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PILLAGING THE PAST, PROJECTING THE FUTURE: ARCHITECTURAL HISTORY AND URBAN CULTURE IN 21ST CENTURY WARFARE

The fluid nature of boundaries in the twenty-first century defines the current Long War of the United States against a general terrorist threat. This new mode of warfare is made possible by geopolitical transformations, information analysis, and drone technology, resulting in the transformation of the battlefield into a multi-dimensional 'battlespace.' And unlike previous methods, this new method of warfare has repercussions in its understanding and use of time.

The strategy of asymmetrical drone warfare, used primarily by the United States military, is premised on pre-emption and the forecasting of potential future scenarios. Its power lies in its ability to strike, with some precision, into the everyday domestic life of potentially dangerous targets. Alternatively, the strategy of urbicide, the preferred mode of warfare implemented by terrorist groups such as ISIS, lies in locating the power of the past, in history. Urbicide uses time past, and the cultural weight of architectural history as its battleground, as it attempts to destroy a people through eliminating the artefacts of its cultural memory. Unlike drone warfare, the targets of urbicide are not located in the quotidian activities of the domestic urban fabric, but rather it leverages strength in its selection of culturally significant, monumental and iconic buildings. It is within these dualities of future/past, domestic/monumental which encompass contemporary geospatial-temporal warfare that architecture and urban will be analysed in this paper.

Introduction

The idea of fortifying cities to defend against attack is as old as the concept of the city. The design of weapons and war machines and the study of ballistics and projectiles have been in a constant dialogue with city defences.[1] The projectile, in its various forms, was the decisive factor in the development of defensive fortifications.[2] The most noted architect to understand the reciprocal relationship between fortress, wall and war machine was Vitruvius. In the Preface to the first Volume of his *Ten Books on Architecture*, Vitruvius described how he served in the Roman army as an artilleryman and army engineer. He specialized in Roman war machines, specifically the construction of *ballista,* an ancient weapon that deployed heavy, missile-like darts; and a catapult-type sniper weapon operated by one soldier called the *scorpio*.[3] Following his explanation of war machines in Book 10, Vitruvius described how to defend city walls against these war machines, instructing how to build structures to withstand the battering ram and protect the watchtower (which would eventually become built to be mobile). At the very origin of architectural discourse, knowledge of wall construction and the reciprocal development of war machine technology was considered part of architectural expertise.

By the fourteenth-century the artillery cannon began to outperform the ballista in efficiency with the invention of gunpowder. In response to these inventions, an advanced science of siege fortifications developed, reaching its apotheosis with engineer Sébastian Vauban in the 17th Century.[4] Responding to the ability of weapons to project further and with increased efficacy into the defended space, defences had to project themselves outwards from that space. A pattern of solid walls elaborated into one of detached forts and outposts, increasing the distance and range of surveillance.[5] The projection of defences counteracts projectile attack technologies in an attempt to maintain symmetry of distance between the two forces. Competition between defence and attack is part of continuum of violence against the city. Projection, specifically ballistics, is crucial to this play of defence and attack. During this era, forms of projection included the calculation, planning, and anticipation of physical projectiles (weapons) through space. However in contemporary warfare, projection is premised upon imagining future events by synthesising and analysing intelligence data in order to formulate defensive responses to these future scenarios. Here time, specifically, the future, is given priority over space as advancements in the military's technological capacity has created an ever-increasing spatial distance between soldier and battlefield.

This paper will place aside, at least temporarily, the humane and ethical judgements of these new modes of contemporary warfare, drones and urbicide, in order to understand the inherent implications and consequences they have on contemporary architecture and urbanism.

Urbicide: Warfare on the Monumental Past

The technological development of war machines in response to urban defences demonstrates that violence against cities is in no way a new concept; however offensive military operations that deliberately inflict damage on cities and their citizens with the intent of eradicating a specific culture can be described as 'urbicide.' In its close relation to genocide, urbicide needs to be understood as a form of both a physical and socio-cultural destruction. The modern city has endogenous urbicidal potential – the seeds of urban destruction are carried within cities themselves.[6] While the concept of violence against the city may be as old as cities themselves, the use of the term 'urbicide' and the large scope of relative destruction is relatively new. The concept was discussed in 1948 when Raphael Lemkin, a Polish Jew who escaped the atrocities of World War II, authored the draft of the United Nation's Genocide Convention. Lemkin's understanding of genocide was twofold; it included barbarity, the killing of people, as well as vandalism, which was defined as attacks on culture as the expression of a people's genius.[7] Lemkin would go on to characterize genocidal cultural vandalism as "the destruction of the cultural pattern of a group, such as the language, the traditions, the monuments, archives, libraries, churches. In brief: the shrines of the soul of a nation."[8] Unfortunately, Lemkin's second concept of cultural vandalism as genocide was not included in the final draft of the Convention.

In 1968, in a *New York Times* article titled "Lessons in Urbicide," Ada Louise Huxtable criticized the demolition of historic riverfront textile mills in Manchester, New Hampshire that were replaced by parking lots.[9] Marshall Berman used the term to describe the destructive effects of Robert Moses' aggressive urban restructuring in the Cross Bronx Expressway project.[10] Berman characterized this type of urban renewal project as a great crime without a name – "Let us give it a name now: URBICIDE – the murder of a city."[11] The word 'urbicide' re-emerged during the 1990s as Professor Bogdan Bogdanovic, an architect and former mayor of Belgrade, used the term to depict the violence associated with the dissolution of Yugoslavia seen in the siege of Sarajevo and the destruction of Stari Most.[12] Urbicide, according to Bogdanovic, "is the intentional attack on the human and inert fabric of the city with the intent of destroying the civic values embodied within it – the very spaces for interaction where cultures are generated and shared."[13] In describing the destruction of culturally significant urban landscape in Beirut's Central District in 1982, and its reconstruction in 1983, Caroline A. Sandes claims central Beirut was the site of urbicide since it experienced the "deliberate destruction of urban areas, in particular of cultural heritage, as part of the tactics of armed conflict." And following the claims of Robert Bevan and Martin Coward, Sandes states that urbicide is not only an attack on the fabric of the city, but that the attacks contain the "intent of destroying the civic values embodied within it."[14]

When we talk about urbicide it is important to determine what is meant by 'urban' or 'city' in order to understand what is being attacked and why. Urban can mean both the physical and material conditions of a city or town, as well as the patterns of lived experience, culture and identity that occur within these material conditions.[15] Bevan succinctly describes the totemic nature of architecture and the psychological and emotional effects of urbicide. He writes,

> A library or art gallery is a cache of historical memory, evidence that a given community's presence extends into the past and legitimizing it in the present and on into the future. In these circumstances structures and places with certain meanings are selected for oblivion with deliberate intent. This is not 'collateral damage.' This is the *active* and often systematic destruction of particular building types or architectural traditions that happens in conflicts where the erasure of the memories, history and identity attached to architecture and place – enforced forgetting – is the goal itself. These buildings are attacked not because they *are* in the path of a military objective: to their destroyers they are the objective.[16]

Urbicide does not necessarily need to erase a city; it can be the selective targeting of one aspect of a city's life, such as the heterogeneous mixing of ethnicities and religions.[17] Urbicidal attacks, therefore, can take the form of assault on physical structures or on the life and culture that is housed within those structures. Attacks on urbanity can come in the form of destroying the physical conditions that allow for heterogeneity and removing built traces of shared identity, as happened in the ethnic-cleansing of Bosnia.[18] Urbicide is a strategy to destroy the living history of a place, to kill part of its identity, and to destroy its heterogeneous urbanity for political ends.[19] Coward identifies three historically typical uses of urbicide. These are: destruction in peacetime, the effects of war moving into urban areas, and urban destruction that facilitates a politics of exclusion.[20] This violence is then conceived as a form of destruction 'in its own right', not as a by-product of other forms of political or military violence.[21] This reinforces the idea that urbicide is a deliberate and planned assault on culturally significant buildings and urban areas for the purpose of damaging or destroying the culture represented and fostered in urban space.

From Cold War Containment to Long War Pre-emption: War on the Future

The gradually extending distance between defence and attack facilitated by technological developments in ballistic weaponry and siege fortifications accelerates during the Cold War with computer and network systems. The Cold War period was characterised by a perpetual sense of risk as the U.S. was threatened by the perceived global advance of communism.[22] The U.S. responded to this fear through the policy of containment, essentially an "American-led policing of closed communist borders."[23] Containment required the "technological means to project military force across the globe" to create boundaries of military capacity between allies and the communist enemy.[24] The U.S. kept its enemies at bay through its commitment to maintaining, threatening and, at times, using force; having the capacity to utilise hard power anywhere without hesitation.[25] This demonstrates the combined strategic use of spatial boundaries, surveillance from a distance, and the threat of force. Missile defence shield systems developed during the Cold War period essentially projected an invisible wall of defensive capacity outwards from the continental US.[26] The belief and trust placed in these security systems was destroyed and rendered obsolete by the attacks of 9/11, as the threat no

longer consisted of an identifiable nuclear projectile, but something altogether new that could not be deterred through traditional defensive technologies based upon physical projections and traditional notions of sovereign borders.

After the terrorist attacks of 9/11 the United States launched attacks against al-Qaeda, in what became known as the War on Terror, a move that required careful exploitation of global power structures and domestic military policy. The U.S. positioned itself in a condition of unending war resulting from long patterns of military expansion, particularly during the Cold War, which projected capacity around the world.[27] This situation led to the Pentagon renaming the War on Terror the 'Long War.'[28] Stephen Graham describes the Long War as "the more or less permanent, global use of pre-emptive raids and armed drones against purported adversaries."[29] Former President Bush explained the justification for pre-emption in 2002: "If we wait for threats to fully materialize, we will have waited too long … We must take the battle to the enemy, disrupt his plans, and confront the worst threats before they emerge."[30] The doctrine of pre-emption reorganises traditional power relations between states allowing anticipatory policies to be enacted in response to potential threats. Therefore, the Long War has a different nature to the Cold War, and historical urban military operations, which were based on paradigms of deterrence and seemingly confined to 'contained' spatial boundaries.[31] Pre-emption, which is formulated upon the practice of data-based projection, turns defence into attack and reconfigures the time of action and response. "It denotes acting on the time before: the time of threat, before it has emerged as a clear and present danger."[32] This reconfigured power structure provides the U.S. the right to pursue targets across sovereign borders (and into allied countries) in the name of self-defence – as seen in the current drone campaign in Pakistan – and is made possible by the temporal projection of data.

Drone warfare is part of a broader pre-emptive defence strategy that emerged from national anxiety stoked during the Cold War, fully maturing after 9/11 into the Long War's aggressively anti-urban drone strike campaigns. Drone warfare can be understood as a direct response to the guerrilla warfare tactics of terrorist organizations and is presented by the U.S. government as being precise and, in contrast to the historic carpet bombings of previous wars in Vietnam and Cambodia, morally advanced.

Drones are quickly becoming the main mode of military operations in a post 9/11 era where 'defence' has transformed into the slow, never-ending burn of 'security.'[33] These machines are symptomatic of new forms of asymmetrical power and military strategies to survey and control from ever increasing distances, ensuring that the majority of the impact of war is felt by the weaker power. Drones do not function as autonomous flying machines; they are merely part of an advanced machinic extension of a global control and command network that has its origins in the Cold War's Semi-Automatic Ground Environment (SAGE) and the global network of space satellite programs that followed.[34] The SAGE system can be understood as a series of electronic fences extending out toward Canada and the Arctic Circle. Created through the collaborative work of the U.S. Air Force, IBM, MIT and the Canadian Air Force, it formed a defensive ring of radar stations built along the far northern perimeter of North America as part of the Distant Early Warning Line completed in 1957. Three other radar networks – the Pinetree Line on the Canadian border, the Mid-Canada Line, and the DEW Line – fed the SAGE system a picture of air traffic as far north as the Arctic Ocean.[35] Similar to the SAGE system, the current Network Centric mode of techno-scientific warfare in the 21st Century consists of vision-based regimes reliant upon machines that are linked through a network of satellites and computers; performing as "prosthetic, cyborganised, sensor systems." [36] However unlike SAGE, this new drone approach to warfare is not merely for defence but uses intelligence data to pre-emptively project attack into the future. The U.S. is not the sole player in this on-going and seemingly borderless counter-terrorism war machine; however it championed the doctrine of premption and perfected the use of military drones.

War on Domestic Life: From Battlefield to Battlespace

After the introduction of aerial warfare, the wall as a strategic defence mechanism became irrelevant, re-emerging only as a conceptual boundary of military capacity and safety in distance; the watchtower dissolved into a shadowy entity of invisible eyes and perpetual threat from the sky. This dissolution of walls and boundaries defines the Long War and is made possible by geopolitical transformations and drone technology leading to a reclassification of the traditional inside/outside dichotomy of the battlefield, to one of a multi-dimensional 'battlespace'.

The concept of battlespace permeates all levels and scales of military and civilian life in the twenty-first century, from the individual to global networks of communication and intelligence.[37] It is a fluid logic of contingency that imagines

enemy territory, belligerents, intelligence, communication and the home front as part of a relational network.[38] This move normalises militarised urban space as threats that are now found within the everyday sites and populations of cities, and reconfigures political violence along a contingent spectrum of 'security'.[39] The Long War significantly altered the U.S. government's attitude towards urban warfare as the nature of the enemy changed from a state sponsored ideology to an insurgency of radicalised individuals and independent groups. Issues of "how best to respond to counterinsurgency operations within large urban areas are amongst the most important within US military politics."[40] The US now faces an adversary that utilises the city's defensive capabilities in vastly new ways, such that the balance of power between high tech and low tech forces becomes much more symmetrical.[41] Technologically superior ground forces are not necessarily a match for an insurgency enmeshed in an urban environment as the topography and density renders traditional 20th century warfare technology, such as superior firepower, as ineffective.[42] 'Battlespace' extends the traditional notion of boundaries around warfare and allows the U.S. to circumvent the disadvantages of urban fighting. Network centric warfare such as drone technology, allows U.S. fighters to operate in a different spatio-temporal environment from their targets and regain the upper hand in asymmetrical combat.

Drones are used not only to launch missiles at targets, but also to collect surveillance data that is transmitted back to pilots and operators at the Creech Air Force Base in Nevada for analysis. This data is then used to monitor known terrorists and launch precise attacks, aiming to minimise civilian casualties.[43] Data collection is also used to analyse patterns of behaviour and association to help identify unknown terrorists and launch pre-emptive strikes against them. Pre-emption via drone technology dovetails the functions of surveillance and attack – a process that the US military describes as 'compressing the kill chain'.[44] The history of the drone "is that of an eye turned into a weapon" that combines the traditional functions of the watchtower and the projectile weapon.[45]

The consequences of drone strikes and the Network Centric warfare that it enables, present multiple implications which contribute to significant transformations in the nature of warfare and the manner in which geospatial borders are imagined and understood. Moreover, revolutionary advances in war technology such as drones affect the collective spatial boundaries of military and civilian life. There are many important consequences of this new mode of warfare, too many to discuss within this text, nevertheless we can claim that drone technology has led to geospatial transformations and has reconfigured a series of multiple boundaries ranging in scale from the domestic to the geospatial which includes the dismissal of sovereign borders, the elimination of war zone boundaries, and the destruction of boundaries between soldier and civilian life. Drone warfare eliminates the city, as a whole, as an attractive target, and focuses instead on only parts of the city, or usually domestic blocks within urban space thereby changing the nature of warfare since the introduction of the airplane bomber.

The drone is part of a networked machinic assemblage that is dependent upon the analysis of data. The strategy of drone warfare and pre-emption is based upon a software tool called GeoTime, which amalgamates and graphically displays in three-dimensions geo-spatial, temporal, and intelligence data from a variety of sources.[46] This type of time-geography model was first created by the Swedish geographer Torsten Hagerstrand, who, in the 1960s and 70s, conceived of time and space as 'room' for the unfolding of potential scenarios. According to Haggerstrand, "every situation is inevitably rooted in past situations."[47] It is this projection of potential future scenarios based on past patterns of behaviour and movement where the current battlespace exists, and where military decisions are assessed and made. Data is collected by surveillance cameras on drones, it is then analysed so that observed past events can be used to predict future events. The same drone can then pre-empt those events by launching attack missiles precisely into the domestic sphere of potential terrorists, striking at a potential future threat that is yet to fully emerge.

Drones operate prophylactically through the use of predictive calculation in order to prevent the possibility of an emerging, perceived threat to occur, leading local populations to project themselves as potential victims.[48] David Rohde, former *New York Times* journalist, was held for seven months by Taliban forces and described what life is like living under drones. "The drones were terrifying. From the ground, it is impossible to determine who or what they are tracking as they circle overhead. The buzz of a distant propeller is a constant reminder of imminent death. .... A drone's victim never hears the missile that kills him."[49] Drones "work to normalize the permanent targeting of everyday urban sites … and populations."[50] Perpetual surveillance and the use of extra-judicial killings in the name of self-defence project a web of targets over the landscape, rendering every place and individual a potential threat and, therefore, a justifiable target. These individuals then inhabit "urban landscapes re-constituted as collections of physical and military targets."[51] The move to non-territorial battlespace operations bypasses urban defence tactics by ignoring the city's inherent defensive capacity.

Conclusion

The aerial attacks on European cities during World War II demonstrated that the wall was no longer adequate to keep violence isolated. Intense feelings of national insecurity after World War II encouraged the U.S. to develop the defensive strategy of containment – boundaries of constant surveillance around the enemy providing a sense of control and security. Military technology over the past half-century has allowed the military architectural typologies of the fortress and the watchtower to dissipate and permeate the globe in order to function in entirely new ways. Physical walls have been translated into boundaries of intelligence that combine the functions of the watchtower and the weapon. Data based systems of intelligence gathering and projected lines of defence reflect the same dialogue between city defence and ballistic weaponry described by Vitruvius and elaborated by Vauban and, later, the SAGE system. However, this dialogue has now been reconfigured into the form of a drone that allows the defensive process of surveillance to project data into the future and launch attacks into domestic space.

Drones form part of the U.S. military's asymmetrical warfare against terrorism; they operate on the concept of pre-emption and in the temporal domain of the future. Drones are touted by the U.S. military as 'precise' and 'clean' yet their strength resides in their omnipresent, quotidian existence – a literal hovering over everyday domesticity of a potential target. Urbicide, however, is premised upon the destruction of cultural memory, encapsulated in its architecture and urban fabric, the cultural heritage of a people that is represented in the architectural monuments of shared past. As a result, urbicide serves as a prelude to the elimination of a specific race or ethnic group through iconic buildings and architectural typologies that serve as containers of cultural artefacts and thus, memory. Where previous warfare was primarily spatial, concerned with the conquering of borders and territory, warfare now includes the dimension of time, including past, present, and future. Drone warfare relies on data projected into the future to determine precise attacks that target individuals within domestic space. Urbicide, on the other hand, projects its attack into the past – into the spaces of collective memory and identity encapsulated in architectural, cultural monuments; destroying a city and its people by erasing history. These two forms of violence both temporally extend historical traditions of urban warfare – urbicide reaches back into the past, whereas pre-emptive drone warfare projects into the future. They form different iterations of a historical dialogue between attack and defence that projects through urban space but now has implications for understandings of time.

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