



Gender and jihad in the United States: A comparative analysis of Islamic State supporters using the 3N model of radicalization

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Gender and *jihad* in the United States: A comparative analysis of Islamic State supporters using the
3N model of radicalization.

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A Thesis in the Field of Psychology
for the Degree of Master of Liberal Arts in Extension Studies

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Abstract

Acts of terrorism and insurgency have dramatic consequences for national and global strategy and security efforts. Numerous factors complicate our understanding of violent extremism. Diverging values, cultures, and ideologies underpin and further complicate these variables. The 3N model of radicalization suggests that radicalization to violent extremism is driven by the needs, narratives, and networks of an individual. This study uses the 3N model as a theoretical framework for conducting a comparative analysis of a US cohort charged by the United States with offenses related to their support of the Islamic State from March of 2014 – December of 2023. It was hypothesized that a comparative analysis utilizing the 3N model would identify uniquely gendered typologies of the needs, narratives, and networks motivating US women's radicalization to the Islamic State vis á vis those of US men. While the gendered hypothesis was not supported, findings suggest that radicalization of a US cohort to the Islamic State is consistent with those theorized by the 3N model of radicalization.

Frontispiece

Before we can understand contemporary identity politics, we need to step back and develop a deeper and richer understanding of human motivation and behavior. We need, in other words, a better theory of the human soul.

Francis Fukuyama

Dedication

This work is dedicated to my children, Kate, Elle, Sophia, Vivian, Ava, Mimi, and Myles with my deepest gratitude for your patience, inspiration, kindness, humor, and love. To Quinn, thank you for rounding out our crew with your many gifts and talents. All eight of you are the fuel! To my parents and siblings, thank you for providing a homebase built on curiosity, hard work, humor, and love. To Karen, no words adequately express what your unyielding friendship, encouragement, and love mean to me. To Peter, thank you for seeing me and helping light the way. I love you all.

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Table of Contents

Frontispiece.....	iv
Dedication.....	v
Acknowledgments.....	vi
List of Tables	x
Chapter I. Introduction.....	1
Background of the Problem	6
The Islamic State of Iraq and Syria.....	10
Women and the Islamic State	13
Research from the Ground Up	16
The 3N Model of Radicalization.....	20
Conclusion	23
Chapter II. Methods	25
Sample.....	25
Procedure	26
Demographic Variable Coding	27
The 3N Model of Radicalization Coding Criteria.....	31
Chapter III. Results	37
Demographic Results	37
Reporting of Demographic Variables	39

Results from the 3N Model of Radicalization	40
Findings of a Comparative Analysis of the Needs Typology of the 3N	
Model	40
Significance Loss	41
Opportunity for Significance Gain.....	42
Religious/Ideological Duty	42
Loneliness, Boredom, Need for Belonging.....	42
To Correct an Injustice/Revenge	42
Sympathy	42
Relationship	43
Vulnerability	43
Findings of a Comparative Analysis of the Narratives Typology of the 3N	
Model	43
Inspired by Ideology/Propaganda of ISIS.....	45
Roles within ISIS.....	45
Instrumental, Social/Cognitive, and Operational support.....	46
Findings of a Comparative Analysis of the Networks Typology of the 3N	
Model	47
Radicalization Class.....	48
Arrest Class.....	48
Support/Acceptance of Family	48
Support/Acceptance of Friends.....	48
Use of Permanent Messaging.....	48

Use of Encrypted Messaging	49
Chapter IV. Discussion	50
General Discussion	50
Limitations and Future Directions	52
Appendix 1. Demographic Variables and Justifications.....	55
Appendix 2. Demographic Variable Coding Criteria	59
Appendix 3. Needs Typology of the 3N Model Coding Criteria.....	60
Appendix 4. Narratives Typology of the 3N Model Coding Criteria.....	61
Appendix 5. Networks Typology of the 3N Model Coding Criteria.....	63

List of Tables

Table 1. Supporting Evidence and Coding Criteria for Demographic Variables	29
Table 2. Supporting Evidence and Coding Criteria for the Needs Typology of the 3N Model of Radicalization.....	32
Table 3. Supporting Evidence and Coding Criteria for the Narratives Typology of the 3N Model of Radicalization.....	33
Table 4. Supporting Evidence and Coding Criteria for the Networks Typology of the 3N Model of Radicalization.....	35
Table 5. Comparative Demographic Results	38
Table 6. Comparative Results of the Needs Typology of the 3N Model of Radicalization	40
Table 7. Comparative Results of the Narratives Typology of the 3N Model.....	43
Table 8. Comparative Results of the Networks Typology of the 3N Model	47

Chapter I.

Introduction

Irrespective of how one views terrorism, and at whatever level of analysis (e.g. individual, group, organizational, subnational), terrorism is behavior, and thus rests firmly in the sights of psychology.

—John G. Horgan

Acts of terrorism and insurgency have dramatic consequences for national and global strategy and security efforts. Numerous factors complicate our understanding of violent extremism including religion, ethnicity, regime and/or policy opposition, perceived and/or actual structural and systemic violence, historical violence, economics, and oppression (Atran, 2021; Brugh et al, 2019; Klausen et al., 2020). Diverging values, cultures, and ideologies underpin and further complicate these variables (Azani & Koblenz-Stenzler, 2022; Speckhard & Ellenberg, 2022). While terrorism research has experienced exponential growth post 9/11, empirical studies of female terrorists remain limited, particularly comparative analyses of male and female terrorists (Phelan, 2020; Shapiro & Maras, 2019). Currently, evidence suggests that both women’s involvement and agency in acts of terrorism is increasing (Ahmad, 2019; Speckhard & Ellenberg, 2021). Further, extant research has shown tremendous diversity in the sociodemographic variables of female terrorists, inaccuracies stemming from mediatized stereotypes of female terrorists, and the inapplicability of many research findings on male terrorists to

their female counterparts (Jacques & Taylor, 2013). Thus, efforts to identify and address research gaps regarding the social and behavioral aspects of women's participation in violent extremism are both timely and necessary.

Of particular interest to terrorism researchers is the radicalization of men and women from Western Countries to The Islamic State of Iraq and Syria (also known as ISIS; IS; *Daesh*), a *Salafi jihadist* extremist group designated a terrorist organization by the United States government in December 2004 (U.S. Department of State). ISIS' recruitment of upwards of 40,000 foreign terrorist fighters (FTFs) from 2014 to 2019 provides fertile ground for inquiry due to the unparalleled wealth, lethality, and internet-based recruitment strategies exploited by the organization (Pearson & Winterbotham, 2017; Speckhard & Ellenberg, 2022; Spencer, 2016). Further, global media attention highlighting the explicitly gendered hierarchies and binaries of ultra-conservative Islam and Islamist *jihadist* groups – including frequently punishing pre-and-proscribed social norms governing women's behaviors – become curiosities vis á vis Western norms supporting women's motivation and agency (Biswas & Deylami, 2019; Ingram, Whiteside, & Winter, 2020; Wickham, Capezza, & Stephenson, 2020). Thus, the migration of at least 4,000 female supporters of ISIS into Iraq and Syria - many hailing from Western countries – confounds and fascinates researchers, Western society, and the media alike (Morgan & Chermak, 2021; Shorer, 2018).

According to the literature, ISIS aggressively and successfully targeted female recruits with enticements of empowerment, increased social status, increased political agency, financial stability, and strong interpersonal support and connection (Bigio & Vogelstein, 2019). However, these emotionally-enticing “carrots” often differed

diametrically from the “sticks” of near-complete subjugation women experienced once recruited (Biswas & Deylami, 2019; Ingram, 2021). Overall themes such as religious ideology, personal and/or situational circumstance, social milieu, desire for revenge, and empowerment have been identified as motivating both men and women to radicalize to violent extremism (Ahearn, 2021; Atran, 2021; Brugh et al., 2019; Klausen et al., 2020; Smith, 2018). However, intricate values embedded within these themes differ for men and women, particularly within the highly patriarchal, ultra-conservative context of Islamic extremism (Jacques & Taylor, 2008; Speckhard & Ellenberg, 2021; Wickham, Capezza, & Stephenson, 2020). Factors driving women’s radicalization to, and their roles within, terrorist organizations are not yet fully understood and appear to be highly variable depending on demographic factors, psychosocial contexts, and within the evolving, clandestine, and hybridized landscape of terrorism (Amusan, Adeyeye, & Oyewole, 2019; Lounnas, 2023; Termeer & Duyvesteyn, 2022). The involvement of US women as both supporters and agents of the Islamic State creates a particularly puzzling paradox. Given the unparalleled oppression, brutality, and violence of the Islamic State *against* women (Aasgaard, 2017, Al-Dayel, 2021; Kaya, 2020, Perešin, 2018), why would women from the US - arguably the most powerful liberal democracy in the world - radicalize to the violent extremism espoused by the Islamic State?

The present study rests on three main premises. The first regards gender as a social construct vulnerable to stereotyping. The characteristics of gender are reflected in expectations regarding norms, behaviors, and roles associated with what it means to be a man or woman in any given society. Gender stereotypes are built over social context and history, reflecting widely shared beliefs about what it means to be male or female (Eagly,

1987). The second premise is that women's roles within IS, and strict mandates for their behavior, were specifically delineated in Islamic State doctrine (Ingram, Whiteside, & Winter, 2020). These mandates closely adhere to the gendered stereotypes, hierarchies, and power dynamics of patriarchal societies (Daymon & Margolin, 2022). The final premise is that the Islamic State used women to their strategic advantage as the temporal context of the so-called *caliphate* unfolded, emphasizing women's importance in the domestic sphere as the *caliphate* was built (Khelghat-Doost, 2019), sanctioning women's participation in *jihad* as the *caliphate* was threatened and dismantled (Bloom & Lokmanoglu, 2023), and humiliating inactive men into action by taunting them with women's successful engagement as fighters (Ingram, 2021). The proposed study builds on these premises by examining variables related to the strategic and successful targeting of US women by the Islamic State as a means of achieving the group's socio-political objectives.

The current study offers a comparative analysis of social and behavioral factors contributing to the radicalization of women and men in the United States charged with offenses related to the Islamic State from January 2014 through December 2023. Specifically, the 3N model of radicalization (Webber & Kruglanski, 2017) is used as a theoretical framework for conducting a gendered analysis of the three psychosocial forces proposed by the model as contributing to radicalization, namely: (1) the individual needs, or motivations, of those radicalizing to ISIS; (2) the ideological narratives of the individual's cultural milieu; and (3) the complex interplay of social influence and group pressure within the individual's social network. It is hypothesized that a comparative analysis utilizing the 3N model will identify uniquely gendered typologies of the needs,

narratives, and networks motivating US women's radicalization to the Islamic State vis á vis those of US men. It is postulated that such factors will vary in accordance with the group's highly gendered construct of Islamic *jihadism*. Ultimately, the goal of the present study is to explore the utility of the 3N model as a mechanism for conducting comparative analyses of the social and behavioral nuances contributing to the radicalization of a sample of US women and men to the Islamic State of Iraq and Syria.

While the 3N model has achieved a high degree of empirical support in field and experimental research in both radicalized and general populations (Adam-Troian et al., 2020; Bäck et al., 2018; Bélanger et al., 2019; Da Silva et al., 2022; González et al., 2022; Jasko, LaFree, & Kruglanski, 2017; Jasko et al., 2020; Kruglanski et al., 2022; Lobato et al., 2019; Milla et al., 2022; Resta et al., 2022; Webber & Kruglanski, 2017; Webber et al., 2018), to my knowledge no other studies have employed the model to study the role of gender in individuals charged with terrorism. Generally, the current study makes an important contribution to the empiricism of terrorism research by testing the 3N model of radicalization in a novel way. More specifically, this study seeks to add empirical weight to the psychological study of factors underlying the motivations of US women and men charged with supporting the Islamic State during the rise and fall of the so-called Islamic State *caliphate*. Lastly, this work contributes to the larger body of terrorism research by building a partial database of US women and men who radicalized to the Islamic State for use in future terrorism research. As foreign terrorist fighters and their children are repatriated to the United States, the proposed study has potentially broad implications for updating, informing, and streamlining deradicalization and counter

terrorism research, programming, and national security strategy and policy (Doctor et al., 2023).

Background of the Problem

Catalyzed by the terrorist attacks of 9/11, academic and governmental research, practice, and policy on terrorism has increased exponentially in the past two decades. Groups and individuals supporting and enacting ideologically motivated violence vary widely according to beliefs (Smith, 2018), organizational goals (Khelghat-Doost, 2019), recruitment strategies (Shorer, 2018; Speckhard & Ellenberg, 2022), types of attacks and targets (Jacques & Taylor, 2008), and roles within terrorist organizations (Brugh et al., 2019). The proposed study focuses on transnational terrorism, defined by Atran (2021) as: “a strategy (a) of groups bound together by ideological affiliation but not by internationally recognized structures of existing nation-states, which (b) aims to effect long-term societal change across nations in conformity with a political or religious doctrine (c) by persistent means of extreme violence against nonconforming civilian populations meant to destabilize and undermine the prevailing order, (d) while increasing conformity and support susceptible to alienation from, and hostility to, that order,” (p.472). Global efforts to understand the myriad and intersecting complexities underpinning violent extremism are beginning to yield results, yet critical gaps remain in evidence-based analyses of terrorist actors, their motivations, the radicalization process, and effective terrorism countermeasures (Moyano, Kruglanski, & Trujillo, 2022; Schuurman, 2020). With the possible exception of “lone wolf” terrorists (Trimbur et al, 2021), a decades-long history of psychological research aimed at producing a reliable, predictive profile of a terrorist actor consistently suggests terrorists are no more likely

than the general population to have personality traits, psychological disorders, or predispositions to psychopathy that could foretell future engagement in radical, extremist, violent, behavior (Horgan, 2005; Monahan, 2016; Schuurman, 2020). What then, drives ordinary individuals to move from socially normative beliefs and behaviors to those that support and enact the socially deviant ideologies and activities of terrorist organizations?

While researchers across academic disciplines have conceptualized radicalization in different ways, the prevailing view sees radicalization as (a) a gradual process of socialization into (b) a system of extreme beliefs that (c) justifies violence to achieve ideological goals (Hafez & Mullins, 2015). Research sponsored by the U.S Department of Justice emphasizes the “social nature of radicalization to terrorism,” (Smith, 2018, p. ii), illuminating how social processes and group dynamics exert influence on an individual’s radicalization to violent extremism. In the same vein, Klausen and her team (2020) conceptualize radicalization to terrorism as a learned process of self-invention acquired through immersion in the “cultural values, norms, and moral boundaries” of the group’s ideology (p. 590). The group’s extreme beliefs and behaviors create a rigid binary between believers and non-believers, forcing the radicalizing individual to choose between the two. As the bond between the radicalizing individual and the extremist group strengthens, revered group leaders and members exert increasing influence and control, leading to the individual’s alienation from family members and friends. Thus, while individual psychology informs some aspects of radicalization and participation in terrorism, all facets of terrorism – including radicalization, participation in terrorist activities, organizational goals, targets and tactics,

ideological shifts, and societal impact - are underpinned by social psychological factors (Webber & Kruglanski, 2017).

The processes leading to radicalization, bounded by intergroup relations and the intricacies of society itself, are predominantly the work of social psychology (Horgan et al., 2017; Moyano, Kruglanski, & Trujillo, 2022). While initial studies of radicalization and terrorism sought to explore the relationships between individual psychopathology and the actor's situatedness within contexts believed to facilitate extremism, recent work on the psychology of radicalization takes a broader approach, recognizing multiple individual, social, and societal level variables which may act and/or interact to predispose or prevent individual radicalization (Ozer, Obaidi, & Schwartz, 2023). Psychosocial processes of social identity relative to ingroup and outgroup behavior (Tajfel, 1982; Tajfel & Turner, 2004), the human need for interpersonal attachment and belonging (Baumeister and Leary, 1995), and the influence of group membership and processes on individual behavior (Brewer & Chen, 2007; Brewer & Gardner, 1996; Hogg, Abrams, & Brewer, 2017; Nilsson, 2021; Smith, Blackwood, & Thomas, 2020) within the context of violent extremism have also garnered renewed consideration. The evolution from radicalized individual to brutal terrorism actor is also informed by the social psychology of 'us' versus 'them' dehumanization, the criminalization of terrorist targets by their perpetrators, and the legitimization of inhuman, often fatal, acts of violence condoned by group expectations, organizational mandates, and ideological frameworks (Kizilhan & Steger, 2021). The social psychological impact upon children raised within and targeted for membership by the Islamic State as related to self-esteem, identity, socialization,

psychological security, symbolic immortality, and behavior is also garnering significant attention (Watkin & Looney, 2019; Garshabi & Maleh, 2024).

Overwhelming societal challenges stemming from globalization; displacement and forced migration; intractable political, religious, and cultural conflicts; and increasing social and economic disparities have deepened and exacerbated the already complex landscape of human security. So, too, have emerging technological threats, cybercrime, disinformation, human rights violations, and transnational crime and terrorism, all of which threaten to further tip the scales toward protracted war and conflict (Moyano, Kruglanski, & Trujillo, 2022). The Covid-19 pandemic, far from pausing or halting the threat of *jihadist* terrorist violence, offered the Islamic State a unique opportunity to propagandize and weaponize the Covid-19 virus as a means for building conspiracy theories against Western nemeses, conceptualize the virus as ‘a soldier of Allah’ who would spare true believers, and exploit the global panic and instability wrought by the crisis as a renewed ‘call to action,’ (Kruglanski et al., 2020).

Currently, the rapidly evolving international landscape poses further challenges: Russia’s assault on Ukraine intensifies an already overburdened and complex humanitarian and global security environment, while great power competitions and renewed and new allegiances to the Islamic State *caliphate* – many from the world’s most fragile corners – portend both ongoing and novel threats to global stability and security (Ingram & Mines, 2022). So, too, does intractable “bred in the bone” hatred (Post, 2005) and violence legitimized by historical, modern, and increasing intergroup divisions falling on sectarian, interfaith, and political lines (Hodgetts et. al, 2022). At this writing, the ongoing and complicated war in Gaza following the October 7, 2023, attack by

Hamas upon Israel has only served to deepen humanitarian crises in the region, increase global divisiveness, and dangerously blur distinctions between victims and aggressors (Cronin, 2024). Thus, understanding the processes, facilitators, and perpetrators of violent extremism remains an urgent concern for the United States and the global community (Thomas & Martin, 2024; Margolin & Jablonski, 2024; McCary, 2024). In their 2024 Annual Threat Assessment, the U.S. Office of Intelligence and analysis warns that “ISIS will remain a centralized global organization even as it has been forced to rely on regional branches... [and will attempt] to conduct and inspire global attacks against the West and Western interests,” (US Homeland Security, 2024).

The Islamic State of Iraq and Syria

In June of 2014, the Islamic State officially self-declared a *caliphate* in Iraq and Syria. By August of 2015, IS controlled more than 60% of Syria’s land mass, a territorial acquisition similar in size to the United Kingdom (Bakkour & Stansfield, 2023). From 2013 through 2019, tens of thousands of men, women, minors and children traveled to Iraq and Syria from over 80 different countries to join the so-called Islamic State (Benmelech & Esteban, 2020; Jiménez-Sánchez, 2022). Many foreign travelers to IS-held territory were attracted by the promise of a physical ‘State’ devoted to the primacy of Islamic *jihadism* (Daymon & Margolin, 2022), which (a) justifies violence as a means of attaining the wider goal of securing territory to build the Islamic State (Bunzel, 2017) and (b) subordinates those who do not share their beliefs, including other Muslims and Muslim majority countries, the legitimacy of whom is not recognized by IS (Hamid & Dar, 2017).

During this same period, the United States saw the largest surge in homegrown *jihadist* activity ever experienced (Vidino, Hughes, & Clifford, 2022), with approximately 300 Americans travelling or attempting to travel in support of IS (Mehra et al., 2023). Some American travellers made their way to Iraq and Syria independently, while others accompanied friends or family. Still others journeyed in hopes of meeting a like-minded *jihadist* mate, building a family, and fortifying Islamic State territory. In addition to these US ‘travellers’, numerous other American IS supporters remained stateside, perpetrating 16 attacks on U.S. soil in the group’s name. As of December 2023, 247 individuals have been charged in the U.S. on offenses related to ISIS (Nexus, Program on Extremism, George Washington University, 2023).

When the Islamic State *caliphate* fell in 2019, Syrian Defense Forces (SDF) and their coalition partners were faced with the daunting task of managing tens of thousands of foreign travelers captured during IS’ dismantling. While men and teenage boys were most often imprisoned and guarded by the SDF, the families of IS fighters were sent to Syrian detention camps (Bunn et al., 2023) at Al Hol and Roj (Doctors Without Borders, 2022). As of December 2023, approximately 9,000 foreign terrorist fighters remain in Syrian prison facilities, while another nearly 44,000 individuals affiliated with IS remain in SDF camps (Thomas & Martin, 2024). Al-Hol, the largest of the two detainment facilities, is divided into two camps. The “Main Camp” houses Syrian and Iraqi nationals, while the “Annex” is reserved for foreign nationals (Doctors Without Borders, 2022). Of particular concern to experts are the large number of children who have spent their formative years detained within Syria. Of Al-Hol’s aggregate population, 64% are children, 50% of whom are under the age of 12 (Doctors Without Borders, 2022).

Largely forgotten by the international community, experts caution that Al-Hol is the “perfect breeding ground” for raising future ISIS fighters and rebuilding the IS *caliphate* (Garshabi & Maleh, 2024, p.2). In the absence of formal education to counter ideological narratives, many child detainees are at risk of being indoctrinated into violent extremism by their mothers, many of whom continue to promote pro-ISIS ideology within the camps (Saleh, 2021). Research has also isolated radicalization vulnerabilities unique to young women and girls, potentially increasing the threat of intergenerational transmission of risk to them within the camps (Yarrow, 2020).

As of May 2024, the United States government has formally repatriated approximately 50 individuals from Syria (Blinken, 2024) after concluding that the “only durable solution to the challenge we face in northeast Syria is to repatriate, rehabilitate, reintegrate and, where appropriate, prosecute nationals for crimes they have committed,” (US State Department, 2022). However, the repatriation of foreign nationals from Syria remains a complex balancing act rife with problematic citizenship deprivation concerns, ethical humanitarian considerations, and very real threats to national security (Spieb & Pyne-Jones, 2022; Doctor et al., 2023). Concerningly, and despite the significant progress of coalition forces in containing the ‘evolving and increasingly diffuse,’ threat of IS, the group continues to exhibit remarkable resilience in both physical and information spaces (McCary, 2024; Lynch, 2022). Following the deaths of four of the group’s leaders in relatively quick secession (Thomas & Martin, 2024) and challenges created by IS’ cyclical governance (Bamber-Zyrd, 2022), the Islamic State was still able to claim 84 attacks within Syria in the first three months of 2024 (Margolin & Jablonski, 2024). And while the network of pro-ISIS supporters in the U.S. has been disrupted following the

2019 fall of the *caliphate*, the continued arrest of IS supporters in the United States as recently as May of 2024 serves as a potent warning: American supporters of IS are still active, attempting to travel, and harnessing new digital communications to rebuild the *caliphate* of the Islamic State (Vidino, Hughes, & Clifford 2022). Thus, evidence-based research investigating the psychosocial factors motivating radicalization and terrorism are not simply retroactive exercises, but serve as important tools for future counterterrorism, deradicalization, and reintegration strategy, policy, and programming, a particularly salient point considering the constantly evolving threat of global terrorism posed by the resurgence of ISIS-K in Afghanistan, Hamas, Hezbollah, and fringe *jihadi* groups throughout the Middle East and North Africa (MENA) region.

Women and the Islamic State

Congruent with the aforementioned absence of a singular, empirically-sound profile of a terrorism actor, a singular demographic portrait of the “homegrown” *jihadi* terrorism actor has also proven elusive (Klausen et al., 2020). Initially, many foreign ‘travelers’ to Syria prior to the creation of the Islamic State reportedly out of sympathy for the Syrian people in the aftermath of decades of drought, extreme poverty, and brutality at the hands of the violently oppressive Assad regime (Speckhard & Ellenberg, 2022). Ultimately, many foreign ‘travelers’ morphed into foreign terrorist fighters (FTFs) as the Islamic State in Syria merged with subdued al Qaeda operatives in Iraq. While a full discussion is outside the scope of this paper, the creation of a self-declared *caliphate* in Iraq and Syria required Islamic State founders to navigate a complicated continuum. In transitioning from an operations-based group focused on tactical advantage to a state-building group, the *caliphate* required physical land, the provision of services and public

goods, a police force, and effective propaganda to attract new citizens and families (Khelghat-Doost, 2019). In short, IS needed scores of men and women to carry out the operations necessary to create, build, and defend a functioning state (Bakkour & Stansfield, 2022). While establishing the IS *caliphate* in June of 2014, Islamic State leader Abu Bakr al-Baghdadi issued a specific call for women to travel to the Islamic State: a call answered by over an estimated 4,000 women from Western countries (Speckhard & Ellenberg, 2021). English-speaking women are believed to have been particularly valuable to the organization (De Visser, 2021). Despite the numerous proscriptions on women's social activities, roles, and behaviors as dictated by culture, conservative Islam, and Shari'a law (Khelghat-Doost, 2019; Winter, 2018), the Islamic State had successfully initiated their unprecedented, targeted recruitment of Western women (Daymon & Margolin, 2022).

Currently, two streams of thought exist regarding the role of women within the Islamic State. While traditional scholars of security studies view the relationship between women and terrorist groups as exploitative, whereby inherently peaceful, innocent, and maternal women are victimized by violent, male-dominated groups, experts warn how such thinking creates dangerous "blind spots" for female terrorists, allowing them to fly under the radar (De Visser, 2021). Current scholarship now aims to disrupt narratives in which women are regarded as inherently peaceful (Bloom & Lokmanglu, 2023; Margolin & Cook, 2024; Jiménez-Sánchez, 2022). Throughout history, in fact, women have been active supporters and agents of terrorism across numerous contexts including the Tamil Tigers of Eelam (LTTE) in Sri Lanka, the Kurdistan Worker's Party (PKK), and as 'Black Widow' suicide bombers and hostage takers in Chechnya (Bloom, 2011; Pearson

& Winterbotham, 2017) to name a few. The recruitment prowess of the Islamic State, however, stands apart: IS successfully drew more women into their organization than any other terrorist group in history, largely via online recruitment and propagandizing (Ingram, 2021; Speckhard & Ellenberg, 2021).

Existing studies have identified numerous factors believed to be drivers in motivating Western women who radicalized to the Islamic State including: sympathy for the Syrian people (Speckhard & Ellenberg, 2022); a perceived religious obligation to defend attacks against their Islamic community (Amusan, Adeyeye, & Oyewole, 2019; Wickham, Capezza, & Stephenson 2020); an attraction to the traditional religious conservatism of ISIS and the opportunity to build communities and families according to conservative Islamic values (De Leede, 2018; Morgan & Chermak, 2021); the promise of life free from growing post-9/11 Islamophobia (Pearson & Winterbotham, 2017); the allure of religiously sanctioned female agency and empowerment within a normally restrictive, ultra-conservative milieu (Al-Dayel, 2021; De Visser, 2021); and the prospect of raising future defenders – “cubs” - of the *caliphate* (Horgan et al., 2017; Saleh, 2021). Perhaps the most mediatized, reductionist variable put forth as motivating women from Western countries to join the Islamic State was that of the passive, pathologically naive “*jihadi* bride;” a young women lured by the promise of marriage to a *jihadi* warrior, motherhood, financial security, and a home complete with domestic servants (Martini, 2018; Phelan, 2020; Spencer, 2016). Regardless of the driving force, IS women quickly learned that propagandized “pull factors” motivating them to join IS did not match realities on the ground: prohibition from combat in the early stages of the *caliphate*; the strains of young widowhood; inadequate and failing infrastructure; unforgiving physical

environments; a dearth of Western luxuries; and woefully inadequate general, prenatal, obstetrical, and pediatric healthcare and medications (Saltman & Smith, 2015).

Research from the Ground Up

The psychological study of terrorism is a challenging undertaking. According to Conway (2021), researchers of terrorism and extremism face myriad pragmatic difficulties related to the safety, consent, and ethical treatment of their subjects; legal and jurisdictional complications; data access challenges; and threats to their own personal safety owing to online visibility, exposure to dangerous actors, and prolonged and/or repeated exposure to mentally and emotionally distressing content. In addition to these difficulties, Horgan (2017) argues that overly reductionist psychological approaches have created a negative cascade within the field: the failure to capture the diversity and complexity of radicalization and terrorism has led to inconsistent and unclear applications of findings and has created uncertainty about what the psychology of terrorism *is*, leaving “psychological research on terrorist behavior...conspicuously underdeveloped,” (p. 199). Other researchers also view reductive approaches as problematic, claiming that studies of radicalization and terrorism lacking disaggregation by gender likely fail to capture the nuances of female terrorism, leading to theories, risk assessments, and measures that fall short of meeting targeted national security strategy and policy goals (Banks, 2019; Margolin & Cook, 2024). Additionally, the often-unavoidable use of secondary sources in many extant terrorism studies has stunted the development of empirically grounded methods for researching the phenomenon, leading to an overabundance of literature review-style research offerings (Schuurman, 2020). Further, LaFree and Gill (2024) illuminate potential weaknesses of open-source terrorism databases including the lack of

a generally accepted definition of terrorism, inconsistencies in the compilation of database information, potential biases introduced by media sources, and the difficulties inherent to collecting data in high conflict contexts with often differing languages.

Researchers undertaking the psychological study of terrorism and extremism are essentially tasked with building a dynamic, powerful, consequential machine without clear instruction. There are many parts and pieces to the puzzle of terrorism research, but do they fit together in a cohesive way? Are variables found to be congruent in one context incongruent in the next? As mentioned previously, a single terrorist profile has not been identified. Thus, the psychological study of terrorism has been criticized as a game of ‘chance’; heavy on demographics and light on empiricism and applicability. To be sure, hypotheses built on demographic vulnerabilities should be approached with skepticism (Jacques and Taylor, 2013). However, as new primary sources of data (e.g., federal court documents, suspect interviews, victim interviews, etc.) become available, simple demographics transform into established baselines for statistical evaluation (Branch, 2021; Sidman, 1960). A primary goal of the current study is to build on what is *known* by incorporating analytical findings from three previous studies investigating factors motivating men and women to radicalization. These are discussed in turn.

The first study, conducted by Jacques and Taylor in 2013, performed a comparative analysis of 222 women and 269 men involved in 13 conflicts across numerous global religious and ideological groups. In general, the authors found no significant differences between men and women in age, educational achievement, criminal history, or exposure to terrorist activism via family members. However, their research found female terrorists were less likely to be employed, less likely to be

religious converts, and less likely to have been immigrants prior to involvement with terrorist organizations when compared to their male counterparts. They also found that female terrorists were more likely to be divorced or widowed. Further, differences between and among men and women across the 13 conflicts examined in the study suggest the presence of regional, ideological, and/or conflict-specific influences. Their study theorized that etiologies for female terrorist engagement may be more reflective of individual-level vs. group-level variables. While these etiologies represent important starting points for comparative research, the breadth of ideologies and numerous countries of perpetrator origin create numerous confounds (such as liberal vs. ultra-conservative social visions, democratic vs. authoritarian political structures, and differences in far-right, far-left, and religious-inspired ideologies) for investigating the radicalization of US women and men within the highly specific, ultra-conservative context of ISIS-inspired *jihadism*.

The second study, performed in 2019 by Brugh et al., performed a comparative analysis similar to Jacques and Taylor (2013) but focused specifically on *jihadist*-inspired terrorist groups. In a sample of 272 women and 266 men whose formative years were spent in Western countries, they found significant differences in year of birth, profession prior to radicalization, criminal behavior prior to radicalization, group affiliation status, primary organizational affiliation, and engagement with and location of foreign fighting between female and male terrorists. Their findings illuminate similarities and differences between women and men engaged in *jihadist* terrorism, and – importantly - found that shifting ideological goals and strategies within organizations may stem from current realities faced by the organization, such as periods of increased or waning power and/or

influence. When situated within the previously stated premises, the evolution or disruption of a *jihadist* group's ideological goals may correlate with shifts in the roles of women and men within the organization, thus informing predictive models of radicalization and terrorism. While their work adds valuable information to gendered factors of engagement in terrorism, it does not examine the Islamic State specifically, nor are U.S. men and women disaggregated from the sample. Given that *jihadist* groups hold specifically different ideologies, aggregate samples of differing *jihadist*-inspired groups fail to capture ISIS-specific variables of interest. Further, ISIS was unique in their 'call' to women, suggesting the possibility of an inherent difference between IS and other *jihadist*-inspired groups. Finally, existing terrorism research has established the unique impacts of social, cultural, and political environments on factors motivating radicalization, therefore the aggregation of individuals from all Western countries may not accurately detect variables particular to a US sample (de Leede, 2018).

The third study, conducted by Shapiro and Maras in 2019, examines the radicalization of US women to ISIS within the framework of Akers' social learning theory (SLT). Their research investigates how women from the US radicalized; if family and/or friends approved or were involved with radicalization; the women's use of the internet during radicalization; the women's reasons for radicalizing; the roles of women within ISIS; and the types of support women provided to ISIS and its members. Their findings suggest that women's radicalization process occurs within three distinct classes: (a) self; (b) as a dyad; or (c) within a group. The researchers found that all three classes used the Internet/texting for connecting with other ISIS members, while secondary Internet functionalities (e.g., Facebook, Twitter, YouTube) were utilized differently by

each of the self, dyad, or group classes. In the group and dyad classes, the researchers found radicalization to be predominantly driven by kin/social relationships. For self-class women in their study, sympathy for and identification with the Muslim community was the most salient reason driving radicalization. The researchers also found women's roles within ISIS differed depending on radicalization class and age, suggesting the influence of unique and/or uniquely intersecting demographic variables. Further, the types of support provided by women to the organization differed depending on radicalization class. Taken together, these findings highlight the potential influence of both individual- and group-level variables. While the findings of Shapiro and Maras' study offer clues to potentially significant psychosocial information regarding the radicalization of U.S. women to the Islamic State within the context of SLT, their study was not designed to be comparative and therefore does not capture factors particular to the radicalization of US women to the Islamic State vis á vis those of US men.

The 3N Model of Radicalization

The 3N model of radicalization identifies three psychosocial factors theorized to contribute to radicalization: (1) the needs or motivations of the individual, which drive behavior; (2) the narratives, or ideologies, ascribed to by the ingroup of the individual, which act as a roadmap of sanctioned behaviors for satisfying motivations; and (3) the network, or respected social milieu, of the individual which informs, normalizes, and reinforces behaviors deemed desirable by the group and punishes those that are not (Kruglanski, Bélanger, & Gunaratna, 2019; Webber & Kruglanski, 2017). Simplified, the 3N model is formulaic: "needs + narrative + network = radicalization," (Da Silva et al., 2022, p. 2). The 3N model of radicalization is underpinned by Significance Quest Theory

(SQT) (Kruglanski, Chen, Deschesne, et al., 2009; Kruglanski, Bélanger, Gelfand, et al., 2013; Kruglanski, Gelfand, Bélanger, et al., 2014; Kruglanski, Molinaro, Jasko, et al., 2022). SQT is a motivational construct which posits the quest for significance – the need for social worth, to “matter”, to make a difference – is universal. The baseline strength of the quest varies from individual to individual and is not an ever-present force motivating all behavior. Rather, the quest is triggered when an individual – or those who matter to them – experiences either (a) significance loss or (b) the opportunity for significance gain. Such triggering events activate the quest for significance, thus motivating the individual to direct attention to the means available for restoring or enhancing social worth (Kruglanski et al., 2013).

The first component of the 3N model – *needs* - refers to the motivational force driving the radicalization of an individual. According to Webber and Kruglanski (2017), this force is triggered when an individual – or their respected social milieu - experiences a real or imagined loss of significance due to an experience of humiliation, dishonor, or shame. Behaviors associated with radicalization are intended to restore significance to the individual and their social group. The *need* component may also be triggered by opportunities for significance gain, such as being regarded a hero or martyr for engaging in terrorism. Both mechanisms are believed to be related to and underpinned by the sacred values of the individual and their social milieu. As conceptualized by Atran (2021), sacred values are incorruptible, highly stable objects, beliefs, or practices resistant to social influence, context, and historical temporality. As Atran explains, “...from decades, centuries, or millennia past...people most willingly engage in costly sacrifices and extreme actions to protect or advance nonnegotiable values, whether

religious or secular,” (p.479). Thus, threats to sacred values are believed to be prime motivators for radicalization.

The second component of the 3N model – *narratives* - refers to the cultural ideology of the group and how its influence sanctions the means available for achieving significance (Webber & Kruglanski, 2017). The quest for significance is not a one-size-fits-all undertaking: the actions and behaviors associated with restoring and/or gaining social worth vary in accordance with values embedded within the individual’s sociocultural frame of reference. Essentially, the ideology of the group acts as a “sanctioned playbook” (Klausen, et al., 2020, p.590) for its members, dictating which beliefs and behaviors are acceptable and desirable for significance acquisition or restoration (Webber & Kruglanski, 2017). Generally, quests for social worth tend to be met via constructive and prosocial means (e.g. caregiving, educational and professional successes, marriage and family) (Jasko, LaFree, & Kruglanski, 2017). However, when the quest for significance is activated by humiliating, shameful, or degrading significance loss (e.g., exclusion, ostracism, Islamophobia), radicalization and a terroristic mindset may result, particularly when an individual’s social milieu subscribes to extreme ideologies (Bélanger et al., 2019; González, 2022; Lobato, Moya, & Trujillo, 2020; Pfundmair, 2019; Webber et al., 2018).

The third and final component of the 3N model - *network* - refers to the influence and dynamics of the individual’s social group (Webber & Kruglanski, 2017). Without the support of an individual’s social network, ideologically driven beliefs and behaviors lack validation and reinforcement. In the absence of consensual validation, an individual may likely question the veracity, value, and moral justification of their beliefs, behaviors, and

means for achieving significance, particularly if such beliefs and behaviors are non-normative and potentially distressing (Webber et al., 2013). Conversely, support from an individual's social group validates, reinforces, and advances individual beliefs and behaviors.

According to Webber & Kruglanski (2017), group dynamics exert significant influence on individual behavior, ultimately determining who is admitted or excluded from a group. When group inclusion is not assured, an individual may actively participate in attaining the goals of the group and ascribing to their hierarchies and norms in a bid to earn group membership (Nilsson, 2021). Individuals alienated from larger society are particularly vulnerable to the acceptance and camaraderie of smaller groups, where ideologies gain traction more easily than those of larger groups with greater member diversity (Baumeister & Leary, 1995; Webber & Kruglanski, 2017). Small group dynamics may also influence members to engage in more extreme behaviors than those they would undertake alone (Isenberg, 1986). In addition, if an individual's social network becomes a "second" family to them, they are said to be "fused" with the group, increasing the likelihood they will engage in personally costly or violent behaviors to protect the interests and goals of the group. (Swann et al., 2012).

Conclusion

Globally, religious extremism and radicalization are now considered the foremost drivers of modern terrorism (Ishaku, Askit, & Dinji, 2021). Radicalization is not a linear process (Hafez & Mullins, 2015), but rather shifts under the dynamic influence of myriad and complex individual, social, and societal level factors. In this study, the 3N model of radicalization (Webber & Kruglanski, 2017) is used to conduct an analysis of a sample of

US women and men charged with offenses related to the Islamic State comparing the three psychosocial forces proposed by the model as contributing to radicalization, namely: (1) the individual needs, or motivations, of those radicalizing to ISIS; (2) the ideological narratives of the individual's in-group which delineate appropriate behaviors for satisfying needs; and (3) the respected network of the individual which shapes behavior via an intricate balance of social influence and group pressure (Kruglanski, Bélanger, & Gunaratna, 2019; Webber & Kruglanski, 2017). The study expects to find that a comparative analysis using the 3N model will identify unique indicators of the needs, narratives, and networks motivating US women's radicalization to the Islamic State of Iraq and Syria, that will differ – vis á vis those of US men - in accordance with the group's highly gendered construct of Islamic *jihadism*.

Chapter II.

Methods

In this section, the sample and procedures of this study are discussed.

Sample

Subject selection for the current investigation began by accessing the George Washington University (GWU) Program on Extremism open-source database (extremism.gwu.edu/gw-extremism-tracker), which catalogs individual cases of offenses related to the Islamic State from March 2014 through July 2023. All case files were searched to identify female subjects, females' years of birth, and females' US residency status. Female subjects residing legally in the United States by birthright, naturalized citizenship, or refugee status were included in the sample. Female subjects not legally residing in the US at the time of their offenses related to the Islamic State were excluded from the study. Following the compilation of female subjects from the GWU files, an additional search for eligible female subjects was made by viewing press releases from the U.S Department of Justice dated from March of 2014 through December of 2023. After the search for eligible female subjects was exhausted, the above process was repeated for male subjects to serve as a comparison group. Due to the comparatively large number of male offenders versus female offenders, saturation for male subjects was met within the GWU case files, thus no further database searches for the identification of male subjects were necessary.

The initial aggregate sample of all eligible subjects (N = 233) was then entered into SPSS according to gender and birth year. The resulting database was sorted by

gender. Male subjects were randomized until a complete matched sample to female subjects according to birth year was achieved. This resulted in a final aggregate sample of individuals ($N = 52$, M age at first offense = 31.67 years, $SD = 10.62$ years) charged by the United States with offenses related to the Islamic State from March 2014 – December 2023. In one case, a matched sample according to year of birth was not possible. In this instance, the female sample – the oldest in the group at the time of her offense - was matched to the oldest available male sample at the time of his offense, resulting in a seven (7) year discrepancy. The final subsets in this study consist of Subset A, females ($n=26$, M age at time of the offense = 32.27 years, $SD = 11.27$ years) and Subset B, males ($n = 26$, M age at time of offense = 31.08 years, $SD = 10.12$ years).

Procedure

Following the construction of the aggregate sample, additional data for each of the fifty-two subjects was extracted from open-source files at (1) the George Washington University Program on Extremism (<https://extremism.edu/cases>), (2) the United States Department of Justice press releases (<https://justice.gov/news/press-releases>), and (3) the Investigative Project on Terrorism (<https://investigativeproject.org/cases.php>) for the purpose of (a) building demographic information for the 52 individuals charged by the US for supporting the Islamic State between March 2014 and December 2023, and (b) performing a comparative analysis of female and male offenders using the 3N model of radicalization. Available data sources included indictments, plea agreements, judgements, information, transcripts of criminal cause for arraignment and pleading, sentencing orders, arrest warrants, criminal complaints, statements of fact, positions of US on sentencing, defense positions on sentencing, courtroom minutes, memorandums of law,

disclosures of arguable suppressible evidence, motions to dismiss, and conditions of release documents. The decision to limit data sources to federal court documents in this study was not made lightly. Although the use of secondary sources may have potentially yielded a greater overall volume of personal data for each subject, a primary goal of this study was to initiate the construction of an empirical database of US-based *jihadists* for use in future terrorism research. Thus, data extraction was restricted to the primary data of federal court documents, sources less subject to the potential bias of sensationalized media reports. To further combat potential bias, all available documents were read and coded across the three chosen data sources to check for continuity and accuracy (Jacques & Taylor, 2013). Coding accuracy was ensured by coding an initial sample of ten female subjects and 10 male subjects. After a one-week interval, the same twenty cases were re-coded in a test-retest fashion to check for consistency in coding (Sage Research Methods, 2011). When coding accuracy was confirmed at the one-week retest, coding for the remainder of the aggregate sample was initiated. Although discrepancies between prosecution and defense files were anticipated, data between the two was found to be surprisingly consistent, allowing for adequate cross-validation of variables and facilitating the dismissal of atypical variables (Mathison, 1988). In all, over 700 documents were accessed to produce the final dataset used for testing the 3N model.

Demographic Variable Coding

A main goal of the proposed study was to decrease “chance” in terrorism research; thus, each demographic variable was selected based upon empirical findings from previous studies on terrorism and radicalization. Supporting evidence and coding criteria for the demographic variables chosen in this study are presented in Table 1.

Notable demographic variables of interest not measured in this study but potentially worthy of future research, along with their sources and justifications, are available at Appendix 1.

In this study, the process for variable coding was conducted by extracting data for each individual subject from all available court documents across the three data sources. Because demographic variable documentation did not appear to be standardized across the source documents (i.e., standard intake documentation was not apparent), each document was carefully read to ensure maximum data extraction. Information accuracy was cross validated across available documents as criminal cases built over time. This method of cross-validation was employed for all variables in the study. Building complete demographic information for each subject generally occurred across numerous documents. Variables of interest were coded only when specifically referenced; any variable not specifically referenced in a data source was coded as “unknown”. When numerous variables were referenced, all were captured and coded to ensure maximum data extraction for each subject in the sample.

Table 1. Supporting Evidence and Coding Criteria for Demographic Variables

Variable with supporting evidence	Justification	Coding
Significance of year of birth as measured against rise and fall of IS caliphate (Jacques & Taylor, 2013; Brugh et al., 2019; Shapiro & Maras, 2019)	Studies suggest ISIS targeted and recruited females differently according to shifts in the <i>caliphate's</i> influence (increasing vs. waning) in Iraq and Syria, thus the age of a female relevant to the ISIS' strategy at a particular point in time may better inform the study of females' motivations factors, roles, and types of support provided to the organization.	Coded as the age at which the subject was first investigated by the US for offenses related to the Islamic State
Birthplace (Hafez & Mullins, 2015)	Research suggests there may be important differences in propensity for radicalization and/or terrorism based on generational immigrant status, anti-foreigner sentiment, and identity differences, thus birthplace is a potentially significant variable. In this study, inclusion criteria stipulate that "most or all of formative years were spent in the US," thus, some subjects may have been born outside of the US and are first generation American immigrants.	Coded as the subject's country of birth
Education (Jacques & Taylor, 2008)	Education levels may inform grievances related to low socioeconomic status, unemployment, lack of social mobility, neighborhood demographics, etc. that may create vulnerabilities to radicalization and terrorism. Further, level of education may influence the roles available to individuals within ISIS.	Coded as the highest known educational level completed at the time of the subject's offense

Variable with supporting evidence	Justification	Coding
Family/Marital Status (Jacques & Taylor, 2013; Shapiro & Maras, 2019)	These studies found female terrorists are as likely to be married as they are to be single and that female terrorists are more likely to be widowed or divorced than male terrorists (Jacques & Taylor, 2013); and that kin relationships were the predominant reason for women radicalizing (Shapiro & Maras, 2019). These findings suggest that psychosocial factors related with marriage and family may impact radicalization.	Coded at time of offense as indicated by data sources. Both civil and Islamic marriages (common in the ideology of ISIS) were coded as married
Religion: Islam born or convert (Jacques & Taylor, 2013; Klausen et al., 2018; Brugh et al., 2019; Shapiro & Maras, 2019; Azani & Koblentz-Stenzler, 2022)	Neither religious conversion in general (Jacques & Taylor, 2013), nor religious conversion to Islam specifically (Brugh et al., 2019) was significant in aggregated samples of individuals from Western countries. However, Klausen et al. (2018) found that in the US, converts are relatively more likely to commit terrorism than converts from other Western countries. Shapiro & Maras' (2019), too, found that approximately 32% of the females in their US sample were converts to Islam compared to 21% of Islamic converts in the general US population (Azani & Koblentz-Stenzler, 2022) suggesting the need for further inquiry.	Coded as the religion of the individual at the time of the offense

Supporting evidence and coding criteria for demographic variables in sample of 52 US individuals charged with offenses related to the Islamic State from March 2014 – December 2023

The 3N Model of Radicalization Coding Criteria

As conceptualized by this study, the needs, narratives, and networks typologies of the 3N model of radicalization were constructed based upon previous research findings on radicalization to terrorism (Smith, 2018; Shapiro & Maras, 2019; Webber & Kruglanski, 2017). To provide greater empirical support for potential nuances associated with US women's radicalization to the Islamic State, data coding allowed for more than one variable to be captured across all typologies when more than one variable was referenced. Variables not referenced in the data sources were coded as "unknown". Supporting evidence and coding criteria for the needs, narratives, and networks typologies utilized in this study are presented in Tables 2, 3, and 4, respectively. Variable justifications for use in this study, along with methods of coding criteria, are proffered to increase transparency and to aid in future empiricism of terrorism research.

Table 2. Supporting Evidence and Coding Criteria for the Needs Typology of the 3N Model of Radicalization

Variable and supporting evidence	Measurement Criteria	Coding
Triggering event (Smith, 2018; Webber & Kruglanski, 2017)	(a) Significance Loss	<i>References to humiliation, exclusion, degradation, etc.?</i>
	(b) Opportunity for significance gain	<i>References to opportunities to earn respect/admiration of ingroup/social milieu?</i>
Motivation for radicalization (Shapiro & Maras, 2019; Smith, 2018; Webber & Kruglanski, 2017)	(a) Religious/Ideological	<i>Duty to follow religious/ideological directives.</i>
	(b) Need for Belonging	<i>Loneliness, desire to fill a void.</i>
	(c) Correct an Injustice/Revenge	<i>Desire to correct an injustice or extract revenge</i>
	(d) Sympathy for group/victims	<i>Sympathy for victims in Iraq and Syria, ISIS, and their cause</i>
	(e) Relationship (existing or desired)	<i>Being in a relationship with, or desiring a relationship with, a member or potential member of ISIS.</i>
	(f) Vulnerability	<i>I.e., presence of mental illness, cognitive challenge, brainwashing, impressionable youth as determined by Court ruling</i>

Supporting evidence and coding criteria for needs typology of 3N model in sample of 52 US individuals charged with offenses related to the Islamic State from March 2014 – December 2023

Table 3. Supporting Evidence and Coding Criteria for the Narratives Typology of the 3N Model of Radicalization

Variable and supporting evidence	Measurement Criteria	Coding
Belief systems/narratives/ideology espoused by ISIS (Shapiro & Maras, 2019; Smith, 2018; Webber & Kruglanski, 2017)	(a) Referenced (b) Not referenced	<i>Identify with group's religious, political, extremist ideas and sanctioned violence to achieve goals</i>
Roles within ISIS (Shapiro & Maras, 2019)	(a) Planner (b) Financial provider/advisor (c) Supplier (d) Terrorism enactor (e) Traveler: Spouse, companion, breeder (f) Educator/propagandist	<i>Provision or attempted provision of tactical strategies for one or more terrorist attacks or trainings</i> <i>Provision or attempted provision of funds, funding agents, or advised how to get funds for ISIS</i> <i>Provided or attempted to provide supplies (e.g., food, weapons, fighters).</i> <i>Attempted or succeeded in carrying out at least one or more terrorist acts against a person/people in the US or abroad.</i> <i>Attempted to travel or successfully traveled to IS territory to be a spouse/companion and to provide children as future IS warriors.</i> <i>Promoted the cause and attempted to or was successful in indoctrinating or gaining support from new members into the group, including family, friends, and children.</i>

Variable and supporting evidence	Measurement Criteria	Coding
Type of support (Shapiro & Maras, 2019)	<ul style="list-style-type: none"> <li data-bbox="871 305 1079 337">(a) Instrumental <li data-bbox="871 365 1136 397">(b) Social/Cognitive <li data-bbox="871 488 1073 521">(c) Operational 	<p data-bbox="1346 305 1843 363"><i>Attempted or successful provision of tangible items, services (self, materials, funds, fighters)</i></p> <p data-bbox="1346 367 1864 483"><i>Attempted or successful dialogue with members, followers, and/or sympathizers to exchange knowledge, information, ideas, feedback, and access to information.</i></p> <p data-bbox="1346 487 1814 542"><i>Attempted or successful organization and execution of attacks to further goals of ISIS.</i></p>

Supporting evidence and coding criteria for narratives typology of 3N model in sample of 52 US individuals charged with offenses related to the Islamic State from March 2014 – December 2023

Table 4. Supporting Evidence and Coding Criteria for the Networks Typology of the 3N Model of Radicalization

Variable	Measurement Criteria	Coding
Radicalization Class (Shapiro & Maras, 2019; Smith, 2018; Webber & Kruglanski, 2017)	(a) Self	<i>Radicalized alone.</i>
	(b) Dyad	<i>Either began radicalization alone and joined one other person or began radicalization with one other person.</i>
	(c) Group	<i>Began as a dyad and joined a group or began and continued with a group.</i>
Approval of family (Shapiro & Maras, 2019; Smith, 2018; Webber & Kruglanski, 2017)	(a) Absent	<i>Individual did not have approval of family when joining ISIS</i>
	(b) Present	<i>Individual had approval of family when joining ISIS</i>
Approval of friends (Shapiro & Maras, 2019; Smith, 2018; Webber & Kruglanski, 2017)	(a) Absent	<i>Individual did not have approval of friends when joining ISIS</i>
	(b) Present	<i>Individual had approval of friends when joining ISIS</i>

Variable	Measurement Criteria	Coding
Internet use specific to ISIS (Shapiro & Maras, 2019; Smith, 2018; Webber & Kruglanski, 2017)	(a) None	<i>No reference to internet use</i>
	(b) Long-lasting/permanent messages	<i>Messaging functionalities such as general internet, Facebook, Twitter</i>
	(c) Temporary/encrypted messages	<i>Messaging functionalities such as WhatsApp, Skype</i>
Class of criminal arrest (Shapiro & Maras, 2019)	(a) Self	<i>Arrested alone</i>
	(b) Dyad	<i>Arrested with one other person</i>
	(c) Group	<i>Arrested with two or more people</i>

Supporting evidence and coding criteria for networks typology of 3N model in sample of 52 US individuals charged with offenses related to the Islamic State from March 2014 – December 2023

Chapter III.

Results

This chapter reports the results of a comparative analysis of a sample (N = 52) of US women and men charged by the US government with offenses related to the Islamic State from March 2014 through December 2023. The 3N model of radicalization serves as the theoretical basis for this analysis.

Demographic Results

Many variables are believed to contribute to the radicalization of individuals to *jihadist* extremism. Compound variables are also believed to drive the process of more-costly commitment from radicalized individual to terrorism enactor. In both instances, some demographic variables of interest include: Age; birthplace; regional residence; educational attainment; marital/family status; being Islamic by birth versus by conversion; criminal history prior to radicalization; a willingness to participate in suicide operations; a willingness to undertake foreign travel to wage violent *jihad*; the outcome of foreign fighting attempts; and in what manner perpetrators are eventually apprehended (Jacques & Taylor, 2008; Jacques & Taylor, 2013; Hafez & Mullins, 2015; Pearson & Winterbotham, 2017; Klausen et al., 2018; Brugh et al., 2019; Khelghat-Doost, 2019; Shapiro & Maras, 2019; Wickham et al., 2020; Koblenz-Stenzler, 2022). Table 5 provides a comparative analysis of the demographic variables utilized in this study.

Table 5. Comparative Demographic Results

Demographic Variable	n, Subset A, females (%)	n, Subset B, males (%)
Age		
Less than 16	NIL	1 (3.8%)
16-18	2 (7.7%)	NIL
19-21	3 (11.5%)	5 (19.2%)
22-25	1 (3.8%)	2 (7.7%)
26-35	13 (50.0%)	10 (38.5%)
36-55	6 (23.1%)	8 (30.8%)
55+	1 (3.8%)	NIL
Country of Birth		
Unknown	6 (23.1%)	7 (26.9%)
United States	13 (50.0%)	12 (46.2%)
Other	7 (26.9%)	7 (26.9%)
Education		
Unknown	15 (57.7%)	23 (88.5%)
Less than high school	2 (7.7%)	NIL
GED/HS diploma	3 (11.5%)	1 (3.8%)
Some college	1 (3.8%)	1 (3.8%)
College graduate	3 (11.5%)	1 (3.8%)
Graduate/prof. school	2 (7.7%)	NIL
Marital/Family Status		
Unknown	5 (19.2%)	11 (42.3%)
Single/no children	4 (15.4%)	6 (23.1%)
Single/children	3 (11.5%)	1 (3.8%)
Relationship/no children	1 (3.8%)	1 (3.8%)
Relationship/children	NIL	NIL
Married/no children	4 (15.4%)	3 (11.5%)
Married/children	6 (23.1%)	4 (15.4%)
Widowed/children	1 (3.8%)	NIL
Divorced/no children	1 (3.8%)	NIL
Divorced/ children	1 (3.8%)	NIL

Demographic Variable	n, Subset A, females (%)	n, Subset B, males (%)
Regional Residence in US		
Northeast	7 (26.9%)	7 (26.9%)
Midwest	9 (34.6%)	7 (26.9%)
South	7 (26.9%)	11 (42.3%)
West	3 (11.5%)	1 (3.8%)
Religion		
Unknown	6 (23.1%)	3 (11.5%)
Islam-born	14 (53.8%)	13 (50.0%)
Convert	6 (23.1%)	10 (38.5%)

Comparative demographic results of a sample (N = 52) of US individuals charged by the US government for offenses related to the Islamic State from March 2014 – December 2023.

Reporting of Demographic Variables

1. Both male and female subjects in this study first came under law enforcement scrutiny between the ages of 26-35 at 50.0% and 38.5%, respectively.
2. 50% of female subjects were born in the US, a percentage comparable to male subjects at 46.2%.
3. Educational attainment was the largest demographic for which data was absent from archival data. In the female sample, subjects earned a high school diploma at the same rate as females who graduated from college: 11.5%. In the male sample, a full 88.5% of subjects lacked educational data due to its absence from documents consulted.
4. Determining the accuracy of marital/family status for individuals in this study was difficult. Information regarding marital/family status was absent from documents of 42.3% of male subjects and 19.2% of female subjects. More largely available marriage and family data for females may indicate a gendered societal focus on

the anomaly of the “good wife/good mother” as a terrorist (Schmidt, 2022). From this sample, 23.1% of females were married with children at the time of their offenses; the same percentage of males (23.1%) were single with no children.

5. Results for regional residence in the US showed that 34.6% of females in the sample were from the Midwest, while 42.3% of males were from the South.
6. Finally, 53.8% of females and 50.0% of males in the sample were Islam-born.

Results from the 3N Model of Radicalization

The following section reports the findings of a comparative analysis examining typologies of the 3N model of radicalization. Tables 6, 7, and 8 provide findings of the needs, narratives and networks typologies of the 3N model of radicalization as conceptualized in this study.

Findings of a Comparative Analysis of the Needs Typology of the 3N Model

Table 6. Comparative Results of the Needs Typology of the 3N Model of Radicalization

Needs Typologies	n, Subset A, females (%)		n, Subset B, males (%)	
Significance Loss				
Unknown	2	(7.7%)	1	(3.8%)
Not Referenced	7	(26.9%)	3	(11.5%)
Referenced	17	(65.4%)	22	(84.6%)
Opportunity for Significance Gain				
Unknown	2	(7.7%)	1	(3.8%)
Not referenced	NIL		1	(3.8%)
Referenced	24	(92.3%)	24	(92.3%)

Needs Typologies	n, Subset A, females (%)		n, Subset B, males (%)	
Religious/Ideological Duty				
Unknown	3	(11.5%)	NIL	
Not referenced	2	(7.7%)	NIL	
Referenced	21	(80.8%)	26	(100%)
Loneliness, Boredom, Need for Belonging				
Unknown	4	(15.4%)	1	(3.8%)
Not referenced	11	(42.3%)	24	(92.3%)
Referenced	11	(42.3%)	1	(3.8%)
To Correct an injustice/revenge				
Unknown	4	(15.4%)	1	(3.8%)
Not referenced	10	(38.5%)	9	(34.6%)
Referenced	12	(46.2%)	16	(61.5%)
Sympathy				
Unknown	3	(11.5%)	NIL	
Not referenced	6	(23.1%)	21	(80.8%)
Referenced	17	(65.4%)	5	(19.2%)
Relationship (Desired or Existing)				
Unknown	3	(11.5%)	1	(3.8%)
Not referenced	7	(26.9%)	23	(88.5%)
Referenced	16	(61.5%)	2	(7.7%)
Vulnerability (Determined by Court)				
Unknown	2	(7.7%)	NIL	
Not referenced	21	(80.8%)	25	(96.2%)
Referenced	3	(11.5%)	1	(3.8%)

Comparative analysis of the needs typology of the 3N model in a sample of 52 US individuals charged with offenses related to the Islamic State between March 2014 - December 2023.

Significance Loss

Individuals in both Subsets A and B referenced experiencing a triggering event related to significance loss, with 65.4% of females and 84.6% of males reporting experiencing significance loss.

Opportunity for Significance Gain

Likewise, both Subsets A and B made strong references to the opportunity for significance gain, with 92.3% of both subsets referencing the opportunity for significance gain as the impetus for becoming involved with IS.

Religious/Ideological Duty

Similarly, both groups referenced a strong religious/ideological duty to follow the mandates of the Islamic State, with 80.8% of females and 100% of males in the sample referencing religious/ideological duty.

Loneliness, Boredom, Need for Belonging

In this study, 42.3% of females referenced their involvement with IS as a pathway to combat loneliness, boredom, or for social connection. In the male group, only one subject (3.8%) - the youngest in the male subset - referenced his involvement as a vehicle for building community with others.

To Correct an Injustice/Revenge

In this sample, 46.2% of females referenced their involvement with the Islamic State as an outlet for correcting an injustice or exacting revenge for grievances related to alienation and/or mistreatment of themselves or their social milieu. In the male subset, 61.5% referenced their involvement as a vehicle for “righting wrongs” or getting revenge against those perceived to be hostile to their cause or social group.

Sympathy

64.5% of the females in this group referenced sympathy for people in Iraq or Syria as a motivating factor in their radicalization to IS, while 19.2% of males in the sample referenced sympathy as a factor driving radicalization.

Relationship

In this sample, 61.5% of females referenced current or desired relationships as a motivation for joining ISIS, while only 7.7% of the males (n=2) referenced relationship needs as a motivating force. This percentage may not be a true representation of either number, however. As previously notes, relationship goals for female terrorists may be inflated due to increased focus on gendered stereotypes and media representations of the same (Schmidt, 2022).

Vulnerability

For 11.5% of the females (n =3) and 3.8% of the males (n = 1) in this study, federal courts determined that underlying vulnerabilities such as mental illness, cognitive delay, or immaturity of youth exerted undue influence on the individual's decision to support the Islamic State.

Findings of a Comparative Analysis of the Narratives Typology of the 3N Model

Table 7. Comparative Results of the Narratives Typology of the 3N Model

Narrative Typologies	n, Subset A, females (%)	n, Subset B, males (%)
Inspired by ISIS ideology/propaganda		
Unknown	2 (7.7%)	NIL
Did not reference	3 (11.5%)	NIL
Referenced	21 (80.8%)	26 (100.00%)
Confirmed roles within ISIS		
Supplier		
Unknown	1 (3.8%)	1 (3.8%)
No	2 (7.7%)	1 (3.8%)
Yes	23 (88.5%)	24 (92.3%)

Narrative Typologies	n, Subset A, females (%)		n, Subset B, males (%)	
<hr/>				
·Tactical/organizational planner				
Unknown	1	(3.8%)	1	(3.8%)
No	20	(76.9%)	21	(80.8%)
Yes	5	(19.2%)	4	(15.4%)
·Traveler: Spouse, companion, breeder				
Unknown	1	(3.8%)	NIL	
No	15	(57.7%)	26	(100%)
Yes	20	(38.5%)	NIL	
·Financial supporter				
Unknown	1	(3.8%)	1	(3.8%)
No	13	(50%)	21	(80.8%)
Yes	12	(46.2%)	4	(15.4%)
·Terrorism enactor				
Unknown	1	(3.8%)	NIL	
No	21	(80.8%)	23	(88.5%)
Yes	4	(15.4%)	3	(11.5%)
·Educator/Propagandist				
Unknown	1	(3.8%)	NIL	
No	7	(26.9%)	7	(26.9%)
Yes	18	(69.2%)	19	(73.1%)
Type of support (actual or aspirational)				
·Instrumental				
Unknown	1	(3.8%)	NIL	
Not referenced	2	(7.7%)	1	(3.8%)
Referenced	23	(88.5%)	25	(96.2%)
·Social/Cognitive				
Unknown	2	(7.7%)	NIL	
Not referenced	NIL		5	(19.2%)
Referenced	24	(92.3%)	21	(80.8%)

Narrative Typologies	n, Subset A, females (%)	n, Subset B, males (%)
Operational/Kinetic		
Unknown	2 (7.7%)	NIL
Not referenced	14 (53.8%)	2 (7.7%)
Referenced	10 (38.5%)	24 (92.3%)

Comparative analysis of the narratives typology of the 3N model in a sample of 52 US individuals charged with offenses related to the Islamic State between March 2014 - December 2023.

Inspired by Ideology/Propaganda of ISIS

In this sample, 80.8% of the females and 100.0% of the males referenced being inspired by the ideology and propaganda of the Islamic State.

Roles within ISIS.

Most of the women and men in this sample acted as suppliers to the Islamic State (88.5% of females and 92.3% of males). Similarly, a large proportion of females (69.2%) and males (73.1%) served as educators to new/potential members, teaching the ideology and goals of IS and driving IS' powerful propaganda machine. Less widely common were the roles of tactical/organizational planner (females, 19.2%; males 15.4%). Terrorism enactors were also less commonly reported at 15.4% for females and 11.5% for males. It should be noted that data may not adequately reflect the activities or lethality of individuals captured and subsequently returned to the US by Syrian Democratic or other coalition forces, as true activities that took place within the Islamic State may never be known. Females in the sample served as financial supporters (46.2%) more than males (15.4%). Females were also more willing to travel to IS territory as a spouse/potential spouse, companion, or to fulfill an obligation to populate Islamic State territory with

future citizens and warriors than males (females, 38.5%; males, NIL). Role definitions are provided in Table 3.

Instrumental, Social/Cognitive, and Operational support

This section of the narratives typology captures the types of support subjects *were willing to provide* to IS versus the roles they *actually performed* (as reported in the previous section). In this study, the decision was made to differentiate between the two in order to capture the aspirational goals of the subjects had they not been apprehended by US law enforcement. In most cases, both female and male supporters of IS aspired to be far more agentic, lethal, and involved in all aspects of IS leadership and organizational strategy; their intended support of IS appears to have been limited only by clandestine necessity and arrest by law enforcement. One young female in the sample was given multiple warnings and chances by US law enforcement to cease her involvement with IS prior to her arrest. She repeatedly refused and was subsequently arrested as she attempted to board a flight to Islamic State territory. Many other subjects continued their involvement with IS while in prison following arrest or while out on supervised release.

In this sample, 88.5% of females and 96.2% of men did provide or were willing to provide instrumental support to the IS. Similarly, 92.3% of females and 80.8% of males did provide or were willing to provide social/cognitive support to the Islamic state. Finally, 38.5% of females and 92.3% of males did provide or were willing to provide operational support to IS, a far higher number than reported by the terrorism enactor variable in the previous section (females, 15.4%; males, 11.5%). Definitions of instrumental, social/cognitive, and operational support are provided in Table 3.

Findings of a Comparative Analysis of the Networks Typology of the 3N Model

Table 8. Comparative Results of the Networks Typology of the 3N Model

Network Typologies	n, Subset A, females (%)		n, Subset B, males (%)	
Radicalization class				
Unknown	1	(3.8%)	2	(7.7%)
Alone	9	(34.6%)	1	(3.8%)
Dyad	6	(23.1%)	11	(42.3%)
Group	10	(38.5%)	12	(46.2%)
Support/Acceptance of Family				
Unknown	8	(30.8%)	14	(53.8%)
Not referenced	8	(30.8%)	3	(11.5%)
Referenced	10	(38.5%)	9	(34.6%)
Support/Acceptance of Friends				
Unknown	7	(26.9%)	1	(3.8%)
Not referenced	3	(11.5%)	NIL	
Referenced	16	(61.5%)	25	(96.2%)
Use of permanent messaging (general internet, Facebook, Twitter)				
Unknown	3	(11.5%)	3	(11.5%)
Not referenced	3	(11.5%)	NIL	
Referenced	20	(76.9%)	23	(88.5%)
Use of encrypted messaging (Skype, WhatsApp)				
Unknown				
Not referenced				
Referenced	8	(30.8%)	8	(30.8%)

Network Typologies	n, Subset A, females (%)		n, Subset B, males (%)	
Arrest class				
Unknown/At large	1	(3.8%)	NIL	
Alone	14	(53.8%)	20	(76.9%)
Dyad	7	(26.9%)	3	(11.5%)
Group	4	(15.4%)	3	(11.5%)

Comparative analysis of the networks typology of the 3N model in a sample of 52 US individuals charged with offenses related to the Islamic State between March 2014 - December 2023.

Radicalization Class

In this sample, females most often began their affiliation with IS alone (34.6%) or with a group (38.5%), compared to males who most often began their involvement with a group (46.2%) or as part of a dyad (42.3%).

Arrest Class

For both Subsets A and B, arrest by law enforcement most often happened while alone (females, 53.8%; males, 76.9%).

Support/Acceptance of Family

Females most often referenced the support of family (38.5%). This variable was unknown for 53.8% of males and referenced by 34.6% of males.

Support/Acceptance of Friends

Both females and males referenced the support of friends regarding their activities with the Islamic State at 61.5% and 96.2%, respectively.

Use of Permanent Messaging

Both subsets in this sample referenced the use of permanent messaging (general internet, Facebook, Twitter, etc.) as they radicalized or performed duties related to the Islamic State at the rate of 76.9% for females and 88.5% for males.

Use of Encrypted Messaging

The use of encrypted messaging (Skype, WhatsApp, etc.) was used at the same rate by females and males in this sample (30.8%).

Chapter IV.

Discussion

This chapter offers a general discussion of the findings of this research, including its potential limitations and directions for future research on the psychology of terrorism.

General Discussion

The main objective of this study was to explore the potential similarities and differences between females and males in the United States who radicalized to and supported the Islamic State. Using the 3N model as a theoretical framework, I predicted a comparative analysis would identify uniquely gendered typologies of the needs, narratives, and networks of US supporters of IS, varying in accordance with the group's highly gendered construct of Islamic *jihadism*. To test this prediction, an aggregate sample of 52 US individuals charged with offenses related to their support of IS were coded for demographic information and variables related to the needs, narratives, and networks surrounding their radicalization to the Islamic State from the first arrests in March 2014 through December of 2023. A matched sample of females and males resulted in Subset A (females, n=26) and Subset B (males, n=26). The results of this inquiry largely did not support the hypothesis. Although some apparent differences in demographic information were found, these discrepancies may stem from the process by which intake inquiries by federal agents and legal teams were conducted. As previously discussed, many initial interviews with subjects may have been prejudiced by mediatized, gendered stereotypes of gun-wielding male warriors and the incongruous nexus of womanhood, motherhood, and terrorism.

In this study, an examination of the needs typology of the 3N model for both females and males shows striking similarities in their motivations to radicalize to ISIS. The majority of subjects in both groups referenced significance loss, opportunity for significance gain, religious and/or ideological duty, and the need to correct an injustice and/or extract revenge as drivers for radicalizing to the Islamic State. While differences exist in the remaining variables of the needs typology (loneliness, boredom, need for belonging; sympathy; relationship; and vulnerability), such differences may, again, be the result of gender-stereotyped intake and interview procedure foci. Analysis of the narrative typology illustrates the strength of Islamic State ideology and propaganda on the radicalization trajectories of subjects in both subsets. And while differences were found between the *actual roles* subjects performed within IS (offenses subjects were subsequently charged for) as compared to the roles subjects *aspired to perform*, these variances appear to be directly related to the subject's arrest. Findings clearly indicate that all subjects in this sample – both male and female - were willing to go to any extreme in their support of the Islamic State and were limited only by their eventual detainment. Evaluation of the network typology of the 3N model indicates the strength of interpersonal relationships and internet use in radicalization pathways in this sample. A surprising finding was that more females in the study began radicalization processes alone. Not surprising was the impact of general and encrypted internet communication by the Islamic State on radicalization trajectories in the US. By all accounts, the Islamic State has written the playbook for reaching the masses; one now being used by other terrorist organizations to reach – and gain sympathy for – the disenfranchised.

Far from mediatized tropes of young males thirsty for *jihad* and martyrdom and their “pathologically naïve, look-at-me girl” counterparts, (Lohen & Zelenz, 2017 p. 50) the reading of over 700 articles documenting the radicalization and participation of this US sample makes clear the strength and influence of Islamic State propaganda and outreach, particularly amongst those who feel subjugated and wronged. Reductionist narratives which misjudge the capability of the Islamic state, Kizilhan and Steger (2021) warn, “...is disastrous in many ways. First, it reflects a considerable underestimate of this totalitarian terrorist organization. Many of the leading actors of the ‘Islamic State’ are highly educated people with university degrees obtained abroad. They are experienced guerilla fighters from Chechnya or Bosnia, engineers, IT experts, cameramen, chemists, artists, and musicians. This is an elite that can certainly keep up with other intellectuals in the Arab world and leaves them partly ‘speechless’ with their know how,” (pp. 28). In the current study, the powerful nexus of a triggering event(s), IS’ potent ideology, and their extensive network proved fertile ground for radicalization in this US sample, an unprecedented phenomenon which should not be minimized nor ignored. While the hypothesis was not supported in this study, a nascent understanding of variables related to the radicalization of this US cohort was achieved, exposing potential nuances worthy of future inquiry.

Limitations and Future Directions

One limitation of this study is its reliance on data procured from government sources for the construction of a novel database. While it was impossible to interview the subjects in this study, the decision to extract archival data from Federal Court documents – which must adhere to stringent investigation procedures and are provided under oath –

was deemed superior to data extraction from potentially biased media reports and news articles (Shapiro & Maras, 2019). While data extraction from federal court documents may have yielded less information than data obtained from secondary sources, the benefits of primary data source usage and its overall contribution to an empirically grounded terrorism database was determined to outweigh the drawbacks of potentially missing data. A second limitation of this study is directly related to the use of government documents. Much of the data in government documents has not yet been systematized for efficient, standardized use by terrorism researchers (Spryopoulos et al., 2022), thus collection is laborious and often lacks full demographic information. A third limitation, as previously discussed, are the inherent challenges in conducting research in the psychological study of radicalization and terrorism. Ascertaining strong starting points for developing empirical research is difficult. While the proposed study is modelled on work of other researchers in the psychological study of radicalization, pragmatism may limit or neglect the detection of factors significantly associated with the radicalization of US men and women to the Islamic State. An additional limitation may be that variable choice in the construction of the 3N model as applied in this study is too broad to be robust in the wider scope of terrorism research.

Future terrorism research would be greatly aided by the standardization of intake procedures and interviews for subjects at the time of their arrest. As citizens are repatriated from Syria, such standardization is a pressing need and essential to future terrorism research. Incomplete intake information may decrease our understanding of radicalization pathways, potentially diluting the applicability and efficacy of counterterrorism measures and limiting or comprising counterterrorism, deradicalization,

and rehabilitation programming and policy. Finally, the database of US-based Islamic State *jihadists* must be more fully developed to expand our understanding of the mechanisms by which the Islamic State so powerfully disseminated and weaponized online propaganda and outreach in the US. This is particularly salient given the current unrest in the MENA region.

In conclusion, while my hypothesis was not supported, empirical evidence in this study supports the notion that significance loss, the opportunity for significance gain, the need to correct an injustice and extract revenge, religious and ideological duty, and the ideology and propaganda of the Islamic State were important drivers in the radicalization of a US sample as theorized by the 3N model of radicalization.

Appendix 1.

Demographic Variables and Justifications

Demographic Variable	Author	Justification
Year of Birth versus Age	(Jacques & Taylor, 2013; Shapiro & Maras, 2019; Brugh et al., 2019)	Studies show that ISIS targeted and recruited females differently according to shifts in the <i>caliphate</i> 's influence (increasing vs. waning) in Iraq and Syria, thus the age of a female relevant to the ISIS' strategy at a particular point in time may better inform the study of females' motivations factors, roles, and types of support provided to the organization.
Birthplace	(Hafez & Mullins, 2015)	Research suggests important differences in propensity for radicalization and/or terrorism based on generational immigrant status, anti-foreigner sentiment, and identity differences, thus birthplace is a potentially significant variable. In this study, inclusion criteria stipulate that "most or all of formative years were spent in the US," thus, some subjects may have been born outside of the US and are first generation American immigrants.
Regional Residence in US	(Hafez & Mullins, 2015)	Findings suggest that poor socioeconomic status, high unemployment rates, residential discrimination, ethnically homogenous

Demographic Variable	Author	Justification
Education	Well-known and generally accepted knowledge by most researchers in this study. For one example, see Jacques & Taylor, 2008.	neighborhoods, high residential concentrations, etc. may contribute to vulnerabilities driving radicalization. Thus, regional information becomes potentially useful for guiding future studies regarding community characteristics that may lead to radicalization or violent extremism. Findings suggest that poor socioeconomic status, high unemployment rates, residential discrimination, ethnically homogenous neighborhoods, high residential concentrations, etc. may contribute to vulnerabilities driving radicalization. Thus, regional information becomes potentially useful for guiding future studies regarding community characteristics that may lead to radicalization or violent extremism.
Marital/Family Status	(Jacques & Taylor, 2013; Shapiro & Maras, 2019)	These studies found female terrorists as likely to be married as they are to be single and that female terrorists are more likely to be widowed or divorced than male terrorists (Jacques & Taylor); and that kin relationships were the predominant reason for women radicalizing (Shapiro & Maras, 2019). These findings suggest that psychosocial factors related to marriage and family may impact radicalization.
Religion (Islam born or convert)	(Jacques & Taylor, 2013; Brugh et al., 2019; Shapiro & Maras, 2019; Azani & Koblentz-Stenzler, 2022; Klausen et al., 2018)	Neither religious conversion in general (Jacques & Taylor, 2013), nor religious conversion to Islam specifically (Brugh et al., 2019) was significant in aggregated samples of individuals from Western countries. However, Klausen et al. (2018) found that in the US, converts are relatively more likely to commit terrorism than converts from other

Demographic Variable	Author	Justification
History of criminal behavior prior to radicalization	(Jacques & Taylor, 2013; Brugh et al., 2019)	<p>Western countries. Shapiro & Maras' (2019), too, found that approximately 32% of the females in their US sample were converts to Islam compared to 21% of Islamic converts in the general US population (Azani & Koblentz-Stenzler, 2022) suggesting the need for further inquiry.</p> <p>In an aggregate sample of Western terrorists inspired by various ideologies, Jacques & Taylor (2013) found no significant connection between radicalization and criminal history prior to radicalization. Brugh et al. (2019) found in their sample of <i>jihadist</i> terrorists from Western countries, men were significantly more likely to have a criminal history prior to radicalization. Further exploration is necessary to study the connection between criminal history and radicalization in a sample of US men and women</p>
Involvement in suicide operation	(Jacques & Taylor, 2008)	<p>In their 2008 study of suicide bombers from the Middle East, Chechnya, Pakistan, and Kurdistan, Jacques & Taylor found significant differences in motivations, key events, peer pressure and exploitation between 30 female and 30 male subjects.</p>
Foreign fighting attempts	(Brugh et al., 2019; Khelghat-Doost, 2019; Pearson & Winterbotham, 2017; Wickham et al., 2020)	<p>In their study of <i>jihadist</i> terrorists from Western countries, Brugh et al. (2019) found that although the number of foreign fighting attempts did not differ significantly among women and men, women were more successful in their attempts. This may indicate a strategic advantage of women in terrorist organizations: they are often more able to pass through security checkpoints more easily than men (Khelghat-Doost, 2019; Amusan et al.,</p>

Demographic Variable	Author	Justification
Outcome of first foreign fighting attempt	(Brugh et al., 2019)	See above.
Manner in which subject was apprehended	(Brugh et al., 2019; Khelghat-Doost, 2019; Pearson & Winterbotham, 2017; Wickham et al., 2020)	Research suggests there may be differences in how female and male terrorists come into custody. For instance, females may be more likely to be arrested with one or more other people because they are often considered to be more likely to act with a group rather than alone.

Appendix 2.

Demographic Variable Coding Criteria

Demographic Variable	Measurement Criteria
Year of Birth	(a) Year of birth (b) Age at first radicalization attempt
Birthplace	(a) United States (b) Other; specify
Regional Residence	(a) Northeast (b) Midwest (c) South (d) West
Education	(a) Less than high school (b) GED/high school (c) College graduate/some college (d) Unknown
Marital/family status	(a) Single/no children (b) Single/children (c) Relationship/no children (d) Relationship/children (e) Married/no children (f) Married/children
Religion	(a) Islam born (b) Islam convert

Appendix 3.

Needs Typology of the 3N Model Coding Criteria

Variable	Measurement Criteria	Coding
Triggering event (Smith, 2018; Webber & Kruglanski, 2017)	(a) Significance loss	<i>References to humiliation, exclusion, degradation, etc. made?</i>
	(b) Opportunity for Significance gain	<i>References to opportunities to earn respect/admiration of social milieu?</i>
Motives for radicalization (Shapiro & Maras, 2019; Smith, 2018; Webber & Kruglanski, 2017)	(a) Religious/Ideological	<i>Duty to follow religious/ideological directives.</i>
	(b) Need for Belonging	<i>Loneliness, desire to fill a void.</i>
	(c) Correct an Injustice/Revenge	<i>Desire to correct an injustice or extract revenge.</i>
	(d) Sympathy for group/victims	<i>Sympathy for victims in Iraq and Syria, ISIS, and their cause.</i>
	(e) Relationship (existing or desired)	<i>Being in a relationship with, or desiring a relationship with, a member or potential member of ISIS.</i>
	(f) Vulnerability	<i>I.e., presence of mental illness, cognitive challenge, brainwashing, impressionable youth</i>

Appendix 4.

Narratives Typology of the 3N Model Coding Criteria

Variable and supporting evidence	Measurement Criteria	Coding
Belief systems/narratives/ideology espoused by ISIS (Shapiro & Maras, 2019; Smith, 2018; Webber & Kruglanski, 2017)	(c) Referenced	<i>Identify with group's religious, political, extremist ideas and sanctioned violence to achieve goals</i>
	(d) Not referenced	
Roles within ISIS (Shapiro & Maras, 2019)	(g) Planner	<i>Provision or attempted provision of tactical strategies for one or more terrorist attacks or trainings</i>
	(h) Financial provider/advisor	<i>Provision or attempted provision of funds, funding agents, or advised how to get funds for ISIS</i>
	(i) Supplier	<i>Provided or attempted to provide supplies (e.g., food, weapons, fighters).</i>
	(j) Terrorism enactor	<i>Attempted or succeeded in carrying out at least one or more terrorist acts against a person/people in the US or abroad.</i>
	(k) Traveler: Spouse, companion, breeder	<i>Attempted to travel or successfully traveled to IS territory to be a spouse/companion and to provide children as future IS warriors.</i>
	(l) Educator/propagandist	<i>Promoted the cause and attempted to or was successful in indoctrinating or gaining support from new members into the group, including family, friends, and children.</i>

Variable and supporting evidence	Measurement Criteria	Coding
Type of support (Shapiro & Maras, 2019)	<ul style="list-style-type: none"> <li data-bbox="871 305 1079 337">(d) Instrumental <li data-bbox="871 365 1136 397">(e) Social/Cognitive <li data-bbox="871 488 1073 521">(f) Operational 	<p data-bbox="1346 305 1843 365"><i>Attempted or successful provision of tangible items, services (self, materials, funds, fighters)</i></p> <p data-bbox="1346 365 1864 488"><i>Attempted or successful dialogue with members, followers, and/or sympathizers to exchange knowledge, information, ideas, feedback, and access to information.</i></p> <p data-bbox="1346 488 1818 548"><i>Attempted or successful organization and execution of attacks to further goals of ISIS.</i></p>

Appendix 5.

Networks Typology of the 3N Model Coding Criteria

Network Typology of the 3N Model of Radicalization

Variable	Measurement Criteria	Coding
Radicalization Class (Shapiro & Maras, 2019; Smith, 2018; Webber & Kruglanski, 2017)	(a) Self	<i>Radicalized alone.</i>
	(b) Dyad	<i>Either began radicalization alone and joined one other person or began radicalization with one other person.</i>
	(c) Group	<i>Began as a dyad and joined a group or began and continued with a group.</i>
Approval of family (Shapiro & Maras, 2019; Smith, 2018; Webber & Kruglanski, 2017)	(a) Absent	<i>Did the individual have the approval of family when joining ISIS?</i>
	(b) Present	
Approval of friends (Shapiro & Maras, 2019; Smith, 2018; Webber & Kruglanski, 2017)	(a) Absent	<i>Did the individual have the approval of friends when joining ISIS?</i>
	(b) Present	
Internet use specific to ISIS affiliation (Shapiro & Maras, 2019; Smith, 2018)	(a) None	<i>No reference to internet use.</i>
	(b) Long-lasting/permanent messages	<i>Messaging functionalities such as general internet, Facebook, Twitter.</i>
	(c) Temporary/encrypted messages	<i>Messaging functionalities such as WhatsApp, Skype.</i>
Class of criminal arrest (Shapiro & Maras, 2019)	(a) Self	<i>How was the subject arrested?</i>
	(b) Dyad	
	(c) Group	

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