Female Suicide Terrorism: An analysis of trends and group motivations linked to the increase in female participation as suicide bombers

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ABSTRACT

There has been an increasing level of female participation as suicide bombers, driven primarily by groups understanding of strategic advantages when using women. First, considering the argument cultural shifts have allowed women more opportunities to participate is shown to be faulty as it only explains participation in secular and domestic organizations, failing to consider increasing rise in religious and international organizations, as well as the time lag between male and female participation in suicide campaigns. The strategic argument is capable of explaining the time lag and participation in any group type because it frames the decision as a cost-benefit analysis. The primary benefits which have been driving the increase in female participation include additional publicity and psychological effects following the attacks, as well as an additional ease in access to targets when compared to male attackers. Two trends that supported the strategic argument were female participation is greatest in areas of high restriction against women by the state, as well as women preferring belt bomb weapon types. Additionally, women were used very selectively in regions that were openly against female rights and education. The increase in female participation is driven by a strategic cost-benefit analysis conducted by the group, rather than individual opportunities offered to women.

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CHAPTER ONE
INTRODUCTION AND GENERAL INFORMATION

The horrible events in New York City at the World Trade Centers on September 11th 2001, are one example of a phenomenon which has been exponentially increasing since the 1980's [1](CPOST, 2016; Royston, 2011; Dearing, 2009; O'Rourke, 2009; Gordon, 2005; Brown & Reuter, 2004); suicide terrorism. As scholars have observed these cases more closely, they also found an increase in the level of female participation within groups as suicide bombers. (Figure 1) (CPOST, 2016; O'Rourke, 2009) This paper attempts to better understand what is driving the increase in female suicide bombers; is there a new age of terrorism with women seeking equality to men, or a strategic advantage terrorist organizations are more readily using.

While there is no single definition for terrorism, the key elements are violence and fear. Through the use of violence, terrorists create a sense of fear within a society with the goal of forcing a government to meet their demands. (Royston, 2011; Dearing, 2009) Suicide terrorism specifically uses tactics which kill the attacker in the process of the attack, such as an explosive belt, or driving a car bomb into a crowded area. (Royston, 2011; Dearing, 2009; Federal Bureau of Investigation, 2005; Atran, 2003) These attacks bring an additional level of physical and psychological impact; they cause mass casualties and demonstrate the extreme lengths the group will use to achieve their goals. (Royston, 2011; Dearing, 2009; Alvanou, 2008)

[1] Appendix one shows the number of attackers over time which confirms the exponential growth in attacks.

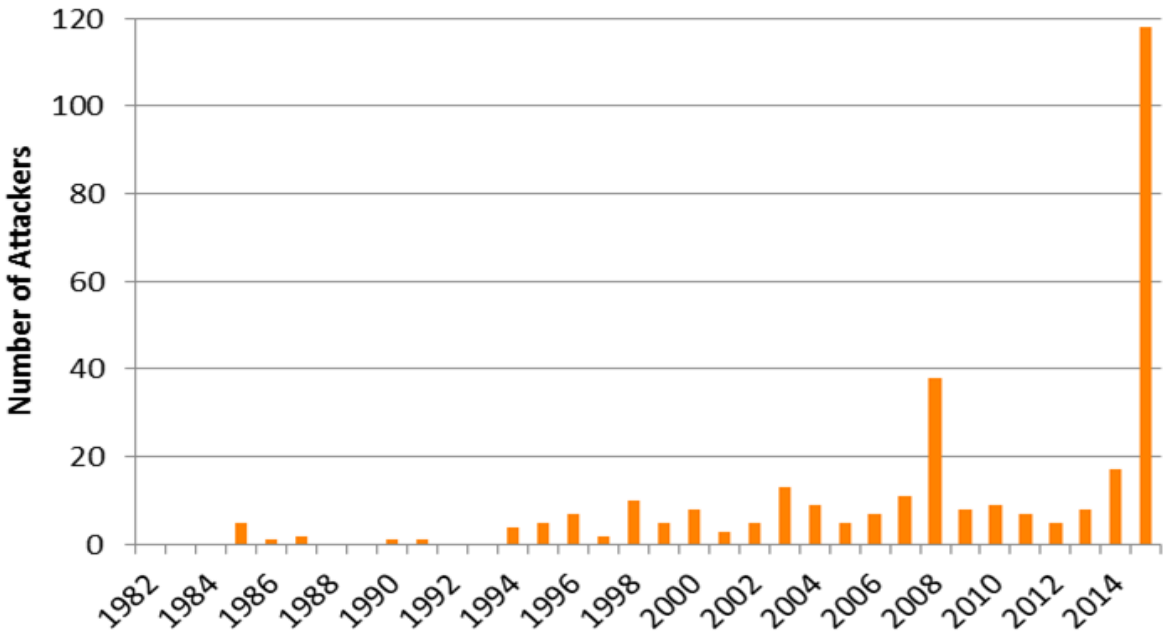

Figure 1 Female Participation as Suicide Bombers over Time

While there is an increase in female participation, the typical suicide terrorists are young, single men between the ages of 17-24. (Merari, Diamant, Bibi, Broshi, & Zakin, 2009; Freedman, Pape, & Bloom, 2005; Silke, 2003) The attackers are often less educated than their leaders, but they still tend to have at least a high school education, if not a university degree, (Royston, 2011; Merari, Diamant, Bibi, Broshi, & Zakin, 2009; Freedman, Pape, & Bloom, 2005) and come from middle class families. (Royston, 2011; Merari, Diamant, Bibi, Broshi, & Zakin, 2009) These are not impoverished men acting out of desperation, but rather enthusiastic individuals looking for a place to fit in. (Royston, 2011) Recruiters, who are commonly friends and respected members of the community, will use and manipulate an individual's desire to fit in to a group by

providing a community of peers and like-minded individuals, and slowly molding towards extremism. (Royston, 2011; Dearing, 2009)

The first case of a woman being used for a suicide bombing was in 1985 by the Syrian Social Nationalist Party. Sana Mekhaidali, nicknamed “The bride of the South,” targeted a convoy of Israeli Defense Forces in Lebanon, killing five soldiers. (Royston, 2011; Dearing, 2009; O’rourke, 2009; Tzoreff & Schweitzer, 2005) This very successful first attack was replicated within the group, as well as copied by other organizations. Another notable case was the 1991 assassination of Rajiv Gandhi, a former Prime Minister in India, by a woman nicknamed Dhanu. As Dhanu approached her target, she was stopped by a suspicious officer, but the former Prime Minister waved the officer off assuming no harm could befall him from a woman, which shortly became a fatal mistake. (Royston, 2011; Dearing, 2009)

These early attacks spread as terrorist organizations took note of advantages women had over men when conducting suicide attacks. Women were rarely stopped by guards until it was too late; they were able to wear clothing which concealed their weapons, even going as far as to feign pregnancy to carry more explosives. (Royston, 2011; O’rourke, 2009; Dearing, 2009) As awareness of these advantages became widespread, more groups allowed women into the ranks of suicide bombers, with some current estimates at 15% of suicide attacks now being carried out by women. (Royston, 2011; Dearing, 2009; Freedman, Pape, & Bloom, 2005)

While there were several organizations that began using females as suicide bombers, religious groups were delayed in their acceptance of the practice. Three years

following the start of female suicide terrorists, Hamas made it clear they felt women had no place as active fighters. In 1988, Hamas declared within their charter, “The Muslim woman has a role in the struggle for liberation that does not fall from that of a man in that she is the one who produces the men.” (O’rourke, 2009; Tzoreff & Schweitzer, 2005) It is this division of gender roles that continued well into the 2000’s through four major suicide campaigns by the organization.

However, in 2004, nineteen years after the first use of women during a suicide attack, Wafa Idris was the first known female suicide attacker associated with a religious organization, and her attack was claimed by Hamas. (O’rourke, 2009) This group, which as recently as 2002 had publically renounced the participation of women as suicide bombers, (Raghavan & Balasubramaniyan, 2014) had drastically changed their official opinion, releasing this statement following the attack:

> “The fact that a woman took part for the first time in a Hamas operation marks a significant evolution for the Iz a Din al-Kassam brigades. Male fighters face many obstacles on their way to operations, and this is a new development in our fight against the enemy. The Holy War is an imperative for all Muslim men and women, and this operation proves that the armed resistance will continue until the enemy is driven out from our land.” (Raghavan & Balasubramaniyan, 2014; Bloom, 2011; Royston, 2011; O’rourke, 2009)

As more groups change their positions to allow women to participate as suicide bombers, the question remains as to what is driving the change. Some scholars feel there are shifting cultures or attitudes, which have provided women more equality, thereby, allowing them the opportunity to take up the role of fighter within a society.(Raghavan & Balasubramaniyan, 2014; Herath, 2012; Gonzalez-Perez, 2008) Others argue strategy leads organizations to use women if they exist in cultures which refuse to see them as a threat. (Royston, 2011; O’rourke, 2009) While both arguments

acknowledge culture plays a role in the increase of female participation, they differ on what exactly its role is and what is the primary driver of the increase. (O'rourke, 2009)

This project will attempt to show support for the strategic argument, and claims it better explains the growing participation of women as suicide bombers when compared to the culturally driven argument. First, the paper will examine the literature of each argument. Next, it will look at trends – general trends of suicide terrorism, female suicide terrorism, and then compare female participation based on levels of restrictions placed on women by the state, region, weapon selection, and religion. Through the analysis of these trends, this paper hopes to show cultures where women are seen less as a fighter are more likely to use women as suicide terrorists rather than cultures that are inclusive of women, affording them the opportunity to be fighters if they wish. Finally this paper will put forward conclusions from its analysis, and provide suggestions for future work.

CHAPTER TWO
LITERATURE REVIEW

Following a recent surge in women's participation as suicide bombers, there has been an increase in work looking at the role of women inside terrorist organizations. Two conflicting arguments have emerged; both arguments consider the cultural environment women find themselves in, but consider that environment to play different roles when determining the level of female participation. The first argument considers culture as a primary driver in the number of female suicide bombers as it determines the level of access women will be granted within groups. (Gonzalez-Perez, 2008; Hewitt, 2003; Baldez, 2002) The second argument claims strategy is the primary driver for the level of female participation in suicide bombing, but the cultural framework of a society is paramount when considering female capabilities and effectiveness as suicide bombers. (O'rourke, 2009)

When considering the role of culture, both arguments are interested in the degree of restriction a culture places on women. Both arguments assume the norm is for a culture to place traditional and patriarchal restrictions on women. These societies stress the need for women to remain in the home, to obey their fathers or husbands, and to remain in support roles rather than have their own agency. (O'rourke, 2009; Gonzalez-Perez, 2008; Alison, 2003; Yuval-Davis, 1997; Segal, 1995) Agency here refers to the role of the individual and their actions, beliefs, and intents. (Dearing, 2009) While traditional, patriarchal cultures are the norm, there are some cultures which have evolved to place fewer restrictions onto the gender divide, which greatly increases

female access to all levels of society, including suicide bombing according to some scholars.

Culture as a Driving Factor

The amount of gender specific assumptions and limitations found in a culture will first dictate what level of agency[2] women have within a society. As a society places fewer restrictions on gender, women are able to choose issues and organizations with which to become involved. (Gonzalez-Perez, 2008; Hewitt, 2003; Baldez, 2002) Because cultures are traditionally patriarchal with strict limitations on the roles women are allowed, there is an assumption women will face these same limitations within terrorist organizations. Due to those patriarchal frameworks, women are relegated to supportive roles rather than being allowed to actively participate as fighters. (Alison, 2003; Harries-Jenkins, 2002; Hong, 2002; Segal, 1995) Women can only participate if there has been a cultural shift towards inclusion, allowing them a level of agency to choose if and when they will become involved as suicide terrorists.

When a culture shifts away from patriarchal frameworks, there is an opportunity for women to mobilize across society, which is expected to be seen from higher labor participation rates, to roles in military or police forces. (Alison, 2003; Yuval-Davis, 1997) At the societal level, inclusion provides a culture where women have the opportunity to be actively involved, rather than being bound to supportive roles by assumptions or strict rules. (Gonzalez-Perez, 2008; Alison, 2003; Yuval-Davis, 1997) The stronger the

[2] Agency was previously defined as the role of the individual and their actions, beliefs, and intents. (Dearing, 2009)

repression on women, the less likely they are to be sanctioned to fight in any regard. Therefore, they are also less likely to be accepted into terrorist organizations as suicide bombers. (Gonzalez-Perez, 2008) When gender specific assumptions are relaxed, women have more opportunity to choose how actively they will pursue issues they care about.

One primary example of women's increased involvement due to a relaxing of gender assumptions is in the Liberation Tigers of Tamil Eelam (LTTE). This group was fighting against the local government of Sri Lanka in an attempt to separate and form an independent state. (Herath, 2012; Gonzalez-Perez, 2008; Alison, 2003) The Tamil people were a small percentage of the population in Sri Lanka and were tired of the repressive and violent actions against them by the Sinhalese majority government. (Herath, 2012) After years of tensions building, a full conflict broke out, and at the early onset in the mid-1980's, the LTTE began heavily recruiting women. (Herath, 2012) The LTTE were trying to gain freedom from a government it saw as repressive, and therefore, afforded a level of equality to all Tamils' who wanted to help earn that freedom, including women.

The leader of the group, Velupillai Prabhakaran, stated, "Tamil women are subjected to intolerable suffering as a consequence of male chauvinistic oppression, violence and from the social evils of casteism and dowry" and suggests that "some of these problems can be resolved if men and women recognize each other's liberty, equality and dignity and enter into a cordial relationship based on mutual understanding and share the responsibilities of family life and also contribute to the development of

society." (Alison, 2003; Pirapaharan, 1996) There was a belief within the group that women were suffering as much as, if not more than, the Tamil men and therefore, had a right and a duty to take up arms and defend themselves.

This shift in culture allowed women an opportunity to make the choice to become actively involved in the conflict and created an environment where women were able to form the Black Tigers, an exclusively female suicide squad. It was through this changing society, where men and women had equal levels of agency and responsibility, which women were allowed to participate as fighters and as suicide bombers. (Herath, 2012)

Women are more commonly drawn to terrorist organizations that focus on domestic issues and/or have secular affiliations, as compared to those with an international scope and/or a religious framework (Herath, 2012; Gonzalez-Perez, 2008; Hewitt, 2003) Domestic groups appeal to women because they are concerned with changing the current social order, which scholars assume to be patriarchal and restrictive towards women. (Berko & Yuval, 2012; Herath, 2012; Gonzalez-Perez, 2008; Skaine, 2006) Conversely international groups, as well as religiously affiliated organizations, try to maintain a societal norm that other parties are attempting to change. (Gonzalez-Perez, 2008) Secular groups, typically, are less constrained by traditional gendered roles, sometimes making them more accepting and appealing to women.

When considering the specific appeal of domestic versus international organizations, the first consideration is the level of agency afforded to women within a group. Domestic groups are more likely to challenge traditional gender roles, providing

an inclusive environment where women are given the decision to join an organization in any roles, including active ones. (Berko & Yuval, 2012; Gonzalez-Perez, 2008) Furthermore, domestic groups are more heavily dependent on support from the local community, which often requires a larger buy in from women. (Jordan, 2014; O'rourke, 2009) Not only do domestic groups provide an opportunity to participate, but they are concerned with issues that directly affect women's daily lives. Conversely, most international groups are fighting to maintain current patriarchal social structures, leaving very few opportunities for women to participate and even fewer opportunities to improve. (Gonzalez-Perez, 2008; Skaine, 2006; Baldez, 2002)

Once women have been afforded the opportunity to become involved, they are motivated to join terrorist organizations that offer an improved status quo for their "group". This group can be a specific ethno-national designation or a more general vision of women as a whole. (Raghavan & Balasubramaniyan, 2014; Berko & Yuval, 2012; Herath, 2012; Gonzalez-Perez, 2008; Baldez, 2002) When considering the LTTE, the first women to join the organization took advantage of an opportunity to stop depending on men for their safety and well-being and instead took action to improve the situation of women within their society. (Berko & Yuval, 2012; Herath, 2012; Alison, 2003) By fostering a more inclusive environment, domestic groups provide women an opportunity to help shape the new societal structure once they defeat the current system. On the other hand, international groups aim to maintain tradition, including women's role to strictly be supportive rather than active fighters.

Both international groups and religiously affiliated organizations fight to maintain strict traditional structures, which include rigid gender norms.(O'rourke, 2009)[3] Initially these gender norms blinded the organizations to any potential benefit women could serve in a violent role, as women were sequestered to supportive home life positions where they could best serve the male head of their household.(O'rourke, 2009) Furthermore, there was fear of community backlash that would see this female participation as the group acting irresponsibly and against the religious teachings for which they were supposed to be fighting.(O'rourke, 2009) It was not until religious groups saw secular organizations using women with high levels of continued success from 1985-2002 that they were willing to consider using female suicide bombers. (O'rourke, 2009) [4]

According to this level of cultural inclusion argument, women will become involved in groups that award some level of equality to females. These groups, which are more commonly domestic and secular, not only allow women to participate but also focus on issues which women can relate to or care about. In this way, women find an opportunity to improve the status quo of a society, thereby directly improving their own lives and the lives of their female friends and family members. It is because of this opportunity women are willing to take up arms, and sometimes make the ultimate sacrifice of giving up their lives.

[3] O'rourke claims 85% of female suicide bombings were conducted by secular groups, and all secular groups which allowed the use of suicide bombing campaigns, also allowed women to participate in them.
[4] The first female suicide attack was conducted in 1985, while the first female suicide attack by a religious organization wasn't conducted until 2004, and that group released a statement in 2002 denouncing the practice of female suicide attacks

While these cultural arguments attempt to explain trends in secular and domestic organizations, the strategic argument below offers an alternative framework that can encompass a larger variety of terrorist organizations' decisions. Rather than use cultural frameworks as the driving mechanism, the strategic argument considers culture as one factor among a multitude of considerations, and in this way, it is able to explain a wider range of groups. Additionally, the cultural argument does not speak to the significant delay between the use of male and female suicide bombers. This time gap is not long enough for one to expect a drastic shift in culture or to see an advent in women's level of agency, (O'rourke, 2009) but it is long enough to suggest women have been granted access where they previously were excluded.

Furthermore, much of the support for this cultural argument is based on rhetorical claims from the organizations' leaders. Rhetoric often reflects what a group assumes their supporters want to hear rather than how they actually feel. (O'rourke, 2009; Baldez, 2002) While these groups may believe in equality for men and women, they could just as easily be using misleading propaganda or recruitment techniques. A more inclusive culture could drive an organization to include female suicide bombers, however, it is equally likely a need, or strategic advantage, drives groups to recruit women using a promise of agency they never intend to provide. (Baldez, 2002)

Strategy as a Driving Factor

Historically, women have only been allowed to join fighting organizations, such as the military, only when there was a desperate need for increased membership. (Segal, 1995) In World War II, posters of Rosie the Riveter promoted strength, ability,

and a sense of freedom to lure women into the workforce, but as soon as the men arrived back home, those same women were expected to become docile, dependent, and confined once more. (Andrews, 2016; Segal, Bachman, Freedman, & O'Malley, 1999; Merryman, 1998; Dandeker & Segal, 1996; Segal, 1995)

This primarily happened during times of war, and women are usually relegated to supportive, non-combat positions. (Harries-Jenkins, 2002; Segal, 1995)Many countries opened their ranks to women during World War II; however, women were almost entirely excluded from combat positions. Instead, women were used for positions seen as inherently gendered tasks, such as nursing, or in positions of skilled labor, such as mechanics. (Hong, 2002; Segal, Bachman, Freedman, & O'Malley, 1999; Dandeker & Segal, 1996; Segal, 1995) This restrictive and conditional access was only allowed out of necessity, but when the need disappeared at the end of the war, women were most often demoted back into their sole roles as housewives and mothers. (Andrews, 2016; Merryman, 1998)

This same trend has carried over into terrorist organizations, with female participation first being driven by a need and then, a strategic analysis of when and where women can be deployed. The strategic argument for female participants as active members breaks the decision to use women into three stages of analysis: 1) Is there a need for additional members to fill combat positions 2) Are women capable of filling those positions and 3) Is allowing women into those positions worth the costs the group will face?

Demands on Membership

The first stage of analysis for a terrorist organization is to determine if there is a need for additional bodies to carry out its mission. Due to the nature of a successful suicide bombing campaign, each attack incurs at least one member fatality, which ensures a high need for recruitment. Many who argue cultural inclusivity is a primary driver of female participation point to higher levels of female suicide bombers among domestic groups to support their claim. However, this trend could also be caused by domestic groups having a smaller population to pull from, such as the LTTE who were pulling from an ethnic minority in the larger population. Because of this smaller pool of potential members, groups have a greater willingness to accept any person as a fighter.

Furthermore, there is a common trend for a significant time lapse between the first cases of male suicide bombings and the initiation of female suicide bombers during a terrorist organization's suicide campaigns. (O'rourke, 2009) This timing, using women later in the campaign, suggests it was a rising need for additional members, more than a sudden shift in cultural inclusivity of a society, which opened the door to female suicide bombers. (O'rourke, 2009) This need for additional fighters, rather than a sudden shift in cultural inclusivity of a society, is great enough to heavily influence an organization's willingness to use female suicide bombers. (O'rourke, 2009)

When a terrorist organization needs a large number of recruits, women are an optimal choice for recruitment potential. Not only do women directly increase the size of the recruitment pool, but often they will encourage an increase in male participation in one of two ways. Either men will join more frequently to avoid feeling surpassed by female efforts, (Berko & Yuval, 2012) or women's involvement supplies an appearance

of credibility to the group. (Berko & Yuval, 2012; Herath, 2012; Bloom, 2011; O'Rourke, 2009) When a group is willing to break traditional gender norms, not only do they demonstrate how dedicated and sincere they are about their cause, but this action also leads many in the community to assume they must be justified if they are willing to go to such extremes. (O'rourke, 2009) Through this increased credibility, the group is able to recruit larger numbers of both men and women.

Viable Candidates

The second stage of analysis for a terrorist organization is to decide if women are capable of completing the tasks that the group needs fulfilled. While there were assumptions in place that women were not violent enough to participate as suicide bombers, there were a growing number of women asking to be involved, as well as women taking active roles elsewhere in society. (O'rourke, 2009; Alison, 2003) As soon as groups realized women were willing to conduct these attacks, there were two gender specific advantages which made them appealing options – appearance and levels of suspicion placed on women.

One key consideration during a suicide attack is how to carry the explosives without arousing suspicion. Women can, or sometimes are required to, wear long, baggy clothing, which makes hiding explosive vests or belts much easier. Additionally, several groups realized because women can easily feign pregnancy, explosives could be camouflaged as an attackers' 'baby bump.' This advantage was so useful that even groups unwilling to use female attackers would dress men in women's clothing. (O'rourke, 2009; Wong, 2005)

Another advantage specific to female attackers is the additional access to targets they are afforded because of lower levels of suspicion from authorities. (O'rourke, 2009) Here is where cultural frameworks can affect the strategic argument; if women are not seen as fighters in a society, security forces often watch them less, search their persons or bags for explosives less, and allow them to approach closer to restricted areas before being stopped. (O'rourke, 2009)

One example of this was Dhanu, the LTTE Black Tiger, who approached a prominent political figure during a public event, setting off her explosives while at the feet of the former Prime Minister of India. (Chicago Sun-Times, 1991; BBC, 1991) Some cultures not only fail to see women as threats but also prevent male officers from searching women. Because these same societies also employ very few female officers, female suicide bombers can walk through security checkpoints completely uninhibited. (O'rourke, 2009; Bloom, 2005) One member of the Iraqi Tribal Awakening Movement in charge of securing Baghdad during the Iraq War claimed, "We search every single person coming to the market, especially those who are carrying bags or boxes, but the suicide bomber was female, whom we don't search at all." (O'rourke, 2009; Farrell & al-Husani, 2008) When women are ignored as a threat, it becomes much easier to use them as suicide bombers.

Costs vs. Benefits

The final stage of analysis for a group which has realized women are capable of filling needed positions, is to determine what costs there are to using women, and if they are worth those costs. This cost-benefit analysis is another area where cultural

frameworks can have an influence. Terrorist organizations must determine what backlash there will be from both their supporters and members if they choose to use women, then compare those costs with the benefits female attackers offer.

When calculating the cost of using women for suicide attacks, groups must consider how it could affect their support within the community, estimating any backlash that could occur to additional recruitment efforts. Terrorist organizations often rely on community support to provide food, shelter, and members to their cause. Groups fear that by breaking gender roles and norms, they will infuriate their supporters and loose the protection of their community. The Palestinian cases show how aware groups can be of their community reputation. This group selected girls who were already social outcasts or adhered to very strict protocol, only interacting with girls in the presence of a male family member until the day of the attack.

Terrorist organizations also worry how female participation could influence male fighters. (Berko & Yuval, 2012; O'rourke, 2009) Many cultures feel a woman's place is to support men, not to fight alongside of them. Therefore, if a woman is conducting a task, such as suicide bombing, it could become less appealing to male fighters, who are the majority of suicide attackers. (Berko & Yuval, 2012; Royston, 2011; O'rourke, 2009) Several groups counteract this issue by using women for suicide bombings while using less heroic rhetoric to promote their deeds, reserving the title of hero and martyr for men. Additionally, the families of female suicide bombers are consistently paid as little as half of the rewards male attackers' families would receive. This differing treatment

further supports that strategy, not a level of equality and inclusiveness, drives the increasing level of female suicide bombers.

While the cost of using women as suicide bombers can be high, there are three primary benefits that have led groups to increasingly find women worth the costs: additional publicity for the attacks, more intense psychological trauma for the audience or targets of an attack, and an increased lethality of attacks.

When considering the primary goal of terrorist organizations is to bring enough attention and fear to the state to persuade them to give in to demands, a group needs to maximize both attention and fear, both of which is increased by the use of women increases. When women are used for suicide attacks, there is a shattering of traditional gender norms which provokes a stronger outcry from the public and piques journalistic interest. This initial shock not only increases coverage of the attack but also leads reporters down a rabbit hole trying to uncover secrets in the woman's life or group's beliefs that make it possible for such a cultural breach to occur. (Raghavan & Balasubramaniyan, 2014) By having a larger audience and more media coverage, the group is more likely to have their demands heard, not only by the state but also by the public. (O'rourke, 2009) This increases the attention and outcries by the public to the government, heightening the pressure on the state to resolve the issues.

Along with increased coverage, breaching taboos also increases the psychological effect on the target or audience of an attack. Because female participation is still assumed to be primarily supportive, rather than active, by using female fighters groups, demonstrate they are not only willing to break cultural norms but will also take

advantage of them to further their cause. This signals to the targets that no one, anywhere, is safe until the group's demands are met.

A final benefit of using female suicide bombers is an increased level of lethality per attack. (O'rourke, 2009) Because women can get closer to their target before being stopped, and often with larger amounts of explosives, they inflict more damage per successful attack. This higher lethality increases the amount of publicity and fear women invoke in each subsequent attack. However, because so many of the advantages rely on a lack of suspicion towards female attackers, it should be noted or explored in future work whether this trend will decline or disappear.

While there is a lot of similar consideration between the cultural and strategic arguments, one area where the strategic argument has additional merit, is when explaining the use of children for suicide bombings. Groups can go through the three step analytical process (do we need numbers, are they capable, and are the benefits worth the costs) and decide if it is a viable strategy to use children for suicide bombing. Conversely, there is no culture where children are given the same level of equality as adults, opening the door for their participation in suicide bombing.

Theoretical Expectation

In trying to solve the puzzle of why female suicide terrorism has been on the rise, this paper has shown the two competing theories: the cultural and strategic arguments. Cultural theorists believe the way women are treated by an organization or society will determine how likely they will become involved, while strategic theorists counter the key is how suspicious the target is towards women. While both theories offer strong logical

reasoning and evidence, the strategic argument has a broader framework to cover more of the range of cases.

The cultural argument contends female suicide bombing will increase as women gain equality and agency within a society. When a culture views a woman independent of her father or husband, she has more choices of roles to take on, including that of a fighter. Furthermore, when women are a part of society, rather than subservient to it, they can help shape the outcome of a conflict. Alternatively when women are ignored or seen only as support to men, their input changes nothing, therefore they have no motivation to sacrifice for the group. In this argument, the key driver is that women will fight for those who respect them and provide support to them, rather than those who restrict them.

There are two fundamental issues with the cultural argument; the first is it equates women's level of equality or agency to the level of acceptance that same group has for their participation as fighters. The cultural argument claimed women join groups with a focus on social change, because those groups are more likely to accept female fighters as equals to men. (Herath, 2012; Gonzalez-Perez, 2008) However, these groups could promote equality as a tactic to attract women to their ranks when they need more members. Baldez's work suggests many of these organizations do not wish to improve women's level of agency or equality, but rather need them to win their cause. (Baldez, 2002) Additionally, even in cultures with high levels of agency and equality, there is not large numbers of female participation in military and police organizations. (Hong, 2002; Segal, Bachman, Freedman, & O'Malley, 1999; Dandeker & Segal, 1996;

Segal, 1995) These cultures may see women as equals, but not as fighters, therefore making it very problematic for the cultural argument here to assume the two are connected.

The second issue with this argument is its explanatory limitations; women are often treated differently than men within terrorist organizations, cases where women are recruited forcibly or manipulated into joining rather than choosing to do so, and finally, when there are children used as suicide bombers. The first of these limitations is when women are treated differently than men within the organization. While the cultural arguments focus on groups where women are given equal or improved status, there are also cases where women are still treated as subservient to men. Several terrorist organizations only offer female suicide bombers families half the amount men are provided, and many groups have strict rules on the level of alone time women are to have with handlers before an attack. (Berko & Yuval, 2012) If women were seen on equal levels to men, there should not be drastic differences in the treatment of male and female suicide bombers.

Furthermore, the cultural theory is limited when trying to explain situations where women are manipulated, or forced, into joining an organization rather than having a level of agency allowing them to decide to participate. During interviews from an Israeli prison with women who had attempted suicide attacks, numerous women spoke of being told this was their only way to remove shame, or to gain access to heaven. (Berko & Yuval, 2012; Herath, 2012; Alison, 2003) This is not a feeling of equality, but rather is a calculated analysis of who to use. Similarly, when considering groups who use

children as suicide bombers, there is no culture that will see kids as having the right or level of equality of adults to conduct such attacks, and can only be explained when considered through the lens of the Strategic argument.

Compared to the cultural argument, the strategic argument is much better equipped to deal with the range of cases found among female suicide bombers because they frame the decision as a cost-benefit analysis. Terrorist organizations measure the benefits women offer their campaign against the costs of allowing them to participate. When considering the costs of using female suicide bombers, costs stem from reputation among the community, efficiency of women as attackers, and assumptions women are not willing to participate. Rather than the level of equality driving female participation, it is how strategically advantageous women are.

Furthermore, the strategic argument is fully capable of explaining the cases covered by the cultural arguments. In cultures where women have higher levels of access to the organization, are seen on more equal footing to men, and are dealing with issues women can support, there should be very low costs to the organization if they decide to use women as suicide bombers. Additionally, these groups would be expected to have an easier time recruiting female participants, even further reducing the cost of female participation. There would be low levels of community backlash among their supporters, and therefore, makes them likely candidates to be the first groups to use women.

While the cultural argument was unable to explain situations where women were treated as subservient to men in terrorist organizations while also being used as female

suicide bombers, the strategic argument is able to explain those situations. O'Rourke showed women are typically used towards the end of a suicide campaign, (O'rourke, 2009) either as a last resort, or representing a major shift in tactics. This supports a strategy focused decision, as women were originally excluded, and then later allowed into the group. A group that does not want to give women higher levels of agency may later decide the need for additional fighters requires female participation. These groups are also likely to force, coerce, or manipulate women into joining rather than offering an environment where women are treated with equality leading to voluntary participation.

As well as needing to force women to participate, numerous groups are also concerned with reducing the cost associated with female participation. A few ways to minimize costs is to show the community while women are being used, they are by no means equal to men. This helps explain cases where female suicide bombers are rewarded less or provided with less respect compared to men following their attacks. Using women that have been shamed by a community, or are seen as outcasts is another way a group can reduce the cost of female participation. While these cases were considered outliers by cultural arguments, in the strategic argument they represent the range of decisions a group must make while weighing the costs of using female suicide bombers as compared to the benefits.

Competing Hypothesis

Cultural argument hypothesis: Female participation as suicide bombers will increase when a culture is less restrictive towards women.

Strategic argument hypothesis: Female participation as suicide bombers will increase when a culture is more restrictive towards women.

The first hypothesis supports the cultural argument. Women should be more active in groups that provide them with agency to decide they want to participate. When given this opportunity, women can choose to be active, combat fighters. The second hypothesis supports the strategic argument. Women will be more effective as suicide bombers in societies that do not suspect they are capable of such actions, and therefore, they are more appealing during a cost-benefit analysis.

This project expects to find support for the second hypothesis for two primary reasons; the first is that women are typically treated differently as suicide bombers, which suggest a cultural gender divide, rather than an increasing level of equality. The second, because they are most commonly used towards the end of suicide campaigns which suggests a tactical change, rather than an environment of inclusivity.

This project will also explore regional trends to determine where suicide bombers are active, weapon preference of attackers to find how women are conducting attacks, and also religious trends to determine if religious groups, as many scholars above discussed are less likely to use women. Both religion and region can also represent cultural factors that could affect the cost of using women, as well as the rules placed upon women that may make them less suspicious as attackers. By investigating the trends of activity for female suicide bombers, this paper hopes to shed light on which theory is more capable of explaining the increasing rates of female suicide bombers.

Overview

This project adds to an understanding of what is driving the increase in female suicide attacks. This chapter focused on the literature surrounding this puzzle, and outlined two competing theories; the cultural argument suggests a relaxing of restrictions on women leads to their increased participation, and the strategic theory which claims groups conduct cost-benefit analyses to determine the most profitable time to use female suicide bombers. Next, this chapter outlined the theoretical implications of both arguments, and explained why the strategic argument is more convincing. Finally the chapter laid out the competing hypotheses this paper will investigate as well as trends it expects to find in its results.

The next chapter will explain the research design and methodology that will be used to gain a better understanding of the problem. The paper will look at data from the University of Chicago Project on Suicide Terrorism (CPOST) comparing all confirmed suicide attacks from 1982-2015 to determine which hypothesis has the most support. The project predicts the strategic argument to be more capable of explaining the increasing amount of female suicide terrorism. By better understanding the causes of the increase, improvements can be made to prevent or minimize these attacks. Furthermore, if the strategic argument is supported, it is likely women's participation will naturally fall overtime without interference by outside factors. As women are used more commonly, they will be more suspect, and thereby lose the majority of their strategic advantage, rendering them less useful to groups.

CHAPTER THREE
RESEARCH DESIGN

This project will focus on the years 1982- 2015 to identify trends among female suicide attackers, as well as attempt to test the role of restriction on the dependent variable; level of female participation as suicide bombers. Using University of Chicago's "Chicago Project on Suicide and Terrorism "(CPOST), there are 6,117 confirmed cases of suicide attackers over the time frame, and 314 cases of female attackers. Variables were also pulled from the START projects Global Terrorism Dataset as well as a key explanatory variable from Cingranelli & Richards Human Rights Dataset. This paper will conduct a chi-square test on restriction and gender to determine if the level of participation is significantly different between levels of restriction. The project will also look for possible trends to show support for the competing hypotheses.

Variables

Dependent Variable

*The Level of female participation (*or the number of female attackers*)* is the dependent variable of this study, and it represents the number of female attackers across the 1982-2015 time frames. There are 314 confirmed cases of female suicide attackers from the CPOST dataset. [5] Because this project is only concerned with answering why female participation is increasing, there are very few comparisons between the levels of male and female participation. Instead, the data will focus on the shifting levels of female participation in relation to time, level of cultural restriction seen

[5] CPOST assumes if the sex of the attacker was not listed, a male conducted the attack due to the overwhelming majority of cases being carried out by males.

in a society, and then consider general trends among regions, weapon preferences, and religious affiliations.

Women have historically been excluded from violent fighting roles within society, (Segal, 1995) therefore this study works under the assumption that groups will initially exclude women from violent or combat roles. Therefore, this study is attempting to find the factor which will persuade a group to change the level of access awarded to women within the organization, or the point where women's participation levels increase.

Explanatory Variables

The key explanatory variable is the level of female restriction. This variable captures how likely a society is to see women as equal to men, and also how likely the society is to suspect women are capable of holding violent combat roles. There are three other variables this paper will explore; region, weapons, and religion.

CPOST did not have a variable to reflect the level of restriction placed on women, so this project takes advantage of the Human Rights Dataset (Cingranelli & Richards, 2014) variable for the level of women's economic rights. This variable measures the legal protection in place from 1981-2008, as well as severity of enforcement, to determine how many economic rights women are afforded within the state. It includes consideration for how independent woman can be, and even how likely the state is to allow women into combat roles of police officers and military positions. Below are the specific rights this variable takes into account:

> "Equal pay for equal work, free choice of profession or employment without the need to obtain a husband or male relative's consent, the right to gainful employment without the need to obtain a husband or male relative's consent, equality in hiring and promotion practices, job security (maternity leave,

> unemployment benefits, no arbitrary firing or layoffs, etc...), non-discrimination by employers, the right to be free from sexual harassment in the workplace, the right to work at night, the right to work in occupations classified as dangerous, and the right to work in the military and the police force." (Cingranelli & Richards, 2014))

This variable captures the level of agency awarded to women by the state through the option to work fairly and safely, and also a State's willingness to accept women into a violent combat role. The restriction variable uses the inverse of the economics right variable, the higher the economic rights afforded to women, the lower the level of restriction. This paper recognizes several limitations for this variable; it is strictly applicable to women, and it is an overall score rather than reflecting changes over time. Because the variable only applies to the level of restriction placed on women by the state, there is potential it will explain only female participation, rather than allowing a comparison between male and female levels of participation. The second is the variable considers the time frame of 1981-2008, but fails to represent potential shifts in cultural restrictions that could have occurred in the more than 20 years.

This paper will use the restriction variable as an overall indicator of the level of restriction placed on women by the state, which it assumes will be the same within the organization. [6] There are two reasons this project is comfortable making this assumption. The first is that it is a fair representation of how suspicious a state would be of a female attacker. The Strategic argument would classify this as an advantage for the

[6] While this assumption has been made, the author recognizes there is a high probability the terrorist organization will operate under different levels of restriction than is seen in the state. This could occur either because the organization is a micro-chasm culture nestled into the state, or the individuals are displeased with the culture within the state and organize along those shared grievances.

group, while the cultural argument would see an environment with little female agency providing very few opportunities for female participation.

The second reason this paper assumes the same level of restriction between the state and terrorist organization is the need of the organization for community support. If a group is active in a state with few rights for women, the group would not expect support for providing agency to women. This assumption would make this an appropriate variable to represent both the strategic and cultural arguments as it captures how likely a group is to offer a level of agency and equality to women, and also how likely a state is to suspect women as fighters.

Women's economic rights is an ordinal variable with a range of 0-3, measuring the level of legal and enforced protection women are afforded by the state. The scale is broken down as such: zero represents no economic rights for women and systemic discrimination, one represents some economic rights for women, but laws are not enforced effectively as well as women facing moderate levels of discrimination. A two represents moderate economic rights for women as well as effectively enforced laws, however there is still some discrimination, and finally a three represents nearly all of women's economic rights are guaranteed by law and are heavily enforced with no tolerance for discrimination based on sex. Restriction is the inverse, with zero representing High Restriction, one is Moderate Restriction, two is Low Restriction, and three is No Restriction.

The Human Rights dataset provided most states with a value from zero-three, however Palestine and Somalia were not coded, causing seven of the 314 cases to be

excluded. This project predicts states with High Restriction will see higher levels of female participation as groups make strategic choices to use women. The conflicting cultural theory predicts states with lower levels of restriction should see higher female participation, as women are allowed more agency to choose their levels of participation. This variable should be able to provide strong support for one theory over the other as it can support participation levels increasing either due to level of agency when restriction is lower, or due to level of suspicion when restriction is higher.

Three additional variables this project will explore are Region, Weapons, and Religion. By exploring the levels of female participation divided among regions this project is attempting to capture two things; what areas are most likely to see female suicide terrorists, and what similarities or differences there are between areas with female suicide bombers present. By better understanding where female suicide terrorism is occurring, scholars would have a focus for in depth regional or group analysis for future work.

Using the START project dataset, countries were divided into thirteen regions.

- North America
- Central America &Caribbean
- South America
- East Asia
- Southeast Asia
- South Asia
- Central Asia
- Western Europe
- Eastern Europe
- Middle East & North Africa
- Sub-Saharan Africa
- Russia & the Newly Independent States
- Australasia & Oceania

This designation was preferred to other designations with only 6-8 regions in an attempt to reduce bias a few areas of activity may have on overall regional trends. Furthermore, by using groupings with fewer states in each, the paper is attempting to minimize the locations to compare when considering possible shared cultural ties and ideologies that could be affecting regional trends. Appendix 2 lists all the countries in each region.

Next this paper will look at weapon type – CPOST provides the type of weapon used by attackers. There are 13 categories of weapons possible to be used by the attacker; car bomb, truck bomb, belt bomb, boat bomb, scuba bomb, airplane, motorcycle bomb, backpack bomb, animal bomb, mixed, cart bomb, turban bomb, unspecified, and other. For the purposes of this project, truck and car bomb were combined into vehicle bomb as they are expected to be used in similar situations. The paper hopes to examine what trends, if any, can be found between men and women when determining what weapon to use for their attacks.

The final variable this paper explores is *religion* – CPOST provides the religious affiliation of the attacker, and I will be using the designations provided by the CPOST dataset; Muslim, Hindu, Christian, Secular, and Unknown. This variable captures both the cultural level of traditional and patriarchal roles women would be expected to follow, and also tests the literatures claim that religious groups should be hesitant to use female suicide bombers. (O'rourke, 2009; Gonzalez-Perez, 2008; Skaine, 2006) The project expects an increase in participation along religious lines as these groups are more likely to be restrictive towards women, both because women are less suspected,

making them more efficient, and also because women are more restricted and easier to control and force into suicide bombing.

Testing

As seen in Figure 1, women's role as female suicide bombers is increasing. From 2005-2014 there was an increase from five cases to seventeen, which is an increase of 240% over ten years. From 2014-2015 alone there was an increase from seventeen attackers to 118, which is an increase of 594% in one year. The first relationship to be tested is the relationship between restriction and level of female participation. While the paper is only examining trends for region and religion, a chi-square test has been done for restriction to test the two competing hypotheses, as well as weapon type. A chi-square model will be used to determine if the level of restriction in a state, or weapon type preference, is statistically relevant to help explain the variation in the number of female suicide bombers.

CHAPTER FOUR
ANALYSIS

While this project is primarily concerned with understanding why there is an increase in female suicide bombers, the exponential growth of male suicide bombing, as seen in Figure 2, should be mentioned. The first case of suicide bombing was conducted in 1982 by Hezbollah, which first used men, and added women to the campaign three years later in 1985. The Liberation Tigers of Tamal Eleam (LTTE) followed the example set by Hezbollah and started using male suicide bombers in 1987, adding women four years later in 1991. Suicide bombing was recognized by terrorist organizations to be a successful tactic, and began to be used more widely, which explains the exponential growth seen for male attackers from 1982-2015. Over the past fifteen years, 2001-2015, male suicide bombing has increased from seventy-one attackers a year to 769, which is an increase of 934%. This rapid expansion in suicide attackers is problematic and future work should focus on solutions to reduce this trend.

Female suicide bombing, while increasing, has been at a slow, almost stagnant rate, until 2015 which saw a dramatic surge in female attackers. From 2000-2014 female suicide bombings increased from eight attackers to seventeen, which is an increase of 113% over fifteen years compared to a male increase of over 900%. 2015 alone saw 118 female suicide bombing cases, which was a spike of 594% in one year. While 2015 may be skewing the rate of female participation, it is not solely responsible for driving the increase over time in female suicide bombers.

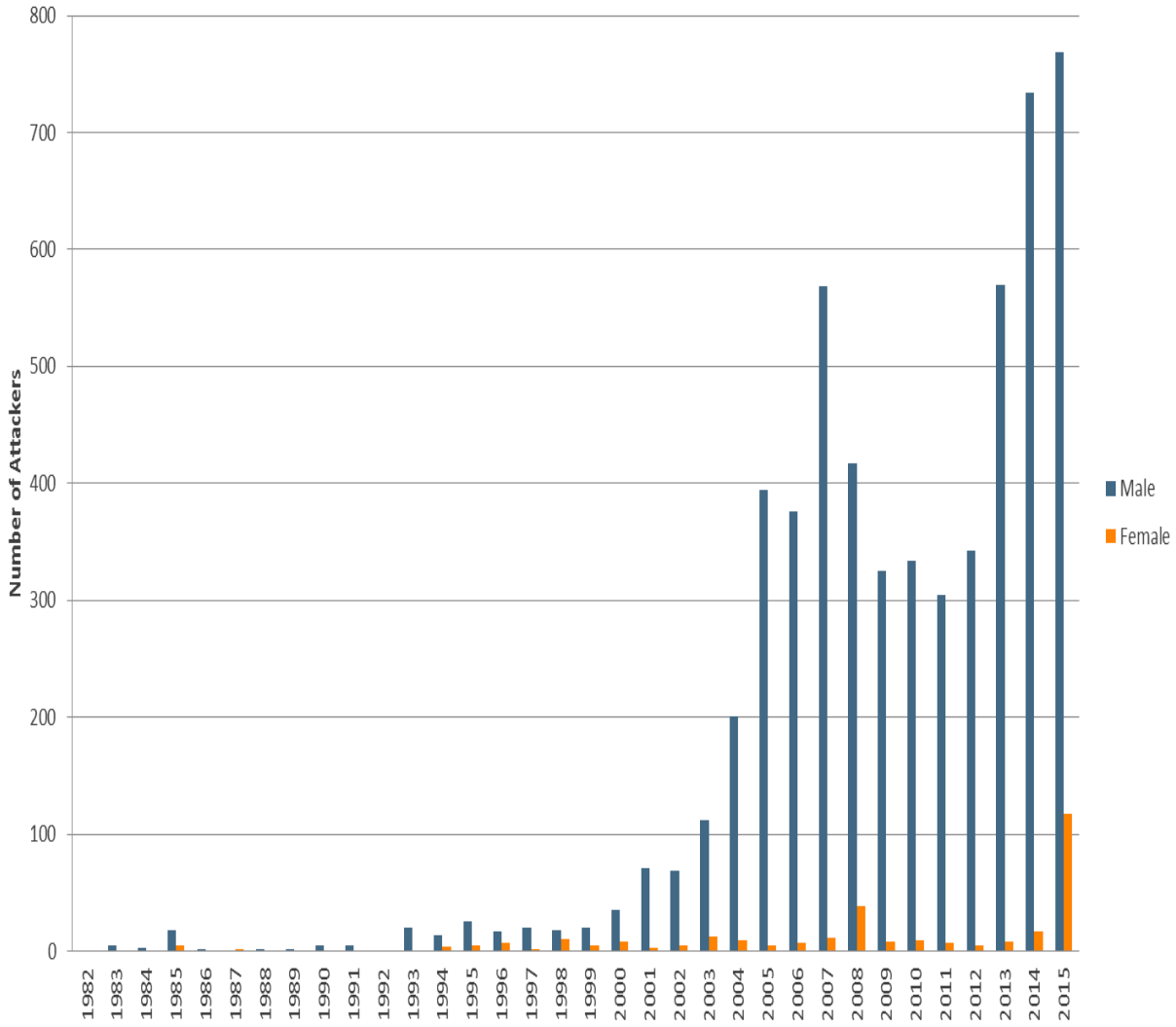

Figure 2 Number of Attackers per Year by Sex from 1982-2015

Because of the dramatic spike in activity during 2015 this paper will first examine possible trends during that year. Eighty-one women attacked in Nigeria, twenty-two in Cameroon, twelve in Chad, while there was only one attacker each in Afghanistan, Turkey, and Somalia. 97% of the cases that occurred in 2015 were conducted in Nigeria, Cameroon, and Chad, which are all times and locations that align with an increasing activity level of the terrorist organization Boko Haram. While CPOST did not assign these cases to a particular organization, this project assumes the location and timing connect the group to the attacks (Akinola, 2015). This 2015 activity by Boko Haram supports the strategic argument. Boko Haram consistently speaks out against the education of women, (Oriola, 2016; Akinola, 2015) including a mass kidnapping of over two-hundred school girls in 2014. (Oriola, 2016; Akinola, 2015) If a group which is so strongly against the equality of women is willing to use 115 women and girls for suicide bombings, it is likely a technique of efficiency and not a measure of equality

Moving backward from 2015 to consider the overall trend for female participation, there is a slow rate of increase which suggests women are not accepted as regularly as men within terrorist organizations that are conducting suicide bombings. This indicates groups are not affording women the same level of agency as men are provided, and suggests there are unique factors determining the level of female participation compared to male participation.

Restriction

Restriction, as previously discussed, is a variable taken from the Human Rights dataset that measures the level of economic rights provided to women by the state, and

how strictly those rights are enforced. This paper used levels of economic rights to determine how restrictive a state was against women, with the higher levels of economic rights indicating lower levels of restrictions. Zero indicates high levels of restrictions placed on women, while one indicates moderate levels, two indicates low levels, and three indicates no restrictions placed on women.

With 307 cases of female attackers from 1982-2015, Figure 3 shows female participation is higher in states with higher levels of restriction. There were no cases of female participation at levels for no restriction or at low restriction for women, and the relationship was entirely driven by the difference in participation between moderate and high levels of participation. There were 203 cases of women participating at the High level of restriction, and 104 women participating at the Moderate level of restriction.

There are two interesting findings from these results; the first is the lack of cases among low and none levels of restriction. While this could indicate individuals will be less violent as alternative avenues are available to express their grievances against the state, there are cases of male suicide bombings conducted in states with low or no levels of restriction. The cultural argument claimed participation should increase as women became less restricted; with fewer restrictions placed on women, they would be afforded higher levels of agency and more opportunities to participate in the group. The lack of cases among states with low or no restriction supports the strategic argument; women with higher agency and opportunities to be fighters in a state will be suspected more commonly, or will choose alternative avenues of participation outside of suicide bombing campaigns.

The second finding is that states with the highest level of restriction have the highest level of participation. This relationship supports the strategic argument that as a state becomes more restrictive, women will be suspected less often and therefore will be more useful as suicide bombers.

An alternative explanation should be mentioned that women will choose to join suicide campaigns in highly restrictive cultures as they have no other avenues available to participate and feel important. However, much like a recruiter manipulates men into joining along promises of belonging and making a difference, this is still a strategic tactic recruiters would take advantage of. The Cultural argument predicted the reverse would occur where women would be more likely to participate in states with moderate levels of restriction, as there would be some amount of economic rights guaranteed to them, and should be least likely to participate in states with high levels of restriction.

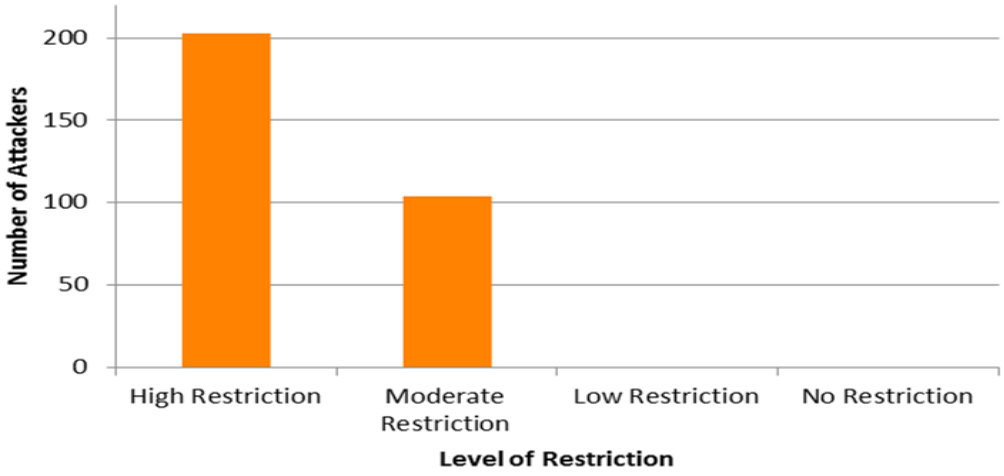

Figure 3 Number of Female Attackers by Level of Restriction

One limitation to note when using restriction as a key explanatory variable, it is a female specific variable. Restriction is a measure of legislation and enforcement, concerning women's economic rights within the state, therefore, could misrepresent the level of restriction placed on the men in a state when comparing cases in each category. However, this paper assumes men will face the same, if not less, levels of restrictions as women and therefore is comfortable in its analysis of this relationship.

Region

Region was divided into thirteen categories following the START GTD designation of regional groupings. Table 1 shows the distribution of both male and female attackers by region. As can be seen in the table, the four most prevalent regions where women were active, in order from most active to least, is Sub-Saharan Africa, the Middle East and North Africa, South Asia, and Russian and the newly Independent States. While there was activity in those four regions, the other nine regions[7] had very few, if any, cases of female activity, and are all less than one percent of the total number of suicide cases by men and women as shown in Figure 4.

It is important to also look at which regions women have the highest percent of participation, as the number of cases is interesting, but does not represent what level of access women are afforded in the region. Notably, the order is different as seen in Figure 5; women participate in order from highest percent of cases to the least in Sub-Saharan Africa, Russia and the newly Independent States, Middle East, and finally

[7] All regions are defined in Appendix 1

South Asia. The middle-east, which had 55% of all suicide bombing cases, and South Asia which had almost 34%, both only used women in 2.6% of their cases.

This compared to Sub-Saharan Africa with only eight percent of overall suicide bombing cases but thirty percent of those attackers are female, and Russian and newly independent states who account for only 1.6% of all cases but use women in twenty-eight percent of those cases.

Table 1 Cross Tab of Restriction and Level of Participation as Suicide Bombers

Level of Restriction on Women in State	Male	Female	Total
High Restriction	4,096 (69.14%)	203 (3.43%)	**4,299 (72.57%)**
Moderate Restriction	1,474 (24.88%)	104 (1.75%)	**1,578 (26.63%)**
Low to No Restriction	47 (0.80%)	0 (0%)	**47 (0.8%)**
Total	**5,617 (94.82%)**	**307 (5.18%)**	**5,924**

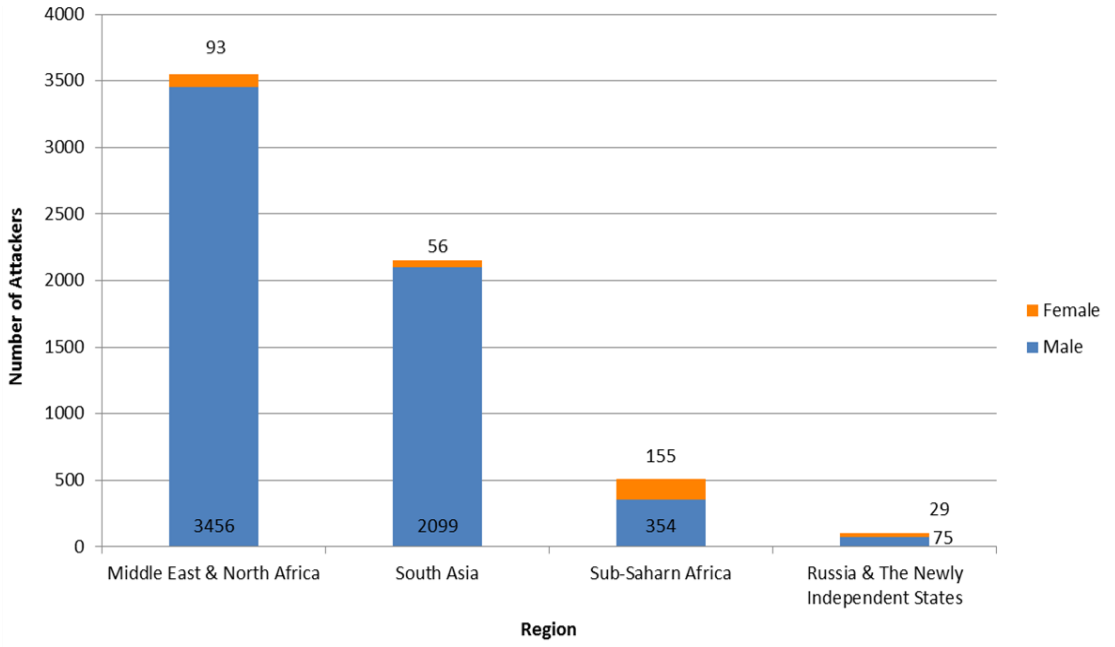

Figure 4 Number of Attackers per Region Broken into Sex

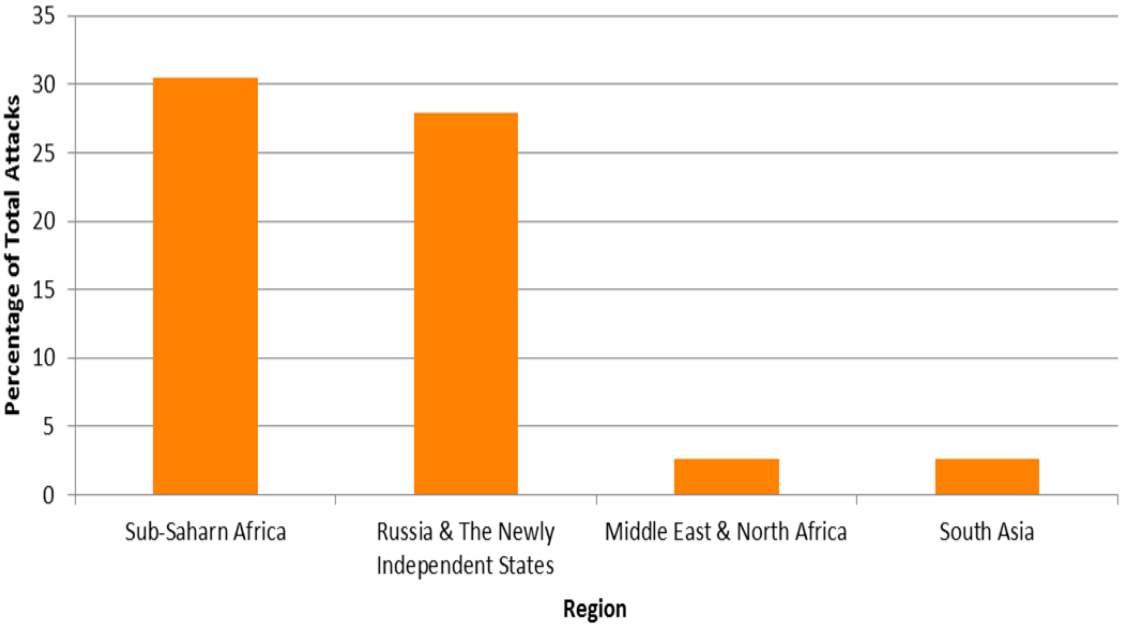

Figure 5 Percentage of Female Participation by Region

While this regional division of activity could offer support that women choose where to participate based on cultural factors, one of the two regions where women participate at the highest percentage (Sub-Saharan Africa with 30% female participation) is driven primarily by activity seen through the terrorist organization Boko Haram which, as was previously discussed, does not offer support, agency, or opportunities to women.

Two regions are responsible for 85% of all suicide bombings worldwide; Middle East and North Africa, and South Asia. However, these two regions use women in only 2.8% of all their attacks. The fact that women are used so rarely when compared to men suggests women are very selectively allowed to participate. While cultural theory would suggest this is support that women are only used in situations where they are welcome and face less restriction, the previous section discussed how women are more active when they are in states with higher levels of restriction, rather than in states where they are afforded higher levels of opportunity and agency.

An alternative explanation which supports the strategic theory is that women are only used in regions that either face increased levels of counterterrorism measures, which make it harder for men to conduct suicide attacks, or in regions where there is less community cost for using women. Regardless, the Middle East and South Asia are clearly effective at using men to successfully conduct suicide bombings and do not need women to participate, therefore both regions have low percent of female participation. This is an area that would benefit greatly from future research.

Weapon

The CPOST dataset broke weapon used by the attacker into thirteen categories, but there were two clearly preferred methods as seen in Figure 6; vehicle bombs and belt bombs. Vehicle bombs were the clearly preferred weapon as they were used in forty-nine percent of all cases, while belt bombs were also popular, being used in thirty-five percent of all cases. However, women overwhelmingly preferred the belt bomb method, which was used in eighty percent of all attacks carried out by women.

Conversely, only eight percent of all female suicide bombings used a vehicle type explosive, the preferred method overall by attackers. This is supportive of the strategic argument, which claims two of the five key advantages of using women is their lack of being physically searched, and their ability to wear clothing capable of concealing a bomb. Terrorist organizations are clearly taking advantage of these factors by only allowing women to participate when there is a need to deliver a belt bomb weapon.

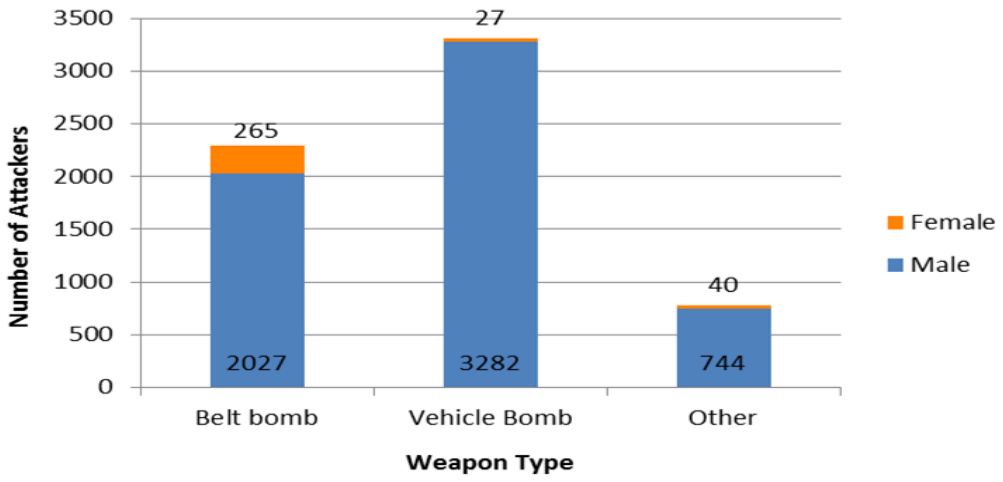

Figure 6 Weapon used by Attacker Separated by Sex

Religion

The final variable this project considered was the role of religion on the level of female participation. Table 2 shows the distribution of female suicide bombers religious affiliations, and the results are overall inconclusive due to the majority of the cases being unknown. Eighty-one percent of all cases were unknown for religious affiliations. With such a large unknown, there is no way to understand if religion is associated with the level of female participation.

This finding does highlight while cases may be available, due to the unique nature of this attack, it is very difficult to find personal information on the attackers. Once a terrorist has conducted a successful attack, there are very few traces of that individual's life left for researchers to gain a better understanding of their motivations. Many times researchers are lucky to get sex, much less a person's age, level of education, religious affiliation, or other indicators which may have a strong influence on that persons individual motivations.

Table 2 Distribution of Female Attackers by Religion

Religion	Female Attackers
Unknown	264
Muslim (Other)	2
Muslim (NA)	14
Muslim (Sunni)	3
Muslim (Shia)	2
Secular	2
Christian	1
Hindu	38

CHAPTER FIVE
CONCLUSIONS

When trying to understand what leads women to participate in suicide terrorism, there have previously been two conflicting theories behind the driving factors. The first is that women will participate in cultures where they are more commonly accepted and are given an opportunity to participate. The alternative theory is that women will participate when a group determines they are in need of additional members, and women offer more benefits than costs by their participation. This project has found a lack of support for the cultural argument, and instead has found three key results it considers support for the strategic theory.

The first supportive evidence this paper found was the result that at higher levels of restriction, there are higher levels of female participation. This supports female participation levels being driven by low suspicion levels in the state, and how easily groups can manipulate women into joining an organization. This result is also the strongest direct evidence against the cultural argument, which predicted women would increase their levels of participation as a state became less restrictive.

The second supportive finding for the strategic argument is the overwhelming use of belt bombs, which are used in eighty percent of all cases with female suicide attackers. This supports both arguments by strategic theorists that groups use women because they are searched less, and are able to easily conceal an explosive device on their person. Furthermore, it shows women are used in a very tactically specific function when compared to men who only used belt bombs in thirty-three percent of their cases, instead preferring vehicle bombs forty-six percent of the time, and yet still showing

significant diversity in the types of weapons employed. Groups have overwhelmingly only offered access to women when they were in need of a deliveryman for a belt bomb.

The final piece of support this paper has found for the strategic argument is in the consistently different way groups treat men and women. Men are used first in a suicide campaign, and their activity is increasing at an exponentially rapid rate, while women are brought in later after membership drops, or counter-terrorism efforts create roadblocks for male participants. When considering the rates women are used in comparison to men, the highest they ever reach is 30% in Sub-Saharan Africa, and then twenty-eight percent in Russia and the newly independent states. While this could be counted towards cultural specific areas that allow women an opportunity, the trend seen in restriction, as well as the Sub-Saharan Africa relationship being driven primarily by Boko Haram, both support the strategic argument.

There are two key implications when women's participation is considered a strategic choice rather than an indicator of female cultural acceptance. The first is that the increase is primarily driven by the fact women are not suspected as attackers, and therefore have been able to be more efficient. Therefore, to best solve the increase in female suicide bombers, rather than focusing on improving cultural factors for women, the key is to address the issue as a tactical problem. Rather than increasing educational programs for women, policy makers should focus on training police and military to consider all people, even women and children, as a possible threat, and to create security programs that will properly screen all citizens rather than assuming away possible assailants.

If policy makers will concede to this shift when confronting this problem, it should lead to the second implication; female participation should, over time, decline. Because women are primarily used as back-up when security measures are making male participation more complicated, the best tactic to counter female participation is to add screening and suspicion to them as well. As a state or community begins to suspect women more commonly and conducts searches on them more frequently, they will become mush less effective, and therefore will offer no benefit during a terrorist organizations cost-benefit analysis. This would be expected to effectively terminate their participation.

When considering the limitations of this work, as well as suggestions for future work, the nature of the attacks is clearly a limiting factor as there is minimal personal data available, and also there are few cases. While more cases would be enlightening, there are solutions available to make more cases unnecessary. Future areas that would be important for researchers include, group centered or campaign specific analysis, as well as better understanding indicators for male suicide bombers as women should be expected to decline once they are treated appropriately as a potential threat. One finding in particular is that the Middle East and North Africa is responsible for fifty-five percent of all suicide bombings, male and female, which is an important avenue for future study.

Ultimately, this paper has presented support that female suicide bombing occurs due to strategic advantages offered by women to groups. Terrorist organizations will use women when they are in need of additional members and will benefit from

employing female suicide bombers. This project contradicts the competing cultural theory that suggests female participation is an indication of increasing female agency and equality. By showing female participation increases as additional restrictions are placed on women, as well as the specialization in weapon type, this project confidently states female participation to be strategic, rather than culturally driven.

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APPENDIX

Appendix A- Rise in Suicide Bombers over Time

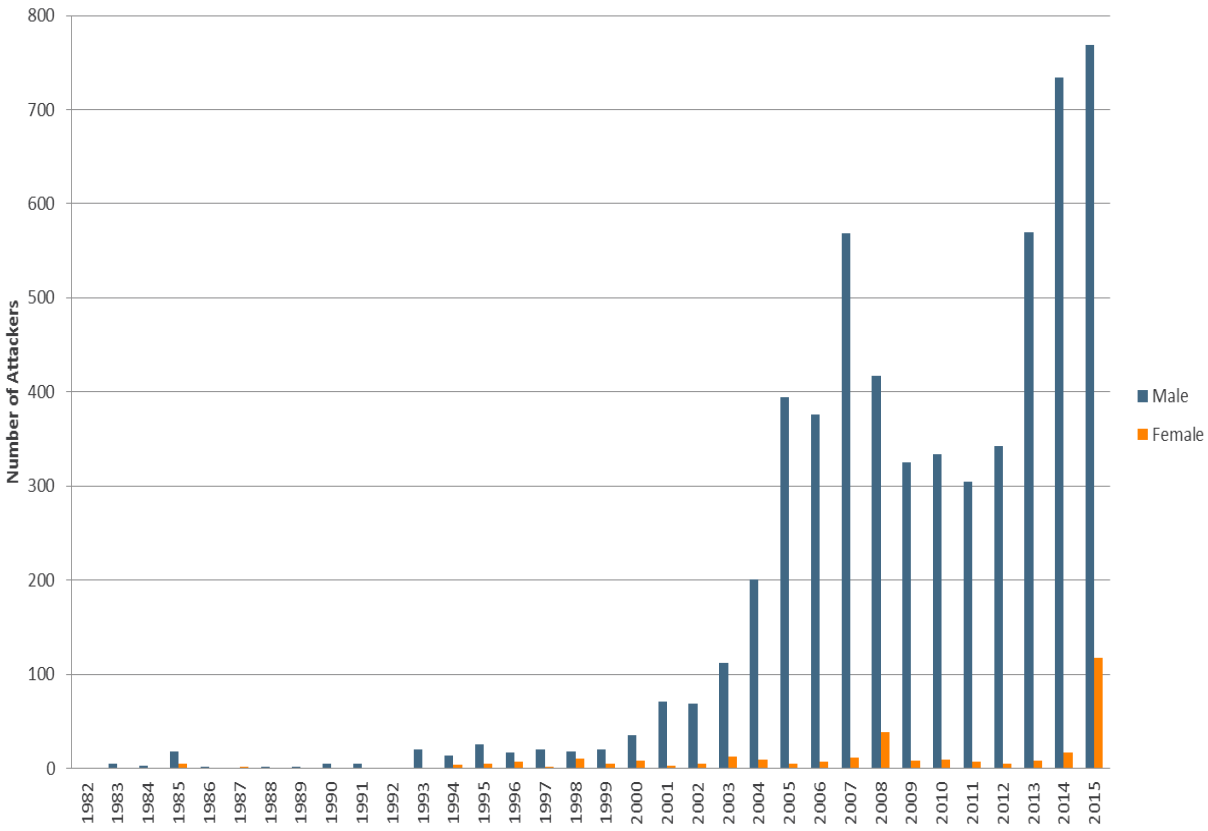

Figure 7 Number of Suicide Bombers per Year and Sex

Appendix B- Number of Attackers by Sex in each Region

Table 3 Distribution of Attackers by Region and Sex

Country	Male	Female
Middle East & North Africa	3456	93
Sub-Saharan Africa	354	155
South Asia	2099	56
Western Europe	25	0
North America	20	0
Russia & The Newly Independent States	75	29
Southeast Asia	17	0
East Asia	20	2
Central Asia	8	2
Eastern Europe	2	0
South America	2	0
Central America	0	0
Australasia and Oceania	0	0

Appendix C- START Global Terrorism Dataset Regions

University of Maryland's regional codes based off the Terrorism Database Codebook (pg. 19-20):

North America (1):
Canada, Mexico, United States

Central America & Caribbean (2):
Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bonaire (Netherlands Antilles), Cayman Islands, Costa Rica, Cuba, Curacao (Netherlands Antilles, Dominica, Dominican Republic, El Salvador, Grenada, Guadeloupe, Guatemala, Haiti, Honduras, Jamaica, Martinique, Montserrat, Nicaragua, Panama, Puerto Rico, Saba (Netherlands Antilles), Sint Eustatius (Netherlands Antilles), Sint Maarten (Netherlands Antilles), St. Barthelemy, St. Kitts and Nevis, St. Lucia, St. Martin, St. Vincent and the Grenadines, Trinidad and Tobago, Turks and Caicos, Virgin Islands (British) , Virgin Islands (U.S.)

South America (3):
Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Falkland Islands, French Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela

East Asia (4):
China, Hong Kong, Japan, Macau, Mongolia, North Korea, South Korea, Taiwan, Tibet

Southeast Asia (5):
Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, South Vietnam, Thailand, Timor-Leste, Vietnam

South Asia (6):
Afghanistan, Bangladesh, Bhutan, India, Maldives, Mauritius, Nepal, Pakistan, Seychelles, Sri Lanka

Central Asia (7):
Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan

Western Europe (8):
Andorra, Austria, Belgium, Corsica, Denmark, Finland, France, Germany, Gibraltar, Great Britain, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Malta, Isle of Man, Monaco, Netherlands, Northern Ireland, Norway, Portugal, San Marino, Spain, Sweden, Switzerland, Vatican City, West Germany (FRG)

Eastern Europe (9):

Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Czechoslovakia, East Germany (GDR), Hungary, Kosovo, Macedonia, Moldova, Montenegro, Poland, Romania, Serbia, Serbia-Montenegro, Slovak Republic, Slovenia, Yugoslavia

Middle East & North Africa (10):

Algeria, Bahrain, Cyprus, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, North Yemen, Oman, Qatar, Saudi Arabia, South Yemen, Syria, Tunisia, Turkey, United Arab Emirates, West Bank and Gaza Strip, Western Sahara, Yemen

Sub-Saharan Africa (11):

Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo (Brazzaville), Congo (Kinshasa), Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rhodesia, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe

Russia & the Newly Independent States (NIS) (12):

Armenia, Azerbaijan, Belarus, Estonia, Georgia, Latvia, Lithuania, Russia, Soviet Union, Ukraine

Australasia & Oceania (13):

Australia, Cook Islands, Fiji, French Polynesia, Kiribati, Marshall Islands, Micronesia, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Samoa (Western Samoa), Solomon Islands, Tonga, Tuvalu, Vanuatu, Wallis and Futuna

VITA

Samantha Louise Okowita was born in Salisbury North Carolina on the great day of June 30th. Her wonderful parents, Cindy and Frank Hinson brought her home to join her older sister Elizabeth. She grew up spending time with family, and was always driven to learn; from attending educational camps over her summer holidays, to caring for animals and crops on her family's modest farm. She was accepted into the North Carolina School of Science and Mathematics for her junior and senior years of High School. During her time at NCSSM she not only broadened her cultural and academic awareness, but began developing her strong leadership skills as a resident life advisor.

Following high school, she attended North Carolina State University in Raleigh, gaining a Bachelor of Science degree in Human Biology and graduating Cum Lade. Again, she focused not only on academics, but was driven to lead her fellow wolfpack. She volunteered both as a council member while in the Scholar's organization, and worked as a Resident Advisor. Both allowed her to develop leadership skills, as well as levels of empathy, patience, and compassion that would rival the best pre-school teachers.

After college she married her best friend, Alex, as well as started a new chapter in Tennessee. Initially she worked at the Oak Ridge National Laboratory as an intern, developing educational engagement programs for University students. This led her to discover a passion for bridging the gap between policy and science. Under this realization she joined the University of Tennessee in Knoxville as a Master's Candidate for a Master of Arts in Political Science. Following graduation in the spring of 2017 she hopes to continue to grow as a leader, bridge gaps between policy and science, and never stop learning.