enemy who had a more or less specific spatial character. The deterritorialized and networked enemy can only be taken on by deterritorializing the American way of war. The enemy therefore has been fought in Afghanistan, Iraq and beyond by using counter-network strategies. In counter-network warfare eliminating nodes is essential to eventually bring down the whole network (Crawford, 2009).

The US adoption of the everywhere war

Within this type of warfare the UCAV has been given a prominent role. The enemy is in that sense haunted by a new phenomenon, the ‘transnational weapon’. This persistent threat mirrors the terrorists’ own ability to strike anywhere at any time. The use of drones has turned asymmetric...
warfare against the enemy. In a sense, the War on Terror, an asymmetric conflict on multiple levels since the beginning, has been brought back to a symmetrical war.

Some authors see similarities between the tactics used by both sides in the War on Terror, terrorism and drone warfare, since both are of a transnational character. In this thesis a comparison has been made between the main workhorses in modern counterinsurgency, armed drones, and the signature weapon within transnational terrorism, the IED.

The choice for the IED as the weapon of choice comes from its versatile employment and the relative ease with which it is constructed and used. Since the psychological effect of the weapon is key, the threat is of greater importance than the actual blasts, it is a ‘symbolic weapon’ (Martin, 2009). The power of these weapons, and of terrorism itself, lies in the hidden character. Although to another extent, the same factor is what has made drone strikes an effective tactic in countering terrorist networks.

Both strategies, drone strikes and the use of IED’s, are continuous campaigns of small operations. Both tactics could be considered precision strikes. The strategies are aimed at the erosion of the enemy in the broadest sense, by doing relatively low damage at a time. The effects that both tactics have is to some extent comparable, while at the same time some major differences are noted. Especially drones and non-suicide IED’s share a number of similarities in effectiveness, accuracy and the amount of risk for the operator.

The UAV is also a hidden weapon, that can strike anywhere and at any time. In that it resembles the IED. The differing factor between the two weapons is the intended effect. The IED aims at harming the opponent in a psychological way. Although the drone does have psychological effects on insurgents, these have to be considered to be additional outcomes of the strategy. The strategy itself is directed towards the destruction of enemy networks. The direct effects of drone strikes, the destruction of targets, is the first and foremost reason for their deployment. The psychological effects it thereby has on the enemy is only a side-effect.

Although IED’s as well as armed drones are both tactical and psychological in nature, they do differ on this point. The drone is a weapon of great tactical value that through its effectiveness has a psychological impact on its enemies. The IED, on the other hand, is a symbolical weapon. The main strategies used thus strongly differ at their core. The intended results of the use of IED’s and drones are completely opposite. Therefore, the use of drones should be seen as an answer to transnational terrorism, not as a strategy resembling it.

Transnational terrorists were the first to fight an ‘everywhere war’. The Western response to this new threat has been one of counter-network warfare, wherein ‘man-hunting’ became an important approach to bring down terrorist networks. Terrorists in a sense became prey and were hunted down and killed by a transnational weapon, the drone could loiter anywhere at any time. The ‘everywhere war’, that can be traced back to a terrorist campaign, has been adopted by the West. Both sides fight an everywhere war in the Global War on Terror. Eventually, it came forward as the sole solution in fighting an enemy without geographic bounds. The ‘everywhere war’, which Gregory describes as an American invention in fighting a terrorist threat therefore turned out to be the opposite. It has been an invention of the global Jihadists which has been adopted by the US and its allies.
The tactics and strategies employed by global insurgents are not directly comparable to the relatively new phenomenon of drone warfare. UAV’s are therefore not a weapon of state terrorism, as Grégoire Chamayou (2013, in: Gregory, 2013c) argued. It has, however, been a fitting answer to the specific characteristics of transnational terrorism. The introduction of the armed drone to the battlefields of the War on Terror induced a threat towards insurgents against which they could barely protect themselves. This factor rebalanced the conflict. Bringing a new kind of asymmetry to an already asymmetrical war resulted in the war becoming symmetric. Although Chamayou’s vision on drone warfare is very critical, his notion that the introduction of drones reversed the polarity of the War on Terror connects to the findings of this research. Instead of a reversal of asymmetry, however, the process is more a balancing of the asymmetry.

The shift from fighting the enemy towards hunting for it

War, which has always been a process of grand scale, became a concatenation of micro-events. The focus has shifted towards small-scale operations, which results in a new approach to warfare. The Global War on Terror has been turned into a global man-hunting campaign. The Authorization for Use of Military Force authorized the US President to hunt down operatives of Al’Qaeda and its affiliates anywhere at any time during the first days of the War on Terror. The foundation for an everywhere war was thus installed in the very beginning.

The strength of the strategy is that important results can be achieved with relatively small efforts. The destruction of single nodes in terrorist networks will eventually lead to the complete disintegration of these networks. Hunting for terrorists, or insurgents, is how counter-network warfare has been operationalized. Within this strategy, two different approaches of attacking nodes can be distinguished. US drones carry out both targeted strikes and signature strikes. Targeted strikes are target-centred, whereas signature strikes are geo-centred.

Originally only known targets were put under drone surveillance and eventually the decision could be made to strike them with a missile. These were targeted strikes on HVT’s, based on intelligence provided. Theoretically, the assassination of designated HVT’s can take place anywhere. Target-centred assassinations fit within the theoretical concept of the everywhere war. Each target in itself functions as a micro-battlespace (Chamayou, 2013, in: Gregory, 2013b). Finding, fixing and finishing a target result in the geographical factor becoming a consequence of the hunt for the target. Drone strikes, however, have not reached the global scale predicted by Chamayou (2013) and Gregory (2013). Although targeted assassinations have occurred outside official warzones, it was with the consent of the governments of Pakistan, Somalia and Yemen.

On the other hand, geo-centred signature strikes are stronger connected to the geographical scope of this thesis. These revolve around surveillance and ‘spatial domination’. It has the advantages of classic patrolling, but without the endangerment of one’s own troops. This has resulted in a growing number of strikes on unknown targets, who turn up within the drone’s sphere of surveillance. In contrast to targeted strikes, in the case of signature strikes war and geography are strongly interconnected. The existence of this specific strategy proves that war and geography have not lost its connection after all, since waging war is reduced to gaining control of the geography of the enemy. Al’Qaeda and its affiliates have reacted to this by hiding in inaccessible areas, such as the mountainous area of Waziristan in Pakistan. In contrast to target-centred man-hunting, this is much more a continuation of existing COIN strategies, but modernised and made more fitting with regard
to the possibilities of modern technology. The technology functions as a new form of patrolling on two levels. UAV’s can be deployed in areas that are non-permissive for ground forces. Their presence could substitute for boots on the ground in the sense that drones also dominate a space. Besides, the complexity of the global effort to halt transnational terrorism can be decreased when drones come to play a central role. By functioning as a global patrol, drones can gather intelligence from all over the world, while their strike capabilities enable them to deny safe haven for terrorists and insurgents outside the borders of ‘official’ areas of operations.

Within modern COIN, drone surveillance has become an attractive alternative to the classic tactic of patrolling on foot, that has become increasingly difficult due to the widespread use of IED’s. The targeting of individuals and consequently the manhunt approach both originate from this initial role of unmanned patrolling aircraft. The role of hunter-killer platform is therefore a mere extension of a classic COIN strategy.

However, the surveillance possibilities and the high level of accuracy that drones offer have not resulted in absolute clarity of the battlefield and omniscient battlespace awareness. Also in drone strikes collateral damage cannot be ruled out. Critics of drone warfare, however, seem to base their opinions on a caricature of drone warfare. The strategy is put aside as ineffective, unethical or even counterproductive, while it surely offers an array of new possibilities in warfighting, as has been shown in this thesis.

Conclusion

To return to the central question, the spatial dynamics of warfare have been radically altered since the introduction of the first armed Predator. Initially, the spatial dynamics of warfare were changed by the self-proclaimed enemy of the West, the global Jihadists. They started their everywhere war on September 11, 2001, and continued it during the following years in the UK, Spain and throughout the entire MENA region. The West in general and the US in particular have gotten solidly involved over the years. The birth of the armed UAV consequently originated from a desire to search for and strike targets anywhere at any time. Within the modern War on Terror UCAV’s operate in a protracted battlespace, making it a transnational weapon. This weapon became a modern and safer alternative of patrolling an area with ground forces. Hovering drones were able to spatially dominate an area and strike targets from a geo-centred perspective, thereby reterritorializing a war that had been deterritorialized in the first place. By doing so, the asymmetry which was a central characteristic of the war, was rebalanced and the conflict became to a large extent symmetric. The Global War on Terror was, from a Western perspective, turned into a global man-hunting campaign, a consequence of the everywhere war and modernised counterinsurgency tactics.

The future of drone warfare and future research

Armed UAV’s serve a specific purpose and have proven useful against a specific type of enemy. It would, however, be unwise to put too much emphasis on the development of unmanned systems. In future theatres of conflict, with presumably an increased non-permissive character towards UAV’s in comparison to Yemen, Pakistan or Afghanistan, it might be necessary to fall back on more conservative, old-fashioned strategies and tactics. Drones are very effective, but they have proven their effectiveness in only one scenario.
The focus of the US and its allies and partners should and will remain with asymmetrical warfare: irregular warfare, insurgencies and terrorism (Work & Brimley, 2014). Drones are specifically used in the manner that is described to counter transnational terrorism. Within the US strategy to defeat transnational terrorism, drones are a basic asset.

Future research could build further on the idea brought forward in this thesis that drone warfare has made the War on Terror more symmetric. The concept could be further researched. What other processes might influence this, or is the introduction of drones the only factor that made the War on Terror more symmetrical? Also, the secondary effects of drone strikes, the psychological effects, seem to be a firm base for future research. This is loosely linked to the notion that drones can act in order to ensure a new kind of ‘spatial domination’, which is a concept that could be elaborated upon more thoroughly. Finally, this thesis has made a start with a multi-dimensions comparison of IED’s and drones, which could very well be a central theme of a later research project.
References


