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Decentralizing Power: Building Peace through Architecture in the Middle East

by

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Dedication

I would like to dedicate this research to my family who has stood by me in every step on the way on this long journey to earn my master's degree, my fiancé Mariam who proves to me each day the immeasurable wealth of her companionship, and to my advisors Juliana Felkner and Matt Fajkus for their constant support on this research and throughout my experience at UT.

Abstract

Decentralizing Power: Building Peace through Architecture in the Middle East

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This paper argues that applying contextually conscious, and sustainable design principles in

Middle urban environments has far-reaching social, cultural and environmental implications that

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could help diffuse and mitigate future conflicts and increase survivability for inhabitants. Initially, an extensive study of the role of cultural perception through the eyes of colonialism and orientalism on the conflicts and architecture of the Middle Eastern region, particularly its legacy on identity, and architecture indicates the fact that due to this legacy, modern conflicts in the Middle East tend to be recurring, identity based and related to resource inequity. These findings inform the idea that architecture has a duty to adapt and deal with the complicated problems that face the populace and play a role in an attempt to alleviate them. Modern residential and commercial building design and construction in the Middle East region had failed to react accordingly to these various dangers as proven by the immense recurring conflicts and levels of destruction and suffering present in various modern-day Middle Eastern urban battlegrounds. By

studying the experience of people inhabiting these urban zones, and their relationship to the

government and its effect on resource and energy, a framework of architectural intervention

dubbed "Peace Building Architectural Intervention" that incorporates political, cultural, and energy contexts is theorized that is a vital tool to protect people in conflict-prone areas by

helping diffuse these conflicts, aid them by giving them energy and resource dependence, power

Keywords: Peace Building, Colonialism, Orientalism, Conflict Zones, Sustainable design,

Resilience, Survivability, Cultural relevance, Identity

transparency and cultural expression.

Table of Contents

1.1-Introduction	I
1.2-Research Methodology	3
2.1-The State of Conflict: Why Do We Fight?	4
2.2-Big Fish Eats Little Fish: Conflict in the Age of Globalization	7
2.3-Predicting Conflict	10
2.4-The Will of the People	13
2.4-Architecture and Conflict	18
2.5- What Is a Peace Building Architectural Intervention?	26
3.1-The Middle East: Conflict Analysis	28
3.2-Orientalism: A Flawed Perspective	32
3.3-The Portrait of a Sick Man	40
3.4-The Broken Compass.	
3.5-1979: The Paradigm Shift	46
4.1-Peace Building Architectural Interventions: Groundwork of a Theory	51
4.2- Architecture and Colonialism: A Crisis of Identity	53
4.3-Cultural Wars: Battle for Space	61
4.4-Urban District Redevelopment: Meso Scale	64
4.5-Power Dynamics: Macro Scale	71
5.1-Sustainability: The Path to Equity and Survival	79
5.2-Surviving Conflict: Micro Scale	82
5.3-Urban Jungles	89
5.4-Sustainable Challenges:	94
5.5-Peace Building Interventions: A Tool for Gentrification?	97
5.6-Urban Development and Economic Policy: Freedom vs. Control	100
6.1-Conclusions	105

List of Figures

Figure 1 Redrawing of borders according to the Sykes-Picot Agreement of 1916 (Koch, 2014)	2
Figure 2 Map predicting violence by municipality in Bosnia (Cederman & Weidmann, 2017)	11
Figure 3 Map of predicted levels of conflict across the world in the years: 2011, 2017, 2030, 2050	
(Karlsen & Urdal, 2011)	12
Figure 4 Painting Depicting the Assassination of Archduke François Ferdinand (Dash, 2013)	13
Figure 5 Saint-Martin-de-Ré Star Fort France built by Vauban (Waldek, 2017)	20
Figure 6 Timeline of Major Conflicts in the Middle East involving foreign powers (Author)	30
Figure 7 Medieval Depiction of Muslims worshipping the Prophet Mohammed with the devil in the	;
background showing western misconceptions of Islamic Culture (Mizan Project, 2019)	35
Figure 8 Dante and Virgil Meet Muhammad and His Son-in-law, Ali in Hell (William Blake, 1824-	1827)
	36
Figure 9 The Surrender of Granada, by Vicente Barneto y Vazquez (Vicente Barneto y Vazquez, 18	336) 38
Figure 10 Jan III Sobieski pod Wiedniem (John III Sobieski at Vienna) (1883)	39
Figure 11 Parisian Women in Algerian Costume (The Harem)(Renoir, 1872)	
Figure 12 Ancient Egyptian figureheads in Rue Du Caire, Paris (Cooper, 2018)	56
Figure 13 1933 Rendering of Algiers as envisioned in Plan Obus by Le Corbusier (Ackley, 2006)	58
Figure 14 Examples of different Colonial Architectural Influences (from the right: Downtown Beiru	
Lebanon, Tunis Tunisia, Alexandria Egypt	
Figure 15 Tatooine as imagined in Star Wars ("Tatooine StarWars.com," 2019)	
Figure 16 Naboo as Imagined in Star Wars ("Naboo StarWars.com," 2019)	65
Figure 17 Destroyed view of downtown Beirut at the End of the Lebanese Civil War and its	
Reconstruction (Massena, 2018)	
Figure 18 Maronite Cathedral of Saint George beside the Mohamad El Amin Mosque in CBD	
Figure 19 Renovated and newly built buildings with Middle Eastern Architectural Elements in CBI	
Figure 20 3D Map showing the Syrian Presidential palace atop Mount Qasioun inaccessible from the	•
center (Google Maps)	
Figure 21 Egypt's Tahrir Square during the 2011 revolution and during its 5th year anniversary (The	
2016)	
Figure 22 Cairo's New Administrative Capital designed by SOM (Clinch, 2015)	75
Figure 23 Downtown Beirut Area containing two Major Seats of Power: The Grand Serail, and the	= 6
Parliament (Google Maps)	
Figure 24 Location of the Centers of Power in Beirut (Google Maps)	
Figure 25 Israeli Air force Strike in Gaza showing the immense level of destruction (RTE, 2014)	
Figure 26 Drone Image of Tariq Al-Bab in Aleppo (TRT World and Agencies, 2016)	
Figure 27 A myriad of rudimentary systems applied by people in conflict zones that embody perfec	
sustainable design thinking	
Figure 28 LEED Project Checklist indicates the LEED Silver Score (Author)	
Figure 29 Decrease in the size of the Amazon Jungle over the years (Ometto et al., 2014)	91
Figure 30 Photograph indicating how the damage in a jungle would be confined to where the	0.2
deforestation occurs (Gibbs et al., 2010)	
Figure 31 Middle Eastern Countries vs. Sweden economic and energy data (SIWI, 2010)	
Figure 32 Electricity Tariffs Comparison (Zhang, Ou, Song, & Li, 2017)	
Figure 33 Computer Rendering of the Homs Dream project (Zein, 2014)	99

Decentralizing Power:

Building Peace through Architecture in the Middle

1.1-Introduction

In a day and age where the Middle East has become a byword for conflict, tension and insurgency as architects it becomes imperative to find a valid answer to the question "Can Architecture Be Neutral in a Conflict Zone?" In his award-winning dissertation, architect Jong Min Park at the Royal College of Art Park attempted to answer this question and tackled the issue of the tumultuous border between North and South Korea where he boldly claims that "(His vision is) A form of silent protest, this impermanent architecture aims to create a lasting legacy" (Park, 2015) yet that border is 160 miles long and is a heavily controlled region thus that vision affords the plausibility of being realized. The Middle East, however, which this thesis concerns itself with, is a much more complicated region bridled in a conflict that is the results of extremely complex socio-religious, economic, cultural and sectarian. Its own architectural silent protest must be one on a much larger and more profound scale to parallel the depth of the problem.

The term "Middle East" refers to different things depending on the source. The definition given by the Encyclopedia Britannica will be utilized in this research as is defined as "the lands around the southern and eastern shores of the Mediterranean Sea, extending from Morocco to the Arabian Peninsula and Iran and, by some definitions, sometimes beyond." (Encyclopaedia Britannica, 2019) The region is not alien to conflict in all its forms. It is an area of sharp dichotomies that is in itself trying to wrestle away a long and bloody history that it just cannot

escape. Questions of identity and which path would pave its future are ones being answered through heated debate and bloody conflict. Even now it struggles with the rise of various forms of religious fundamentalism and the sparks and embers of the bloody civil wars in Syria, Yemen and Libya that project themselves onto other regional tensions. The fact that these conflicts are transcendent of their immediate political borders remains a clear testament to the undying unrest in a troubled region that has been boiling ever since the end of the First World War and redrawing of its borders. It is sadly evident however that with the current rise of sectarian tensions in the region that the collective memory of the general peoples of the middle east is a particularly finicky one that seems to retread the same destructive steps in an almost cyclical and generational fashion. Flashpoints such as the Middle East, the Korean Peninsula, the former Soviet Bloc, Kashmir and the long-standing tensions in these areas are all testaments to the fact that conflict is a prominent problem in the modern world that needs to be addressed diligently and adapted for, in the case of architecture, accordingly.



Figure 1 Redrawing of borders according to the Sykes-Picot Agreement of 1916 (Koch, 2014)

1.2-Research Methodology

This research is qualitative by nature and an exercise in architectural theory that aims to understand the roots of modern conflict in the area and attempt to study how architecture is embroiled in these conflicts. The ultimate aim is to synthesize the elements of a "Peace Building Architectural Intervention" as a method of architectural that would be conscious to conflict in all its forms within urban areas and play a role in both mitigating conflict and decreasing its toll when it occurs. The theory revolves around the idea that conflict in the Middle East is always going to recur as long as the main instigators of it, are still present and thus architecture must prepare, mitigate, and protect the collateral majority involved, lest it become simply a practice of erecting totems and monoliths that have no greater function than to form a barrier between the outside space and the newly formed internal one.

The research intends to erect the pillars of this intervention and justify the rationale behind the need for utilizing this tool and to establish the critical thought process that drives it.

This goal is to effectively lay the groundwork for more focused future expansion of its ideas as it morphs into its own discipline. However, the greatest takeaway would be to present the reader with the means to understand the state and causes of conflict in a specified region, and its relation to architecture, sustainability, and the built environment. This would allow for a more critical exploration of the subject and branching out into various mediums. Architecture ontologically is a living organism that reacts to its surrounding environment and thus we must approach it in a much more cohesive way than its immediate surrounding but study its intrinsic relation with the zeitgeist of the populace that inhabits it.

2.1-The State of Conflict: Why Do We Fight?

"War is the continuation of politics by other means."

Carl Von Clausewitz

Humans have been in conflict since before recorded history. We developed weapons from flint rock even as we dwelled in caves for conflict was a natural way to settle difference amongst ourselves and the natural environment. As humans emerged from caves and started forming more complicated societies they learned that peace was a more lucrative option than conflict as a status quo. Politics formed out of this need to settle conflict and resolve it, becoming the art of dealing with and settling conflict in all its forms. As human societies developed so did humans' ability to share more together for a greater purpose, objects owned became commodities in trade, However as humans have made strides in philosophy and ethics, conflict still remains a reality we struggle with to this day. To put this into perspective, as of 2018, the Council of Foreign Relations recognizes 25 major Global conflicts around the world that span Asia, Africa, Europe and North ("Global Conflict Tracker," 2018) Conflict thus is not absent from the world, and will likely never cease to exist as a political tool when all others fail. Armed conflict has many causes and can be defined as being International or Civil war. In a paper published by researchers Matthew O. Jackson and Massimo Morelli at Stanford University, the authors divide the main causes of war as "rational" and "irrational". Rational when there is "action to maximize the expected payoff to that agent out of the available actions and relative to the agent's beliefs about the potential consequences of the actions." (Jackson & Morelli, 2009). They summarize it as an action that has "material costs and benefits". The irrational causes of war are particularly those that do not have a direct material cost and benefit and Jackson and Morelli state that the most common of those are: Religion, Revenge, Ethnic cleansing and other ideological mass

killings (Jackson & Morelli, 2009). The nature of conflict lies fundamentally in imbalance whether, economic, social, ideological, cultural or even simply power and thus it becomes a dynamic of the discrepancy. This fixates our compass on attempting to understand where discrepancies lie between groups, to trace the origins of a conflict. While conflict occurs almost universally in its various forms, when it turns violent and deadly it adopts its most destructive and tragic form. This categorization of armed conflict goads the questions of the predictability of conflict, in the attempt to lay the groundwork to create prevention methods.

Utilizing Jackson and Morelli's categorization, we can infer that "Rational conflict" is more predictable than an irrational one. That is because rational conflict is one concerned with the material world and thus the dynamics of coveting and seeking out what is coveted can be understood within the limitations of politics. It is related to maximizing a particular gain and thus can be weighed in terms of net gain and loss which give it an angle of predictability. However, when it comes to irrational conflict the definition of gain and loss and the tangibility of it is a much deeper and complicated issue. This makes the predictability of such conflicts much more difficult as there is no clear metric to indicate that it would occur. However what unites both types of conflict seek control of the environment, whether to capture vital resources, expand living space, commit genocide, control or topple a government or crush a rebellion, what is contested is the land and its inhabitants. However with the advent of the 20th century there has been a push from jurists, statesmen, and international bodies to attempt to curb armed conflict as a method of conflict resolution between different groups or states such as the signing of the Porter Convention of 1907, Covenant of the League of Nations in 1920, the Kellogg-Briand pact of 1928, the Stimson Doctrine of 1932, and article 2(4) of the Charter of the United Nations. These attempts saw mixed results as the 20th century saw two major world wars that elevated the

scale of destruction and warfare beyond anything seen in human history. World War I was dubbed the War to End all Wars, but the peace treaties it forced the defeated central powers to sign would leave a sense of bitter resentment that would lead to another even more destructive one. It was in the closing days of the war on August 6, 1945, when an American Bomber the Enola Gay dropped the "Little Boy" atomic bomb on the city of Hiroshima in Japan, followed by another bomb named "Fat Man" on the city of Nagasaki 3 days later, the world was left in awe. The atomic bomb was an apocalyptic nightmare that had shown humanity that the balance of power has changed forever. One could not fight a "Thousand Splendid Suns" as the director of the Manhattan Project Robert J. Oppenheimer quoted when he witnessed the first successful atomic bomb detonation in the New Mexico desert. After the conclusion of the war, the nature of conflict had changed and the world saw a "Cold War" between the two main superpowers of the World, the United States, and the Soviet Union. Due to the threat of Nuclear Holocaust, a direct armed conflict was avoided, but the world was being divided along cultural and ideological lines. Culture thus resurfaced as the main battleground of the two ideological powerhouses that sought to project it to other nations whether by political upheaval and control or direct military intervention.

2.2-Big Fish Eats Little Fish: Conflict in the Age of Globalization

Culture is defined by Merriam-Webster as "the customary beliefs, social forms, and material traits of a racial, religious, or social group" (Merriam-Webster, 2019). Culture, therefore, would be effectively what defines and subsequently divides various groups of people. Its proliferation indicates diversity, and its uniformity indicates homogeneity. Culture as well can be seen enclosing within it the multitude of factors that make up an individual's identity. This makes culture a very contentious issue especially because it encloses values within it that could differ from those of different cultures. It is this social justice system that would differentiate between individuals and rate them according to their compliance to the culture that they live within. This social judicial system as well would extend to groups and nations rather than only individuals, and cultures are then judged accordingly.

Cultural conflicts are thus commonplace and human history has seen a myriad of dominant cultures subjugate others in a showcase of superiority and dehumanizing others. This was particularly evident and well documented during the colonial age when European imperial powers would dominate and exploit various cultures around the world launching for a platform of technological superiority that translated into a cultural one. While this cultural subjugation is one not new, and certainly hearkens back to even ancient history and efforts such as Alexander's efforts of Hellenization, and the Roman conquest of different tribes, it was always contained within the physical borders of the spreading politically entity. With the advent of the printing press in the 15th Century, Johann Gutenberg gave the world its first propaganda machine that enabled ideas to spread easily, something the protestant reformation benefitted from immensely as it permeated Catholic lands and spread. With the industrial revolution, came the inventions of the phonograph, the telegraph, photography, and film, and those would help transfer culture

faster than ever before and allow the world to see hear and visit places they only ever dream of. However, it was with the inventions of the radio and subsequently television that borders fell for culture and became merely political as the untamable airwaves yet proximity from the broadcasting towers would still limit to a degree to what extent would information be propagated. During World War II Radio Free Paris would broadcast to French freedom fighters speeches from the leader of the resistance Charles De Gaulle that goaded them to continue the fight. The Germans might have had an iron grip over mainland Europe but the airwaves were out of control for times had clearly changed. The next leap came with satellite broadcasting which obliterated the limitations of geography once and for all, this allowed the spread of culture to all corners of the globe. In the age of the cold war, it would be essential to penetrate deep behind enemy lines to spread ideology and culture as a tool for conversion. Yet it was only when the age of the internet dawned that media became truly uncontrollable, with an instantaneous propagation of information of all kinds.

With this continuous evolution of the tools of cultural propagation, the world would see an increase in cultural clashes. Globalization has changed the world as we know it and redefined its various dynamics effectively creating a world without borders. In this "global village" commerce, trade, societies, values, consumption, privacy have all been redefined and exported. This entire system of different ideologies that guide these socio-economic and political dynamics of the world have all become parts of a packaged culture, and while culture before the age of satellite television and the internet was indeed contained within political borders, where the state could regulate to a great degree what exactly permeates its borders and what does not, with globalism foreign culture in all its forms was being beamed right into the living rooms of people, with little to be done to contain it. This while definitely holds a myriad of positives is one that as

well exasperates cultural conflicts, as culture is easily transferred and adopted by people in different places. This in theory is a noble and beautiful notion that would unify the world and create a "global village". However this as well puts cultures at a contest, and cultures that do not produce, and propagate their own culture as effectively as others would suffer and diminish in time, in what can only be a tragedy for the human race as it slowly homogenizes into the dominant culture of the time rather than create a village for all. Thus in the age of globalization not only is information more readily spread, but conflict as well and this warrants a reaction to be able to control the damage being done from this encroachment of unfiltered information that could foster divide between groups of different opinions, backgrounds, or values.

2.3-Predicting Conflict

Building upon the aforementioned ideas predicting conflict is an essential exercise that seeks to understand the precursors of outbreaks of violence and assess the likelihood of their recurrence a thorough socio-political, economic, demographic and religious study must be undertaken to effectively be able to identify precursors and deal with them accordingly to avert conflict. In the field of conflict resolution, there exists a myriad of models that are implemented by researchers that study various factors and accordingly build predictions on where conflicts would arise. With the advent of the digital age, computational models have further pushed the ability to run ever more complex simulations, and with the rise of machine learning push the variables under study even further beyond simple regression models. In a paper published in the journal "Science" titled "Predicting armed conflict: Time to adjust our expectations?" authors and researchers Lars-Erik Cederman and Nils B. Weidmann state that previous work by researchers "Weidmann and Ward" had generated a map in Bosnia that predicted violence in 1995 by municipality (shown in the figure below). The authors in reflection upon the results state that "Although the conflict in four municipalities was forecast correctly, the model missed three actual outbreaks and falsely predicted violence in four municipalities. As is often the case in conflict prediction, many areas remain peaceful and are predicted as such (shown in gray)." (Cederman & Weidmann, 2017)

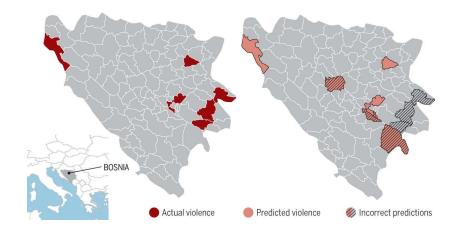


Figure 2 Map predicting violence by municipality in Bosnia (Cederman & Weidmann, 2017)

The article continues by indicating, that the same authors were able to accurately predict a coup in Thailand a month before it occurred in May 2014 using advanced quantitative methods. This would make a case for two things, the first being that accurately predicting conflict is a difficult endeavor but certainly a doable one, and that with time and increased computational power the same researchers produced more accurate predictions.

In another example that serves to show however how finicky the science of conflict prediction can be a conference paper published in 2009 (and updated in 2011) by researchers at the Centre for the Study of Civil War, PRIO at the University of Oslo named "*Predicting Armed Conflict 2010-2050*" featured the use of complex computational models to generate a map of the world with predictions of susceptibility of conflict on a scale from 0-1, with 0 being the least susceptible and 1 being the most. This map contains predictions of violence outbreak by country for the years (2011-2017-2030-2050). It is immediately noticeable that the conflict analysis had failed to correctly predict the conflicts that arose as part of the Arab spring as well as the Ukrainian conflict. Regarding the Middle East, the map indicated that both Syria and Libya had a relatively low susceptibility for conflict throughout the 40 years of the study while Algeria was given the highest susceptibility as well as a moderate susceptibility in Morocco. This was almost

exactly the opposite case as while Syria and Libya saw bloody civil wars, Morocco and Algeria passed through the initial phase of the Arab spring relatively peacefully until now. The map correctly indicates that Iraq has a high susceptibility for conflict which had materialized in the rise of the fundamentalist group ISIS, and indicated that Yemen and Egypt both were moderately susceptible, which did see unrest and a civil war respectively.

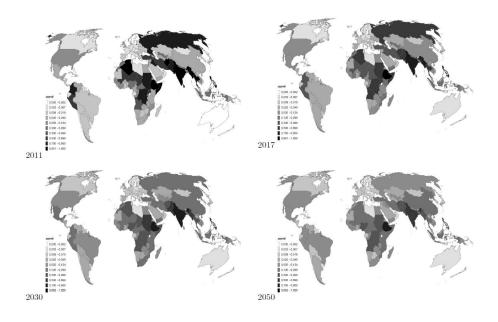


Figure 3 Map of predicted levels of conflict across the world in the years: 2011, 2017, 2030, 2050 (Karlsen & Urdal, 2011)

Thus the computational approach to predicting conflict can be rather a hit or miss, which can be attributed to the fact that while computational models can do advanced quantitative analysis the indices and variables being fed into them are still qualitative in nature. History, in particular, an essential subject in the science of conflict analysis and prediction is very qualitative by nature and has to be broken down into subjective indices which are fed into the model that in turn will run the numbers accordingly. However, due to the very complicated nature of human relations and conflict, history becomes the collective memory of a people and a force that would govern their judgment and actions and thus it becomes an obligatory process if one is to understand how why and where conflict will arise.

2.4-The Will of the People

A century before computers were tasked in predicting conflict, Germany's "Iron Chancellor" Otto von Bismarck stated in 1888 that "One day the great European War will come out of some damned foolish thing in the Balkans." (Smyth, 2014) This would suggest an almost psychic ability of Bismarck to predict a future conflict that would erupt in 1914, 26 years later. The spark of the war would be the assassination of Archduke of Francois Ferdinand of Austria in Sarajevo by a 19 year old Bosnian Serb named Gavrilo Princip, and the events that followed in the following months that lead to World War I. The question remains, how could Otto Von Bismarck predict with such accuracy the event even before Princip was born? Furthermore, did Gavrilo Princip's "Shot heard all around the world" be the true cause of the deaths of millions in the following years? Had Gavrilo Princip not fired that shot could the war have been averted? The short answer is no. The long answer is that it was bound to happen anyway unless the precursors to it were diffused.



Figure 4 Painting Depicting the Assassination of Archduke Francois Ferdinand (Dash, 2013)

Early 20th century Europe was the seat of increasingly ambitious empires whose colonial ambitions were bound to clash in their different colonies, new ideologies, and ideas of freedom, individuality and nationalism that were fundamentally opposed imperialism were permeating the

contemporary European mind of the age. This was a canvas for imbalance in all its forms, dominating cultures engulfing smaller ones, a rush for resources that would seem some of the worst exploitation of different peoples in human history, and ideas of cultural and racial superiority such as eugenics, anti-Semitism, slavery, and Aryanism. The stage was set for an escalation of these complicated conflicts to War on a global scale as these phenomena spanned the globe, and indeed this powder keg only required a spark, that found itself in Princips' bullet. That answers half the question, which is how Bismarck would predict a great conflict in the coming years, but the latter part of how was he able to know it would start in the Balkans remains unanswered. To be able to see through this almost psychic acumen of Bismarck, one must understand that the Balkans were at the time controlled by the ailing Austro-Hungarian empire, and full of national fervor due to gaining independence from the Ottoman Empire only recently in 1878 but annexed into the Austro-Hungarian Empire rather than unite with Serbia as a nationalist Balkan state. This all boils down to the idea of a greater power's cultural and political hegemony of over smaller people's and their inability to express their identity or political will. This "will of the people" is a particularly important concept when discussing the nature of conflict and this idea was one beautifully expressed by the Great Russian novelist Leo Tolstoy in Chapter II of his masterpiece War and Peace where he states:

"Writers of universal history who deal with all the nations seem to recognize how erroneous the specialist historians' view of the force which produces events is. They do not recognize it as a power inherent in heroes and rulers but as the resultant of a multiplicity of variously directed forces. In describing a war or the subjugation of a people, a general historian looks for the cause of the event not in the power of one man, but in the interaction of many persons connected with the event."

Tolstoy's work in War and Peace is a masterful study of the dynamics that drives both its titular concepts. Napoleon of France and Alexander I of Russia are stripped down by Tolstoy in his novel to become not the almost mythical figures that exist in the imagination of the peoples they lead but become an expression of the communal will people and the events that shape this will. This is an exceptionally important point as it defines the relationship between a governing body, whether a local or foreign one, or a democratic or autocratic one, with the populace. And thus when the ruling body stops representing the will of the people, conflict will occur and thus this relationship becomes seminal in either building peace or marching to war.

Indeed one prominent example of this is stated by author Andrew Nagorski in his book "Hitlerland: American Eyewitnesses to the Nazi Rise to Power" where he documents an interview conducted by American reporter Sigrid Schultz who worked with the Chicago Tribune as a reporter in Berlin in 1919. On one of the assignments, Nagorski states, Sigrid's team was interviewing German Officers right after the close of World War I and Germany's defeat at the hands of the allies, and one particular officer was a bitter young seaman named "Raeder" who told the American reporters "You Americans need not feel proud of yourselves. Within twentyfive years at the latest, your country and my country will be at war again. And this time we shall win, because we will be better prepared than you will be" (Nagorski, 2012) In 1939, the Second World War would break out, and now the young seaman who had become Grand Admiral Erich Raeder would be leading Germany's Naval forces into the War he predicted twenty years ago. The young Raeder made that claim before anyone in Germany knew of another bitter Corporal named Adolf Hitler who would lead Germany into the War, only serving to strengthen the idea that Hitler had expressed the will of the German people who had been severely humiliated in the Versailles Treaty of 1919, and wanted to regain their prestige and execute their revenge.

Ideologies and ideas, not only individuals, as well would play a role in indirectly representing or expression the common will of the people. This can be seen in the works Marx and Engels Communist Manifesto whose call for breaking the chains of workers in the world would find many yearning ears. It can be argued however that had not the workers or as Marx puts it "The Proletariat" of the world been exploited and forced to work in abysmal conditions during the Industrial revolution the message would not have resonated as strongly as it did or even at all. The opening lines of the Communist Manifesto begin with the now timeless words "A spectre is haunting Europe — the spectre of communism" (Marx & Engels, 1848) Thus the spectre Marx writes about is already one he was able to identify and write about. The absolute resource equity that Marx would call for was an idea that was built on the fact that workers felt that their share of the resources of the land was not equitable to the great capitalists and bourgeoisie of the time. This imbalance in Marx's eyes caused conflict between the social classes and was to be remedied with the workers rising up in a communist revolution against the entire system. A supremely important point is indicated by Marx in the opening lines of the Manifesto that supports the idea that this Manifesto is only an expression of a thing that existed rather than an original creation or idea he had synthesized in a fit of literary genesis, where he states:

- "I. Communism is already acknowledged by all European powers to be itself a power.
- II. It is high time that Communists should openly, in the face of the whole world, publish their views, their aims, their tendencies, and meet this nursery tale of the Spectre of Communism with a manifesto of the party itself." (Marx & Engels, 1848)

These two revelations clearly indicate that the authors' intention was to organize this view that is already prevalent and express it, a fact that would become pivotal in our

understanding of the will of the people, and the road to conflict. Whether social, economic or cultural any work that does not build on a prevalent state in society is one that is doomed to fail, and the opposite is true. Founders of Great Religions find a following not only because they claim divine enlightenment but because their message resonates with the society that they preach among. Even reformers such as Martin Luther would not have been able to rock the very foundations of the Catholic Church in 1517 when he published his 95 theses had not the populace shared his frustration at the practices of the papal authorities at the time and the 95 theses had expressed eloquently that frustration and the need to counter it. Thus philosophers, sociologists, economists and all great thinkers and reformers synthesize ideas to rectify problems that they find exist in the context which they exist in and wish to express on its behest. Thus building upon these ideas it becomes clear that among all things shared by a community, if there is inequity in distribution or imbalance in the expression of the communal will of the people, the seeds of conflict are sowed, and what is more fundamentally shared between the entire society, than the built environment it inhabits? Therefore the urban space has a duty to be as reactionary in nature as all other shared elements of a society, and express social and economic equity, as well as the identity and the will of the people that inhabit it, and define the power dynamics that exists between all elements of the social system to establish a balanced peace among all. Architecture thus is a crucial element when conflict is to be studied and understood, and the shared common space is a part of the dynamics that if imbalanced would lead to conflict.

2.4-Architecture and Conflict

When we think of the most fundamental definition of a building it would generally be that of an interior space that provides shelter from outward threats. Throughout history, architecture evolved from the early cave dwellings in ingenious ways to provide shelter for its inhabitants in areas of conflict while getting more invested within the fabric of society. Thus urban design emerged as a discipline which sought to view the built environment in a more unified and cohesive way, rather than each building as an individual island. The city would emerge as a model for a cohesive ecosystem that had to provide more than just shelter, but a functioning economy, and social space for civil interaction.

The ancient Greeks perfected the art of Urban Planning, and it was no wonder that Athens would form the world's first democracy at the hands of Pericles and its Agora would be a model for public spaces for interaction and debate for centuries to come. Here it is important to understand that had not Athens grown into a bustling metropolis and amalgamated a variety of people with conflicting interests and ideas, democracy would not have been created as a system to preserve the city and keep it in balance. This is one of the earliest examples of how an urban environment would influence the power dynamic of government and the people, and how the urban spaces such as the agora came to symbolize this dynamic and express the will of the people to contribute to the discourse. Architecture thus has an integral part to play in defining the levels of transparency between the rulers and ruled, and help articulate the dynamics of authority and the populace's accessibility to it. The Medieval Castle, for example, serves as a sublime multilayered structure that embodied the feudal system of the Medieval Ages. The walls of the settlement and the keeps would help ward off aggressors of any kind, providing protection for the dwellers that live within, they, in turn, would farmlands for the feudal lord who would

inhabit the Castle, the largest structure in the settlement. This variation of building scale plays into the dynamic of the feudal social class system of serfs, knights, barons, and kings and the urban space defined the relationship between these classes, as the lord provided protection through the walls and the castle in exchange for serfdom in the farms and fields. The built environment here defined the social contract that existed and thus would play a crucial role in enforcing a system upon the inhabitants.

Even the architecture of these structures and cities would morph to meet the military advancements of the time to supplement their main function of providing protection against foreign threats. Castle walls grew thicker, as the artillery guns grew bigger. Building materials changed with more extreme climates. Architecture in itself has always been adaptive to its environment, whether climatically, geographically, socially, financially and politically. The crusader citadel of Raymond of Saint-Gilles that sits atop the Middle Eastern city of Tripoli, Lebanon, is one rife with these examples. The thick castle walls to withhold bombardment, the massive iron gates the small apertures for archers, the openings for burning oil, and countless other architectural devices utilized for the purpose of preservation of life and repelling invaders. Even the historical Mamluke city that lies under the citadel, on an urban level has architectural devices employed, from a labyrinth of narrow roads to low ceilings, and archways, to spiral staircases that are built counterclockwise to favor the right-handed sword swings of the defenders. With the advancement in technology beyond the Medieval Ages, architecture reacted too and evolved accordingly. France's Marshall Vauban's star fort design was the result of the canon and gunpowder age and changed the landscape of warfare throughout the Renaissance. Professor of History at Eastern Connecticut University Jamel Ostwald states in his book "Vauban under Siege" that "(Vauban) played a central part in reducing the defense's dominance while setting the stage for a military enlightenment later in the century" (Ostwald, 2007). As populations grew and walls became increasingly vulnerable to cannonade star forts would centralize the authorities' power within the walls and attempt to defend it, rather than ring the entire urban area with the now defunct and increasingly expensive walls. This indicates the power that architecture has to affect fundamentally the landscape of many other disciplines it tackles, while as well as affecting the urban landscape of people's lives involved.



Figure 5 Saint-Martin-de-Ré Star Fort France built by Vauban (Waldek, 2017)

Yet the disciplines original intention of being a shelter from any form of adversity has been neglected in the past two centuries due to advancement of weapons technology that has rendered the protective properties of commercially built buildings almost negligible, for as the guns grew bigger the walls grew thicker until they couldn't be thick enough. This approach to "armored" architecture has proven its ineffectiveness especially in the face of modern explosive devices that have truly terrible capabilities as seen in various bombings all around the world such as the 1995 Oklahoma City bombings to various attacks in the Middle East such as the Khobar Bombings of 2004. This has caused a shift in the focus of what the function of a building is and has reduced it mostly to the creation of internal space and the creation microclimate within that

space in an effort to achieve hydrothermal comfort. This shift, however, embodies within it a limitation that encapsulates architecture in a paradigm that exists only to act as a barrier towards outward conditions, and forwards an individualistic approach to what a building is, rather than see it woven into a greater fabric of different layers. The role of architecture subsequently as a physical shelter is put under heavy scrutiny especially as the international levels of terrorism have proliferated in the past decade as well as the need for well-protected assets and buildings such as hospitals. "Bunkering Up" which is the traditional method of approaching sensitive buildings is an expensive and often aesthetically unpleasing ordeal that cannot be replicated with ease and comes with many tradeoffs with regard to the internal climactic conditions of the building.

After the end of World War II, the face of warfare had changed and the nature of warfare increasingly took the face of civil war with foreign intervention, rather than state vs. state conventional war; the Gulf Wars being the notable exception. As the imbalance of power grew between states guerrilla warfare became a more prevalent form of conflict which would in effect elongate the life of conflict even when tactical victory is achieved as evident in the aforementioned examples of Iraq and Afghanistan which are still ongoing. Conflict has become especially more sporadic and harder to control with the rise in global terrorism and the availability of various types of weaponry that can wreak mass havoc and can be deployed by a single individual. Terrorism is no new concept but it is the advancement and availability of the methods to strike at larger scales that have made it into the major problem of the 21st century. Author H.V Savitch in his book "Cities in a Time of Terror: Space, Territory, and Local Resilience" states that "three out of every four terrorist attacks in the last four decades have been concentrated in cities" (Savitch, 2008) this indicates that urban areas are the most lucrative

targets for global terrorists. He goes on to state that "in the last four decades, cities have been subject to more than 12000 incidents of terrorism, and incurred over 73000 causalities". Thus urban centers are increasingly are being targeted for a number of reasons, including population density, political and economic status and symbolism as in the 9/11 attacks on the World Trade Center in New York.

The International Strategic Analysis agency has estimated that in 2017 around 100,000 people have died as a direct result of various conflicts, with millions of others being indirectly or directly impacted. (ISA, 2018). With the same conflicts that caused these deaths still raging on the numbers of casualties would be theoretically replicated again this year and for an indefinite time until a solution arises to these complicated and longstanding conflicts. Indeed one of the greatest and largest contributor to this alarming number of casualties is the Syrian Uprising turned Civil War which enters its 7th year in 2018 and even with escalations occurring relatively less than in previous years a significant number of civilians are still at risk and suffer from siege and bombardment. This inherent relationship between the built environment and conflict, embodied in the fact that conflict generally seeks to control the built the environment by force, imposes upon planners and architects an urgency to act and take part in helping avert and minimize such crises which see no final solution even when tensions only wither down. The ability to predict and asses the likelihood of future conflicts would adequately help set up architectural and urban policies that could save the lives of many and ease the suffering of others. This would strongly advocate for an architectural reaction that would adapt to face these challenges rather than stand oblivious to or even exasperate them as it mostly does today.

Thus the contemporary architecture of the region in relation to conflict has been passive.

Architecture in the Middle East never adequately reacted towards the challenges of conflict

stated above. Rarely did local architecture change and waver from mostly poorly imitating its international counterparts. Perhaps the Swiss thinker and architectural theorist Lucius Burckhardt sums it best in his 1957 essay "Urban Planning and Democracy" where he states "The apartment meant to suit everyone actually suits no one" (Fezer & Schmitz, 2012) This is a clear call for context-sensitive architecture whatever that context might be, even a very challenging one as a flashpoint A modern interpretation of how architecture can regain its role as a shelter would be "Protective design". Protective design is a nascent field of architecture that focuses on architectural design elements to help protect its inhabitants rather than the aforementioned bunkering up system which would prove invaluable in the large-scale reconstruction effort. This would incorporate different circulation paths, different materials, different structural components, and ultimately a flexible rather a rigid approach for protection. In urban areas where such bombings or explosions happen the radius of the destruction is much wider than what is commonly thought and blocks on end would suffer from massive blast pressure damage and flying shrapnel. The property "protectiveness" is introduced here as a metric to measure the effectiveness of a certain façade design in protecting the inhabitants of the building. Protective design is currently pioneered and undertaken by some specialized firms such as "Thornton Tomasetti" and "KPFF" but still, relegate its use to specialty buildings and not the residential scale. According to the New York-based firm, Thornton Tomasetti protective design includes (Thornton Tomasetti, 2018):

- Risk Assessment
- Façade Hardening
- Perimeter Protection and Safety
- Disproportionate Collapse prevention

- Operational and technical security services
- Blast analysis and design

The US Department of Homeland Security and Federal Emergency Management Act (FEMA) has as well produced over the last two decades a series of guidelines on how to design buildings to mitigate terrorist attacks against buildings self-described as an effort that "serves to advance high performance and integrated design for buildings and infrastructure." (Smilowitz, Arnold, Ettouney, & Kaminskas, 2011)These guidelines provide an invaluable resource for designers to take into account the various architectural, layout, geometrical, material, structural, and mechanical variations that can be implemented to mitigate the effects of blasts and explosions. The guideline states that "the overall goal of this program is to enhance the blast and chemical, biological, and radiological (CBR) resistance of our Nation's buildings and infrastructure to meet specific performance requirements at the highest possible level." (Smilowitz et al., 2011) It as well serves to prove the idea that architecture should be reactive to various threats even in countries with a generally lower risk of violence outbreak.

Protective design is thus an intuitive approach that presents guidelines for architects to focus on façade hardening, perimeter protection, and disproportionate collapse as some examples of approaches to protection, which could prove crucial for the survivability of inhabitants. The true challenge lies in the ability to implement protective design and high-performance envelopes into a dedicated policy or building code that would govern the reconstruction process while justifying it enough to make it into a financially viable solution. However, architects and engineers can find ways to implement some of these ideas in a way that takes into consideration the resilience of the built environment. One prominent example of this is that in many Middle Eastern cities the roads are very narrow and almost a maze to maneuver through. Had a building

collapsed it would block the road for an indefinite time and make it not viable to rescue teams and ambulances which could cost valuable lives. Here architects and engineers can deal with such scenarios in a similar fashion to how they deal with earthquake engineering, which is difficult to predict but essential to plan for and on a planning level would help create a better urban space in both terms of safety and breathing space. Such a solution would work well in locations in the Middle East that are on a fault line such as the city of Beirut in Lebanon, but in areas that don't suffer from such contingencies, it becomes more difficult to find that double use that would justify the implementation. The biggest culprit being a psychological angle to protective design that would act as an omen for conflicts to come in an effort to be preemptive which would not endear it to inhabitants. This then raises the question of the availability of smarter more efficient approaches to tackle conflict through architecture in a way that doesn't necessarily have to completely rely on the certainty of its occurrence but work on diffusing it? It is this thesis hypothesis that an approach built on sustainability, and cultural relevance and expression is one that would be very successful in becoming "peace building architecture". That however would be strongly contingent on the ability of professionals to correctly identify precursors to conflict and intervening architecturally in a way that would successfully implement the two aforementioned pillars of this brand of architecture.

2.5- What Is a Peace Building Architectural Intervention?

Stemming from this state of conflict in the world and especially the Middle East, and due to the immensity of the destructive power available, and ease of power projection it becomes imperative to attempt to avert conflict at all costs, to avoid immense human suffering, and cultural erasure. Many approaches can be taken to build and ensure peace, and in this research, the theorized peacebuilding architectural intervention is one that seeks to establish it through architecture and the built environment. The approach is to initially analyze the conflict at hand and identify the precursors that might evolve to full-blown conflict in the future. After identifying the main generators of conflict between groups, an analysis of the relation between the reasons Applying this approach to outlining a peacebuilding architectural intervention the following section deals with analyzing the conflict in the Middle East, one that is deeply ingrained in a cultural battle between various groups that forcefully attempt to change the status quo. This cultural battle sees various stages, and different facets to its multidimensional origins, and the conflict that brews from it either sees systemic persecution of certain groups to the point where armed conflict would fall and become inevitable. Thus being able to allow the urban space to give a literal and figurative breathing space for various groups in this multiethnic and religious region, would lay the groundwork toward more sustainable peace.

For a Peace Building Architecture Intervention (PBAI) to succeed in its aims. It should seek to amalgamate different groups together and break barriers in the social fabric by breaking barriers in the architectural fabric. Architecture is a reflection of society and its machinations and thus architecture must reflect an amalgamated tolerant society if it is to succeed in building peace. This amalgamation is not necessarily physical, but one that attempts to create a shared experience through equity in all its forms, energy, aesthetic expression, public space, and quality

of life. Only when groups feel they are equated with one another would they agree to an active part of the society they inhabit, moreover achieving this equity would largely decrease the likelihood of conflict between the various social groups. Thus to achieve these goals of equity this research proposes an architectural intervention built on two main ideas: Sustainability, and Cultural Expression. Moreover, this research proposes amalgamation of both ideas into one as a practice of reviving vernacular architectural practices that serve these purposes astoundingly well. It also hypothesizes that one byproduct of this implementation is the radical effect it would have on the nature of conflict if it occurs and how sustainable design can itself increase the survivability of inhabitants and citizens in conflict zones.

3.1-The Middle East: Conflict Analysis

In the Middle East where this study is concerned, many conflicts find themselves rooted in cultural clashes between the various groups that inhabit the area, with each attempting to gain control as a means for survival or hegemony. Whether part of a larger eastern-western clash that has occurred for millennia or more internal ones between the multitudes of different groups that inhabit the area. While for centuries peace would be kept by an all-powerful state controlling large swathes of lands and having the different groups of people as their subjects. Such states would include:

- The Roman Empire, who would favor pagan Roman religion (Until 310 AD) and see rebellions by the Jews of Judea and the early Christians which it would subjugate by force
- The Ummayads who would favor Muslims of Arab lineage see the large spread of their Islamic empire to different parts of the Middle East and face a rebellion from non-Arab subjects under the Abbasid banners in 750 AD
- The Abbasids who would see a Persian-Turko-Arab fight for power and control,
 and would see it fall to the Mongol hordes in 1258 AD
- The Crusaders who would favor Christians and subjugate the Jewish and Islamic inhabitants in the Middle East and fall initially to the Ayyubids and then finally to the Mamlukes in 1291
- The Fatimids who would favor Ismaili Shias who would attempt to culturally convert a Sunni School majority Egypt and would fall to the Sunni Ayyubids as well in 1171 AD

- The Mamluke who expelled the Mongols rose from a slave caste and ruled until they were subjugated by the Ottomans in 1517
- The Ottomans who would favor Muslims from the Turkic origin and see rebellions from various groups both Christian and Muslim from different ethnicities until falling to the British and Arabs in the Great Arab Revolt of 1917

The fall of the Ottoman Empire at the close of World War I is signaled as a key historical point of major political change within the region that had been occurring for the past century. IN a disruption of the natural process of the rise and fall of states in the region, the victorious allied powers would enact the 1916 Sykes-Picot agreement to carve up the empire on a colonial basis redrawing borders with little regard to the very complex socio-demographic makeup of the region and paving the way to the various conflicts that would arise across the history of the region in the past century. Every decade since the fall of the Ottoman Empire has been plagued with a major conflict in the region, as well as a multitude of minor or ongoing ones. These conflicts can be divided between direct wars with colonial and foreign powers such as the Algerian War of Independence and the Tripartite Aggression (Suez Crisis) and indirect conflicts which are a byproduct of the colonial legacy e.g.: Yemeni Civil War, Syrian Civil War. These conflicts would ensure unrest in the region that would hinder any process of socio-political progress that can bypass the disastrous effects of the colonial era and set back decades of any progress whatsoever.

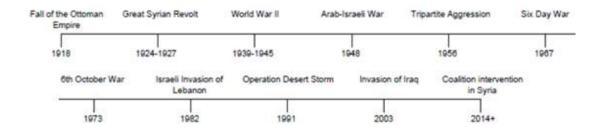


Figure 6 Timeline of Major Conflicts in the Middle East involving foreign powers (Author)

While it is true that not all major conflicts in the Middle East throughout history were strictly ones that involved foreign meddling or intervention such as various civil wars between battling dynasties vying for power (Ummayad vs. Abbasid, Fatimid vs. Ayyubid, Mamluke vs. Ottoman etc.) and other ideological based uprisings and tensions (Al Nafs al Zakiya Uprising, Al Mihna, The Fitnas) modern conflicts would find themselves all rooted deeply in the legacy of colonialism and a deeply flawed orientalist view of the middle east best described by the Palestinian thinker Edward Said famous thesis in his book *Orientalism* as a "-subtle and persistent Eurocentric prejudice against Arabo–Islamic peoples and their culture" (Said, Bayoumi, & Rubin, 2000). We can divide the roots of modern conflict in the Middle East that bypasses simple power grabs, but rather ideologically motivated conflict, into three distinct eras:

- The age of colonialism during the dying years of the Ottoman Empire
- The creation of new secular nationalistic states after the fall of the Ottomans
- The Withdrawal of the colonial powers and the conservative vs. progressive conflict that followed

This section will attempt to study the three eras distinctly and hypothesizes that the main cause of conflicts in the Middle East is at heart a cultural issue, of suppression, expression, and identity. Understanding the legacy of colonialism, and orientalism thus becomes a crucial

precursor to be able to initially fathom exactly the part architecture has played in the greater scope of conflict in the region and to prepare an apt reaction that can play a positive role in helping build peace, through sustainable culturally expressive architecture.

3.2-A Flawed Perspective: The Middle East in the Eyes of the West

As the latter part of the paper has shown it is essential to understand the nature of conflict to be able to effectively produce solutions that would help avert it. Thus Peace Building Architectural interventions are specific interventions that require a tailored solution to a specific problem and cannot be generalized to all conflicts just as architecture cannot be generalized to all climates and cultures. For the Middle East, the crux of this paper relates the main precursors of modern-day Middle Eastern conflict to "Orientalism" which relates to the western idea of eastern peoples. For one to understand why the western perception of the Middle Eastern region and its peoples had guided the imperialistic and politically insensitive way the European powers conducted themselves in the region, paving the way for previous and upcoming modern age conflicts, one must study what and how that view was conceived and what it generated.

By definition, the word "*Orient*" would suggest in its referential nature that the origin point is a point to the west on the plane under study. From there it would be evident that the "Orient" by itself it is a western creation, as is the "Levant" which is equally referential, and refers to the countries east of the center point that was traditionally Ancient Rome. The western world's self-belief in cultural superiority over other nations would be encompassed mostly in how peoples beyond the ancient Roman frontiers would be labeled "barbarians" a word that stems from the Greek word "*Barbaros*" which according to the "Dictionary of Modern Greek" by Georgios Babiniotis is onomatopoeic, and resembles the sound $\beta\alpha\rho$ - $\beta\alpha\rho$ (bar-bar) which would symbolize an unintelligible sound to Ancient Greeks and uttered by foreigners (Bampiniōtēs, 2008). This was in itself an antonym to the word "politēs" which means citizen and resembles modern day polite as in a person that is civil or urbane where both words are equally related to the stature of belonging to civilized urbanized Roman cities. Many different

cultures would adopt the onomatopoeic "bar-bar" to signify incomprehensible speech, such as the Arabic word "بَرْبَر" (Bar-bar), however only in Latin would the "foreign" meaning "barabrus" become synonymous with "uncivilized" which in turn would then carry on to all languages of Latin origin such as French (Barbare), English (Barbarian) and Italian (Barbaro).

The eastern-western divide which had physically began in 395 AD with the split of the Roman Empire into separate eastern and western empires would be solidified with the duality of two authorities and two capitals, Rome and Constantinople. This split would then manifest over the coming centuries culturally with the Eastern Empire adopting Greek as its official language in lieu of the western Latin, and religiously culminating in the Great schism of 1054 where the church would split in a western and eastern part each with its own figureheads and creeds. The papacy seated in Rome was the natural political successor to the Western Roman Empire that fell in 476 A.D, after a series of conversions by the local barbarian tribes into Christianity that ensured they would answer to the Pope or at least avoid clashing with him. The now papal dominated Western Europe would look to the rise and spread of Islam in the Arabian Peninsula and its subsequent conquests of the Christian dominated regions of Egypt, the Levant, and Mesopotamia as a true threat from the East, and would seek to demonize the people of the region as infidels and heretics who have forcefully claimed the holy lands and block the passage of pilgrims there. This loss of Christian dominated lands in the wake of the Islamic conquest during the Rashidun Caliphate, and the continued rapid expansion under the Ummayads which exactly a century after the death of the Islamic prophet Muhammad in 632, had armies marching into central France in 732 A.D after control of the Iberian Peninsula was in effect a two-pronged push into Europe. Stopped by Charles Martel at the Battle of Tours, the Islamic armies continued with

their conquests undeterred on different fronts, raiding Rome in 846, and seeking to conquer Constantinople on multiple occasions.

The Western retribution came with Pope Urban II's call in 1095 in a sermon in the council of Clermont of "Deus Vult!" translated from Latin as "God Wills It!" To fight Muslims was a religious duty to be carried by every Christian under the umbrella of the papacy formally launched the crusades. Kings from all over Europe joined under the papal banner and marched east to save an increasingly threatened Constantinople from Seljuk attacks and ultimately capture the holy lands. Fueled by fiery rhetoric by priests such as Peter the Hermit, the Crusaders would commit horrible acts of violence against Jews in the Rhineland in 1096 even before setting towards the holy lands. This would once again indicate that the idea that whoever is "foreign" be it, Jew, Muslim or anyone who does not fall under the sphere of the papacy is a heretic and would be fought. The crusades were not only campaigns towards the holy lands but became a political tool by the papacy to spread its influence through multiple crusades within Europe especially towards Eastern Europe's Slavic regions and other regions excommunicated for apostasy such as The Albigensian Crusade (1209–1229) in southern France, further intertwining the idea of church political authority and influence.



Figure 7 Medieval Depiction of Muslims worshipping the Prophet Mohammed with the devil in the background showing western misconceptions of Islamic Culture (Mizan Project, 2019)

Even when the Islamic world was in its golden age during the reign of the Abbasid Empire in the East and the Umayyad Dynasties in Andalusia, the view of Muslims and easterners would be a negative one, albeit from a religious rather than cultural view in that context. This view would clearly be indicated by one of Medieval Europe's greatest works of literature "The Divine Comedy" by Dante Alighieri. Particularly in the first part of the poem, dubbed the "Inferno", Dante would divide his hell into 9 concentric circles going deeper according to the gravity of the sin, and would meet two very influential figures in Islam, The Prophet Muhammad and his nephew Ali, in the second to last 8th Circle of "Fraud". Through his journey, Dante would come across them in the 9th "Bolgia" (evil ditch) of the circle reserved for "Sowers of Discord" with both eternally suffering grotesque punishments. This would encapsulate the medieval view of Islam as a heretical offshoot of Christianity that deserved no less than the worst

punishment in hell, only superseded by the final 9th circle reserved for Lucifer himself. One could argue that Dante's view might be his own, but his poem was so influential it would form the western idea of hell, and even create the modern Italian language which is based on the Tuscan dialect Dante would utilize in writing the poem.

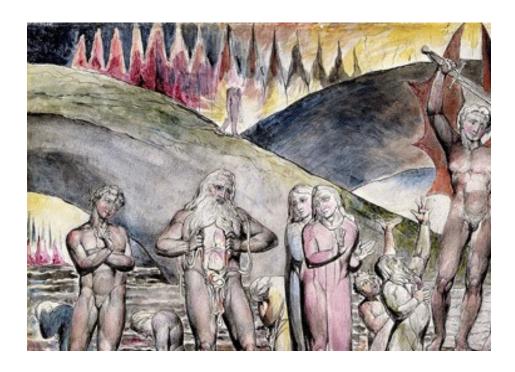


Figure 8 Dante and Virgil Meet Muhammad and His Son-in-law, Ali in Hell (William Blake, 1824-1827)

After the Mongol invasion of the Abbasid Empire in 1258 and the fall of Baghdad, the Islamic golden age would effectively cease and European ascendency would be rekindled once again with the Renaissance. Built on the rediscoveries and Arabic translations of the works of the Greek and Roman philosophers and scientists, the subsequent 14th century "Quattrocento" saw this rebirth hearken once again to Greek and Roman ideals. The ideas of the Renaissance would slowly seep out into other parts of Western Europe and would produce a sweeping cultural revolution. This period would be concurrent the rise of the Ottoman Empire as a force to be reckoned with in the east, especially with its center being for the first time on European soil, and on the ruins of the seat of the former Eastern Roman Empire. The capture of Constantinople in

1453 and the famous "Hagia Sophia" cathedral which had been built by Byzantine emperor Justinian, and its subsequent conversion into a mosque by Ottoman sultan Mehmet II, would send shockwaves through Christian Europe at the fall of the last remaining bastion of defense at the gates of Europe against the "eastern invaders".

On the other side of the known world, the Reconquista of Moorish Spain which culminated in 1492 with the Fall of Granada would be another defining moment in history, which would indicate the expulsion of Islam from Western Europe effectively solidifying the idea that the European west would be solely Christian. The inquisition lead by zealous and brutal priests such as father Torquemada was officially tasked by the papacy with uprooting the Muslim influence from the region. The inquisition would become notorious in its practices, and would forcefully target Muslims and Jews and effectively homogenize and very diverse region of Europe.

Paintings depicting the capitulation of Granada would depict King Ferdinand victorious on a white horse, giving audience to a defeated subservient Muhamad XIII would ingrain itself in the European cultural mind as a parallel of nothing short of good triumphing over evil. The Reconquista would as well bear witness to other accounts of architectural conversions such as the conversion of the Great Mosque of Cordoba to a cathedral in 1236 after the city was captured by King Ferdinand III of Castile, and the rise of the Mudejar style of architecture which was "a type of construction with a unique technology developed over the course of several centuries (12th to 17th) thanks to the co-existence of cultures and the combination of forms and building methods employed by Christians, Muslims, and Jews, through the exchange of their knowledge and experience." (UNESCO, 2018)



Figure 9 The Surrender of Granada, by Vicente Barneto y Vazquez (Vicente Barneto y Vazquez, 1836)

After a century of aggressive expansion and excursion into Europe and North Africa the Ottomans proved to be the most potent threat to western Christianity since the invading Mongols. The apex of this westward expansion would see the Ottoman armies under Suleiman the Magnificent besiege Vienna in 1529, after capturing the Balkans and some parts of Hungary. This apex would also be the height of strong ottoman rule which then saw a string of less capable sultans that could not effectively mimic the success of the earlier sultans. Different historians differ on the exact date of Ottoman decline but generally, Mehmet IV's disastrous expedition towards Vienna in 1683 would be seen as the pivotal end of Ottoman hegemony, and the cultural decline of the Eastern World.



Figure 10 Jan III Sobieski pod Wiedniem (John III Sobieski at Vienna) (1883)

3.3-Orientalism: The Portrait of a Sick Man

There is no doubt that the Ottoman Empire's decline was disastrous to the region, being characteristic with longevity, coupled with scientific and cultural stagnation. The region had always seen the rise and fall of various dynasties and empires, which went into the natural cycle of the successive political entities, however, the fall of Ottoman Empire saw a rather peculiar end that differed from that of the previous empires that controlled the Middle East. The western powers had realized that the stagnation the empire had seen over the 17th and 18th centuries, had made it a weak state that can be manipulated and disintegrated. This would be encapsulated best in Tsar Nicholas I's famous declaration in 1853 at the advent of the Crimean War, that the Ottoman Empire is the "Sick Man of Europe" (De Bellaigue, 2001). This era would characterize the shift from the belligerent view of the west towards the eastern Islamic Empires from that a mighty foe to one of regressive inferiority characteristic of traditional imperialistic views of the age.

This would encompass the true "Orientalist" view now commonly known, and discussed by authors such as the aforementioned Edward Said. The western European powers would slowly encroach on the territories of the Empire, and interfere more willingly sometimes against the Ottoman Empire to ensure their own interests such as the French intervention to stop the 1860 Maronite-Druze civil war in Mount Lebanon after Emperor Napoleon III's declaration of being the protector of Maronites in the East, or in its favor to ensure that it would be kept on a lifeline until properly carved up, such as the western interference in the Crimean War, and the "Oriental Crisis" of 1840. The latter crisis would be an attempt to contain the specter of Muhammad Ali Pasha, the Ottoman Viceroy of Egypt who had become a force to reckon with

within the Empire and would be seen as a powerful natural successor to the Ottoman Empire, something which the European powers would not allow.

It was during the era that European Orientalists would interweave within the Middle Eastern communities and draw their exotic and fetishized portraits of the peoples that inhabited the region. The Napoleonic expedition to Egypt had revealed various ancient Egyptian artifacts that caused a craze in Europe further solidifying the idea, popularized earlier by Shakespeare of the exotic feminine east in his play "Anthony and Cleopatra". This view only expanded with other famous works of the era Wolfgang Amadeus Mozart would set his famous opera "Die Entführung aus dem Serail" (The Abduction from the Seraglio) in a Turkish Harem. Lord Byron's exploits in the Greek War of Independence as well would solidify the image of a heroic romantic poet helping an oppressed Christian nation wrestle its freedom from the tyranny of the Ottoman yoke.

After the French invasion of Algeria, artists such as Eugene Delacroix and Pierre Auguste Renoir would popularize the painting of Middle Eastern women in private settings such as their homes and harem's as in Delacroix's 1834 painting "Women of Algiers in their Apartment" a mere 4 years after the French invasion of Algeria, a landmark event in the colonial history of the middle east. Renoir's "Parisian Women in Algerian Costume (The Harem)" represents an even more interesting outlook into the perspective that Europeans would have of the people of the Middle Eastern colonies, as it was a painting of women in Montmartre in Paris, donning racy "Algerian costumes" and features nudity and partial nudity. It is important to indicate that Renoir visited Algeria for the first time in 1881 according to author Ludmilla Jordanova in her book "The Look of the Past: Visual and Material Evidence in Historical Practice", 9 years after completing the painting in 1872 (Jordanova, 2012) This gives a unique perspective of how

someone who had not visited Algeria and had only imbibed the general perception would Algerian women's attire and an exotic harem look like as this painting was a pastiche of Delacroix's previous work. This view however would contrast surprisingly with an account described in a paper published at Kings College in London under the title "Western European Perceptions of the Ottoman Empire from the Sixteenth to the Nineteenth Century" where the author, Seif Kabil, would describe an account by a Venetian enslaved by the Ottomans named "Giovanni Antonio Menavino" who would describe in his memoirs the institution of the Harem stating that "- the women he observed learned to read and write, embroider, and play instruments." (Kabil, 2014) This would indicate the selective nature of orientalist views of what different aspects of the Middle East would be channeled back to mainland Europe.

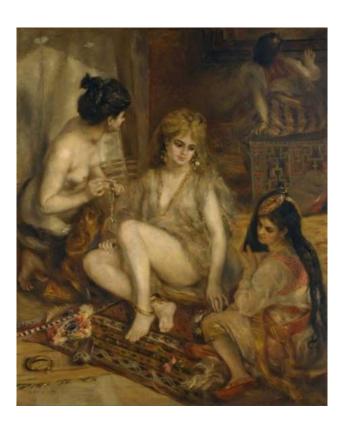


Figure 11 Parisian Women in Algerian Costume (The Harem)(Renoir, 1872)

3.4-The Broken Compass

In the era of post-independence and riding a wave of Arab Nationalism lead by Jamal Abdulnasser, and his socialist regime that replaced King Faruk the last of Alawid Kings of Egypt, the independence movements of the Arab world were fueled by this Nationalist ideology. Initially, Arab Nationalism and the Islamic identity were not particularly contradicting in their end goal. Both sought independence from the colonial powers, and a restoration of freedom of expression and destiny for the people in the Arab World. Indeed Arabs are not an ethnic group but a cultural group of people that speak the language. In that regard, it is incredibly similar to the post-ethnic and tribal idea of Islam that does not according to its founder the prophet Muhammad differentiate between an Arab or Ajami (Foreigner) in nothing but piety. Arabic as well is the official language of Islam as the Quran was written in Arabic and had to be learned by all the peoples that wished to read and recite it across the globe. Thus the two ideas of Arab culture and Islamic culture are indeed are thus deeply intertwined, Arab Nationalism, however, is not and would go against the aforementioned Islamic doctrine of no differentiation except on the basis of piety.

Here we must understand the complexity of the subject matter, as Arab Nationalism was an idea first suggested by Christian Arab intellectuals as a replacement for the ailing Ottoman Empire. Its father was a Christian Maronite author from Mount Lebanon named Jurjy Zeidan, and this idea was then augmented by various other Christian writers such as Boutros Boustani, and later Gebran Khalil Gebran. Some Arab Muslims who as well had suffered from the rise of Turkish Nationalism within the empire in the 19th century saw Arab Nationalism as the answer. Others saw that Islamic Unity between the now different states and reforming the Ottoman Empire is the key answer to the revival of the ummah' (nation) an idea most prominently

Abdo, and Rashid Rida. This schism between nationalism and the religious identity lies at the core of the cultural conflict in the Middle East as both are mutually exclusive when it gets to the specifics and thus there would only be one that reigns. European nationalism and secularism of the 19th century effectively found its way into the Middle East but it has not been entirely successful in becoming an accepted status quo.

It was then the Great Arab revolt of the First World War would see the Arab Armies of Sharif Hussein Ibn Ali working in tandem with British Forces in the region to defeat the Ottoman Empire after a deal was made through Lawrence of Arabia, between Sharif Hussein of Mecca and Sir Henry McMahon of the British Empire where the British effectively promised Sharif Hussein an independent Arab state he would rule around the Middle East if he helped them defeat the Ottomans. The Ottomans were defeated and Needless to say, the British did not go through with their end of the deal and Hussein's downfall came quickly after the war with the British supporting Ibn Saud to depose him. This incident cast a long and dark shadow over western Arab relations and became a cautionary tale that Islamists use to warn against working with foreign colonial powers. This colonial era saw colonial powers create new secular states, subdue local identities, and brutally quell different civil and military uprisings for independence and change. It was during this Colonial Era that the State of Israel was created in 1948 on the lands of the British Mandate for Palestine and the expulsion of the Palestinian inhabitants of the land into the neighboring countries, which would become a very thorny issue in the region. During this era both Arab nationalists and Islamists goals intertwined into seeking independence and saving Arabian Middle Eastern culture from forcible change. Over the next half of the 20th century, different independent movements in the new states had effectively gained their

sovereignty and independence whether through political or military action and then came the burning question of "what to do next?"

3.5-1979: The Paradigm Shift

The Post-Colonial era saw the colonial powers slowly pull out of the nations they molded and created in the past century whether by politics or by force or a mix of both. Their legacy was a questionable one, to say the least, as it was characterized on one hand by modernization efforts that occurred due to the advancement of western civilization at the time, but marred with the various atrocities and forms of exploitation and subjugation of the native peoples. This left the Middle Eastern world torn apart with a push for the reclamation of its historical identity characterized with animosity towards the western world and another contrasting push for the acceptance of the colonial legacy and the completion of the modernization process on the lines of an Occidental view of western superiority. Through this massive cultural tug-of-war, Islamic culture struggled to find its place in a world whose values are exported from the west and the world is judged upon that generated a view that Islam is a regressive religion whose followers are no more than "barbaric" fundamentalists that attempt to enforce medieval ideas in a modern world. This would characterize a shift from a western-eastern conflict to an internal civil conflict between conservative Islamists who sought now that they have become independent to regain control of the influence they had lost, and progressive socialist and democratic governments who sought to solidify the new secular identity of the peoples of the Middle East. This would be the third and most recent chapter of the conflict.

This view has only been exasperated by a wave of Islamic fundamentalism that finds its roots in the dying years of Pan-Arabism and this post-colonial east. This reactionary movement was one that was bred out of all the frustration that Islamic majority nations felt after the western world had taken world dominance and the failure of Pan-Arabism to deal with the Arab-Israeli conflict to disastrous results. This was coupled with the brutal crackdown of military regimes in

the Arab states on all Islamist political endeavors most famously in Egypt, Syria, Iraq, Libya, and Algeria which would foster an environment an animosity between the state and the popular Islamic identity that those regimes always sought to quell. Indeed the moment where one would signal the shift towards a modern breed of Islamic fundamentalism is the year of 1979. Four major events across the Islamic world shook it to its core and made it shift towards a new era of renewed conflict.

The signing of the Camp David accords in September of 1978 and the subsequent signing of the peace treaty between Israel and Egypt in March of 1979 marked the effective end of the Egyptian led nationalist struggle towards the Palestinian cause that to this day is of cardinal importance to Muslims all over the world and particularly those in the Middle East. This came as a rude shock to Arab Muslims in particular that saw Egypt as the bulwark in fighting Israel and as the de facto leader of the Arab world. This gave fertile ground to Islamist preachers that long criticized pan Arabism and pan Arabist regimes that had persecuted them to argue that these regimes were ineffective and presented them with the proof they long sought to utilize to turn people away from nationalist thought into a more radically religious direction. Authors such as Sayid Qutub which had previously laid the foundations of this Islamic identity in his infamous book "Ma'alim Fi Al Tarik" (Landmarks along the Path) emphasized the importance of true Islamic Revival, and that Islam was more than a religion but the only nationality worth fighting for. Qutub's ideas would become largely influential in this Islamic current that vehemently opposed western intervention and secular states, and his popularity and status grew especially when he was executed by the Pan-Arabist regime of Jamal Abdul Nasser in 1961, endearing him as a martyr "along the path" to various Islamist groups. Qutub's preachings were blamed for the attempted assassination of then Egyptian President Jamal Abdulnasser which lead to Qutub's

downfall, and the assassination President Anwar Al Sadat in 1980 at the hands of Khaled Al Islambouli, which many opposed to the Camp David Accords would view as justice against those who viewed Al Sadat as a tyrant, and traitor and would pave the way to the idea that such radical schools of thought can combat this perceived tyranny.

It was also in 1979 that the Iranian Revolution led by Ayatollah Khomeini would take power in Iran, and uproot the Western-backed Shah in one of the first examples of the effectiveness of fundamentalist ideas in combating western influence in Islamic countries. The Iranian revolution would also see the rise of a true Shia branch of Islam power with its own agenda of dominance. This would be a precursor to a new schism in the Islamic world that would divide it around lines not too different from those of the Protestant Reformation in Europe in the 16th century and the subsequent wars that followed. This movement had equally had an influential Islamic revivalist who would be imprisoned and oppressed by the nationalist secular state, Ali Shariati, who would pass in 1975 in England shortly after his release from an Iranian prison, in mysterious circumstances. Shariati like Qutub would not live to see the monumental legacy of his work.

That close of this pivotal year saw an equally pivotal event in the Middle East that occurred in the months of November and December in Mecca where a fundamentalist Salafist cleric by the name of Juhayman Al Otaibi would seize the grand mosque in Mecca and declare the prophesized appearance of the "Imam Al Mahdi" an important end of times figure in Islamic ideology. This event seriously risked the legitimacy of the Al Saud ruling family and shook the Kingdom which was in the process of modernization to its very core. The Al Saud family would eventually be successful in containing the situation after prolonged weeks but the Kingdom would never be the same again. It would recluse upon itself and turn to stricter enforcement of

Islamic Sharia law in an attempt to quell any challenges to its legitimacy over the two holiest sites of Islam: Mecca and Medina. Saudi Arabia as well had stepped up with a mix of religious leverage and immense oil wealth, to the leadership of the Arab world after its long-standing rival, Egypt had made peace with Israel. 1979 would prove a tumultuous and pivotal year that shifted the nature of conflict from an eastern-western divide to a one concerned about the identity of the whole region. The Sunni-Shiite divide would provide fertile ground for increased foreign intervention (The Gulf Wars, The Libyan Civil War, The Syrian Uprising) in the region which would generate further conflicts and create the precursors for more to come.

The fourth event of 1979 would be the Soviet Invasion of Afghanistan which was received across the Islamic world as a blatant military incursion into an Islamic country already culturally influenced by the Soviet ideology. Calls for a global jihad funded by the Gulf countries, and armed by the United States would see an influx of jihadists and fundamentalists from across the Islamic world pour into Afghanistan, get radicalized, train, and fight the Soviets eventually driving them out of the country in 1989. This was a key point in the history of the Islamic world as it showcased that religious fundamentalist ideology was able to produce a victory against a superpower, at a time when its counter-ideology of Pan-Arabism had failed to. This endeared the idea of jihadists to many Muslims around the world and would see the rise of similar efforts in Chechnya which would once again be able to beat back the Russian army from Grozny in 1994, and the rise of Hezbollah as a fundamentalist Shia based Islamic group that would secure the Israeli withdrawal from Southern Lebanon in 2000. These successes in fighting "western imperialism" would, in turn, radicalize many and gather support for these ideas, and lead to the disastrous events that were the 9/11 attacks that forever changed the fabric of easternwestern relations, and the subsequent invasions by the US of Afghanistan and Iraq in 2001, and

2003 whose regional fires have not died out to this day. All these events lead to an even greater rift between western and Middle Eastern culture that polarized western perceptions to Islamic culture even further and made all relations to it a questionable issue.

4.1-Peace Building Architectural Interventions: Groundwork of a Theory

This thorough study of the roots of modern conflict in the Middle East and its root in Orientalism as a generator of cultural conflict makes a powerful case that conflict is far from alien to the area and will have to endure a tumultuous future as long as there is no defining solution to the various factors in play. Several key points can be deduced that compel the case for conflict conscious architectural

- Middle Eastern conflicts are largely cultural wars due to the presence and intervention of a large number of diverse groups with varying agendas
- Imperialistic interventions in the region created the foundation for many of the modern conflicts in the MENA region by destabilizing regions and empowering some minorities through both political, economic or military means
- Dividing up the complicated region on an unclear and biased nationalistic and ethnic
 basis, while ignoring some major ethnic groups created animosity between various ethnic
 and self-described ethnic groups and other groups that could breed conflict (Arab-KurdPersian-Turkmen etc.) which created a problem of national expression
- The presence of autocratic regimes that favor one group over another and have little regard to human rights of any kind impedes a Middle Eastern renaissance
- Fundamentalism as a byproduct of this divide has fertile grounds to grow even if it remains dormant in many areas and flashpoints

Taking into consideration the extensive analysis of the roots of conflict in the Middle

East and their projected longevity these conclusions can be drawn:

- Cities in the Middle East are undergoing constant cycles of destruction and rebuilding with no changes that could deter future conflicts on both an urban or architectural level
- Colonial architectural intervention was culturally insensitive, suppressed the common vernacular and replaced it with either hybridized or imported architectural typologies
- Orientalist views that govern the eastern western relationship would pave the way to an
 Occidental superiority that would be an impediment for the revival of local Middle
 Eastern and Islamic architecture
- A new typology of architecture should emerge that seeks to react to the complicated issues that face modern Middle Eastern societies
- Cultural expression through architecture and sustainable design thinking should govern the way the peacebuilding architectural intervention in the Middle East is executed

These findings allow us to envision a three-pronged approach to building peace through the built environment. This approach would be divided into three scales of intervention characterized by a micro-meso-macro intervention that would help "decentralize power".

4.2- Architecture and Colonialism: A Crisis of Identity

Architecture was a prominent battleground of a larger cultural conflict that occurred during the age of Colonialism in the Middle East. Launching from a selective twisted Orientalist view of the Middle East, one of the darkest chapters of the colonial era the region saw a systematic suppression of the Arab and Islamic identity of the peoples of the Middle East. The colonial powers would create new nationalistic identities for the respective regions they controlled. The enforcement of this new seemingly secular identity would sometimes be brutal such as the French government outlawing the teaching of Arabic in Algeria on grounds that it was not considered an "official language". This event is chronicled in a thesis published at the University of Mississippi where author Aziz Amir states that "The teaching of Arabic pedagogy and Arabic literature was officially banned starting from 1904, and in 1938, French colonial authorities introduced a law decreeing Arabic a foreign language and completely prohibited its usage in official government documents." (Aziz, 2015) In another account stated in a book titled "Language Conflict in Algeria: From Colonialism to Post Independence" Algerian author Mohamed Benrabah chronicles a chapter in this sustained effort for cultural suppression and change where he states that in "1897, the French Minister of Education acknowledged the ongoing effort to conquer Algeria 'by the School', in order to assert French language over all other 'local idioms', to 'replace ignorance and fanatical prejudices', and in the process to convince Muslims that France was superior." (Benrabah, 2013). Almost half a century later Benrabah mentions an event in 1961 where the Algerian essayist Malek Haddad, addressing a crowd in Beirut would apologize for his weak proficiency of the Arabic language stating that "The French language is my exile" (Benrabah, 2013). This indicates the effectiveness and brutality that the colonial regime would exercise its authority and systematic identity

suppression, as almost 400 years of Ottoman rule could not effectively change the linguistic landscape of Algeria as effectively as a mere half a century of French rule.

The Levant would fare slightly better than North Africa, as the mandate model would be applied instead of the more direct colonization model. While the era of the mandate in the Levant saw some much-needed reforms and modernizations on the political and social fronts, the European version of reform and modernization was not one that seeks to help the people of the region rise from an almost two-century-old stagnation in the Ottoman Empire to modern progressive nations, but merely hammer and shape the region into a quasi-European model with cultural and religious subservience to the west. The western powers would view it as a matter of political expediency fueled by the aforementioned orientalist view which disregarded both the culture and the people of the Middle East.

This forced move towards secularization would reach all manners of life including, sartorial, educational and the creation of new architectural typologies. These typologies would spring up across the middle east such as the French Mandate typology most famously found in downtown Beirut, and the Neo-Mamluke typology of the Alawid dynasty of Egypt which would see a hybridization between elements of traditional Mamluke architecture and baroque European style elements to create an architecture unique to Egypt most famously now found on the coastal city of Alexandria. French colonial architecture has equally been influential in changing the aesthetics of Middle Eastern cities such as those found in Tunisia and Algeria who have acquired a distinctly European style. The North African colonies saw a push by the colonial powers to create tourism for Europeans to come to view the newly acquired wonders of the east. This novelty like manner of treatment of the local architecture saw it transform from a culturally and

environmentally responsive architecture to one that is aesthetic and exotic losing its values in the process.

Colonizers had realized the importance of architecture as a tool for cultural suppression. A dedicated effort to alter the face of the urban environment in the region was undertaken, and many aspects of Middle Eastern architecture were appropriated. Dr. Lobna Sherif a professor of architecture at University of Ain Shams in Egypt chronicles these practices in a paper titled "Architecture as a System of Appropriation: Colonization in Egypt" where Sherif indicates the dynamic of import and export of architectural typologies and elements by stating that "European architects practicing in the colonies employed the classical European repertoire in their buildings. Both trends, of importation and exportation in urban planning and architecture, are within the same paradigm and could be construed as tools of appropriation and domination, and as symbols of power and control." (Sherif, 2002). This would raise the idea that the architectural interventions undertaken by the European powers were not simply based on some altruistic tendency to import what was best, but to import what was different as an attempt to break the population's relation to its prevalent culture or else the exportation would not have occurred.



Figure 12 Ancient Egyptian figureheads in Rue Du Caire, Paris (Cooper, 2018)

One important aspect of architecture is its longevity and permanence and thus it would make for an exceptionally important tool for a colonizer. In comparison to all other forms of art, its permanent presence in the lives of all makes it a powerful symbol to those around it. The colonizers would seek to build and utilize the buildings they introduced as symbols of superiority over the local populations, and leave them as reminders even after they are long gone.

Researcher at ETH Zurich Anna P. Gawlikowska gives testament to this role of architecture in the greater colonial agenda as she states in a paper titled "Architecture as an Indicator of Territorial Conflicts, Globalisation and Unification" that "An invader's frequent practice, aimed at demonstrating their superiority and introducing new spatial hierarchy, was to build architectural dominants and landmarks. These practices led to the creation of a new hierarchy, frequently neglecting an existing culture and authorities." (Gawlikowska, 2010). The author stresses the fact that the importation of the colonizer's architecture was two-faceted and sought not only to symbolize domination but to effectively cut the local populace's roots with its history

and identity. (Gawlikowska, 2010) While the fact that colonialism seeks to suppress local identities is evident by now, the prospect that if architecture played a role in the cultural suppression of different peoples can it then naturally have a role in the revival of this identity and its expression?

These views of occidental superiority would after decades of colonization have a profound effect on both the local population who was given the path to progress only through the path of western education and lifestyles and the actual European populace and intellectuals who would embrace this dynamic. One particularly interesting figure that would embody how western architectural perception informed colonial Middle Eastern architecture is the pioneer and father of modern architecture, Le Corbusier. On a planning level, Le Corbusier's famous plan for Algiers which involved superimposed highways and large concrete buildings is a blatant example of the complete cultural insensitivity involved in western architectural thought towards Middle Eastern built environments. As a figure, Le Corbusier was a revolutionary in both architecture and politics and was an adherent of the movement of "syndicalism" which opposed colonization being anti-capitalist and inspired by communism.



Figure 13 1933 Rendering of Algiers as envisioned in Plan Obus by Le Corbusier (Ackley, 2006)

In her book "Urban Forms and Colonial Confrontations: Algiers under French Rule" author Zeyneb Celik draws a portrait of this confused Corbusier who's western driven orientalist views would clash with his political views by stating that "The last fifty years of European colonization abolished without any regrets the natural richness and petrified the new city into a desert with its crowded houses leaning onto noisy streets." Like the cities of Europe and America, Algiers had sickened, for it had been shorn of its poetry." and goes on to paint a different Corbusier saying that "he expressed his admiration for early colonial urbanism: "The military rulers of the conquest knew how to make beautiful city plans. They knew how to urbanize." (Çelik, 1997) While Le Corbusier's vision for Algiers was his attempt in breaking the mold of the official plan placed by architects Henri Prost, René Danger, and Maurice Rotival, Celik indicates that his attempt disregarded any cultural sensibilities but his own egocentric

vision for the future "Le Corbusier's 1932 Obus A plan (the word obus being a reference to the trajectory of an exploding shell) ignored the existing city by and large and superimposed a new system (Çelik, 1997). Le Corbusier thus becomes an architect who tied progress to occidental ideas even when he had realized the richness of the local and seemingly lamented its loss, and that perhaps is a testament to how the European intellectual would view western ideas as superior rather than different.

The issue that brands of architecture are imported ideas that the colonizers brought with them fails to resonate particularly well with the inhabitants in areas other than aesthetics. The social, cultural, economic, and political contexts are ones most ignored with buildings of these typologies which would present a lesser belonging to the space and built environment. This lessened sense of belonging is a major aspect that must be taken into account when rebuilding processes must be undertaken, as a driver to increase the shared sense of communal and identity link to the built environment which in turn would heighten the individual efforts to preserve it and further its development. Buildings are complicated objects that can instill people with various sentiments the most important being a sense of local pride, and arguably the effects of this more psychological aspect to architecture can be an effective manner in defining Middle Eastern architecture as an architecture of the people, not the colonizer. The argument for the creation of context-sensitive buildings as a method of combatting conflict is strengthened in the fact that these buildings would become the symbols of the finest architectural output of the nation rather than foreign imitating buildings, which would help combat the idea of Occidentalism and western cultural superiority over eastern culture a key culprit in modern political discourse and conflict in the region.



Figure 14 Examples of different Colonial Architectural Influences (from the right: Downtown Beirut Lebanon, Tunis Tunisia, Alexandria Egypt

4.3-Cultural Wars: Battle for Space

While architecture has indeed remained mostly passive towards immediate conflict, postconflict architecture is a subject studied heavily by planners and architects. The question of how to approach the reconstruction of a war zone is a particularly complex and challenging endeavor. The new form of the built environment, the demographic changes, and most importantly how to rectify the problems of the past are some of the main challenges faced in the decision-making process. War as tragic as it may be, presents at its close a unique effort to deal with various urban and built environment related problems like no other. The notion of post-conflict architecture has been particularly an area of interest for architectural theorists most notably in the second half of the 20th century. Following the utter destruction that occurred during World War II and the advent of Le Corbusier's revolutionary ideas about housing, the rebuilding process in many parts of the world, especially in Soviet-controlled zones, was influenced by socialist and communist ideas. These ideas were concerned with the rapid rebuilding of these cities without proper urban planning. In one of the most intricately studied cases of this rapid urbanism in post-war conflict zones, urbanist Kai Vöckler describes in his book "Prishtina is Everywhere", the almost whimsical and chaotic manner of how reconstruction in Prishtina, Kosovo was undertaken after the Yugoslavian war in the 90's "Frequently, the decisions are made by the subcontractors, since they have the most experience. I call this "Last-Minute-Inspiration planning." The roof is built when the money runs out." (Vöckler, 2008) The author goes on to describe how architectural decisions were driven by the whims and envy of the residents rather than a regulated state effort that would help reshape the urban structure and fabric positively (Vöckler, 2008). This shines a light on another side effect of conflict, unregulated construction and building occupation, which can bear disastrous results and emerges as yet another layer in the ever complex landscape of

Post-Conflict architecture. Imbibing the lessons from case studies such as those aforementioned, dealing with the built environment in complex contexts becomes a very particular and specialized affair, for the measure of architecture's success ultimately is the degree of responsiveness it has to its context. Launching from that idea, and the notions established in this paper about Orientalism and Occidentalism argue strongly for architecture to respond and take a role in helping define a communal identity that is unique and originates from the people, to help build cultural bridges and combat festering ideas of imperialism that are still prominent today.

Conflicts that don't involve the great powers such as those in the Middle East almost exclusively always get backing from those powers for conflicting sides and generally end with a political solution that does not define a clear victor. While the act of stopping hostilities and stopping the annihilation of one side is a noble one, if the process thereafter is not followed with a political and social reconciliation program, the weeds of conflict might be removed but the seeds would still be ingrained in the soil waiting for apt nourishment to resurface again. This is particularly evident in conflicts that recur such as the Shiite-Sunni divide in Iraq, The northern and southern Yemen conflicts, the North and South Sudan conflict, Syrian sectarian tensions such as the 1982 Hama Massacre and the 2011 Civil war, Sectarian tensions in Lebanon and many others. This would emphasize the fact that while the political and social process fails, the architectural process has a duty to step in and aid in averting conflict or dealing with it. In the introduction to her book "The Battle for Home: The Vision of a Young Architect in Syria" Syrian architect Marwa Al Sabouni attempts to study how the urban structure and demographic fabric of her hometown of Homs, Syria and answer the question if it had actually exasperated the division between the various groups in the city and helped degenerate the peace into a civil war. Homs is generally known as the "capital of the Syrian revolution" and Sabouni states that the built

environment is "not irrelevant to that question" (Al-Sabouni, 2015) Sabouni raises an interesting notion in stating that "architecture offers a mirror to a community and in that mirror we can see what is wrong and also find hints on how to put it right" (Al-Sabouni, 2015) Urban spaces such as Palestinian and Syrian refugee camps, and various different slums around the Levant have some of the worst living conditions for humans on the planet and these areas do not help quell future fires, but prove a breeding ground for more polarized opinions and views that could resort to conflict to fight a certain relative injustice. Had the urban environment of these places been ones that provided the bare necessities of life, the living space, and the freedom of cultural expression there would have been a lessened susceptibility to conflict in such areas. Here we would hypothesize that an architecture that is involved in the socio-political and economic zeitgeist of the people is one that can play an active role in the betterment of their lives particularly those in conflict-prone areas and act as a buffer towards their moderation.

4.4-Urban District Redevelopment: Meso Scale

When someone in the western world imagines a Middle Eastern city there is a flurry of images that come to mind which would most likely have been viewed in a movie. Hollywood usually has two backdrops for Middle Eastern settings, one usually made for action movies and involves narrow dilapidated streets and dusty chases with insurgents such as those seen in shows like Homeland or movies like Spy Game, or a contrasting one that is the fetishized portrait of the exotic Middle Eastern cities such as those seen in "From Russia With Love" and "Mission Impossible 4" with their fancy hotels and lavish parties. Hollywood as well has certain iconic cues it would utilize to announce a Middle Eastern setting as the camera pans to a palette of light brown and dust, to the backdrop of mosque minarets calling for prayer, spiraled domes, and Islamic arabesque motifs adorning walls. Even fictitious locations in movies such as Star Wars has its share of this contrasting imagery where George Lucas imagines two planets based on Middle Eastern cities that do not escape the Hollywood tropes. The first is seen in the Original Trilogy called Tatooine which was based on the city of Matmata in Tunisia, and featured small desert homes, bandits and depicted it as a place for smugglers and thieves.



Figure 15 Tatooine as imagined in Star Wars ("Tatooine | StarWars.com," 2019)

Contrastingly in the Prequel trilogy Lucas takes us to the planet "Naboo" and its capital city of Theed based on the Moorish city of Seville in Spain, and showed what many inhabitants in the Middle East would consider an idyllic vision of their cities with large Andalusian style gardens and ponds reflecting beautiful architecture in large open spaces. These images are supremely important and raise very important questions of what compromises Middle Eastern architectural identity and if it is being adequately expressed? Certainly one can find frames to capture both these images, but with the aforementioned efforts of cultural subjugation, a massive increase in population, and globalization it is a reality that more places in the Middle East look like Tatooine than Naboo. This further raises the question of how would we be able to make more Naboos out of the multitude of Tatooines? What would the ramifications of such an attempt be on a socio-economic level?



Figure 16 Naboo as Imagined in Star Wars ("Naboo | StarWars.com," 2019)

This calls for an assessment for contemporary architecture in the Middle East which has been defined by concrete buildings with barely any character, with abysmal thermal performance offset by heavy use of mechanical HVAC systems due to little or no use of insulation. In an article entitled "The Contemporary Built Environment in the Arab Middle East" Dr. Mohamad Al Asad a Jordanian architect and professor thoroughly discusses the realities of modern architecture in the Middle East and summarizes it as identity being nonexistent. (Al-Asad, 2008) Asad indicates that since the 1990's there has been a larger emphasis on urban development instead of the more microscale architecture emphasis prevalent before. One such seminally important project would be the Beirut Central District which was intriguingly a post-conflict reconstruction process and became a model in the region for other similar projects. Asad acknowledges the socioeconomic controversy surrounding the project but sees it as done in the highest architectural and urban standard. (Al-Asad, 2008) The CBD remains a landmark project in the Middle East as it was the first example of "Urban District" provided an astounding leap into the highest standards of architectural and urban application and is a showcase for what the region could become if similar projects would occur.



Figure 17 Destroyed view of downtown Beirut at the End of the Lebanese Civil War and its Reconstruction (Massena, 2018)

The CBD is however as Asad mentioned controversial from a socioeconomic perspective. Arch. Rita Chedid at the Academie Libanaise des Beaux-Arts (ALBA) of the Zokak Al Blat neighborhood in Beirut, Lebanon, the study indicated that sporadic growth that occurred in the area during the war period of 1975-1990, This small-scale example indicates how lawlessness creates various socio-urban problems in these zones and thus requires meticulous negotiation and immense financial power to solve, thus raising the need to avert and pre-empt such crises. Another dangerous outcome of conflict that hugely affects post-conflict architecture and peacebuilding architecture, is the demographic shift that occurs due to various socio-political reasons. The example of Chedid's study of Zokak el-Blat exemplifies this matter as she states "Zokak El-Blat became a symbol of a large-scale upheaval of socio-demographic and sectarian-spatial geographies leading to the emergence of a divided city from the micro-local to the metropolitan scale" (Chedid, 2012) This would indicate that Urban District development is a double-edged sword that has to deal with both upheaving a divided urban space without causing more division in the process.

In a city like Beirut that has very clear division lines between Muslim and Christian neighborhoods, The Beirut CBD is an exemplary example of creating a shared space that has no direct group affiliation and is a place where both cultures amalgamate. The district has a number of renovated and new mosques and churches side by side which helps foster a feeling of shared living, and equality of expression rather than that The problem, however, was that this district was an isolated "Naboo" surrounded by a number of "Tatooines". The level of the architectural and urban standard was so astronomically higher than that from the surrounding neighborhoods that the value of the property rose significantly which lead to a socio-economic division instead of the religious one it succeeded in reducing.



Figure 18 Maronite Cathedral of Saint George beside the Mohamad El Amin Mosque in CBD

This is one of the main criticisms lent to the CBD, as an elitist district that is unrealistically expensive. Dr. Rami Daher a Professor in The University of Jordan states "(That critics)-While affirming its importance as a symbol of Lebanon's emergence from its 15-year civil war, they still considered the project as simply a real estate development where history and heritage are but themes incorporated through Disneyfied pastiche representations" (Daher, 2008) This criticism is supported by the fact that the development was confined to a specific area and separated from other areas by a ring road that's not pedestrian accessible. It is notable however to state that the fact that projected was executed in the first place is by itself was a miraculous due to the extremely complicated landscape of a post-conflict zone for when SOLIDERE, the company involved with the reconstruction of Beirut, needed to start with the rebuilding process of the CBD, it had to pay up to 6000 Refugees "squatting in empty apartments" (Chedid, 2012) to leave so it can initiate its master plan. This as well required large scale political leverage for the various ruling parties in Lebanon to agree to the reconstruction process in the first place.

Rafik el Hariri, businessman turned politician, architect of the Lebanese peace and reconstruction

processes, and the largest shareholder in SOLIDERE, states in an interview with Syrian reporter Omar Amiralay that due to the large scale political opposition to this project and to recuse himself from allegations of personal gains, he diverted all earnings from his stocks in SOLIDERE to charities. (Amiralay, 2000) Due to political differences the debate over the development has taken a political angle furthering indicating the fact that such developments are incredibly tricky to handle, and if they occurred would remain controversial if the development is only confined to a singular space rather than a larger plan of development that would react to the needs of different parts of society.

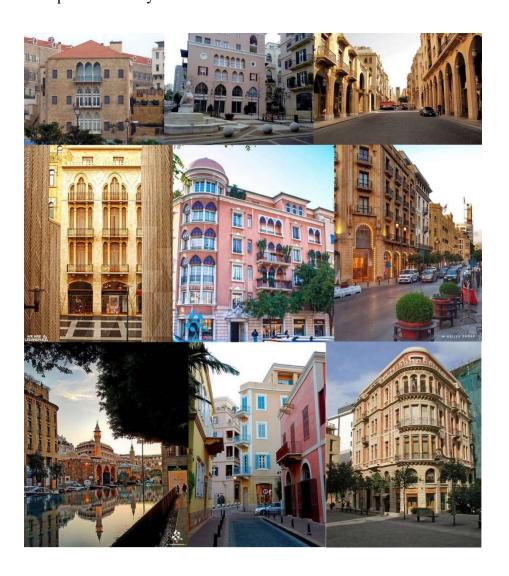


Figure 19 Renovated and newly built buildings with Middle Eastern Architectural Elements in CBD

However it is important to indicate that the problem is not with CBD itself, it is with the surrounding neighborhoods that should be developed with the same standard to drive down the price as the supply equalizes with the immense demand. The answer to socioeconomic problems is equality and equity, yet this should aim to be "positive equality" not "negative equality. It is extremely important to differentiate between both, especially when considering architecture as a generator of peace. Thus, in this case, the push should not be to outright criticize urban developments like the CBD but seek to replicate the process in the neighborhoods that surround it to level the playing field. With this increased quality of life being shared with more people, the feelings of injustice and systematic targeting would be diminished and with it the precursors to social and armed conflict between groups. The CBD, in its success, failures, and criticisms, presents a case study that allows us to link the Mesoscale to the Macroscale of government, and the importance of the role of government and its accessibility in implementing a PBAI.

4.5-Power Dynamics: Macro Scale

Architecture as well plays a pivotal part in the authority-people dynamic and the relationship that governs both. A main hallmark of a Peace Building is founding a transparent relationship between bodies of government and the people as an exercise of trust building and accessibility. The physical space dominates this relationship as architecture is the tangible body of government that the populace would interact with and would thus signify the place and position of the people in relation to the decision-making process. The urban space is perhaps the frontlines between the government and the people, and public squares are the no man's land between them. One would see almost daily protests at the gates of the White House on Pennsylvania Avenue, the Palace of Westminster or the Elysee Palace, which is a vital and important element making the people feel that they can protest and exercise their rights. This is a crucial element in a peace-building process as many conflicts in the Middle East as shown in the previous analysis lies between the government and the populace, and building trust between both is essential for a more transparent democratic process that lends an ability for the populace to vent out without allowing the frustration to escalate into a dangerous conflict.

Architectural interventions are at the heart of defining power dynamics. Governments generally create master plans for cities and mold them according to a large number of factors. However, the way this master plan is executed shifts the relationship between said government and the populace being affected by the development or policies being followed. In some cases seemingly Perhaps there is no more famous an example than the 19th-century renovation of Paris by Baron Haussmann, where Emperor Napoleon III had the famous Parisian avenues enlarged to control the crowds, deploy armies, avoid the barricades and avert the revolutionary justice of the populace. The people's resentment to this plan is mirrored no better than by the famous French

author Emile Zola in his 1872 novel "La Curée" where he states "Paris sliced by strokes of a saber: the veins opened, nourishing one hundred thousand earth movers and stone masons; criss-crossed by admirable strategic routes, placing forts in the heart of the old neighborhoods." (Zola, Borie, & Mitterand, 1999). Although the people's sentiment was divisive, to say the least at the conception of the project, the French capital's avenue's which were the direct result of that intervention have become a much loved icon visited by millions each year and is proof that architecture built with an inherent political goal in its planning, very relevant at the context of the age, is not always spartan and draconian in nature. Haussmann's architectural intervention in Paris is one that is heavily debated among urban planners, but over time has endeared itself to the world as something uniquely French both politically and aesthetically and it could be argued that the forts Zola had mentioned averted an increasingly unpopular Napoleon III in the late 1860's the same fate as his predecessors Charles X, Louis XVIII, and Louis XVI who were deposed by the popular revolutions of 1848, 1830, and 1789 respectively.

The Middle East has no small share of autocratic regimes that are without a doubt the greatest threats towards their own people. Taking a leaf from Haussmann and Napoleon III autocrats and regimes have attempted to modify and subjugate the built environment to strengthen the security of their regime or make it harder for the people to utilize it to protest. Three case studies of the Middle Eastern Capitals would show us the different dynamics between government and the populace and how the physical location of the seats of government would paralleled with the levels of expression allowed by the populace. The first of these would be the Syrian capital of Damascus where the ruling Alawite Al Assad family in Syria moving the presidential palace from the Rabwah neighborhood among the old Sunni dominated streets of Damascus to a massive fortified palace atop Mount Qasioun that cost a billion dollars

(Wainwright, 2013). This played into the Syrian dictator Bashar Al Assad's favor as even when the embers of the Syrian Uprsing had reached Damascus, the fortified palace proved a massive barrier between the rebels and the seat of government and helped the regime survive to this day.



Figure 20 3D Map showing the Syrian Presidential palace atop Mount Qasioun inaccessible from the city center (Google Maps)

The second case study would be that of Cairo, Egypt. Cairo is a gives us a different model of how an autocratic government chose to deal with population dissent. A prominent example of this alteration of the built environment would be that Egypt's Tahrir square, once a bustling square filled with different branches of government and gargantuan ministerial buildings, was the seat of the 2011 Egyptian Arab Spring revolution that gridlocked the government and ousted the reigning President Mohammad Hosni Mubarak from his three decades long presidency. Tahrir square was then heavily monitored and groups of more than three people were disbanded by police. This, however, is not a sustainable solution as the government would not be able to control another revolution without mass casualties.



Figure 21 Egypt's Tahrir Square during the 2011 revolution and during its 5th year anniversary (Tharoor, 2016)

Thus after a period of political turmoil, General Abdulfattah al Sisi had moved the nation's political seat of power into a newly built city in the desert called "The New Administrative Capital" which requires official clearance to visit effectively securing his regime against any form of a popular uprising. This model would see the government electing to move the seat of power an entirely new area, where it would selectively allow admittance to certain people and control who gets to live there under a controlled environment. This would elongate the regimes hold on the country significantly and make it nigh impossible for it to fall democratically, and would steer the other urban areas into a possible rebellion if dissent grows. The new capital as well grasps the idea of international architecture, and its design does not

borrow from the local vernacular which would in effect create a city that would not reflect the populace's heritage or history and is simply a large scale globalist development devoid of any peace-building value.



Figure 22 Cairo's New Administrative Capital designed by SOM (Clinch, 2015)

Lebanon is unique in the Middle East in the sense that due to its system is divided three-way. The Grand Serail in Beirut Lebanon which is the official residence of the Prime Minister, which is effectively the most powerful political figure in Lebanon. The Grand Serail is located in the heart of Downtown Beirut, and is easily accessible in the city, and has in turn seen its fair share of protests at its gate at Riyad El Soloh square, most notably those of the "You Stink" movement in 2015-2016 at which shook the political scene to the core before faltering away. Close by in Nejmeh Square lies the Lebanese parliament, this square and the entire avenue that would lead to it saw it closed down in a period of political turmoil only to be seen it open up again in late 2018. Across from that lies the Martyr's square an iconic location that has seen two

of the largest protests that occurred in Lebanon in the year 2005 (March 14, and March 8 protests) and saw a number of largely notable displays of democratic expression which indicates the power of this government-population proximity factor essential in fostering a relationship of trust or accountability that is needed to give the populace the constant feel of control.



Figure 23 Downtown Beirut Area containing two Major Seats of Power: The Grand Serail, and the Parliament (Google Maps)

Contrastingly the moving of the presidential palace from the Qintari Palace in Beirut to the Baabda Palace in Mount Lebanon is one that would be similar to that of the Syrian model. This move is one embroiled in symbolism as moving the seat of the Maronite President from the Muslim dominated West Beirut, to the Christian dominated Mount Lebanon at a time of rising tensions between the various sects in 1969 would as well symbolize a certain isolationism that the Maronites were moving towards which would profess more clearly during the civil war that would erupt 6 years later in 1975. It as well can be interpreted as a show of superiority as the

symbolism of having Lebanon ruled from Mount Lebanon rather than the more cosmopolitan Beirut hearkens back to the Maronite idea that Mount Lebanon is the heart of Lebanon.

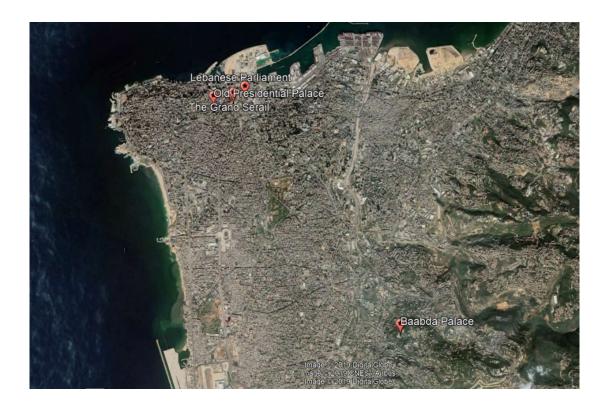


Figure 24 Location of the Centers of Power in Beirut (Google Maps)

This can only strengthen the idea that the built environment has a huge effect on how conflict plays out and its outbreak. Countless other examples exist of this "reactive architecture" and its aftermath, and it makes it clear that when applied on a small scale or urban level it can hugely affect the lives and futures of those involved and thus should be seriously considered when planning or building in regions prone to conflict as a method for conflict diffusion and prevention. The idea of the built environment mirroring the social dynamics is a pivotal one that can be an indicator of future conflicts much in the same way as the presence of ghettos and wealthy districts indicate social injustice which would either be remedied or explode one day. One could argue that the architecture is a product of the first, and not the other way around, as in the architecture being a cause rather an effect, however when dealing with a post-conflict zone,

the reconstruction process presents that golden opportunity to diffuse these social and cultural effects on architecture and attempt to remedy them on a large scale and therefore this newly planned and built urban environment can help alleviate many of the problems that exasperated the conflict in the first place.

5.1-Sustainability: The Path to Equity and Survival

This section addresses the other half of the proposed elements of Peace Building Architecture, Sustainability. Sustainable Design and Thinking, is a major pillar that is required when building peace. Unlike cultural architectural expression, sustainability not only works to avert armed conflict but minimize casualties and suffering if conflict occurs. Aggressors would seek to limit or cut off resources to certain groups, or during actual warfare target lifeline buildings such as food markets, and water and electrical utilities which would prove disastrous. The nexus of food-water-electricity is a sacred one in peacebuilding architecture and without an established resource equity that would distribute these to different groups, conflict finds a breeding ground. Through providing resource equity to various groups the sense of injustice that some social ethnic or religious groups would feel could be averted, and this, in turn, provides the extra layer resilience to the inhabitants of the built environment during armed conflict, where architects can ensure that the built environment they designed is working to augment the survival of its inhabitants. This double role make sustainability a major goal that must be implemented in this peacebuilding architectural intervention and an essential part of diffusing conflict, and containing it, however it faces some challenges in implementation which this section would also address alongside attempting to provide the rationale that sustainable thinking is built on surviving with fewer resources, would naturally find its ideal place currently in the world in places of social, cultural, and armed conflict.

Sustainability is an idea that has infiltrated the zeitgeist of humanity with the advent of fossil fuel depletion, and climate change. Landmark documentaries headed by star figures such as Al Gore's "An Inconvenient Truth" and Leonardo Di Caprio's "Before the Flood" projected imagery of the harrowing effects of environmental degradation caused by different practices

industries and people utilize. Plastics, coconut oil plantations, fossil fuels, and the transportation sector, are all examples that are generally cited and targeted when the topic of sustainability is mentioned, however, architecture and the building sector are actually the largest single culprits of energy intake in the entire energy sector. According to the US Energy Information Administration (EIA), residential and commercial buildings accounted for 39% (~38 quadrillion British thermal units) of energy use for the year 2017 in the United States. (EIA, 2018) This metric while one not directly related to the Middle East is a verifiable one that exemplifies the immensity of energy demand and load that buildings require to operate.

Building rating systems such as LEED and BREAM aim to rate buildings for their energy consumption in all its form and while they are becoming more and more mainstream they still are mainly optional and the rating systems are more quantitative than qualitative by nature.

LEED, for example, gives points in accordance to what systems are installed or utilized but the problem at hand lies in the fact that energy is a quantifiable metric but architecture itself is more of a subjective field that's experiential and perceivable and this defines the schism between both. This then requires a team of highly specialized consultants that can help effectively tackle the question of sustainability in buildings and effectively intermarry the quantifiable metrics of energy and safety with the qualitative aspects of sustainability is required as a step toward larger energy sustainability and equity policies.

One particular concept of interest that should be aimed for is that of Zero Energy buildings. These buildings are defined by the "Whole Building Design Guide" which is a program of National Institute of Building Sciences as a building "which produces as much energy as it uses over the course of a year" (Winter, 2016) Such buildings would be vital in areas where no electricity supply is available or power rationing and cuts are common. This

individualized building thinking can play a role in making limiting the availability of energy to a building or shelter a much harder task to any aggressor. In Gaza for example in 2018 the electricity supply was cut down to 4 hours per day (Khoury, 2018) which would prove disastrous especially for hospital facilities and processes like food refrigeration and preservation. This, in turn, would severely damage any potential peace process for it would only proliferate a larger feeling of injustice among the populace that would fuel their will to resolve their problems with immediate conflict. Thus the question of attempting to individualize and limit energy use in buildings is one that has to be taken seriously as food supply, electrical and water facilities are high-value targets during conflict and aiming as close as possible to design zero energy buildings would help decrease the effectiveness of infrastructure targeting as a form of subjugation of a particular group. Sustainability, therefore, does not only concern itself with a preemptive peacebuilding process but equally would aid during conflict in the survival of the inhabitants. The idea that sustainability is at the heart of survival tactics is one that is logical and almost obvious, then the question is why has it not implemented into the greater discourse about peace building architecture in potential conflict zones.

5.2-Surviving Conflict: Micro Scale

The main goal of Peace Building Architecture is to foster a built environment that breaks down social and economic barriers between various groups susceptible to conflict. However in some cases, armed conflict is inevitable due to a multitude of reasons, and in these cases, Sustainable Design would prove its extreme worth in aiding in the survival of inhabitants. While this is purely justified on a humanitarian basis, lessening the casualties of any conflict would aid in the peace process that aims to either stop the conflict or reconcile the warring groups.

Armed conflict in urban areas is a very tragic affair. The population density coupled with the suffering of inhabitants who have to survive under abysmal conditions for years makes the role of the built environment even more intrinsically connected to the chances of these people's survival. The Wars of the 20th century and the early 21st had displayed in full effect the immense power of war machines to destroy with the ever innovative ways that armies and terrorists employ to maximize casualties and destruction. Far more complex and effective traditional munitions amalgamated with the utilization of the multiple aspects of science to perfect the art of war. But what these conflicts also proved was the nigh complete failure of architecture to provide adequate shelter and sustenance to civilians that are not involved in the fighting. There was only so much that clay brick and mortar could withstand before the bombs and projectiles grew too powerful to effectively shield against. The idea that the social sensibilities and opposition to war and warfare around the world have grown from the old imperialistic ideas is true, and has made the outbreak of conflict a more costly matter but it has been met with an ever more complex evolution of methods of warfare that make it a much deadlier affair when it would occur.



Figure 25 Israeli Air force Strike in Gaza showing the immense level of destruction (RTE, 2014)

However, it is a fallacy to assume that casualties and suffering in zones of conflict are those strictly affected by direct attacks which are very difficult to stop. A city under a constricting prolonged siege can be viewed as a closed thermodynamic system, in that it consumes itself after a period of time and becomes a desolate shell of its former self. Starvation, dehydration, water pollution, intense climatic conditions all have adverse effects on civilians particularly those in besieged areas. The tactics employed in the Syrian Civil War for example by the Syrian Regime forces in particular display a barbarity inspired by medieval age warfare. The general strategy is to besiege a city or town and then pummel it with various munitions many which according to the "Landmine and Cluster Munitions Monitor" are internationally banned such as cluster bombs and fuel-air bombs in the guise of "barrel bombs" (the monitor.org, 2018). The siege could go on for years and food, fuel, and medical aid would be cut off from the inhabitants that could not escape. According to one account published in "The Guardian" Syrian army defector who was involved in such a siege in the Damascus suburb of Daraya as an opposition fighter reported that "Daraya was placed under tight siege in November 2012. Just

like the Ghouta offensive, food stocks dwindled. Naqrash describes how civilians picked grass from sidewalk cracks to pad out their thin watery stems. He's haunted by memories of children wasting away from starvation." (Al-Arian, 2018) The siege of Daraya would go on for 4 years with the rebels finally surrendering in 2016 after making a pact with the government forces to evacuate to Idlib a rebel-held Northern Province. This strategy would be employed time and time again by sides fighting in the war causing untold suffering and casualties to those that had to endure these prolonged sieges.



Figure 26 Drone Image of Tariq Al-Bab in Aleppo (TRT World and Agencies, 2016)

Another facet of these strategies would be that electricity would be almost nonexistent. Electricity supply to besieged areas is quickly cut when it is first encircled as a means of what Amnesty International calls the "Surrender or starve" strategy. (Shaheen & Wintour, 2017) This poses various risks especially with the loss of refrigeration of food, as well as the loss of electric heating and cooling systems which could prove devastating as the seasons pass. According to one account published in the Guardian during the siege of Eastern Ghouta by a survivor "Fridges don't exist as part of our life. Actually, anything that needs electricity is not used. Thank God we don't have cholera yet." (Shaheen & Wintour, 2017)

Fuel for heating and local electricity generation as well would be cut off except for what smugglers could smuggle into the city, and would be at a much higher price. Syrians in response have as well devised ingenious ways to deal with fuel shortages by extracting fuel from plastics rather than oil. The process involves melting the plastic which would produce a gas that would then be piped and the cooled which would produce a yellow liquid that could be used as an alternative fuel. ("Besieged Aleppo turns to dangerous 'alternative' fuels," 2016) This process is not sustainable however as the plastics would eventually be used up as well as the obvious safety and environmental hazards extraction and burning of diesel and plastics pose.

Other ingenious ways Syrians devised for survival were using an improvised solar oven by placing mirrors on a satellite dish and focusing sunlight through small mirrors on a hanging pot of metal, a system similar to solar towers. In the besieged town of Douma, residents used rudimentary solar panels to power a water pump, and restore the water supply for the residents. (Mohammad, 2017) Another account from Damascus by journalist Youmna Al Dimasqhi indicates the use of rudimentary green roof gardens for planting food. Dimashqi reports the account of an inhabitant named Hamid that implemented this system on his rooftop "At the beginning, I put 60 bags of dirt in a 15 square meter (160 sq ft) area," said Hamid, "but when the blockade tightened, even more, I expanded the area to 30 square meters (320 sq ft). I planted things like arugula, radishes, parsley, cilantro, and lettuce. That's how I was able to avoid the crazy prices of the market" (Al-Dimashqi, 2015) This account is a cogent example of reactive sustainable survival tactics utilized that if implemented on a larger scale could effectively diffuse the effectiveness of starvation tactics while providing a green roof cooling effect and urban farming which are both ideas being heavily explored by architectural researchers.

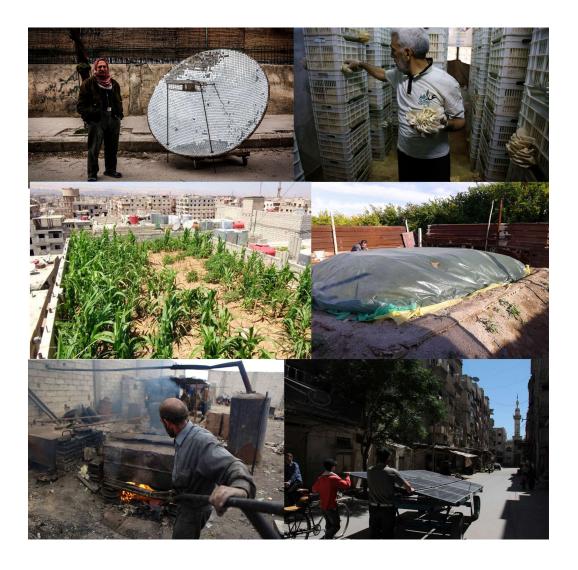


Figure 27 A myriad of rudimentary systems applied by people in conflict zones that embody perfect sustainable design thinking

Combining these systems into a framework dubbed "Low Tech Sustainability" that would be applied preemptively would provide the final piece of the puzzle for "Decentralizing Power" as it would give autonomy to the people through resource equity and sufficiency and therefore prevent the authority's ability to use resources as a tool for political gain and suppression. The systems cover various aspects of sustainability, resource and waste management as indicated by the accounts above, and theoretically would rack up conservatively 53 LEED credits which would make these buildings earn a score of LEED Silver. This is not only proof that sustainability is not necessarily only available to the rich, and not necessarily the

result of highly complicated systems that cost considerable amounts of money, but is readily available from tools easily obtainable as proven by the aforementioned case study.

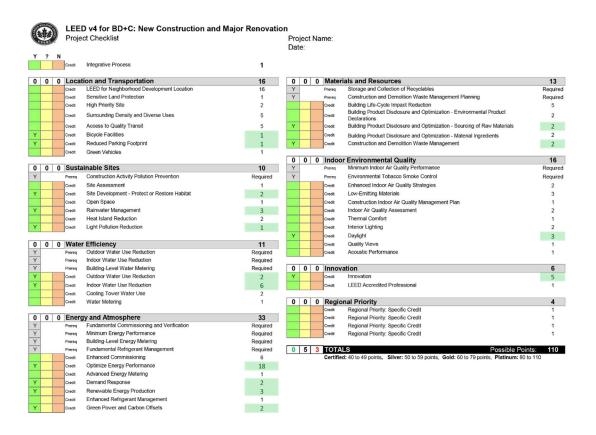


Figure 28 LEED Project Checklist indicates the LEED Silver Score (Author)

The major lesson thus to be imbibed from conflicts of the Middle East is that energy and water in their various forms are often used as a tool of war and siege and that consequently, sustainable design practices have a natural role to play in conflict zones. The horrible experience of how people in the besieged areas of Syria and Gaza were able to survive for such extended periods of time raises the notion of what if the built environment itself "fights back" and was built in a way that would render barbaric practices such as the aforementioned "Surrender or Starve" benign. The idea would be that these practices would deter the effectiveness of such strategies to the point that becomes unviable to those who would consider them effectively changing the rules of the game. Practices of sustainable design such as rooftop urban farming,

off-grid electrical use, passive house cooling, and heating, all examples of low-tech and low-cost sustainable design systems, found their best and most humane implementation in the most unlikely of places and should be heavily incorporated into the reconstruction effort. The question, however, remains of how exactly would these systems be implemented into a functioning ecosystem that would ensure energy equity and urban resilience.

5.3-Urban Jungles: The Nexus of Scales

To translate these rudimentary applications of sustainable building systems into a dedicated architectural intervention, we must synthesize a new way of treating the relationship between cities, buildings and resources. This would see a nexus of the three scales work in tandem to help decentralize power and give autonomy to people. Traditionally cities would be supplied by municipal water systems and electrical utilities through large infrastructure that delivers these resources to every architectural unit or building. For sustainable design thinking to create resilience and equity it must abandon this "macrogrid" thinking, and replace it with a "microgrid" one, that would help inhabitants of different neighborhoods feel that they have control of their neighborhoods rather than feel their living space is out of their direct control. No city, district, neighborhood or home should feel that it is being resource-deprived, and the answer is to empower the people with their own means of resource management. This idea will prove crucial in outlining the way sustainability would seek resource equity and resilience as a means to diffuse conflict or its effectiveness.

Architecture by nature is a complex art that transcends the empirical understanding of the sciences it is involved in. In engineering, we find notions of equilibrium guiding many processes with definitive answers that can be predicted, architecture, or successful architecture at the other hand should present a variable model where it's more than the sum of its parts; a kind of architectural genesis rather than synthesis. This notion is one integral to this idea of architecture in conflict zones, as the building must answer and deal with a plethora of things more complicated than simply the physical attributes of the environment itself. Peace Building architecture is thus a byproduct of an entire integrated assembly rather than simply a layering of elements. Thus architectural and mechanical systems transcend beyond their obvious roles and

become players in this ecology of conflict resolution and survival. Under such a design philosophy sustainability is not layered into the buildings in the guise of its separate systems as is the norm, but the driver behind building a balanced ecology where all the various elements symbiotically work together to create this "jungle".

A natural jungle is the result of the various ecological balances that make it possible as a self-sustaining entity. A jungle is not made out of smaller jungles just as water is not made of smaller "waters", it is the resultant of the entirety of its various elements that have they not worked in tandem together would fail to thrive and thus would die and fade away. With such thinking driving the analogy buildings become the trees in which the smaller natural elements would thrive around and in. This idea of balanced ecology, transcends the mechanisms of dependency for survival and becomes a broader allegory for the idea that it would achieve selfsufficiency, for if we cut down part of the jungle, we would have a smaller jungle, until one tree left, and then the jungle ceases to exist even if all other elements of this ecology still exist in some form or another. This is a testament to the resiliency of the system that is both reliant and independent at the same time. Its reliance on different elements to function, its independence from the same elements across. The Amazonian jungle for example has been dwindling due to deforestation at an average rate of approximately 19,613 km² a year between the years of 1995 and 2015 (Ometto, Aguiar, Centre, & Martinelli, 2014) which is an astoundingly large rate and area when that space is almost twice the size of the Middle Eastern country of Lebanon (10452) km²) yet even with so much depletion we still consider whatever is left of its original state the Amazon jungle, thus still sustaining itself as it stands and not what it was. This perfectly would embody the idea of a city embroiled in conflict in which as certain parts of the urban environment are targeted or inevitably destroyed what is left remains functioning rather than the

entire system collapsing. Only parasites living off those trees would die, and thus we must remove this parasitic nature of dependency on a single building or utility such as an electrical and water utilities for supply and bomb shelters for protection, and rather than make all buildings parasites that live off these centralized buildings, each building becomes a tree in itself, where if it falls it only affects itself.

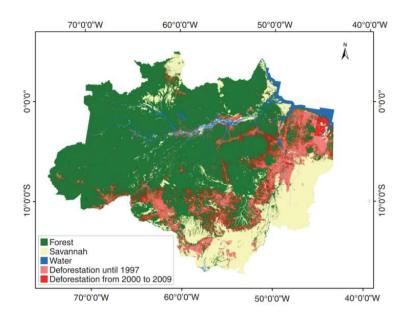


Figure 29 Decrease in the size of the Amazon Jungle over the years (Ometto et al., 2014)

This proves crucial to the championing the idea of a less centralized supply of resources particularly water and electricity, which would rid individual buildings from the centralized supply systems that can easily be manipulated and controlled. Decentralizing grids by replacing them by micro-grids would ensure the sustainability of these resources over the longest time possible and potentially diffuse the weaponization of resource supply grids in both peace and wartime conflict. Long has the term "Concrete Jungles" been used to describe cities, but that term has to evolve to "Urban Jungles" that can provide a case for symbiotic and self-sufficient practices that can aid in conflict architecture.

The grand concept that lies at the heart of this idea is that change starts within the smallest scale, here a self-sufficient tree. As more similar trees exist they congregate to form the urban jungle which is represented on the Meso Scale. This would ensure to a system of elements who's more than the sum of its parts, as this urban jungle, or district would play a role in the expression of the identity of the trees as this would be a jungle for example of Palm or Kapok trees, equally the same with the inhabitants and buildings in our analogy. If people help the jungle proliferate it will grow and expand due to processes embedded within its ecology, however if humans here representing the authority were to deforest the jungle it would not fall in a domino like effect but would isolate the damage to where it is direct and mitigate the collateral and indirect damage to other trees. This system would work from the ground up across the three scales and provide the failsafe against systematic conflict or persecution by the authorities by minimizing the authorities control and influence.

Conflict is naturally a complicated issue that cannot be simply framed with the acts of physical destruction and loss of life. Social and economic injustice between different groups which is a large precursor to many of the conflicts that occur in the Middle East would be achieved through employing such a system of resource management at a decentralized and micro scale, which in turn begins to be one of the products of an architecture larger than the sum of its parts. Power cuts, water deprivation, food supply, medicine supply, urban space and infrastructure are all elements that can be used to marginalize groups and brew future confrontation. Thus urban jungles attempt to create independence for the groups that inhabit these "islands" as even energy justice, sustenance, and equity, pave the way to social and

economic independence which would have a direct effect on the socio-political dynamics of the ruled vs. the ruler.



Figure 30 Photograph indicating how the damage in a jungle would be confined to where the deforestation occurs (Gibbs et al., 2010)

5.4-Sustainable Challenges:

Sustainability is an idea that theoretically presents almost sole benefits on a human, resource and environmental level. However various challenges hinder its practical implementation, and due its vital role in the theorized paradigm of conflict architecture it is imperative to identify these challenges and attempt to create a framework to deal with said challenges and articulate its implementation within the PBAI. The major challenge however lies in the high cost of designing and implementing these sustainable systems which could make the implementation unviable especially when the reconstruction must be made on such a large scale, especially when here it is theorized as a preventive measure for a conflict many would argue in the spirit of optimism could not even occur. However the fact that sustainable practices are still in effect environmentally friendly practices that can offset large amounts of energy and resource use even if conflict doesn't arise for decades makes the case even stronger as implementing such practices on a small scale or a building scale can only do so much, but the reconstruction of conflict zones presents the opportunity to aim for green cities that can play an effective role in climate change mitigation and managing resource waste.

Country	Population million	Population per km²	GDP total USD billion	GDB/cap USD	Electricity use kWh/cap	Indigenous en- ergy resource
Bahrain	1	987	29	35,900	15,570	Gas, Oil
Egypt	78	77	326	4,200	1,300	Gas, coal, hydro
Iran	71	42	872	11,763	1,800	Gas, oil, hydro
Iraq	24	55	102	3,600	1,300	Gas, oil, hydro
Israel	7	290	201	28,245	6,500	Gas
Jordan	5	58	32	5,410	1,440	Nil
Kuwait	3	119	152	42,500	16,800	Gas, oil
Lebanon	4	354	49	12,700	2,800	Nil
Oman	3	13	73	27,900	4,304	Gas, oil
Palestine	4	620	5	1,100	NA	Nil
Qatar	1	69	117	96,275	21,750	Gas, oil
Saudi Arabia	24	12	636	24,936	3,700	Gas, oil
Syria	17	93	99	4,870	1,600	Nil
Turkey	72	91	937	13,450	2,100	Coal, hydro
UAE	5	30	201	40,040	13,700	Gas, oil
Yemen	19	35	61	2,560	174	Nil
Sweden	9	20	385	28,400	15,665	Hydro

Figure 31 Middle Eastern Countries vs. Sweden economic and energy data (SIWI, 2010)

Another challenge lies in the large amount of fossil fuel reserves found in the region, which according to BP is around 48% of the proven reserves in the world (British Petroluem, 2019) and the low cost of electricity generated mostly by fuel and gas sources in comparison to the EU as indicated by Figure 12, an average of 5.3 Cents in the Middle East to the 17.3 of the EU. This would naturally deter the public pressure for more sustainable electricity generation methods and the implementation of the micro grid that is essential for the idea of Conflict architecture. The fact explored earlier of transparency and trust between the government and the populace is key here, as a more empowered populace is one more susceptible to demand change and grasp progressive environmentalist ideas which sustainability lies at the heart of.

Country	Residential (US cents/kWh)	Industrial (US cents/kWh)	Average (US cents/kWh)
Saudi Arabia	1.3	3.2	2.3
Kuwait	0.8	0.4	0.6
Bahrain	0.8	4.4	2.6
Qatar	2.2	1.9	2.0
UAE	5.0	15.0	10.0
Oman	2.6	4.7	2.6
Yemen	4.8	8.7	6.8
Egypt	2.5	2.5	2.5
Iraq	0.7	1.6	1.2
Libya	2.0	2.5	2.3
Jordan	7.5	6.7	7.1
Syria	1.1	8.9	5.0
Lebanon	4.6	7.6	6.1
Palestine	17.3	10.8	14.1
Turkey	15.8	15.0	15.2
Morocco	12.7	9.7	11.2
Algeria	6.2	3.6	4.9
Tunisia	12.3	6.7	9.5
Iran	1.3	2.3	1.8
Average	5.3	6.1	5.6
EU Benchmark	17.3	16.5	16.9

Figure 32 Electricity Tariffs Comparison (Zhang, Ou, Song, & Li, 2017)

Politically speaking as well, regimes would fight the implementation of such systems due to their need to control energy and resource flow to keep the populace reined in. The fossil fuel industry as well would not cede its energy monopoly easily, and political corruption would play into that as politics and large scale energy corporations go hand in hand. But by far one of the largest challenges facing this shift to sustainability in architecture would be the socioeconomic ramifications of a large scale development projects such as this one. The development of sustainable communities should be the end goal of a large scale peace building effort due to the multifaceted nature of conflict which we have established does involve energy conflict and equity.

5.5-Peace Building Interventions: A Tool for Gentrification?

When implementing a Peace Building architectural intervention one must pose the question of how this intervention which is as defined earlier, an urban district development, affects the people already living on or around the land to be developed. "Development" has always been viewed in a good light; the word itself is of positive connotation. It certainly is almost always welcomed when developments such as parks and public spaces are integrated into an urban plan and is centered on it, however, due to the nature of the market and how value is given, developments can become tools for gentrification and demographic relocation or segregation. In his book "Concrete and Clay: Reworking Nature in New York City" Mathew Gandy indicates how the development of central park, a much loved ecological icon in today's dense New York urban jungle, was politically motivated to displace a number of shanty towns of Irish and German farmer immigrants and most prominently one of the city's most prominent antebellum black settlements Seneca Village (Gandy, 2002). While allocating a huge plot of land in the heart of a city to be developed as the park is viewed very favorably especially due to its social and environmental aspects which align perfectly with sustainable design, one must also truly understand the ramifications that will be generated from such a development. Even on developments where no populations are displaced, the value of surrounding properties would rise if any amenity was to be found in the guise of "proximity value". One factor that may exasperate this problem would be that low-income households are more likely to rent rather than own property, and rental systems are very volatile ones that could profoundly affect the income of a household within short periods of time.

In another paper entitled "The Political Ecology of Uneven Urban Green Space The Impact of Political Economy on Race and Ethnicity in Producing Environmental Inequality in Milwaukee" author Nik Heynen mentions that in Milwaukee "-households without sufficient disposable income cannot, in many cases, afford to maintain trees on their property" (Heynen, Perkins, & Roy, 2006) and thus even trees on a plot of land become a contradicting factor to affordability. This highlights just how flawed the value system is, and how essentially until parks, urban forests, low emission public transport, even trees and all other elements that make up a sustainable community, are seen as citizen's rights rather than payable luxuries, widespread sustainable communities cannot be effectively developed.

Another example is the Homs Dream project that is controversial, to say the least, which is seemingly a huge urban development project but seeks to displace the mainly Sunni neighborhoods in Homs in a sustained demographic change effort. The project was characterized with evictions and land seizures from the mainly Sunni neighborhoods beginning in 2009 and was referred to by the inhabitants as "Homs Nightmare". The fact that the project did not approach the Alawite neighborhoods in the city gave it a sectarian angle and fed into a general feeling of discord among the two groups. This was evident as when the Syrian Protests began in the city of Homs on March 18, 2011, the main call of the protestors was to remove Mayor Iyad Ghazal who had largely supported the project. After the government forces cracked down on the protestors the conflict turned into an armed one which led to the destruction of the Sunni neighborhoods in an almost systematic way. Government bombardment would uninhabited buildings that were empty and had no military value, for this was bombardment for the sake of destruction and not winning a battle.



Figure 33 Computer Rendering of the Homs Dream project (Zein, 2014)

The question of should planners and developers develop cities and cause shifts in the populace or should they allow the city to stay in a state of stasis to preserve its people and rent values, and here the layer of sustainability comes into effect to break this purely economic perspective. Cities should be developed and redeveloped now and always, to live up and conform to the advancements and the technologies of architecture, that allow them to collectively create a much better sustainable environment for all the citizens through reduced emissions and lower carbon footprints for. Fear of gentrification should not become an impediment to development, and an excuse to allow a city to fall into a stasis of highly inefficient buildings and infrastructure, for a city is a living organic being that must evolve and adapt. Yet this does not mean that gentrification should occur for development to move forth, large scale development should attempt to override this aspect entirely, or in the case that it couldn't, effectively ensure that it does not target a specific group of people which would brew resentment and is counterproductive to the peacebuilding effort and equally ensure that any populations that have shifted are to be living in improved and sustainable communities at an affordable price with adequate public transport for accessibility to other areas.

5.6-Urban Development and Economic Policy: Freedom vs. Control

A particularly challenging issue that a PBAI must address is that of affordability and availability. It is widely recognized that large scale affordable and sustainable housing is hugely affected by and only possible through government policy. Policy, however, lies with the government and this highlights the importance of the transparency between the people and governing body deemed essential in the application of PBAI. Here the question of is it possible to ever truly be able to have fair affordable housing under a purely capitalist system must be posed and explored to effectively understand the root of why building both sustainably and affordably has been so elusive. Capitalist systems view an individual from any social class as a consumer and do not differentiate between anyone except on the basis of their spending power. Under such a system it is almost impossible to attain true affordable sustainable housing that offers more than shelter, without it eventually generating a process of gentrification due to the increase of demand caused by the increasing processes of urbanization and population increase. Thus freedom of the market and equally viewing all the populace would ironically favor some over the others, which would lead to some neighborhoods being very affluent and sustainable with various amenities, but others turning into slums and ghettos devoid of any aspect of sustainability.

A contrasting model is that of communist systems. The communist approach calls for equal housing to all, total control of the government over the housing sector, in an effort to provide everyone with a housing unit free of charge, essentially affordable housing for everyone regardless. Housing upgrades were only relevant to the work position and family size and was only done through governmental approval and mechanisms. However as utopian as that might sound, this does the complete opposite effect of what capitalist systems do and devalues the

entire market. This, in turn, has massive ramifications, as it would almost nullify the need to create anything but the bare essentials for housing, and communities for in any case it would simply have no value and thus is not worth neither the effort nor the investment. The government, unless harboring a specific environmental agenda, simply wants quantities for housing an entire nation is an extremely taxing effort and every penny must be allocated with care. It would favor the utilization of materials quickly made and easily transported over ones that are selected with care, and thus we are left with concrete jungles that are lifeless and barely function on a sustainable level.

Objectively monitoring both models shows us that both are intrinsically flawed and are counterintuitive to sustainable community development because they still view value as an economic issue rather than an environmental one. One change that can shift our entire perspective on the matter is to start valuing things through a sustainable and environmental lens. While the freedom of the market of the capitalist system should be allowed to always favor newer developments that push the market further with true entrepreneurial spirit, government control over the market especially that of the affordable one should be provided with regulations and subsidies in an effort to not only build parks and transportation infrastructure to support newer communities but make sure some districts remain stable in their market value. For in an idealistic capitalist city the only solution to make all communities both sustainable and affordable is to make all communities sustainable, which would be increasing the supply and thus lowering the value of housing in these communities due to widespread availability and thus making them affordable in the process. Contrastingly in an idealistic communist city, the solution would be that the government would have to be immensely rich, have the funds efficiently allocated into these developments with no corruption, and have a specific

environmental agenda at hand. Naturally, both visions are not easily attainable, yet the former is much more viable and should be targeted in an effort to answer the question of value and sustainable development while the latter is much more taxing undertaking. Here the goal becomes not to supply affordable houses as an alternative less expensive model next to other more expensive better ones, but attempt to satiate the market need through utilizing the way the capitalist value system works rather than fight it. This can be achieved through a hybridized holistic approach of both free market and government control, policy and regulation. This approach can be broken down into two phases and several key points:

Phase 1- Development:

- The main governing body should implement a long duration plan to how it seeks to achieve and develop the various communities around the city
- The overarching goal is to make sustainable communities accessible to all parts of the society with elements of environmental and energy justice for all
- The government can exercise its control through regulations and must have clear environmental and peacebuilding goals and objectives to effectively guide its strategy
- These regulations must enforce sustainable elements for all new developments and redevelopments
- This strict enforcement is necessary to make sure that no cheaper non-sustainable developments are developed by private developers as a way to attract low-income buyers
- The government must ensure that sustainable amenities and elements are offered at discounted prices in the form of incentives to help the implementation of these systems

- Over this time period, every part of the city must be developed or redeveloped
 accordingly to meet sustainability goals with higher density to ensure better utilization of
 "proximity value"
- Large scale development and redevelopment would be divided between private sector development for communities and housing and public sector development of public transportation and infrastructure to ensure a lower dependency on personal vehicles
- Utilization of the private sector for development removes the bureaucratic nightmare that would exist in entirely government controlled community development

Phase 2- Regulation:

- During this phase, the governing body would offer incentives in the guise of long term loans on houses and subsidies
- Building ownership would be encouraged over rent based systems, due to the fact
 that owned properties are affected much less if new amenities are being developed
 close by and reap the effects most efficiently
- Government long term housing loans should be extended to more parts of the society in accordance with their income to encourage ownership
- Regulations of the land development and district plans should effectively put limits on market prices, according to the different planning of the areas

The idea here is not to build affluently for everyone but sustainably, and thus remove the sustainable aspect from the value system by nullifying it. Effectively apply an almost communist approach to a specific element in a free capitalist market by making sustainability available to

all. Sustainability and specifically sustainable communities must essentially move from being viewed as a luxury to being viewed as a right worth investing in for every citizen whatsoever. More affluent developments would still exist in certain areas, but all the populace would be able to live in sustainable communities regardless of socio-economic status. Building ownership would stabilize the property market hugely and slow gentrification, incentives and subsidies would allow developers to design in accordance with the sustainable design code without heavy costs thus making it readily available to all and strict zoning and planning regulations would in a way control the market price without directly enforcing a cap on housing prices unless needed. This system would allow developers to build sustainable affordable communities without ever needing to cause mass displacement or shifts or have the city in a state of stasis to avert such a process. By understanding how value and control must be both balanced this gives us the ultimate means to shape sustainable personalized communities that form the thriving cities of tomorrow.

6.1- The Way Ahead

Launching from the ideas proposed in this study this theorized "Peace Building Architectural Intervention" provides an invaluable tool to help diffuse conflict in areas of disparity in the Middle East. Architecture remains at the heart of people's experience, and is a reflection of their socio-economic status, and thus would make an exceptionally important indicator and tool to understand the challenges that inhabitants of urban areas face. Effective application of this intervention would be a stepping stone towards "Decentralizing Power".

The way ahead includes building upon this research and attempting to apply its principles onto direct cases that require this intervention. Using a myriad of tools such as architectural design principles, published research, case studies of architecture's holistic performance in conflict zones, historical analyses, computer simulations, energy modeling, material testing, and other forms of theoretical study and practical experimentation, the architects and planners must strive to find the best balance between cultural sensibility, survivability and sustainability vs. a conventional architectural set up which has proved ineffective and present the result as a complete proposal on the effectiveness, plausibility and principles this new type of conflict conscious architecture on a building, and urban neighborhood level to create a symbiotic relationship between those factors. The goal is to identify which elements work best with which contingencies and could help form an index spectrum for the relevant dangers and challenges in an area versus how should the architecture of the area aptly react with it.

Equally important is understanding the depth of how sustainable practices can help sustain life which would help establish a framework of why and how it should be implemented in conflict zones, and in the subsequent intervention and rebuilding processes. Sustainable design transcends the more simplistic roles of architecture and layers it with a true layer of resiliency

and consciousness. By intricately studying conflict zones, understanding the faults in planning and design that have exasperated the suffering of the inhabitants and identifying how could principles of sustainable building design can help alleviate both environmental and conflict based dangers, inhabitants are presented with a built environment that is an active part of their lives whether in peace or conflict. Even the design of micro grids and resource management should be layered with the socioeconomic and cultural aspects of the population in question, where a PBAI becomes a call for empowerment through sustainability.

In conclusion, this research lays the foundation for principles for "Peace Building Architectural Interventions" which when implemented would become a very powerful symbol of the region, and a clear statement that something must be done in the form of a very relevant protest to a cycle that does not see an end in the near future.

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