ABSTRACT

Title of Dissertation:	THE SOCIO-IDEOLOGICAL MEANS MODEL OF RADICALIZATION
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The present dissertation posits a novel theory of radicalization expanded from and complementary to the 3N model of radicalization (Kruglanski, Bélanger, & Gunaratna, 2019), holding that narrative and network, while conceptually distinct, are, in reality, operationally inextricable. The socio-ideological means model argues that radicalization is a consequence of the process by which a socio-ideological means is selected to attain the ultimate goal of meeting the universal, fundamental, human need for significance (Kruglanski et al., 2022). The "socio-ideology" is defined as a narrative shared by the network of which the individual is member and to which the individual refers. Without a network, real or imagined; online or in-person; past, present, or future, a narrative will not be considered valid and adherence to it will not be considered valuable. Without a shared narrative, however, a network will not wield influence over its members, who will not feel bonded to one another. The socio-ideological means model holds that significance is the core social motivation underlying political movements and political action, including political violence. The stronger the need for significance, the more susceptible

one will be to significance-granting socio-ideologies, including those which advocate violent extremism. Moreover, as the need for significance becomes more strongly activated, the set of socio-ideologies perceived as available to meet the need expands, to include even those which contradict one another or might otherwise be considered extreme. The present dissertation illustrates the socio-ideological means model using examples from past research on terrorism and radicalization, decades of social psychological literature, and empirical support from correlational and experimental research results. Finally, directions for future research based on the socio-ideological means model and its derived hypotheses are suggested.

THE SOCIO-IDEOLOGICAL MEANS MODEL OF RADICALIZATION

by

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Preface

The original purpose of this dissertation as outlined in the proposal was to provide "an expanded model of radicalization to terrorism which systematically accounts for variation in ideological commitment and network embeddedness." I hypothesized that increased individual ambition and self-ascribed epistemic authority would increase the importance of the narrative and decrease the importance of the network, whereas increased network prestige and network size would increase the importance of the network and decrease the importance of the narrative, ultimately complementing and expanding upon the 3N model of radicalization (Kruglanski et al., 2019).

I sought to test these hypotheses in a series of four experiments, each manipulating a different variable (ambition, self-ascribed epistemic authority, network prestige, and network size) and then asking participants to indicate their likelihood of engaging in two different, mutually exclusive, actions: voting in and boycotting the 2024 election. Before indicating their likelihood of voting and boycotting, participants were presented with two prompts: one, a "narrative" statement using values with which the participant would resonate (based on their answer to an initial question about important political issues) promoting either boycotting or voting, and the other, a "network" statement that an important (or prestigious/non-prestigious or large/small) community of people who support the political issue they previously indicated was important to them supported voting or boycotting, whichever was not supported by the narrative prompt. I predicted that people with higher ambition and higher self-ascribed epistemic authority would report being more likely to engage in the behavior prescribed by the narrative (whether voting or boycotting) and that people with lower ambition and lower self-ascribed epistemic authority would report being more likely to engage in the behavior prescribed by the network (whether boycotting or voting). I also predicted that portraying the network as prestigious or large would increase the likelihood that participants would report being likely to engage in the behavior promoted by the network, and that portraying the network as non-prestigious or small would decrease the likelihood that participants would report being likely to engage in the behavior promoted by the network. In all four studies, the results were non-significant (Appendix A).

I carried out four more studies, each aimed at addressing limitations from the original studies. Study 5 was correlational, designed on the assumption that participants had preconceived ideas about voting and boycotting elections based on their existing narratives and networks that overshadowed the narrative and network prompts provided in the experimental studies. Studies 6 and 7 manipulated ambition and self-ascribed epistemic authority differently than Studies 1-4 and presented a fictitious proposal to increase funding for either counterterrorism military operations or humanitarian aid (and decrease funding for the other). The network was manipulated by telling participants that majorities of either American citizens (ingroup) or French citizens (outgroup) supported the proposal. Participants' narratives were assessed to

be harder to manipulate, given that participants' values were likely longstanding, so narratives were measured as either security or beneficence values – security values were assumed to be consistent with supporting increased funding for military operations whereas beneficence values were assumed to be consistent with supporting increased funding for humanitarian aid. Study 8 assessed that participants were too familiar with the political issues addressed in the first seven studies, so instead asked students to imagine supporting or opposing a proposal for a new, fictitious technology to be implemented at the University. They were presented with a logical argument for or against the technology (the narrative) and a "network statement" that most of their fellow students either opposed or supported the technology, respectively. As in the first four studies, none of the hypotheses were supported in the second set of four studies (Appendix B).

There were certainly many limitations in these additional studies, but the repeatedly non-significant results made clear to me that it was time to consider Karl Popper's (1959) timeless adage that "good tests kill flawed theories; we remain alive to guess again." My goal for the dissertation was to clarify and expand upon the 3N model of radicalization for more effective use in the current radicalization landscape, not to prove myself right by forcing the data to fit the theory, so I decided to re-examine my hypotheses and the assumptions underlying the studies I conducted. In "guessing again," as Popper (1959) would say, via a new literature review and several exploratory analyses, I conceived of a model of radicalization that, while not achieving the narrow aim of this dissertation to determine the effects of ambition and self-ascribed epistemic authority on the impact of narrative and network through the lens of the 3N model of radicalization, does illuminate a series of "lessons learned" that may be used as a roadmap for future research. In the forthcoming chapters, I lay out the socio-ideological means model as a complementary expansion of the 3N model, providing support from the existing literature and empirical support from the eight studies I conducted for this dissertation, for three new hypotheses derived from the new model based on the lessons learned through this process. As noted previously, all of the empirical evidence provided in the forthcoming chapters is the result of exploratory analyses on data from 1,540 participants across seven experiments and one correlational study. The interested reader can find the details for each study in accordance with the originally proposed and subsequently planned analyses in Appendices A and B, respectively.

The socio-ideological means model presented in this dissertation holds, first and foremost, that the first N, the need for significance, is the key component of the theory, more important than either the narrative or the network, and is a necessary antecedent to narrative and network holding any value. The model also holds that narrative and network, while presented as two different components of a three-pronged model (Kruglanski, Bélanger, & Gunaratna, 2019), are operationally inextricable. Narratives exist because networks promote and validate them; networks are created and maintained through shared adherence to a narrative. Both of these premises explain the non-significant results of the planned analyses as well as the significant results of the exploratory analyses.

Regarding the first premise, arguably the core tenet of the 3N model (Kruglanski et al., 2022), a strong need for significance, as measured by the Ambition Scale (Resta et al., 2023), was associated with participants reporting being likely to both vote in and boycott the election – a realistic impossibility that meant that a substantial minority of the participants in each experiment refused to choose between narrative and network, thus contravening the assumption that was inherent in the originally proposed theory and associated methodology: that, when given a choice between two options to meet their need for significance, people will choose *one* of them. And, behaviors not perceived as significance-granting, such as supporting the fictitious technology proposed in Study 8, were not supported or opposed at all, regardless of narrative and network arguments.

Regarding the second premise, the originally proposed theory and associated methodology also relied on situations in which one's narrative and network are prescribing different actions. This paradigm, while hypothetically useful for distinguishing people's preference for narrative and network, neglected to realize that, in the real world, people's narratives and networks are more than correlated; they are inextricably linked. If a network is prescribing action that is different from the narrative, then the network has created a new narrative. And if one's narrative is different from the views of their network, then their network will not be influential for them, and the truly influential network will be the group which shares their narrative, even if one has never met those group members.

Each of these premises and three hypotheses derived from them will be explored in depth in the forthcoming chapters. As noted above, these new hypotheses – "lessons learned" – do achieve my original goal of clarifying and expanding upon the 3N model of radicalization, albeit in a different manner and for different reasons than I initially expected and proposed.

Dedication

For Dan Ajerman and Cheryl Taylor, who taught me that hard things are worth doing, and that anything worth doing is worth doing well. My accomplishments are because of you, so this dissertation is for you.

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Chapter 1: Introduction

For decades, psychologists and other social scientists have grappled with the challenge of creating a model of radicalization to violent extremism that is theoretically sound; supported by empirical evidence; and useful to law enforcement, social workers, clergy, and other practitioners working on the ground to prevent and counter radicalization to violent extremism [P/CVE]. Indeed, understanding the psychological process underlying radicalization is not merely an academic exercise; it is critical to developing programs for rehabilitating and deradicalizing violent extremists and preventing others from radicalizing at all. As such, dozens of models of radicalization have been posited over the past five decades. Upon close examination, it is clear that most models of radicalization contain rather similar components. It is perhaps easiest to understand the similarities and differences among most models of radicalization through the lens of the 3N model of radicalization (Kruglanski, Bélanger, & Gunaratna, 2019). The 3N model is a useful framework through which to understand other models of radicalization because it is quite broad, positing that radicalization occurs through the confluence of three factors: the need (i.e., the motivational component), the narrative (i.e., the ideological component), and the network (i.e., the social component). The present dissertation posits a novel and complementary expansion of the 3N model of radicalization, the socio-ideological means model. Thus, before delving into the socio-ideological means model, it is useful to understand the 3N model and the way in which it explains most other models of radicalization to violent extremism.

The 3N Model of Radicalization

The first N, the "need" component of the model, refers to the need for significance – the universal, fundamental human need to matter, to have dignity, and to be respected by the people whom one respects (Kruglanski et al., 2022). The need for significance is universal in that no one likes to be humiliated or rejected, but not always activated in that most people are not constantly seeking admiration from others; they are focused on meeting other needs as they arise. Rather, the need for significance is activated by either deprivation – that is, loss or threatened loss of significance through rejection, humiliation, or other such experiences – or incentivization – that is, perception of an opportunity to gain significance by becoming a hero or martyr, for example (Kruglanski et al., 2013). Because the need for significance is a broad, overarching category, each of the models discussed herein presents it differently, typically focusing on specific sources of significance loss or threatened significance loss, or different manifestations of the need for significance.

The Need for Significance in Models of Radicalization

In various models of radicalization, the need for significance is conceptualized as perceptions of injustice (Moghaddam, 2005), political oppression (Gurr, 1970), death anxiety (Pyszczynski, Motyl, and Abdollahi, 2009), self-uncertainty (Hogg, 2014), and grievance (McCauley & Moskalenko, 2011). Terror Management Theory [TMT] proposes a specific need which motivates radicalization – death anxiety (Pyszczynski, Motyl, & Abdollahi, 2009). Death anxiety refers to the existential angst evoked by reminders of one's mortality, which subsequently prompts people to zealously defend their cultural worldview (Greenberg et al., 1990). Death anxiety is, at its core, a threatened loss of significance, a feeling of deprivation which can activate the need for significance (Kruglanski et al., 2013). Anxiety about one's death is fear that one will be non-existent and forgotten. Thus, the motivational component of TMT represents a distinct manifestation of the need for significance. Hogg (2014) applied his uncertainty-identity theory (Hogg, 2007) to the process of radicalization, and the theory has long been applied in studies of violent extremism (e.g., Gøtzsche-Astrup, 2019). The need element is referred to by Hogg (2014) as a feeling of self-uncertainty. Self-uncertainty is induced by threats to one's self-concept or closely held values; in other words, threats to one's significance and sources thereof. McCauley and Moskalenko's (2011) model of radicalization was updated in 2017 and highlighted personal and group grievances as individual mechanisms for radicalization, adding that individuals also radicalize for love, status, and escape, all of which may be conceptualized as sources and manifestations of the need for significance (McCauley & Moskalenko, 2017). Similarly, Speckhard's (2016) "lethal cocktail" model of radicalization includes individual vulnerabilities as an "ingredient," a list of 50 motivations ranging from the material to the existential and differing based on whether the individual is living in a conflict zone. Each vulnerability reflects the need for significance: Wanting romance or adventure, wanting to escape personal problems, a need for belonging, a need for purpose, a need for redemption, a desire to help others, a desire to fight on behalf of innocent people, a desire to be a part of a large social movement, and more.

Notably, the way that the need for significance is conceptualized is largely dependent on the social context in which the model or theory of radicalization was published, focusing on the apparent motivations of the members of the most active or well-known terrorist groups of the time, whether anti-colonialists, members of far-left groups, members of al Qaeda, or members of ISIS. For example, in his book *Why Men Rebel*, which was published at the beginning of what Rapoport (2004) referred to as the "New Left" wave of terrorism, Gurr (1970) conceptualizes the need element as the political oppression and intense discontent experienced by people who engage in violent social movements. Considering the time in which Gurr (1970) was writing, the largely successful anticolonial movements of Rapoport's (2004) "Anticolonial" wave of terrorism likely influenced this perception. In the two decades prior to Gurr's (1970) writing, groups such as the *Lehi* and *Irgun* in Mandatory Palestine and the National Liberation Front in Algeria successfully shed the yokes of colonial oppression by using violent guerilla tactics against the British and French, respectively (Rapoport, 2004). Della Porta's (2006) model of radicalization is similarly best understood in the context in which it arose, focusing on radical far-left

groups in Italy and Germany during the "New Left" wave of terrorism (Rapoport, 2004). Della Porta (2006) identifies the network as the core component of radicalization, stating that individual "radical careers reflect – through magnifying to some degree – the perceptions and motivations largely shared in the milieus of the counterculture as a whole" (p. 137). The motivation held by individuals and shared by groups are described as daily experiences of police brutality and perceptions of the state as unfair (Della Porta, 2006). It is not difficult to conceive of these motivations as sources of significance loss, whether on the personal level by being treated by authority figures as a person unworthy of dignity or on a collective level by perceiving that the government does not respect the populace. Police brutality and state repression are critical to the narrative, as Della Porta (2006) states that in social movements, political violence tends to arise gradually after a series of escalations and reciprocations between the social movement and the state. Violence-justifying narratives within Della Porta's (2006) model, then, arise organically when the movement realizes that they must respond to state violence and police brutality in kind (Della Porta, 2008). And, although few models focus on the growing threat of far-right violent extremism, which Rapoport (2021) highlighted as a possible fifth wave of terrorism, need for significance as activated by a perceived threat to one's cherished values (Atran, 2016) or cultural worldview (Pyszczynski, Motyl, & Abdollahi, 2009) can be applied to members of far-right violent extremist groups, who translate their personal grievances and feelings of insignificance into blame of and hatred toward members of minority groups who are seen as eroding their culture and threatening their status (Speckhard, Ellenberg, & Garret, 2022).

The Narrative in Models of Radicalization

The translation of loss of significance into blame and justifications for violence is at the heart of the narrative component of psychological models of radicalization – the element which explains how an individual decides that the way to meet their need for significance is through violent, radical action (Kruglanski et al., 2014). Across different models of radicalization, the narrative is conceptualized as sacred values (Atran, 2016), ideological beliefs (Khalil, Horgan, & Zeuthen, 2022), worldview (Pyszczynski, Motyl, and Abdollahi, 2009), and ingroup culture (Della Porta, 2006), among others. Notably, most of the models discussed presently are designed to apply to radicalization to any violent extremist ideology, although Wiktorowicz (2005) and Silber and Bhatt (2007) specifically posit models of militant jihadist radicalization. Additionally, Sageman (2004) uses the example of al Qaeda members and Hafez and Mullins (2015) use the example of radicalization among Muslims in the West to illustrate their more general models. From the other models of radicalization, however, one can identify common characteristics of seemingly disparate ideologies which contribute to the radicalization of an individual whose need for significance has been activated. The narrative explains the world and one's role in it, especially by delineating important values. It then identifies the sources of one's grievances or creates grievances through identifying threats to cherished values. Next, the narrative justifies violence against the sources of one's grievances by delegitimizing or dehumanizing them. Finally, the narrative portrays those who act in defense of the

group's values and against the group's enemies as heroes and martyrs, thus encouraging further violence and self-sacrifice (Kruglanski et al., 2014).

Atran's (2016) model of radicalization is presented as a portrait (though not a profile) of the "devoted actor." The devoted actor is one who is "willing to protect morally important or sacred values through costly sacrifice and extreme actions, even being willing to kill and die" (Atran & Ginges, 2015, p. 69). Sacred values, the narrative component of the devoted actor model, are those moral values, often based in religious myth and instilled through collective rituals, which signify commitment to group identity and cannot be compromised for that which is non-sacred (for example, trading large amounts of money for land which is considered holy would be considered a violation of sacred values). Ergo, when a loss of significance is linked to the violation of one's sacred values, violence becomes an acceptable, if not an encouraged or even required, means to regaining significance by defending those values (Atran & Ginges, 2012).

Horgan's (2004) model of radicalization was updated nearly two decades after its publication, after the fall of ISIS's Caliphate and amid a potential new wave of far-right terrorism (Rapoport, 2021). Khalil, Horgan, and Zeuthen (2022) proposed an "ABC" model of extremism: the Attitudes-Behavior Corrective. The ABC model proposes that individuals fall along two dimensions, one of attitudes toward ideologically justified violence (ranging from opposition to sympathy or support), and the other of behaviors (i.e., the extent to which someone is involved in such violence) (Khalil, Horgan, & Zeuthen, 2022). Indeed, the ideology is not considered necessary to engaging in acts of violent extremism, as behavior can be high while attitudes remain low. The various factors which Khalil, Horgan, and Zeuthen (2022) propose as leading people to become more sympathetic to violence justified by an ideology and more involved in such violence reflect the need for significance, including structural motivators (e.g., state repression and political exclusion) and individual incentives (e.g., status, belonging). Ideology is also included as a "structural factor" which, if one adheres to it, motivates the individual to fight to achieve the aims of the ideology, such as by creating an Islamic Caliphate or white ethno-state (Khalil, Horgan, & Zeuthen, 2022). In this way, the ABC conception of an ideology is more similar to the sacred values described by Atran (2016) or cultural worldview described by Pyszczynski, Motyl, and Abdollahi (2009); it does not necessarily prescribe violence, but it may require violence to defend it or accomplish its goals.

The Network in Models of Radicalization

Narratives rarely arise on their own, nor can they be sustained if no one adheres to them. Therefore, the network is the third component of the radicalization process outlined by Kruglanski, Bélanger, and Gunaratna (2019). The network is the social component of the model and refers to the people who validate the narrative and reward with significance those who act in accordance with it (Kruglanski et al., 2014). In the various models of radicalization discussed presently, the network is conceptualized as a sense of community (Gurr, 1970), a "bunch of guys" (Sageman,

2004), small group dynamics (Della Porta, 2006), and identity fusion (Atran, 2016), among others. McCauley and Moskalenko (2011) describe a number of group processes which increase radicalization: Group polarization, wherein the group's ideology becomes increasingly extreme as members reinforce each other's beliefs; condensation, wherein less committed members leave the group; outbidding, wherein different groups become increasingly violent in order to attract new members; fissioning, wherein groups split based on differences in ideology or strategy; and group isolation, which strengthens the power of the group over individual members given their lack of alternative means to significance.

In Gurr's (1970) model, which reflects the need for significance as a perception of political oppression and the narrative as a verbal and symbolic language of violence justification, the network is conceptualized as symbols of group identification. These symbols are part of the narrative, serving to bond individuals together as members of a collective who share a grievance, an enemy, and a goal to rebel against that enemy and attain justice, even if violence is necessary to do so. Group identification is thus created by the narrative in Gurr's (1970) model. Research since the model was first put forth, however, has demonstrated the dynamic and often circular relationship between motivated cognition and motivated connection, in which people in a network bond with and feel close to one another through their shared experiences, transforming those experiences into truth and solidifying the narrative (Echterhoff & Higgins, 2021).

Sageman (2004) holds that regardless of what need may have initially motivated one's radicalization, and regardless of whether one truly believes in their group's narrative, it is the network that keeps one involved in terrorism. Sageman (2005) describes the process of radicalization as a "bunch of guys" phenomenon, wherein young, alienated men who would not otherwise act on their resentment toward society (and thus their need for significance) come together as a group. In doing so, their feelings of humiliation are transformed from being personal emotions experienced alone into collective truths. In other words, the need for significance bonds these men together through their shared struggles and the violent extremist narrative explains their struggles and directs their behavior, but no violent action would occur were it not for the small group dynamics active among this "bunch of guys." For example, Sageman (2009) writes, "Seven terrorists sharing an apartment and one saying, 'Tonight we're all going to go, guys.' You can't betray your friends, and so you go along. Individually, they probably would not have done it" (p. 364).

Similarly, Della Porta (2006) describes small group dynamics as critical to the process of radicalization to violent extremism within social movements. Della Porta (2006) explains that radical groups tend to break off from larger political activist groups. In this breaking off, the members of the newer, smaller groups are bonded together through their perceived greater commitment to the political cause. Through this shared commitment and potential movement underground, they become both emotionally closer to one another and increasingly isolated from the mainstream society, which subsequently strengthens their commitment to their shared cause

(Della Porta, 2013), exemplifying the cyclical relationship between motivated cognition and motivated connection (Echterhoff & Higgins, 2021).

According to the devoted actor model (Atran, 2016), when an individual's identity is fused with their group, the individual sees their goals as inextricable from the group's goals (Swann et al., 2009). Their sense of significance is boosted through the group's prestige and the group's accomplishments, and they are willing to sacrifice themselves for the sake of the group. In the mind of the devoted actor, the group's success is their own success, so if self-sacrifice is needed to ensure the group's success, the devoted actor will do so (Atran, 2016). Of course, suicide attacks also confer individual significance through the knowledge that one will be recognized as a hero and a martyr, as well as the promise of eternal rewards after death (Kruglanski et al., 2022).

Finally, two of Speckhard's (2016) "lethal cocktail" ingredients refer to the network: The group and social support. Speckhard (2016) clarifies that these need not exist in face-to-face contexts, but that individuals are highly unlikely to engage in acts of terrorism if they do not believe that they have support in doing so. Thus, the group provides an ideology which explains an individual's grievances and prescribes action to address them, and the group also provides support for the individual through words of encouragement, material resources, and rewards of status and respect when the individual adheres to the narrative. Additionally, Speckhard's (2016) model posits that people who engage in terrorism believe that they will receive broader support, not only from their immediate group, but from the broader community which the group purports to represent. This may not be true in actuality but reflects that a network can be both real in the form of the immediate group and perceived in the form of the broader community or constituency.

The 3N Model and the Current Radicalization Landscape

As mentioned above, Rapoport (2021), whose wave model of modern terrorism categorized four eras of terrorism from the late 1800s until the early 2000s, recently suggested that the 2020s marks a new era of terrorism dominated by the far-right, namely white supremacist and anti-government militia groups. Rapoport's (2004, 2021) system of categorization highlights the prominent ideologies and goals of terrorist movements of their time, from anarchist to anticolonial to leftist to religious to hyper- and ethno-nationalist. The waves are also clearly marked by differing tactics that can span across ideologies, however, from assassinations to provocation of government overreactions to bombings to suicide attacks to mass shootings (Rapoport, 2004, 2021). Several other broad trends from terrorist attacks in recent years have suggested that terrorism is evolving, and three recent and emerging themes highlight the need for a revised social psychological model of radicalization.

Increased Prevalence of Lone Actors

First, there is an increasing prevalence of lone actors, who enact violent extremist attacks inspired by violent extremist groups and ideologies but who are not members of those groups and do not receive direction from them. For example, on October 16, 2023, Abdesalem Lassoued shot and killed two Swedish football fans and injured a third on their way to a game in Brussels, Belgium. Lassoued filmed a video prior to his attack claiming to have been inspired by ISIS and motivated to kill Swedish people, possibly related to a series of Quran burnings in Sweden earlier that year (Nicholls et al., 2023). And on May 14, 2022, Peyton Gendron shot and killed 10 Black people in a grocery store in Buffalo, New York, inspired by white supremacist groups and their ideologies, primarily the "Great Replacement Theory" (Feola, 2022). Terrorist attacks have been increasingly perpetrated by lone actors since 2011 (Hamm & Spaaij, 2017), despite most social psychological theories of radicalization highlighting the rarity of a true "lone wolf" terrorist, suggesting that although these individuals may act alone and undirected, they nevertheless seek the admiration and respect of a valued network by adhering to their narrative (Schuurman et al., 2019; Bright, Whelan, & Harris-Hogan, 2020). For instance, Dan Ephron's (2016) *Killing a King: The Assassination of Yitzhak Rabin and the Remaking of Israel* carefully illustrates the community of Jewish extremists who decried Rabin's efforts at peace with the Palestinians as an existential threat to Israel and the Jewish people and who celebrated when Rabin was killed. In doing so, Ephron demonstrates that Yigal Amir, the so-called "lone wolf" who assassinated Rabin, acted in defense of cultural values (i.e., his narrative) he believed were being threatened, knowing that he would be supported in his actions by the people whom he respected (i.e., his network). Indeed, even in cases in which a lone actor terrorist appears to act in accordance with their own unique ideologies, there is usually evidence that these individuals nevertheless seek acceptance from and belonging in groups (real or imagined) which they respect, whether that is the Knights Templar in the case of Norwegian white supremacist terrorist Anders Breivik (Meloy, Habermeyer, & Guldimann, 2015) or among the ranks of the great thinkers and environmentalists of history in the case of the Theodore Kaczynski, the Unabomber (Arnold, 1997).

Such examples would seem to suggest that there is no such thing as a true lone actor terrorist, and most theories of radicalization concur with that argument. Yet, extensive research has nonetheless found categorical differences between terrorists who act alone and those who act in cells. Spaaij (2010) found that lone actors were more likely than other terrorists to display symptoms of psychological disorders and to struggle in social interactions. Gill, Horgan, and Deckert (2014) found that lone actors planned their behaviors extensively and frequently leaked their plans to others, were older on average than cell-based terrorists, and were comparatively less likely (accounting for age) to be married or have children than cell-based terrorists. A review by Kenyon, Baker-Beall, and Binder (2021) suggested that lone actor terrorists may be more psychologically similar to non-ideological lone actor criminal offenders (such as mass shooters) than they are to cell-based terrorists. Finally, Schuurman and Carthy (2023) developed a binary logistic regression model to predict whether a given terrorist was a lone actor or acted with a group, finding that the most significant predictors of being a lone actor were a lack of a criminal history, older

age, and not being in a romantic relationship at the time of radicalization. Indeed, lack of relationships more generally may be associated with a radicalized individual engaging in lone actor perpetration, as deficits in social skills may preclude them from joining terrorist groups (Schuurman & Carthy, 2023). Because or in spite of these differences between lone actors and cell-based terrorists, psychological models of radicalization to terrorism such as those described previously tend to either exclude lone actors from their discussion or to state explicitly that lone actors are not truly "alone" (Doosje et al., 2016; Moghaddam, 2005; Speckhard, 2016). In other cases, psychological literature which does devote time and space to lone actors tends to present them as exceptions which prove the rule that the social network is a critical component of radicalization (McCauley & Moskalenko, 2017). Schuurman and Carthy (2023), after presenting a list of differences between lone actors and group-based terrorists, nonetheless emphasize that the "differences between these two forms of terrorism are nuanced and should not be exaggerated" (p. 19). The conundrum of terrorist attacks increasingly being committed by lone actors who, despite not being truly "alone," do display categorical psychological and demographic difference from their cell-based counterparts, suggests that the network component of radicalization requires further examination, especially in the context of modern society, when so much social interaction occurs online.

Ubiquity of Online Radicalization

A second trend evident in the past decade of terrorism is the near ubiquity of online radicalization, which has been closely linked to the rise in lone actors (Binder & Kenyon, 2022). For instance, many ideologically motivated mass shootings were inspired by conversations about other such shootings on the right-wing online forum 8chan, which saw increased extremist discourse in the periods immediately after attacks in 2018 and 2019. This type of discourse was particularly long-lasting following the mass shootings at two mosques in Christchurch, New Zealand in March of 2019 (Baele, Brace, & Coan, 2023). In addition, a study of 267 United Kingdom-based terrorists sentenced between 2010 and 2017 found that the majority were influenced in some way by online communications, with younger, more socially isolated individuals appearing to be more vulnerable to online radicalization than other individuals in the dataset (Kenyon, Binder, & Baker-Beall, 2023). Interestingly, Mølmen and Ravndal (2023) suggested that lone actor terrorists were radicalized online through "information provision, as well as amplifying group polarization and legitimizing extreme ideology and violence through echoing" (p. 463), suggesting that the internet played a role in providing and promoting both the ideological and social aspects of radicalization. Herath and Whittaker (2023) distinguished between "isolated" terrorist actors who use the internet for logistical purposes, but do not interact with likeminded others online or offline, and "encouraged" actors who do not have offline networks in which they plan and execute their attacks but do interact with others online. Individuals in the latter group do indeed have networks that are important to them, but those networks are hidden behind a screen. Notably, Hamid and Ariza (2022) nonetheless found that people who were radicalized offline were more likely to be successful and have a higher lethality in their attacks than those

radicalized online. This finding possibly implies that offline networks are more influential in the radicalization process than online groups, or that offline groups are more likely to conduct training for attacks, leading to greater fatalities than attacks plotted by people who only ever discussed their plans with others but did not practice for them or receive training from more experienced group members. Both the increased prevalence of lone actors among terrorist attackers and the increase in online radicalization suggest that networks are increasingly difficult to identify but that their importance and the role they play in the radicalization process has not abated. These trends necessitate a revised social psychological theory of radicalization that recognizes that a network may not be immediately recognizable and that an individual may never be physically embedded in a network despite being strongly influenced by it. In addition to the rise in lone actor terrorists, online radicalization can also be linked to a rise in ideological inconsistency, given the surplus of information and groups online which makes moving between violent extremists groups easier than it once was, when group membership was limited by physical proximity and often physical appearance, as well.

Ideological Inconsistency

A third trend which has emerged in the past few years is that of ideological inconsistency, also referred to as ideological fluidity, an overarching term which includes both ideological mixing and ideological hopping. Ideological mixing, also referred to as "salad bar" ideologies (Deliso, 2023) and the core of "composite violent extremism" (Gartenstein-Ross et al., 2023), is defined as taking parts of different ideologies and combining them to create a unique narrative that speaks to the individual's personal needs and grievances, including the specific source of significance deprivation. For example, on April 12, 2022, Frank James opened fire on a New York City subway, wounding 10 people. James, who had been previously diagnosed with schizophrenia, posted numerous videos featuring incoherent homophobic and antisemitic ideologies on YouTube (Bouza, 2022). Ideological hopping, meanwhile, is defined as moving from one ideology to another. This phenomenon has typically been considered in the literature in terms of individuals who move between violent extremist groups and ideologies (Koehler, 2020) but can also be considered to include disengagement from violent extremist groups and adoption of more mainstream, prosocial ideologies. For instance, former white supremacist Ryan LoRee has spoken about his experience of not only deradicalizing in prison, but adopting a progressive, anti-racist ideology which drove him to engage in environmental justice and other causes in his hometown of Flint Michigan, even running for office on a platform focused on ending the school-to-prison pipeline and the Flint water crisis (Speckhard, Ellenberg, & Garret, 2021; Acosta, 2018). Whereas the phenomena of lone actor terrorism and online radicalization highlight the need to revise our understanding of the role of networks in the radicalization process, the phenomenon of ideological inconsistency highlights the need to revise our understanding of the role of narratives in the radicalization process. Narratives are defined in theories of radicalization as long-held beliefs, sacred values (Atran, 2016), and cultural worldviews (Pyszczynski et al., 2009). These definitions imply

immutability rather than ephemerality. If one could so easily give up an ideology and adopt a new one, or believe in one ideology and yet also believe in another ideology which completely conflicts with the first, how could they be so committed to that ideology that they would commit violence in support of it?

These recent trends of increased prevalence of lone actors, increased online radicalization, and ideological inconsistency are not limited to radicalization to violent extremism. In particular, people's ability to build community and find belonging in online groups with whom they never interact in person has been hotly debated as both a boon to isolated and socially anxious people (Pendry & Salvatore, 2015) and a driver of increased isolation from the real world (Heng et al., 2021). Understanding how people relate to their groups and make decisions about how to behave offline based on interactions with online group members is critical to applying social psychological theories about groups and beliefs to the modern era. Additionally, recent high-profile stories about politicians who leave their parties while retaining their beliefs and those who cling to both their beliefs and their parties which have rejected those beliefs (Saletan, 2024) require a novel understanding of why some people can abide groups and beliefs which are inconsistent with one another and why others cannot. Therefore, the present dissertation aims to expand upon a long history of social psychological theories of narratives and networks and their relationship to each other.

Need, Narrative, and Network in Social Psychology

The relationships between networks and narratives are a hallmark of social psychological research. There is no shortage of literature from which to pull important findings, namely that people's networks have a strong influence on their narratives. Early social psychological research established that members of groups who place a high value on group (network) membership are more resistant to deviating from group-held attitudes (narratives) than people who place a lower value on group membership (Kelley & Volkhart, 1952). Because people belong to multiple groups, they will be least likely to change attitudes held by whichever group is most salient to them and more likely to change attitudes held by groups in which their membership is less salient (Kelley, 1955). Individual characteristics have also been found to relate to a network's influence on one's narratives. High need for closure, for instance, results in people relying on their groups to prescribe their opinions and beliefs and to define the world for them (Kruglanski et al., 2006). More recent studies have found that people who perceive that their ingroups believe in conspiracy theories are more likely to believe in those conspiracy theories as well (Cookson et al., 2021). Furthermore, ideological beliefs (i.e., right-wing authoritarianism, social dominance orientation, universal-diverse orientation) of one's group members predict one's homophobic and racist attitudes, even controlling for their own ideological beliefs (Poteat & Spanierman, 2010).

Most existing literature on the relationship between networks and narratives would suggest that networks inform and influence narratives, rather than the other way

around. The groups upon which these and many other studies are based are typically involuntary, defined using observable or otherwise superficial characteristics: ethnic groups, geographic groups, students at the same school, members of a group of friends, coworkers on the same team, or other such categories. Historically, people have not been able to choose their networks. They are born into them, assigned to them, or default into them by virtue of physical proximity. Groups develop cultures and those cultures have core values which they impart to their members (Smolicz, 1981), and common beliefs and shared realities are considered by many scholars to be at center of groups and group membership (Bar-Tal, 1990; Levine & Higgins, 2001). While religious and political groups are based on beliefs and ideologies rather than superficial characteristics, those beliefs and ideologies are typically transmitted from parents to children; it is uncommon for people to choose their own religious or political group (Acock & Bengtson, 1978; Alford et al., 2005; Jennings et al., 2009). Additionally, many groups are bonded not necessarily by shared beliefs, but by common fates or interdependent goals (Deutsch, 1968). Indeed, Campbell (1958) posited common fates as a distinction between "aggregates of persons" and "social entities." These common fates and goals, however, often result in group members developing shared beliefs about those fates and goals. For example, Donnelly (2020) writes that "linked fate is a socially produced belief" which increases group solidarity, which itself subsequently "reinforce[s] the sense of linked fate" (p. 3). And Rusbult and Van Lange (2003) explained social norms as solutions to interdependence problems, suggesting that narratives arise as a way of keeping networks together.

Yet, there has also been research, albeit more limited, on the ways that narratives influence and inform network membership and the networks to which people choose to belong. Anderson (1991) posited that, in addition to belonging to more tangible communities such as neighborhoods and workplaces, people also have "imagined communities," groups of people who have never met but are bonded through shared values, interests, and aspirations. Similarly, anthropologists refer to "fictive kin," groups of non-relatives bonded through shared values whom people treat as family (Ibsen & Klobus, 1972), including being willing to self-sacrifice on their behalf despite lacking the genetic ties which would make self-sacrifice evolutionarily beneficial (Atran et al., 2014). Additionally, older adults have been found to use various "kin reinterpretation" strategies to create community among friends and distant relatives, and most such strategies are related to shared values and beliefs (i.e., narratives) (Allen et al., 2011). Similarly, mentoring relationships with nonparental adults in Black communities form a type of fictive kin which are rooted in shared experiences and histories (Scott & Deutsch, 2021). It is noteworthy that motivations underlying the creation of fictive kin, such as rejection by biological family members and need for self-efficacy, are closely linked to the quest for significance, suggesting that people create kin-like relationships with non-relatives in order to meet psychological needs not met by their existing networks (Braithwaite et al., 2010; Heslin et al., 2011). Nonetheless, Taylor and colleagues (2022) also found fictive kin relationships used by members of non-marginalized communities to strengthen existing family relationships, in addition to their use by members of marginalized

communities to replace strained or non-existent family relationships. As noted previously, people often do not get to choose their networks, but meeting likeminded people has become easier with the advent of the internet and social media. Network analysis on Twitter, for instance, has found that mutual connections and messages online creates a feeling of genuine community among users who have never met one another (Gruzd et al., 2011).

The terminology used in these theories of narratives influencing network membership, is notable however, as both the terms "imagined" and "fictitious" suggest that these networks are not real, or at least not *as* real as the networks into which people are born and with whom they physically interact. Moreover, the terminology suggests that there is a distinction between involuntary networks into which people are born, and which influence their narratives, and voluntary networks which people choose to join based on their existing narratives. Additionally, groups in the latter category use language which invokes kinship (e.g., "a band of brothers") in order to keep group members bonded to one another in the absence of familial ties (Robert et al., 2019), which are assumed to be stronger than solely value-based ties given their evolutionary importance.

That people have created and chosen their own groups based on shared values for millennia and used kinship-related language to refer to members of their imagined and fictive communities as a means of strengthening intragroup bonds, suggests that the relationship between group membership and attitudes and beliefs is bidirectional – networks influence narratives and narratives influence networks. It also suggests that people are often unsatisfied with the narratives provided and prescribed them by the networks into which they are involuntarily born or assigned, leading them to seek out or create new networks which share their narratives. In the modern era, social media allows people to create and find these networks more easily and to communicate with other members despite geographic distance, making these networks more tangible than they were when Anderson (1991) referred to them as "imagined." Further, the availability of online communities increases people's opportunities to connect and belong with other people who share their narratives. In turn, it is more difficult to distinguish between an individual's narratives and networks, to determine which came first, and to determine which holds more sway over their actions. Additionally, the accessibility of networks based on shared narratives may make existing networks with whom one does not share values and beliefs less important or influential. In particular, because fictive kin relationships are forged to meet the need for significance (Braithwaite et al., 2010; Heslin et al., 2011), when relatives deprive one of significance through abuse or maltreatment (Gómez-Ortiz et al., 2016), that network may be rejected in favor of a significance-granting network with a shared, significance-granting narrative (Seeds et al., 2010).

The Socio-Ideological Means Model of Radicalization

The preceding sections detailed the need for a revised version of the 3N model of radicalization (Kruglanski et al., 2019) in a new era of violent extremism and

terrorism which incorporates the findings from decades of social psychological research on the importance of networks and their relationships with narratives. This research suggests that narratives and networks are operationally inextricable from one another. Ample literature also suggests that needs related to social worth –life's purpose, dignity, belonging, and respect – are core drivers of human behavior. Building on these theoretical foundations, the present dissertation posits a socio-ideological means model of radicalization. The model is detailed below, followed by the three primary hypotheses derived from it.

The model presented in the forthcoming chapters holds that radicalization is the consequence of the selection of a particular means to achieve the universal, fundamental goal of significance. If the need for significance is activated, whether by deprivation or incentivization (Kruglanski et al., 2013), significance becomes an end for which a means must be selected to reach it. The set of potential means to attaining significance consists of infinite "socio-ideologies" – networks united by narratives and narratives shared by networks. The socio-ideologies most conveniently available for selection to meet the need for significance are those in which someone is already embedded: their local community, their religious group, their ethnic group, their political party, and so on. However, one might also find other socio-ideologies, other means to significance, online. People who feel isolated from their communities for any number of reasons can seek out socio-ideologies online where they find their beliefs validated when previously they had been derided. This process is closely linked to the increased prevalence of lone actors discussed previously, as people are able to find communities, no matter how small, which share their beliefs and make them feel special and valued despite their physical isolation. Others may come across new socio-ideologies online while playing video games or scrolling through social media and find themselves attracted to an idea and group to which they had never before been exposed. This process explains the broader phenomenon of online radicalization which has grown increasingly common over the last decade. Some socio-ideologies are better means to significance, namely those which provide clearer and stricter prescriptions for behavior and are found within more entitative groups (Hogg, 2007).

For most people, depending on the level of their need for significance, serving one more or less entitative socio-ideology will be perceived as an appropriate means to significance. For others with a stronger need for significance, however, one socio-ideology may not be sufficient and the set of available socio-ideologies to be selected as means will increase. One might select one socio-ideology, derive all the significance they can from serving it, and then move on to another socio-ideology that can give them even more significance. Others might select one socio-ideology and find that it meets their need for significance for some time and then switch to a new socio-ideology if the old one no longer suffices. Both of these processes reflect the "ideological hopping" component of ideological inconsistency. Still others might choose to serve more than one socio-ideology at a time in order to maximize their significance gain, resulting in "ideological mixing," though they may not recognize that their socio-ideologies are in conflict. A larger set of available socio-ideological

means would also include more extreme socio-ideologies become available to people with stronger needs for significance (Kruglanski et al., 2021).

Hypotheses Derived from the Socio-Ideological Means Model of Radicalization

Hypothesis 1 – Significance Dominance: One's susceptibility to a significance-granting socio-ideology increases as the need for significance becomes stronger.

Hypothesis 2 – Narrative-Network Operational Inextricability: People decide how to meet their activated need for significance based on a socio-ideology comprised of narrative and network components; that is, they will strive for significance in ways specified by the narrative as it is endorsed by the network

Hypothesis 2A: The perception that one's network shares a narrative increases one's commitment to that narrative.

Hypothesis 2B: The perception that one's narrative is shared by a network increases commitment to that network.

Hypothesis 3 – Ideological Inconsistency: The number of significance-granting socio-ideologies, including inconsistent and extreme socio-ideologies, to which one is susceptible increases as the need for significance becomes more strongly activated.

The socio-ideological means model can be applied to a wide variety of behaviors but is particularly applicable to the shifting global terrorism landscape in which terrorists increasingly act on their own, inspired or encouraged by but without direction from formal groups (Combs, 2022), radicalization occurs in online groups of geographically dispersed people with the same beliefs (Atran, 2019; Miller-Idriss, 2022), and personal grievances are emphasized in the manifestos of ideologically inconsistent mass shooters (Lankford & Silva, 2024; Ware, 2022).

The forthcoming sections discuss each of the three core hypotheses of the socio-ideological means model in turn. Each chapter consists of three parts. The first part of each chapter discusses theories of radicalization posited over the last five decades and the way that they can be understood within the socio-ideological means model. As noted previously, most theories of radicalization can be distilled to a motivational component, an ideological component, and a social component, lending credence to the original 3N model (Kruglanski et al., 2019). In the forthcoming chapters, this conclusion is reformulated to demonstrate that most theories of radicalization can be distilled to a primary motivational component and a supplementary socio-ideological component. The next section of each chapter provides support for the focal hypothesis from social psychological theory and research from the past century, demonstrating that most core social needs posited by social and evolutionary psychologists can be subsumed under the umbrella of the need for significance (Kruglanski et al., 2022), that the relationship between developing narratives and belonging to networks is bidirectional, that networks which do not share narratives

are neither valued nor useful, and that narratives which are not shared with others are similarly foregone. The third part of each chapter presents empirical support for the focal hypothesis from exploratory analyses of the results collected explicitly for this dissertation (see Appendices A and B), datasets collected for other projects, and existing datasets available online, along with empirical results from prior research which lend support to the focal hypothesis.

Chapter 2: Significance Dominance

The first hypothesis derived from the socio-ideological means model holds that the three Ns of the 3N model (Kruglanski, Bélanger, & Gunaratna, 2019) – need, narrative, and network – are not equal components as might be compared to a three-legged stool. Instead, the need for significance is the ultimate goal which is attained through adherence to a socio-ideology, with radicalization as the consequence of goal pursuit. In the forthcoming sections, I provide support for the hypothesis that one's susceptibility to a significance-granting socio-ideology increases as the need for significance becomes stronger using prior research on radicalization and motivation and then present empirical support for Hypothesis 1 from exploratory analyses of the data from the studies conducted for this dissertation and from prior research.

Radicalization Would Not Occur Without an Activated Need for Significance

Although the need for significance is not explicitly named in most theories of radicalization and terrorism, it is nonetheless present as the motivational component of almost all of the commonly cited theories thereof. Gurr (1970), for instance, writes, "If intensely discontented, we are susceptible to new ideologies, and less complex beliefs, that assert the righteousness and usefulness of political violence" (p. 193). Citing Schwartz's (1970) theory of revolutionary behavior, Gurr (1970) explains that the people most susceptible to revolutionary ideologies "are passively alienated people who perceive threat, futility, and loss of community in their political environment and, as a consequence, harbor feelings of tension and rage" (p. 199). He continues, "New ideational justifications for violence are effective to the extent that they make sense to discontented people in terms of their specific deprivations and their past experiences" (p. 202). Although Gurr (1970) refers to any number of "deprivations" experienced by discontented people, based on the rest of his writing, it is reasonable to assume that these deprivations are deprivations of safety, hope, and belonging, leading to "threat, futility, and loss of community," as quoted above. As will be discussed in future sections, safety, hope, and belonging can all be conceived of as sources of significance.

Edwards (1927) refers to the translation of discontent with the status quo into revolutionary rage and "oppression psychosis" (p. 55). In other words, Gurr (1970) posits that people who are unsatisfied with their place in the political system, who feel a lack of respect and status, are susceptible to appeals for political violence. The loss of respect and status are hallmark activators of the quest for significance via deprivation (Kruglanski et al., 2014). Beyond lack of respect and status, discontent also manifests as a lack of belonging, according to Gurr (1970), who writes that "the effectiveness of new justificatory beliefs about political violence also varies with the extent to which they provide the discontented with a sense of community" (p. 208). As will be expanded upon in a forthcoming section, the need to belong (Baumeister et al., 2007) is more than merely the need to be one entity within a category, but rather

to feel accepted and appreciated by their community. One can extrapolate from Gurr's (1970) statement that if someone is not actively in need of or seeking a sense of community, just as those who do feel an active need to gain status or respect, because their need for significance is not activated, they will not be susceptible to justifications for political violence.

In describing "extensional delegitimation," a process of radicalization whereby a small segment of a larger political opposition group gradually becomes willing to engage in violence, Sprinzak (1991) writes, "Their terrorism is an extension of a deeply rooted sense of bitterness and historical opposition, a terrorism launched in the name of national liberation of a simple quest for freedom" (p. 59). More succinctly, Sprinzak (1991) writes that "great amounts of disappointment and frustration are required in order to make a terrorist" (p. 61) and that "violence and, eventually, terrorism, only emerge when the group involved feels insecure or perceives an immediate threat" (p. 65). The disappointment and frustration to which Sprinzak (1991) refers are frustration of goals for dignity and freedom, in other words, deprivations of significance. Thus, disappointment, frustration, and insecurity activate the need for significance, resulting in aggression; without disappointment, frustration, and insecurity, the type of delegitimation of the ruling powers or other opposing groups that allows for violence will not take hold (Kruglanski et al., 2022; Kruglanski et al., 2023).

Marc Sageman is perhaps best known in the field of terrorism research for his emphasis on the role that networks play in the radicalization process, and indeed, he argues that "It's all really group dynamics. You cannot understand the 9/11-type of terrorism from individual characteristics" (Sageman, 2009, p. 364). Yet, his research also supports the idea that the need for significance is necessary for radicalization to occur. Of Muslims living in the West who joined mosques primarily to find community, adopted a *Salafi* interpretation of Islam, and eventually accepted a violent *jihadi* or *takfiri* interpretation of *Salafism*, Sageman (2005) writes that their "progressive detachment from the pursuit of material needs allows them to transcend their realistically frustrated aspirations, and promotes satisfaction with spiritual goals more consistent with their limited resources and opportunities" (p. 7). He continues, "Their sacrifice and participation in this Islamist vanguard provide them with a sense of moral superiority [i.e., significance], optimism and faith in the collective future" (p. 7). Ergo, even if militant jihadist terrorism were to never occur without group dynamics and the influence of the network, the terrorists whom Sageman (2004) studied would have never sought out and joined these networks had their need for significance been fulfilled through their participation in the mainstream society. Sageman (2005) reinforces this view as he discusses militant jihadists' animus toward Jews and toward the United States: "This hatred is grounded in their everyday experience of humiliating exclusion [i.e., significance deprivation] from society at large […] This 'bunch of guys' phenomenon escalates resentment into a hatred and rejection of the ambient society itself" (p. 8). Hence, the network and narrative take hold only in response to the existing activated need for significance.

Moghaddam's (2005) staircase model of terrorism posits that radicalization is a process that occurs as a series of steps, with fewer and fewer people progressing to each subsequent step. The first step, the "ground floor," as Moghaddam (2005) calls it, is "psychological interpretation of material conditions" (p. 162). This "psychological interpretation" can be distilled to an activated need for significance. As Moghaddam (2005) writes,

> To understand those who climb to the top of the staircase to terrorism, one must first comprehend the level of perceived injustice and the feelings of frustration and shame [i.e., lack of significance] among hundreds of millions of people down at the ground floor […] Every year, a number of those who feel unjustly treated [i.e., as though they are not significant] are motivated to march along alternative paths, even desperate and radical ones, to address their grievances (p. 162-163).

It is from this floor that Moghaddam (2005) argues that all radicalization begins, implying that while the need for significance is not sufficient to lead someone to commit an act of terrorism – several subsequent steps are needed – the need for significance is the basis upon which radicalization is built. Only once someone perceives a need for significance will they seek out a means to meet that need. Writes Moghaddam (2005), "As long as conditions are perceived to be unjust and hopeless [i.e., significance-depriving] by vast populations on the ground floor, some individuals will very likely be influenced to climb the staircase to terrorism" (p. 167).

Della Porta's (2006) model of radicalization and political violence is embedded within her broader theory of social movements, considering macro-, meso-, and micro-level factors which contribute to radicalization across different countries and ideologies. The need for significance may be understood at first glance to be a micro-level factor, manifesting within the individual's psychology. Yet, activators of the need for significance are observed at the macro- and meso-levels as well. Della Porta (2016) writes "that the closing-down of [political] opportunities is a precondition [for radicalization of social movements], especially the disillusionment after moments of apparent opening-up of opportunities for the opposition" (p. 10). The closing of opportunities to participate in a political system represents a loss of status and respect (i.e., significance), which is compounded if the loss is compared to a perceived gain in status and respect by an outgroup. Relative deprivation (see Walker and Pettigrew (1984) for an overview) is frequently cited as a factor of radicalization (King & Taylor, 2011), including by Moghaddam (2005) in explaining why people move from the ground to the first floor on his staircase to terrorism. Relative deprivation of significance, as described by Della Porta (2016), is a hallmark antecedent to radicalization, then. At the meso-level, Della Porta (2016) discusses the narratives surrounding violence that emerge in radical groups, highlighting "a sort of discourse that identified targets as absolute enemies and identified the group as a heroic [i.e., significant] elite, a heroic vanguard" (p. 15). Though this meso-level factor may certainly be identified as part of the narrative component of the 3N model, it also explains how group members define themselves as heroic, making the perception of

violence as significance-granting a cornerstone of the narrative and thereby exemplifying the dominance of the need for significance in the radicalization process.

As with Della Porta (2006), Pyszczynski and colleagues (2009) couched their theory of radicalization within a broader theory, theirs one of social psychological needs. Terror Management Theory (Greenberg et al., 1986) holds that humans fear mortality and vulnerability, and that

> self-esteem is an anxiety-buffering sense of personal value that consists of two components: first, faith in a particular cultural drama that portrays human life as meaningful, important, and enduring; and second, belief that one plays a *significant* part in that drama (p. 198) [emphasis added].

As a result, "reminding people of their mortality increases attraction to those who consensually validate their beliefs and decreases attraction to those who threaten their beliefs" (Greenberg et al., 1990). Extrapolated to the realm of terrorism specifically, Pyszczynski and colleagues (2009) describe terrorists as "view[ing] themselves as righteous warriors, bound by a sacred duty to fight for their people and ideals against forces they perceive as evil" (p. 154). The word "sacred" will be revisited in a later portion of this chapter (Atran, 2016), but it is the word "significant" used by Greenberg and colleagues (1986) that is of present focus. The fear that one will vanish into obscurity after death is, at its essence, a fear of insignificance. Thus, actions taken in pursuit of self-esteem through promotion of one's cultural worldview, including acts of terrorism, are actions taken in pursuit of significance. When mortality is made salient, Greenberg and colleagues (1990) demonstrate, actions which reinforce one's cultural worldview are prioritized, and actions which detract from one's cultural worldview are rejected. Hence, it is the need for significance which dominates the decision-making process, as a cultural worldview which did not buffer against death anxiety, which did not fulfill the need for significance, would not be adopted, in Greenberg and colleagues' (1990) view.

McCauley and Moskalenko (2011), like many radicalization theorists, list individual-, group-, and mass-level factors (akin to Della Porta's (2016) micro-, meso-, and macro-level factors) impacting radicalization to violent extremism, and each category contains aspects of the quest for significance. At the individual level, they describe both "anger and revenge for harm to self or loved ones (*Personal Grievance)*, [and] outrage for injustice to a larger group or cause the individual cares about (*Group Grievance*)" (McCauley & Moskalenko, 2017, p. 11). These factors clearly reflect the need for significance. At the group level, aspects related to competition, whether against the state power (*Condensation*), against other violent extremist groups (*Outbidding*), or within the group (*Fissioning*), all reflect a collective quest for significance, a need for the group and its members to feel that they are the best and most important advocates for their cause, and that their fight against their declared adversaries is a righteous, and indeed, significant, one. Finally, at the mass level, mobilization in response to self-sacrifice (*Martyrdom*) reflects an understanding of self-sacrifice as significance-granting – seeing others lauded for their self-sacrifice

confirms to potential and existing group members that their own self-sacrifice will also be celebrated and rewarded (Willer, 2009). In reference to the individual-, group-, and mass-level factors, McCauley and Moskalenko (2017) write, "Most of the mechanisms identified are associated with strong emotional experiences, including anger, shame, guilt, humiliation, fear, love, and hate" (p. 12). Emotions such as anger, shame, guilt, humiliation, and fear are all clearly closely linked to experiences of loss of significance or threatened loss of significance. But so too can hate arise toward a perceived culprit who is to blame for one's loss of significance (Kruglanski et al., 2014). And Kruglanski and colleagues (2024) recently theorized that love is a potent source of significance valued by Western cultures in particular (Contu et al., 2024).

In line with scholarly work over the past two decades pushing for radicalization to be understood as arising from a confluence of factors rather than an orderly series of steps (Horgan, 2008; McCauley & Moskalenko, 2008), Hafez and Mullins (2015) conceptualized radicalization as a puzzle in which four "puzzle pieces" come together to produce radicalization. And in line with the scholarly work cited in the preceding paragraphs, each of the puzzle pieces is closely linked to the need for significance. The first piece, grievances, reflects losses and threatened losses of significance. Hafez and Mullins (2015) focus exclusively on grievances "that combine to contribute to Muslim disenchantment with their European host societies" (p. 963), but the experiences that they list, economic uncertainty, unemployment, discrimination, humiliation, marginalization, alienation, and moral outrage, are all sources of significance deprivation that may be experienced by many groups of people around the world and are indeed frequently cited in explanations of the recent rise in far-right violent extremism (Speckhard, Ellenberg, & Garret, 2022). Hafez and Mullins (2015) label the second puzzle piece as "networks," but this piece too reflects the prominence of the need for significance in the radicalization puzzle:

> Individuals are likely to derive psychological and material benefits from radical associations. Activism in a radical milieu could appeal to idealists seeking to transform an unjust world, and it could appeal to lost souls and criminals seeking a new path to personal redemption. It could provide restless youth with excitement or sense of purpose, or it could provide those feeling marginalized and excluded personal empowerment and status (p. 964).

In other words, networks are an important piece of the puzzle, but only because they are a source of significance. Similarly, the third piece of the puzzle, "ideology," contributes to radicalization because of its significance-granting function. Hafez and Mullins (2015) explain that ideology serves to "turn mundane existence into a cosmic struggle between justice and inequity [i.e., a significance-granting fight]" and to "frame personal sacrifice in this world as a steppingstone to eternal salvation and redemption [i.e., significance]" (p. 967). The final piece of the puzzle is "enabling environments and support structures" – again, a factor which may seem to reflect the network component of the 3N model at first glance, but which is revealed to be built upon the need for significance upon closer inspection. These support structures, particularly social media, serve to "advance radicalization by providing ideological

and material support to susceptible individuals" (Hafez & Mullins, 2015, p. 968). They do so by spreading a significance-granting ideology, by amplifying significance-threatening grievances, and by providing tools to gain significance.

Speckhard (2016) also posits that four components coalesce to create radicalization to violent extremism, albeit described as "ingredients" rather than "puzzle pieces": The group, its ideology, social support, and individual vulnerabilities and needs. As with the previously discussed theories and models, the group, ideology, and social support all play a role insomuch as they serve to meet the individual's psychosocial needs – Speckhard has often remarked in public lectures that "nobody joins a terrorist group unless they think it will meet their needs." Those psychosocial needs are familiar to readers steeped in significance-quest theory (Kruglanski et al., 2022): trauma, revenge, frustrated aspirations, marginalization, discrimination, unemployment, underemployment, alienation, desire for justice, need for purpose, desire to do something heroic, need for positive identity, need to belong, a desire for adventure or romance, desire for escape, and desire to solidify one's masculinity or femininity are all manifestations of the need for significance (Speckhard, 2016).

Finally, Khalil and colleagues (2022) recently posited a model of radicalization which once again features the need for significance at its heart. Their Attitudes-Behaviors Corrective [ABC] model places individuals on two dimensions: attitudes and behaviors, which are dynamic, "recognizing that individuals change their attitudes and behaviors all the time" (Khalil et al., 2022, p. 430). Importantly, attitudes in the ABC model refer to the ideology itself (i.e., the narrative in the 3N model), and not to the need for significance to which the ideology responds. Of some terrorist actors, Khalil and colleagues (2022) write, "those who contribute to its [violence] production are not necessarily sympathetic toward its ideology and ostensible objectives, but instead are often motivated primarily by economic incentives, adventure, belonging, status, fear, and so on" (p. 430). This explanation suggests that people can be motivated to engage in terrorism because of a) their support for the ideology, or b) other psychosocial needs. The explanation does not acknowledge the possibility that is the central argument of this first hypothesis – that people are attitudinally supportive of a violent extremist ideology because it meets their need for significance as manifested by needs for "adventure, belonging, status, fear [avoidance], and so on" (Khalil et al., 2022, p. 430). As corollaries to their model, however, Khalil and colleagues (2022) outline drivers of violent extremist attitudes and behaviors, each of which is linked to the need for significance, whether activating the need or meeting it. "Structural motivators" include "state repression, political exclusion, corruption, poverty, inequality and discrimination," all of which can activate the need for significance through its deprivation (Khalil et al., 2022, p. 433). "Individual incentives" include "material incentives, protection, status, a sense of adventure, belonging, vengeance, expected rewards in the afterlife, and a sense of purpose gained through acting in accordance with perceived ideological tenets," all of which can meet the need for significance; therefore, the promise of these incentives can similarly activate the need for significance via incentivization (Khalil et al., 2022, p. 433). Finally, the third category addresses the network aspect of the 3N model:

"enabling factors," includes "'radical' mentors, recruiters, wider social networks and online communities, other forms of traditional and modern media, access to weaponry and other technology, territorial control maintained by violent extremist groups, and so on" (Khalil et al., 2022, p. 433).

Most Social Motives Reflect the Need for Significance

Beyond the spate of theories of radicalization implicitly or explicitly suggesting that the quest for significance or manifestations thereof is the foundational motivation underlying radicalization to violent extremism, theories of motivation put forth by social psychologists for decades similarly support the idea that the need for significance is a supremely powerful social motive. One such theory is self-determination theory (Deci & Ryan, 1985). Self-determination theory posits three "innate psychological needs – competence, autonomy, and relatedness – which when satisfied yield enhanced self-motivation and mental health and when thwarted lead to diminished motivation and well-being" (Ryan & Deci, 2000, p. 68). In considering each of these needs in turn, a common thread is evident – the need for significance. First, the need for competence, which is defined as "a propensity to have an effect on the environment as well as to attain valued outcomes within it" (Deci & Ryan, 2000, p. 231). To perceive that one can affect one's environment and affect one's outcomes within it is to feel competent, but it is also to feel significant. After all, to not be able to affect one's environment is to not matter and to not be able to attain valued outcomes is to be worthless. Indeed, competence in fields that are not valued does not confer the same positive feeling of self-esteem that competence in valued fields does, suggesting that competence is only valued to the extent that it serves the superordinate need for significance (Gniewosz, Eccles, & Noack, 2015; Rosman & Burke, 1980). Second, the need for autonomy, defined as "the organismic desire to self-organize experience and behavior and to have activity be concordant with one's sense of self" (Deci & Ryan, 2000, p. 231), is also related to a feeling of control over one's environment, a feeling of agency. To have autonomy is to feel that what one does matters, the opposite of a Sisyphean, insignificant, non-existence. The third innate need posited by Deci and Ryan (1985) is the need for relatedness: "The desire to feel connected to others – to love and care, and to be loved and cared for" (Deci & Ryan, 2000, p. 231). The need for relatedness is thus closely tied to needs for belonging, for admiration, for respect – all hallmark examples of the need for significance (Kruglanski et al., 2022).

Whereas self-determination theory (Deci & Ryan, 1985), posits three innate needs, regulatory focus theory (Higgins, 2002) posits two decision-making modes as its model of motivation. The first mode, prevention, "is concerned with the absence and presence of negative outcomes, with protection, safety, and responsibilities," while the second, promotion, "is concerned with the presence and absence of positive outcomes, with advancement, aspirations, and accomplishments" (Higgins, 2002, p. 178). The way that Higgins (2002) describes these two regulatory foci is markedly similar to Kruglanski and colleagues' (2013) two means of activating the need for

significance. Prevention refers to avoiding rejection, insecurity, and humiliation – avoiding significance deprivation. Promotion refers to approaching glory, achievement, respect – approaching opportunities for significance gain.

Fiske (2003) lists five social motives, referred to as the BUCET framework. First, belonging, is the "core motivation to be part of a group and get along with the group" (Fiske, 2003, p. 236). As has been discussed already and will be discussed in more depth in a forthcoming paragraph, the need for belonging is a key manifestation of the need for significance. To be a part of a group is to feel accepted and valued; no one wants to be part of a group of people who hate them. Significance, then, is at the heart of belonging. The second BUCET motive is understanding, the need to "see reality the way others in the group see it" (Fiske, 2003, p. 237). Like belonging, understanding would not be a core motive were it not combined with significance. Seeing reality in the same way as others do is gratifying because it is validating, it makes one feel that their worldview is correct, a feeling whose importance is reinforced by the experiments supporting Terror Management Theory (Greenberg et al., 1990), discussed previously. Fiske's (2003) third core social motive is controlling, feeling "competent and effective in their dealings with the animate and inanimate environment" (p. 238). As discussed above, feelings of competence and autonomy, and thereby a feeling that one is capable of affecting their environment and attaining desired outcomes within their environment, are important manifestations of significance (Deci & Ryan, 1985; Kruglanski et al., 2022). The fourth core social motive posited by Fiske (2003) is enhancing self, the need for self-esteem and positive self-worth. The need for significance is closely linked to self-esteem, but includes the added social component, self-esteem that is erected by feeling that others have deemed one worthy of respect (Kruglanski et al., 2022). Therefore, Fiske's (2003) statement that "people with positive self-worth survive well in groups" could perhaps be understood to mean that people whose need for significance is sated are successful group members, or that being a successful group member confers a sense of significance (p. 240). Finally, Fiske's (2003) fifth core motive is trusting, as "viewing the world as benevolent enables people to participate in group life without undue suspicion or vigilance" (p. 241). Trusting may not relate to significance as obviously as the needs for belonging, understanding, controlling, or enhancing self, as it relates more to how one views other people than to how other people view oneself. Yet, examining this need more closely, as with so many other social needs, reveals significance at its core. Fiske (2003) writes that "people are primed to trust that close others will respond positively to them. Basic trust of ingroup others benefits people's adaptive participation in the group" (p. 241). Trust, therefore, refers to confidence that others will treat one positively – a clear indication that one is significant.

The need to belong has been discussed in several paragraphs above; there is no doubt among social psychology theorists that people crave community and acceptance and react poorly when excluded. Baumeister and colleagues (2007) explain this need in depth:

> Like other social animals, humans have a powerful need to belong and find their prospects for survival and reproduction diminished if they are alone in the world. Social rejection therefore strikes a powerful blow at the psyche, undermining the functional purpose of many of its activities, and this may be why many normal response patterns become disrupted. Even in the modern world, people who lack social ties show higher rates of mental and physical illness, among other problems (p. 506).

Baumeister and colleagues (2007) list several methods for activating the need to belong by inducing feelings of social exclusion. Indeed, each experience of personal (and not random) rejection and ostracism reflects a deprivation of significance, for not belonging at random does not produce the same negative effects as not belonging because others have purposefully rejected and excluded the individual (Baumeister et al., 2007). As noted previously, the need to belong is important because it reflects the need for significance, and the need to belong would not be so potent without the need for significance (Kruglanski et al., 2022).

Whereas Fiske (2003) proposes five core social motives, Neel and colleagues (2016) propose seven "fundamental social motives." These motives are more explicitly tied to biological and evolutionary needs than other motives posited by social psychologists, but they nevertheless prove closely linked to the need for significance, for none of Neel and colleagues' (2016) fundamental social motives can be met without the need for significance being met as well, whether as a necessary precursor, an inevitable outcome, or both. The first fundamental social motive, according to Neel and colleagues (2016), is self-protection. Feeling protected, safe, and secure may not be sufficient to produce a feeling of significance, but feelings of vulnerability and danger produce feelings of lack of significance – to feel unsafe and insecure is to feel that one is helpless, defenseless, and that one doesn't matter. The second fundamental social motive is disease avoidance. Similar to self-protection, feeling sick or diseased can create a feeling of weakness, as well as of lack of competence and autonomy (Deci & Ryan, 1985). Similarly, disease is a potent reminder of mortality, and reminders of mortality create a fear of non-existence, of insignificance (Greenberg et al., 1990). The third fundamental social motive proposed by Neel and colleagues (2016) is affiliation, first affiliation (group), which is akin to a promotion focus (Higgins 2002) toward the needs for belonging, relatedness, and understanding, all of which imply the desire to be accepted and appreciated by others. The fourth fundamental social motive is status – a component of the need for significance, as people with higher status are considered more respected, more valuable, and more worthy members of a group (Kruglanski et al., 2022; Neel et al., 2016).

The fifth fundamental social motive proposed by Neel and colleagues (2016) is mate seeking. As Kruglanski and colleagues (2024) suggest, having a mate and being in love are important means to significance gain. With regard to the sixth social motive, the two types of mate retention detailed by Neel and colleagues (2016), general mate retention and breakup concern, have both been found to be linked to the need for significance. Contu and colleagues (2024) found that perceiving potential and

existing romantic partners as significance-granting, either through their socially valued qualities or their admiration and care, increased people's likelihood of entering and remaining in romantic relationships with those partners. Moreover, people experiencing feelings of significance loss were more attuned to the significance-granting qualities of their potential and existing romantic partners (Contu et al., 2024). Finally, Neel and colleagues (2016) detail two facets of the final fundamental social motive: kin care (family) and kin care (child). People who are motivated to care for their family members also feel a sense of belonging and prestige (Neel et al., 2016), suggesting that having and maintaining family connections is a way of meeting the need for significance. Motivation to care for children was not correlated with those variables, but caring for children is a basic evolutionarily beneficial behavior which ensures the survival of one's genes – a direct counter to the fear insignificance and nonexistence inspired by thoughts of one's mortality (Greenberg et al., 1990; Neel et al., 2016).

Empirical Evidence for the Dominance of the Need for Significance

Empirical evidence supports the hypothesis that one's susceptibility to a significance-granting socio-ideology increases as the need for significance becomes stronger. In a sample of 201 U.S. citizens, the effect of exposure to pro-boycotting norms (i.e., a socio-ideology consisting of a group that supports boycotting the election) on viewing boycotting as significance-granting was moderated by ambition ($F(3, 197) = 29.67$, $p < 0.001$, $R^2 = 0.31$), such that people who were exposed to pro-boycotting norms were more likely to view boycotting the election as significance-granting if they had high ambition (a manifestation of the need for significance; Resta et al., 2023) ($b = 0.51$, $p < 0.001$) than if they had low ambition ($b = 0.27$, $p < 0.01$). In turn, perceiving boycotting as significance-granting significantly predicted self-reported likelihood of boycotting the 2024 election ($b = 0.43$, $p < 0.001$) (See Appendix B, Study 5).

Similarly, in a survey of self-described "incels" (involuntary celibates), significance loss experiences were significantly predictive of agreement with the statement "I would rape if I could get away with it" – a particularly violent representation of the incel socio-ideology – but only if they had read incel-linked attacker Elliot Rodger's manifesto and had therefore been exposed to such a socio-ideology ($F(3, 293) = 7.15$, $p < 0.001$, $R^2 = 0.07$) (Speckhard et al., 2021; Ellenberg, Speckhard, & Kruglanski, 2023; Kruglanski et al., 2023). Number of significance loss experiences was also significantly correlated with amount of time participants reported spending on the incel online forum per day ($r = 0.24$, $p < 0.001$) and their self-reported posting frequency ($r = 0.12$, $p < 0.05$), both indicators of participants' attraction to the incel socio-ideology.

Research on susceptibility to conspiracy theories, which may be described as socio-ideologies given their narrative and network benefits to believers (Douglas et al., 2017), lends support to this hypothesis as well. For example, ostracism (a trademark activator of the need for significance) was found to increase endorsement of

conspiracy beliefs via increased vulnerability, and affirming values after ostracism was found to reduce endorsement of such beliefs (Poon, Chen, & Wong, 2020). There is also extensive evidence that activated needs for belonging and for uniqueness, both closely linked to the need for significance, are both strong predictors of conspiracy beliefs (Hornsey et al., 2023). Higher feelings of depression were also found to be associated with conspiracy beliefs in a multinational sample of 8,806 adults during the COVID-19 pandemic (De Coninck et al., 2021). Notably, a feeling of significance deprivation has been highlighted as a motivational aspect of depression (Kruglanski et al., 2022).

Research on the rehabilitation and deradicalization of the Tamil Tigers, a Sri Lankan violent extremist group, also finds that meeting the need for significance decreases susceptibility to violent extremist narratives. Specifically, members of the defeated terrorist group who were given alternative routes to significance through educational, vocational, and cultural programming as part of their rehabilitation program expressed significantly lower levels of extremism than both their counterparts who participated in a minimal rehabilitation program and general Tamil community members. Participating in such programming as well as other psychosocial treatment provided a buffer against feelings of insignificance for the recipients of the program, thus reducing their susceptibility to the violent extremist socio-ideology to which they once subscribed (Webber et al., 2018a).

The first hypothesis derived from the socio-ideological means model of radicalization is that of significance dominance, that an increased need for significance increases susceptibility to significance-granting socio-ideologies. This hypothesis is based on a theoretical foundation and associated empirical findings from decades of research on the social and psychological processes underlying radicalization, namely that people join violent extremist groups and commit violent extremist acts primarily to meet an unfulfilled need for significance, whether that need manifests as a need for belonging in the face of rejection, respect in the face of humiliation, status in the face of marginalization, or desire for admiration on a large scale. These findings are not unique to the field of terrorism studies, however, and this chapter also outlined a variety of theories of motivation and psychological needs posited over the course of many years, most of which can be linked to the need for significance as a cause or superordinate goal. It is important to note that the need for significance is universal (Kruglanski et al., 2022), so while the need for significance is necessary for radicalization to occur, it is not sufficient, as most people with an activated need for significance do not radicalize to violent extremism, of course. Instead, the present theory hypothesizes that a combination of ideological and social factors, a narrative-network amalgam, a socio-ideology, constitutes the means to gaining significance. In the forthcoming chapter, I illustrate that while narrative and network may be conceptually distinct, they are operationally inextricable.

Chapter 3: Narrative and Network are Inextricable

The second hypothesis derived from the socio-ideological means model posits that people decide how to meet their activated need for significance based on a socio-ideology comprised of narrative and network components. The hypothesis suggests that the perception that network members share one's narrative both increase one's commitment to that narrative and increase one's commitment to the network. The first hypothesis suggested that the 3N components were not a three-legged stool, as the need for significance was more important than the narrative and the network. The second hypothesis also diverges from the original 3N formulation, because it posits that the second and third legs of the stool are not only interwoven with one another; they are operationally inextricable from one another. Research on radicalization and in social psychology since the early 20th century have distinguished, of course, between networks and narratives, but the theories also suggest, sometimes implicitly, that the networks that matter are those which share the same narrative, and the narratives that matter are those that are shared by a network.

Narrative and Network are Inextricable in the Radicalization Process

It is no novel finding that narrative and network each serve the other in the radicalization process; the original 3N model holds that the two are intricately intertwined (Kruglanski et al., 2019). Even more explicitly, Holbrook and Horgan (2019) argued that an ideology that creates a sense of social identity (i.e., a network-granting narrative) is more important in the radicalization process than an ideology that prescribes beliefs (i.e., a narrative-granting narrative):

> Notions of ideology in the emergence of terrorism can be clarified and conflicting depictions of its role and agency in these processes can be reconciled if we arrive at a non-binary conceptualization of ideology that emphasizes interpretations of social identity over depictions of the doctrinal (p. 3).

If the purpose of ideology in terrorism is not the provision of doctrines governing belief and behavior, as Holbrook and Horgan (2019) posit, then the purpose is to create a shared narrative that unites a group and creates a social identity. In this understanding of ideology, then, narrative is nothing without network and network exists because of narrative. As Holbrook and Horgan (2019) write, "ideology is integral to, not separate from, the relational mechanisms involved in radicalization pathways and its processes of social learning, collective memory and other social constructs" (p. 7).

The following examples aim to illustrate not that narrative and network do not merely interact, but rather that the two constructs are, in practice, inseparable. First, Gurr (1970) describes the functions of ideology, primarily emphasizing its role in promoting political violence, but secondarily highlighting its role in creating and

maintaining group cohesion. Gurr (1970) explains why ideologies are based in groups, referencing Dion (1959), who wrote that political ideology "is a more or less integrated system of values and norms, rooted in society, which individuals and groups project on the political plane in order to promote the aspirations and ideals they have come to value in social life" (p. 49). Moreover, Gurr (1970) explains that ideologies promoting political violence require normative acceptance of violence – arguably, it is because a narrative cannot exist without a network that his book is entitled *Why Men Rebel*, and not "Why Man Rebels."

Sageman (2004) is famous for his emphasis on networks in explaining radicalization and terrorism. Yet, the reason why groups form is also critical. Whereas Sageman (2004) may argue that groups drive terrorism, it is clear in his research that ideologies unite and drive groups. Consider Sageman's (2009) description of Muslims living in the West who would eventually go on to commit the 9/11 attacks:

> When they became homesick, they did what anyone would and tried to congregate with people like themselves, whom they would find at mosques. So they drifted toward the mosque, not because they were religious, but because they were seeking friends (p. 363).

In this sentence, Sageman (2009) argues that these men were not bonded by ideology (i.e., "not because they were religious, but because they were seeking friends"), but friends can be sought anywhere – at a basketball court, at a job, at a community garden. These men sought friends at a mosque, rather than at any other gathering place, because they wanted to find friends who shared their cultural worldview (Greenberg et al., 1990). The men moved in together, Sageman (2009) explains, because observing halal dietary restrictions is easier done in a group, but observing these laws is not only easier in a group because cooking is simpler. Observing religiously based dietary restrictions is easier in part because one knows that those around them share their beliefs; no one will offer the other bacon or question why their meat must be purchased from a specific seller when it is so much less expensive elsewhere. Sageman (2009) continues, "A micro-culture develops that strengthens and absorbs the participants as a unit" (p. 363). The group is tied together by their shared narrative, one that would eventually come to adopt "a militant script advocating violence to overthrow the corrupt regimes" (Sageman, 2009, pp. 363-364), but one that was, from the beginning, bonded through a shared heritage, culture, and worldview that had nothing to do with violence but was indeed a narrative, nonetheless.

Della Porta's (2006) study of social movements is similarly focused on the role of the group in the production of political violence. Della Porta (2018) explains her relational perspective: "radicalization stems from complex and contingent sets of interactions among individuals, groups, and institutional actors" (p. 463). Thus, her view considers not only the intragroup factors emphasized by Sageman (2004), but also the intergroup factors, between different social groups and between groups and government forces, similar to Gurr's (1970) and Sprinzak's (1991) perspectives,

described in prior sections and chapters. Della Porta (2018) continues, "Encounters between movements and the state, in particular through the policing of protest, are especially influential in radicalization processes" (p. 464). In the preceding chapter, I described how Della Porta (2006) emphasizes the role that police encounters play in creating a sense of significance deprivation. But oppressive police encounters also create a shared narrative which bonds groups together: "In particular, the killing of activists by police was recalled as fueling intense emotions of identification with a community of fighters and the designation of the state as an enemy" (Della Porta, 2018, p. 465). This statement demonstrates that radicalization requires an activation of the need for significance, but it also highlights that the groups are bound by "subcultures sympathetic to violence" and "a broader narrative of oppression" (Della Porta, 2018, p. 465). Della Porta (2018), like Sageman (2004), implies, then, that the type of network that is tightly knit enough to commit political violence together requires a shared cultural narrative. The combination of the network and narrative as a single component of the radicalization process is implied in theories like Della Porta's (2018) which emphasize the role of the "radical milieu," wherein "radical beliefs shape individual radicalization paths when they not only resonate with personal experiences [i.e., the quest for significance] but also combine with friendship or kinship networks" (p. 468). Della Porta (2018) thus combines the effects of radical beliefs being socialized by family members and peers and the effects of groups being driven together through a narrative of oppression by the state. Notably, Della Porta's theory of social movements may be applied to those networks which are involuntary, such as marginalized racial or ethnic minorities which mobilize to change their status in society and thereby gain significance, and to networks which are voluntary, driven together by shared political ideology, for example, and motivated to gain significance by fighting for what they see as a righteous cause or moral value.

Similar to Sageman (2004) and Della Porta (2006), McCauley and Moskalenko (2008) describe radicalization as occurring "in a context of group identification and reaction to perceived threat to the ingroup" (p. 415). "Ingroup" can be described broadly as a social group of which one is a member, with one's degree of ingroup identification varying by the degree to which people see their own identity as defined by their group membership or the degree to which group membership holds personal significance to an individual (Tropp & Wright, 2001). In McCauley and Moskalenko's (2008) model, "ingroup" seems to require a certain degree of such identification and personal significance; it cannot be just any group of which one is a member. They write, "radicalization means change in beliefs, feelings, and behaviors in directions that increasingly justify intergroup violence and demand sacrifice in defense of the ingroup" (McCauley & Moskalenko, 2008, p. 416). Any ingroup worth sacrifice must be personally meaningful and significant. In large groups, explain McCauley and Moskalenko (2008), ingroup cohesion is often described as patriotism or nationalism, both of which imply a love for the group and a belief in the group's superiority or value, more than merely an acknowledgement of one's membership in that group. And in small groups, ingroup cohesion includes "increased respect for ingroup leaders, increased sanctions for ingroup deviates, and idealization of ingroup norms" (McCauley & Moskalenko, 2008). If ingroup norms can be understood as a

narrative held by the network which defines what is and is not appropriate behavior (Cialdini et al., 1991), then the type of ingroup for whose defense one would radicalize and sacrifice oneself is one which adheres to the same narrative.

As noted previously, Terror Management Theory (Greenberg et al., 1990) is a social psychological theory closely related to significance-quest theory (Kruglanski et al., 2022) in its emphasis on death anxiety, or, put more generally, the fear of non-existence (and thereby, insignificance). Terror Management Theory also provides for an important role of networks and the narratives shared by those networks, positing that when faced with reminders of their own mortality, people cling to their cultural worldviews and the communities that validate those worldviews (Greenberg et al., 1990). Pyszczynski and colleagues (2009) write, "because cultural worldviews are socially constructed and there is no way of being absolutely certain that one's worldview is correct, people rely on social validation in order to manage their potential for anxiety" (p. 157). This is perhaps the most explicit combination of narrative and network provided by a theory of radicalization, that narratives not only will not take hold without network validation, but that narratives do not persist in the absence of the network.

Whereas Terror Management Theory (Greenberg et al., 1990) most explicitly combines narrative and network as one component of radicalization, Atran's (2016) devoted actor model explicitly presents two separate constructs which, when acting in concert, produce a devoted actor willing to commit violence and self-sacrifice on the part of the group. Yet, it is possible that neither construct could be impactful without the other. Atran and Ginges (2015) define the devoted actor model thusly:

> People will become willing to protect *morally important or sacred values* through costly sacrifice and extreme actions, even being willing to kill and die, particularly when such values are embedded in or *fused with group identity*, becoming intrinsic to "Who I am" and "Who we are" (p. 69, emphasis added).

The two constructs which play a role in the devoted actor model are sacred values (Ginges et al., 2007) and identity fusion (Swann et al., 2012). Sacred values, the narrative component of the devoted actor model, are "nonnegotiable preferences whose defense compels actions beyond evident reason, that is, regardless of calculable costs and consequences" (Atran, 2016, p. 193). Although this definition includes no mention of a group, sacred values exist because of and in the context of groups. Sacred values, whether religious or secular, are "culturally bound […] things that communities set apart from the economic or profane aspects of everyday life" (Ginges & Atran, 2013, p. 274). Individuals do not define which values are sacred; groups do. Interestingly, Atran (2016) writes that commitment to sacred values leads to "resistance to social influence," although arguably what is meant is that social influence by a group which shares sacred values will always be stronger than social influence by others who do not share those sacred values (p. 195). The network component of the devoted actor model, identity fusion, refers to "when personal and

group identities collapse into a unique identity to generate a collective sense of invincibility and special destiny" (Atran, 2016, p. 193). In this definition, Atran (2016) is clear that identity fusion with a group creates a narrative, one of power and shared fate. It is also apparent, however, that identity fusion would not occur if the group with which one would fuse did not already share a narrative; specifically, a narrative consisting of sacred values. In discussing how identity fusion and detection of "psychological kinship" occur, Whitehouse and Lanman (2014) write that "essential components of one's autobiographical self […] can be perceived as shared with others in a group," and that those essential components, "from the formative experiences of childhood to sharing the traumas of front-line warfare," also frequently include "highly dysphoric experiences, one of the fractioned elements of the category 'ritual,' [that] are especially powerful" (p. 677). In other words, people may identify as a member of a group for any number of reasons, but they will fuse with a group and devote themselves to it only if they share a powerful narrative with the other members of that group. Thus, though Atran (2016) writes that "important values may influence extreme behavior particularly to the extent that they become embedded or fused with identity and internalized," it seems that values only become important because they are shared by a group, and people only become fused with a group if they share important values with the other group members (p. 197).

In her "lethal cocktail" model of terrorism, Speckhard (2016) lists group, ideology, and social support as three different "ingredients." Yet, instead of referring to "the group" and "the ideology," she instead lists the first two ingredients as "the group" and "*its* ideology" (emphasis added). The ideology underlying terrorism, Speckhard (2016) argues, is provided by the group to provide a moral and political justification for violence. She also argues, however, that the group would not exist without the ideology, for the group is defined as "a group with political motivations willing to use terrorism to try to achieve its aims" (Speckhard, 2013, p. 65). And similarly, the ideology is defined as "an ideology that is used to justify intentionally targeting and killing civilians to create terror and thereby advance the group's political goals" (Speckhard, 2013, p. 65). Thus, the presence of an ideology is included in the definition of the group and vice versa. The third "ingredient" in Speckhard's (2016) lethal cocktail model is social support, not from the group members themselves, but "from the constituency that the group purports to represent" (Speckhard, 2013, p. 65). Of course, in including this third ingredient Speckhard (2016) is not arguing that all or most Muslims support militant jihadist terrorism, that all or most white people support white supremacist terrorism, or that all or most trees support ecoterrorism. Rather, she is positing that in order to join a terrorist group, an individual must perceive that members of their existing ingroup will support their actions. This is the broader "radical milieu" described by Della Porta (2018), the outermost circles in a set of concentric circles of radicalization wherein the smallest circle includes card-carrying group members, a somewhat larger second circle includes financiers and facilitators, an even larger third circle includes supporters of but not participants in violent action on behalf of the group's ideology, and the largest circle includes people who do not approve of the violence but think the group "has a point" (Cherney & Murphy, 2019). Social support, therefore, is another aspect of the network that

necessarily adheres to the ideology to some extent, and the ideology is even more powerful if it is supported not only by a small group but by the larger community as well (Cialdini et al., 1990).

The ABC model posited by Khalil and colleagues (2022) also implies an inseparability between narratives and networks in their description of the "enabling factors" which drive radicalization of both attitudes and behaviors. Three enabling factors listed by the authors are radical mentors, radical online communities, and wider offline networks. All of these are network components – social relationships that influence the radicalization process, but each is also necessarily connected to the narrative. Radical mentors "channel sympathy for violent extremism by presenting others with an ideological lens through which to interpret existing grievance" (Khalil et al., 2022, p. 437). Radical communities, on- and offline, do the same. None of these networks would be influential if they were not promoting the ideology, according to the ABC model, and the ideologies would not take hold if not promoted by the network.

Narratives and Networks Function Together and Influence Each Other Bidirectionally

Beyond the realm of radicalization, for over a century, social psychologists and other scholars have implied, albeit not stated directly, that groups and beliefs, networks and narratives, cannot be functionally separated from one another. Cooley (1902) wrote about "the looking glass self," arguing that "to think of [oneself] as apart from society is a palpable absurdity" (p. 2). He continues,

> There is no sense of "I," as in pride or shame, without its correlative sense of you, or he, or they. Even the miser gloating over his hidden goals can feel the "mine" only as he is aware of the world of men over whom he has secret power; and the case is very similar with all kinds of hid treasure. Many painters, sculptors, and writers have loved to withhold their work from the world, fondling it in seclusion until they were quite done with it; but the delight of in this, as in all secrets, depends upon the sense of value of what is concealed (Cooley, 1902, p. 2)

The goals and values described above, and the actions about which one might feel pride or shame do not exist in a vacuum of "I," argues Cooley; they all require a network to validate them. The way people see themselves, much as they might be loath to admit it, is dependent on what others think of them.

This sentiment is echoed by Mead (1934), the social psychologist and philosopher who wrote that "minds and selves are essentially social products" (p. 1). He explains, "The individual experiences himself as such, not directly, but only indirectly, from the particular standpoints of other individual members of the same social group, or from the generalized standpoint of the social group as a whole to which he belongs" (Mead, 1934, p. 138). In this case, a narrative may be understood not only as one's

values and beliefs, but also as the framework by which someone evaluates their worth. If one is serving the narrative, then one has worth; if one is acting in ways contrary to the narrative's prescriptions, then one has failed. This is consistent with the original conceptualization of the 3N model, which holds that the narrative explains what someone should do in order to meet their activated need for significance (Kruglanski et al., 2019). But the 3N model also holds that the narrative is supported and validated by the network, which rewards with significance those who serve it (Kruglanski et al., 2019). Mead's (1934) conceptualization suggests that the narrative does not exist at all without the network – the narrative is a framework for behavior that is supported and validated by a network. A narrative not supported and validated by a network will not be used to evaluate oneself; as Mead (1934) writes, "it is impossible to conceive of a self arising outside of social experience" (p. 140). Moreover, Mead (1934) focuses heavily on the role that communication, via language, gestures, imagery, and symbols, plays in forming societies and the selves that exist within them. This is a clear indication that Mead (1934) views the narrative as a function of the network, rather than as an independent factor in the formation of the self.

Cooley (1902) and Mead (1934) both posited that people define and evaluate themselves through the lens of other people, through their networks and the narratives to which they adhere. Merton and Kitt (1950) delved more deeply into the nature of these networks which people use to understand themselves. Reference groups are those groups which people use "as a frame of reference for self-evaluation and attitude formation" (Merton, 1957; p. 233). Interestingly, Merton and Kitt's (1950) theory of reference groups was used to widen the theory of relative deprivation (Stouffer et al., 1949; Merton, 1957), which can be understood as a type of significance loss (Kruglanski et al., 2022) and is frequently cited in models of radicalization (King & Taylor, 2011). Relevant to the present discussion, Merton and Kitt (1950) address the conflict that can arise when people have several reference groups, each with different norms. Consistent with the present hypothesis, Merton and Kitt (1950) do not argue that people see their norms (i.e., narratives) and reference groups (i.e., networks) as in opposition, but rather have two networks, each with its own accompanying narrative, that are in opposition. The choice, therefore, is not between narrative and network but rather between one narrative-network combination and another narrative-network combination. Also relevant to this argument, Shibutani (1961) posited that people may use their own social groups as references, but they may also evaluate themselves based on the perspectives "of groups in which they have never participated directly, and sometimes of groups that do not exist at all" (p. 256). Thus, the apparent presence of a narrative in the absence of a network among lone actor terrorists is disputed – groups that do not exist in the real world may still act as reference groups, and people sometimes evaluate themselves based on the perceptions of imaginary others, but they are "others" nonetheless. Moreover, Newcomb (1943) suggested that not all groups in which one is a member will serve as reference groups, and Williams (1970) derived from this finding that a reference group may not necessarily be the same group in which one is a member. A reference group may therefore be considered a network with which

someone shares a narrative, for one would not compare themselves to the members of a network with which they did not share norms.

Kelley (1952) expanded upon the idea of reference groups. According to Kelley (1952), reference groups serve two purposes: the first is a normative purpose – "groups, collectivities, or persons that provide the actor with a guide to action by explicitly setting norms and espousing values" (Kemper, 1968, p. 32) – and the second is a comparison purpose – "groups, collectivities, or persons that provide the actor with a frame of reference which serves to facilitate judgments about any of several problematic issues" (Kemper, 1968, pp. 32-33), including questions of one's fate, the legitimacy of their attitudes, and the quality of their actions. Both of these purposes, though used by Kelley (1952) to define groups, are nearly identical to the definition of narratives and ideologies provided by radicalization theorists and scholars. Indeed, Kemper (1968) states that each type of reference group "can be defined […] in terms of its value as a guide to opinion or action in the individual" (p. 34).

Kelley (1955) also examined the idea of cross-pressure, that one person could belong to several different groups with competing or opposing narratives, finding that people were more committed to a narrative if its corresponding network was more salient, and they were less resistant to changing attitudes associated with less salient groups. These results suggest that importance of the network is a necessary precondition for commitment to the narrative. However, in order to manipulate the salience of the network (in this case, Roman Catholics), Kelley (1955) assigned students to read positive articles about the Catholic Church or about another topic (either Dwight Eisenhower or UNESCO, depending on the class the students were taking). Kelley (1955) emphasized that "the 'high salience' articles were carefully selected so as to contain no references to the issues raised in the opinion questionnaire […] They were intended to make a Catholic feel proud of his church" (p. 280). This effort to disentangle narrative and network was critical to testing if students would be more committed to narratives when their associated networks were more salient. However, the results show that narratives are embedded in the networks – students did not need to be reminded of the Catholic Church's specific stances on different issues in order to be committed to those stances, for once the network was made salient, its entire narrative was made salient as well.

Research on social identity theory is also highly relevant to this issue. Social identity is defined as "those aspects of an individual's self-image that derive from the social category to which [they] perceive [themselves] as belonging" (Tajfel & Turner, 1979, p. 59). Notably, social identity theory holds that people derive a sense of self-esteem (closely linked to significance, as described previously) primarily from the identity (namely, the status or prestige) of the groups to which they belong, rather than from "how to" narratives that guide actions aimed at significance attainment. In this way, the original 3N model affirms and expands upon social identity theory to explain that people use narratives, which are propagated and validated by their social groups (i.e., their networks), to understand what they need to do in order to gain significance. The

socio-ideological means model clarifies the 3N model to show that narrative and network are inextricably intertwined and cannot meet the need for significance without one another. This operational inextricability hypothesis is closely linked to hypotheses about social norms derived from social identity theory. For instance, according to Hornsey (2008),

> From a [social identity] perspective, the norms of relevant ingroups are a crucial source of information about appropriate ways to think, feel, and act. Through the process of depersonalization, highly identified ingroup members internalize the norms of the group and assume that others have as well (p. 210).

In this way, Hornsey (2008) explains that social identity theory posits that people, to varying degrees, derive their narratives from their networks and increase their commitment to beliefs (or norms) if they perceive that those beliefs are shared by their group.

Other research has similarly explored the relationship between networks and narratives, with results continuously showing the functional inextricability of the two. For instance, the belief congruence hypothesis (Rokeach et al., 1960) "posits that prejudice and discrimination is largely due to perceived belief dissimilarity rather than to difference in group membership" (Allen & Wilder, 1979, p. 73), suggesting that people see their networks and narratives as closely connected and that they see other people's networks and narratives as closely connected, resulting in dislike of different networks because they perceive them as having different narratives. This hypothesis is consistent with findings on Terror Management Theory (Greenberg et al., 1990), as people cling to their groups and denigrate other groups when reminded of their mortality because they perceive their groups as validating and other groups as challenging their cultural worldviews.

Allen and Wilder (1979) aimed to test whether the belief congruence hypothesis would hold in arbitrarily assigned groups, yet they nonetheless created groups based on belief similarity, namely, which artist, Klee or Kandinsky, the subjects preferred. Thus, although the groups were temporary, they were not assigned at random, and participants knew that they shared at least one belief with their fellow group members, potentially leading them to perceive that they had similar beliefs about other topics, as well. Indeed, Allen and Wilder (1979) reported that "subjects assume greater variance in beliefs between ingroups and outgroups exists on issues which are relevant to the basis of group formation than on more general issues" (p. 79), emphasizing that subjects perceived that the networks existed because the members shared a narrative, and were thus more likely to believe that members of other groups did not share that narrative.

This assumption that other network members share one's narratives, and that networks are influential because the members share narratives is supported by Bar-Tal (2000), who posited that "sharing beliefs is an integral part of group membership"

(p. xi). However, Bar-Tal (2000) distinguishes between personal beliefs, "formed by individuals and […] uniquely stored in their minds, constituting their private repertoire not shared with other people" (p. xii), and between common beliefs shared by groups of varying sizes. Work by Cooley (1902) and Mead (1934), as discussed previously, would suggest that even personal beliefs are formed with relation to the social environment and to the perspectives of other group members, however, for beliefs do not simply arise out of thin air but are rather communicated through the social world. Bar-Tal (2000) acknowledges that many people may share the same personal beliefs, turning them into common beliefs. If a common belief can be shared by only one other person, than the only truly personal beliefs would be those held uniquely by one individual and no one else; the existence of such a unique belief in a world of billions of people is likely very rare. And, since people can have reference groups comprised of people whom they have never met (Williams, 1970), beliefs that are shared by strangers are still common beliefs. Moreover, if one believes that their uniquely personal beliefs are shared by imaginary others, those imaginary others may also constitute a reference group (Williams, 1970), making those personal beliefs shared or common as well.

Bar-Tal (2000) also lists several factors which influence the extent of the consequences of sharing beliefs. Specifically, people higher on social desirability are more likely to be persuaded by group norms and are more reliant on other group members to form their opinions. This finding might suggest that people higher on social desirability may be more influenced by a network than a narrative when deciding on what actions to take to meet their need for significance. However, because these individuals rely on their networks to form their narratives, they are not ignoring the influence of a narrative when they make such decisions; their narrative is simply derived entirely from their network – they do not have a narrative that is separate from a network and therefore competing with it for influence. Additionally, Bar-Tal (2000) finds that people high in self-monitoring are also more sensitive to social norms; again, these individuals may pay more attention to networks than others do, but since their network creates their narrative, it is not as though they are ignoring narrative influences. Finally, Bar-Tal (2000) lists self-differentiation as an individual-level factor influencing the consequences of shared beliefs. Those high in self-differentiation may also be considered to be high in ambition in that they have a desire to stand out from the crowd, but research has found that individuals who want to differentiate themselves from their groups do not necessarily want to deviate from group norms, but rather to be seen as exceptional group members or leaders (Alzahawi et al., 2024; Hirschi & Spurk, 2021). Thus, there may be less reliance on the network to provide a narrative in the form of shared beliefs for people higher on self-differentiation, but the narrative and network are still combined for these individuals.

A key theory of group identification and the derivation of beliefs from groups is uncertainty-identity theory (Hogg, 2007). This theory posits that

> Feelings of uncertainty, particularly about or relating to who one is and how one should behave, motivate uncertainty-reduction, and that the process of self-categorization as a group member reduces self-conceptual uncertainty because it provides a consensually validated group prototype that describes and prescribes who one is and how one should behave (Hogg, 2007, p. 64-65)

This theory clearly outlines why network and narrative cannot be operationally separated from one another. The uncertainty-reducing function of groups, as Hogg (2007) explains, is to "assign prescriptive ingroup attributes to ourselves, […] auto-stereotype, conform to group norms, and transform our self-conception […] [Groups provide] us with a sense of who we are that prescribes what we should think, feel, and do" (p. 67). This definition of groups' function and purpose is similar to Kruglanski and colleagues' (2013) description of the function of narratives: "It is the ideology that tells an individual what to do in order to attain significance" (p. 562). If groups and ideologies, networks and narratives, serve the exact same purpose – to prescribe actions to take in order to meet one's psychological needs, if networks are influential because their members share narratives, and if narratives are influential because they are shared by networks, then the two are functionally inextricable. Indeed, more influential networks are those higher in entitativity, meaning that the groups have more stringent narratives and less tolerance for deviation from the narrative (Hogg et al., 2007), suggesting that a network without a strong narrative is less useful for meeting one's psychological needs, including self-certainty, which can be considered a component of the need for significance (Kruglanski et al., 2022). Lest one think that networks must precede narratives, however, Hogg and Turner (1985) suggest that people select their networks based on basic narratives of similarity; one will not decide to join a group if they do not share beliefs with the other members ("positive interpersonal relationships [promote] a perception of common category membership" (p. 61)). Thus, neither narrative nor network necessarily gives rise to the other; in practice, the two work together to create one socio-ideological means to significance. Moreover, in support of the previous discussion of self-differentiation, Hogg (2010) found that more prototypical members are more influential in groups than less prototypical members, suggesting that highly ambitious people who seek to lead their groups and differentiate themselves from the crowd are well-positioned to do so if they adhere closely, rather than deviate from, to the narrative propagated by their network.

Another key framework through which to understand the functional inextricability of narrative and network is that of shared reality (Echterhoff et al., 2009), which holds that there is a fundamental human need to share one's understanding of the world with others. Echterhoff and colleagues (2009) emphasize that shared reality does not arise spontaneously; the process by which it is created is also important, including through the types of verbal and nonverbal communication detailed by Mead (1934). The authors suggest two types of motives which lead to the production of shared reality. The first, epistemic motives, also referred to as motivated cognition (Higgins et al., 2021), is "the need to achieve a valid and reliable understanding of the world and establish what is real" (Echterhoff et al., 2009, p. 500). Motivated cognition is the

motivation to establish a narrative, and it is achieved by establishing a network which supports that narrative. The second type of motive, relational motives, also referred to as motivated connection (Higgins et al., 2021), is the motivation to "affiliate and feel connected to others" (Echterhoff et al., 2009, p. 500). Motivated connection is the motivation to establish a network, and it is achieved by connecting with others who share one's narrative. Neither network nor narrative can be achieved without the other; as Echteroff and colleagues (2009) write, "Shared realities with others are attractive because they allow individuals to experience a more valid and reliable view of the world *and* to obtain or maintain a sense of connectedness and belonging" (p. 500, emphasis added). Referencing findings from Bar-Tal (2000), Echterhoff and colleagues (2009) also highlight that although one must be cognizant of a shared reality in order for that shared reality to exist, shared reality can exist even if people who perceive that their reality is shared are wrong. This caveat is critical for understanding the role of the combined network and narrative among terrorist lone actors. For example, Ted Kaczynski, the Unabomber, perceived that his narrative was shared by environmentalists past, present, and future, and wrote on behalf of a collective, claiming that his beliefs were shared by masses of people, not just himself (Barnett, 2015; Kaczynski, 1995). Even if that was not actually the case, the network existed in his understanding of it, and that is sufficient for the creation of a shared reality (Echterhoff et al., 2009). Three decades later, another alleged lone actor, Luigi Mangione, professed his admiration for Kaczynski before killing the CEO of United Healthcare and receiving mass support from the public for that act, just as he had expected, according to his written manifesto (Kilgannon et al., 2024). Kruglanski and colleagues (2006) summarize definitions of groups by thinkers over centuries: "a central aspect of groupness resides in the coherence and consistency of the shared reality a group provides for its members" (p. 85). They continue, "because persons construct their beliefs in concert with their fellow members, individual knowledge is inevitably grounded in shared reality" (Kruglanski et al., 2006, p. 85).

Motivated cognition, the need to understand the world and thereby the need for a narrative, is the subject of lay epistemic theory (Kruglanski et al., 2010). This theory explains how people form knowledge and make judgments by seeking out evidence from perceived epistemic authorities, including themselves and their groups, and eventually closing the epistemic process sooner (for those high on the need for cognitive closure) or later (for those low on the need for cognitive closure). Highlighting the tendency for people with low self-ascribed epistemic authority to rely more on their networks for narrative-related information, Bar (1983) found that when Israeli college students were less knowledgeable about a subject, they viewed their peer groups as an epistemic authority on that subject. Similarly, groups with members high in need for closure tend to be more autocratic and have more rigid norms than groups with members lower in need for closure, which tend to be more egalitarian (Dugas & Kruglanski, 2018). Other studies have found that people pay more attention to the opinions and attitudes of other ingroup members than outgroup members (e.g., Echterhoff et al., 2008), and people with higher need for closure trust their ingroups and derogate outgroups more than people with lower need for closure (Acar-Burkay et al., 2014; Shah et al., 1998). Interestingly, people with higher need

for closure also abandon old cultures and embrace new ones if the new ones are more salient to them (Kosic et al., 2004). This might suggest that these individuals are abandoning network in favor of narrative, but consistent findings of the close link between need for closure and group centrism (Kruglanski et al., 2006) suggest that in embracing newer, more salient beliefs, these individuals are abandoning one narrative-network combination in favor of another. Notably, lay epistemic theory, and particularly the theories of group centrism (i.e., the degree to which individuals seek to create a shared reality with their groups) and need for cognitive closure, focus on individual characteristics which increase group centrism and the consequences of group centrism on individual behavior (Kruglanski et al., 2006). The present theory suggests that all groups which hold sway over their members possess a degree of "groupness," as a network without a shared narrative will not influence its members' behavior (Hardin & Higgins, 1996; Festinger, 1950, 1954).

Of particular interest for the present theory, given its applicability to radicalization and violent extremism, is the psychology of conspiracy theories. Conspiracy theories are closely related to radicalization and violent extremism (Kruglanski, Molinario, Ellenberg, & Di Cicco, 2022). More generally, however, conspiracy theories are often conceived of as a type of narrative that is often considered to be quite isolating, as people who believe in conspiracy theories often reject or are rejected by family and friends who are not believers as well (e.g., Zwar et al., 2022). Yet, there is a strong social component to conspiracy beliefs which highlights the functional inextricability of narrative and network. Douglas and colleagues (2017) outlined three categories of motives underlying conspiracy beliefs, each of which has been discussed previously in this chapter. The first category is epistemic motives, the need for knowledge and understanding frequently sought through group membership, as described by Kruglanski and colleagues (2006, 2010). Douglas and colleagues (2017) explain, "conspiracy theories appear to provide broad, internally consistent explanations that allow people to preserve beliefs in the face of uncertainty and contradiction" (p. 539). Several components of this explanation stand out as relevant to the bidirectional link between narratives and networks: first, that conspiracy theories provide explanations; Bar-Tal (2000) and Echterhoff and colleagues (2009) have shown that these explanations are more likely to be believed if they are shared by others. Second, conspiracy theories protect against uncertainty, a key function of groups (Hogg, 2007). Groups which adhere to, validate, and propagate conspiracy theories are high in entitativity and "groupness" (Hogg, 2021), suggesting that networks are more "network-y" when their narratives are more "narrative-y." The second motivational category described by Douglas and colleagues (2017) is existential motives, such as those described in Terror Management Theory (Greenberg et al., 1990) and, importantly, significance-quest theory (Kruglanski et al., 2022). According to Douglas and colleagues (2017), conspiracy theories serve to provide feelings of safety and security, as well as to make people feel as though they have control over their environments. People who feel a lack of power, personally or socio-politically, are more likely to believe in conspiracy theories (Bruder et al., 2013). As with the significance-granting narratives described previously, including the cultural worldviews described by Greenberg and colleagues (1990), conspiracy theories serve

to meet such psychosocial needs if they are validated by groups. Finally, Douglas and colleagues (2017) list social motives as underlying conspiracy beliefs. Of course, significance-quest theory and the present theory suggest that epistemic and existential motives are also social motives, but Douglas and colleagues (2017) specify that their definition of social motives includes "the desire to belong and to maintain a positive image of the self and the ingroup" and that "conspiracy theories valorize the self and the ingroup by allowing blame for negative outcomes to be attributed to others" (p. 540). Arguably, findings that people who feel their self- and ingroup-image threatened are more likely to believe in conspiracy theories (Cichocka et al., 2016) support the hypothesis regarding existential motives as well, providing further support for the argument that the need to belong serves the superordinate goal of attaining and maintaining significance (Kruglanski et al., 2017). Douglas and colleagues (2017) suggest that belief in conspiracy theories can lead to alienation and isolation from society, but the extensive research discussed above suggests that conspiracy belief would not occur without the perception that those beliefs were shared by others. Ergo, the networks which matter and are influential to believers in conspiracy theories are those which share their narrative, while the networks which do not share their narratives are not valued.

Several potential arguments may be reasonably posed in contradiction to this conclusion. First is the argument that independent thinkers, like Galileo, Copernicus, or Einstein, form narratives that are inconsistent with what the rest of their group and the broader society believes. This argument is briefly addressed above in the discussion of beliefs that people believe are shared, even if they are not. Even independent thinkers like Galileo or, arguably, the Unabomber, tend to believe that their ideas are or will be shared, if not by their present cohorts, then by future generations. Indeed, I highlighted previously that Luigi Mangione might consider himself an intellectual descendant of Ted Kaczynski. More certainly, however, Galileo, Copernicus, and Einstein all held beliefs that were once independent and are now shared by most people. Quotes attributed to these thinkers suggest that they too believed that their findings would eventually be accepted by their network of future generations of scientists. Galileo wrote: "The modern observations deprive all former writers of any authority, since if they had seen what we see, they would have judged as we judge." Notably, Galileo wrote this in a letter to Johannes Kepler, using the pronoun "we," confirming that he did not view his revolutionary narrative as his alone (Galilei, 1917). Copernicus also used "we" and spoke of future generations when he wrote, "Finally we shall place the Sun himself at the center of the Universe. All this is suggested by the system of procession of events and the harmony of the whole Universe, if only we face the facts, as they say, 'with eyes wide open'" (Copernicus, 1543/1972). Einstein stated his understanding of his network even more explicitly: "Although I am a typical loner in my daily life, my awareness of belonging to the invisible community of those who strive for truth, beauty, and justice has prevented me from feelings of isolation" (Einstein, 1932).

A second reasonable argument against the hypothesis that narrative and network are functionally inextricable is that various social psychological models of persuasion

distinguish between the content of the message (i.e., the narrative) and the characteristics of the messenger such as their attractiveness or expertise (i.e., the network). The elaboration likelihood model [ELM] is one such theory (Petty & Cacioppo, 1986). The ELM identifies characteristics that might make someone more attuned to central aspects of arguments, namely, features of the narrative, or to peripheral aspects of arguments, namely, features of the network. The distinction between central and peripheral routes to persuasion affirms that narrative and network are conceptually distinct; the present theory does not dispute this finding. Yet, the ELM specifies that elaboration is a spectrum, with the central route to persuasion occupying the high-effort end of the spectrum and the peripheral route occupying the low-effort end of the spectrum (Petty & Wegener, 1999). The information conveyed is the same; as is the ultimate result of attitude change. Indeed, tests of ELM have not explored what would happen if the central and peripheral routes to persuasion diverged to end at two different arguments, for that would require the peripheral route to have its own argument, thus creating a new central route, and the central route to have its own messenger characteristics, thus creating a new peripheral route. Some people might pay more attention to one aspect of the argument or another, but the two aspects are nonetheless working together to serve the same ultimate function. In other words, any message that is conveyed has a messenger and every messenger has a message.

Third, one might argue that phenotypic prototypicality, that is, the extent to which one looks like a prototypical member of their racial group, is predictive of the extent to which one identifies with their racial group (Wilkins, Kaiser, & Rieck, 2010). Such a finding would suggest that a group can be influential merely by dint of one's physical belonging in it, regardless of perception of shared beliefs. However, in their discussion of the results of their study on phenotypic prototypicality, Wilkins and colleagues (2010) discuss several social psychological reasons why people who are more phenotypically prototypical (PP) might self-identify more strongly with their racial group. These reasons include the self-fulfilling prophecy, that PP people engage more with people in their racial group because outgroup members might assume that PP people are more self-identified with their racial group and therefore not interact with them, leading PP people to interact less with outgroup members and more with ingroup members, resulting in higher ingroup identification. Additionally, outgroup members may treat PP people more coldly due to bias against members of the PP person's group with which they are so clearly identified, resulting in higher ingroup identification as a protective strategy. In contrast, people who are less PP may identify less strongly with their racial ingroup not directly because of their physical appearance has allowed them more opportunities to join other networks, including among the majority outgroup (e.g., by "passing"; Rockquemore & Brunsma, 2002). Each of these reasons suggests that ingroup identification is derived from experiences with other members of one's racial group, not just from physical identification.

Empirical Evidence for the Inextricability of Narrative and Network

Extensive empirical support exists for the hypothesis that narrative and network, though conceptually distinct, cannot be separated from one another in practice because the more one feels embedded their network, the more they feel committed to the network's narrative, and the more they believe in a narrative, the more committed they feel to the associated network. In a correlational study of 201 US citizens, perceptions that one's network supported voting and perception of voting as consistent with one's values were strongly positively correlated ($r = 0.58$, $p < 0.001$). Perceptions that one's network supported boycotting the election was also strongly correlated with perception of boycotting as consistent with one's values ($r = 0.56$, $p < 0.001$), and perceptions that one's network supported participating in protests related to the election was strongly positively correlated with perception of protesting as consistent with one's values ($r = 0.60$, $p < 0.001$) (Study 5, see Appendix B).

Across six waves of a correlational study of Americans' perceptions of the 2023-2024 war in Gaza, participants' perceptions that their networks supported Israel was strongly positively correlated with participants' narratives of Israelis as victims in the Israeli-Palestinian conflict ($r = 0.70$, $p < 0.001$), and participants' perceptions that their networks supported the Palestinians was strongly positively correlated with participants' narratives of Palestinians as victims in the Israeli-Palestinian conflict ($r = 0.49$, $p < 0.001$). In the first wave of the study, during the initial Israeli ground operation in Gaza, participants' narratives of Israelis as victims was also significantly correlated with participants' degree of fusion with the pro-Israel community, that is, the extent to which they viewed the pro-Israel community's goals and values as their own ($r = 0.57$, $p < 0.001$). Tellingly, these networks and narratives were closely related to participants' self-reported political orientations – in the United States, a useful example of a socio-ideology or combined narrative-network (Egan, 2020). Pro-Israel narratives and networks were both significantly associated with describing oneself as more conservative (reverse-scored; respectively, $r = -0.40$, $p < 0.001$; $r = -0.33$, $p < 0.001$). Pro-Palestine narratives and networks were both strongly associated with describing oneself as more liberal (respectively, $r = 0.46$, $p < 0.001$; $r = 0.49$, $p < 0.001$) (Ellenberg et al., 2024).

Similarly, a great deal of research has found that people have difficulty extricating their political ideologies from their partisan social identities. In an article entitled *Ideologues Without Issues,* Mason (2018) found "that the identity-based elements of ideology are capable of driving heightened levels of affective polarization against outgroup ideologues, even at low levels of policy attitude extremity or constraint" (p. 866), with the identity-based elements of ideology contrasted with issue-based elements of ideology to indicate identification as a liberal or conservative not because of any particular policy position but because of a social connection to groups labeled as liberal or conservative – that is, Democrats and Republicans, respectively. This definition of identity-based ideology is reminiscent of Holbrook and Horgan's (2019) characterization of terrorist ideologies being more closely linked to the creation of social identity than to the propagation of dogma. As a case in point, in Mason's (2018) study, polarization was operationalized as participants' willingness to marry someone in their ideological group over someone in the opposing ideological group,

and this polarization was significantly predicted by identity-based ideology, controlling for issue-based ideology. Perceived social distance from the opposite party was also significantly predicted by identity-based ideology, even for participants whose stances on individual issues were more consistent with the opposite political identity (i.e., right-leaning liberals and left-leaning conservatives).

Beyond partisan identity, examination of religious identity also provides ample evidence for Hypothesis 2. Unlike political ideologies, which are practical for some and value-laden for others, religious socio-ideologies uniquely confer upon their believers and members a worldview that is sacred and existential (Atran & Ginges, 2012). Because these values are sacred, one might think that they might be held even in the absence of network support for them, thus distinguishing narrative from network. Yet, even people high on intrinsic religiosity – arguably, a clear indication of a truly held ideological belief above and beyond social influence – demonstrate prejudice toward relevant outgroups that is predicted by a measure of social intrinsic religiosity (e.g., "I feel a strong sense of being connected with other people of my faith group"; "The religious group I belong to is an important reflection of who I am") (Van Camp et al., 2016). Additionally, religious social identity was found to mediate the positive effect of frequency of religious service attendance on psychological wellbeing, though the study did not control for other religious beliefs (such as belief in God as a protector or Just World beliefs) that might also be explanatory but less directly related to one's social identity (Greenfield & Marks, 2007).

In this chapter, I outlined the second hypothesis derived from the socio-ideological means model, presenting a socio-ideology as the means by which someone can meet their activated need for significance. That ideological and social factors contribute to the radicalization process is not novel; the first part of this chapter details how these components have been presented in a myriad of theories of radicalization. However, Hypothesis 2 posits that although narrative and network can be defined independently of one another, they are functionally inextricable: people do not value groups with whom they do not share beliefs, and people do not hold on to beliefs that are not shared, even if those fellow believers are imaginary or exist only in future generations. This finding is implicitly supported by theories of the relationship between groups and beliefs and groups and identities going back to the beginning of the 20th century, as well as by empirical findings in a variety of fields.

Chapter 4: Ideological Inconsistency

The hypotheses discussed above in the prior two chapters present a socio-ideological means-focused revised and complementary version of the 3N model of radicalization (Kruglanski et al., 2019), first demonstrating that the need for significance is the dominant factor influencing radicalization and then showing that narrative and network are not two intertwined components but rather comprise a functionally inextricable social-ideological factor which serves as the means to significance attainment, with radicalization occurring as a consequence. Even if narrative and network cannot be disentangled, however, it is still possible, in some cases, that people will have competing narratives supported by competing networks, each prescribing a means to attaining significance that is in direct opposition to the other. Consider, for example, the many social justice and civil rights movements around the world in which leaders aiming for the same goal and representing the same broad social group prescribe vastly different means to attaining that goal. It is not inconceivable to think of a young Black student in the 1960s whose church community follows the nonviolent civil disobedience method of attaining civil rights advocated by Martin Luther King, Jr., but whose friends from school believe that violent action is necessary to overthrow oppression, as preached by Malcolm X and the Black Panthers. One could also easily imagine a young woman inspired by feminism to be stuck between her sorority sisters advocating for sexual liberation and her aunts urging her to shun men altogether. What would these young people do in the face of such a decision? Hypothesis 3 of the socio-ideological means model posits that the number of significance-granting socio-ideologies to which one is susceptible increases as the need for significance becomes more strongly activated. The set of available socio-ideologies could grow to include socio-ideologies which conflict with one another. This situation, to which I will refer as "ideological inconsistency" is one of growing focus in the field of radicalization research, as violent extremist attackers such as neo-Nazi-turned-militant jihadist Devon Arthurs and ecofascists who adhere to both Nazi and environmentalist ideologies, increasingly cite two or more apparently conflicting ideologies in their reasoning for their attacks (The Soufan Center, 2021). However, research has not yet presented a satisfying psychological explanation for ideological inconsistency and its apparent increase in recent years.

Recent Radicalization Research on Ideological Inconsistency

Heggehammer (2009) referred to the mixing of disparate militant jihadist ideologies as "ideological hybridization," explaining why "many jihadist groups are displaying ambiguous rhetoric and behavior with regard to who they consider as their main enemy" (p. 1). This "ambiguous rhetoric and behavior" largely refers to whether groups focus on the "near enemy" – that is, Arab governments seen as insufficiently Islamic – or the "far enemy" – Western governments perceived as oppressing Muslims. As militant jihadist groups in the period post-9/11 attempted to maximize recruitment, they often proclaimed both enemy groups to be their primary focus for attacks. Heggehammer's (2009) exploration of ideological hybridization is limited to

its causes at the group level rather than the ideological level, finding that groups hybridize their ideologies when they feel weak or isolated in order to increase recruitment by addressing a wide range of grievances which matter to their potential members. This is, in essence, an explanation of hybridization owing to a group's desperation for significance. When groups feel their status, power, and impact rising, they can afford to hew closely to their ideologies in their purest forms, shedding less committed members through a process McCauley and Moskalenko (2008) refer to as "condensation." When groups face a loss of significance, for instance by leadership losses or counterterrorism pressure forcing them from territory, however, they may feel forced to expand their appeal by adopting a more flexible ideology. This is not to say that ideological flexibility is akin to ideological moderation. In fact, Heggehammer (2009) argues that ideological hybridization represents increased radicalization because it widens the range of the group's enemies, for instance, from the local government in the country where the group is operating to the United States, to the West, and to countries near and far which cooperate with the United States. Hybrid groups have a wider range of and fewer restrictions on targets for attacks, and they take these opportunities in the hopes of attaining or regaining their collective significance.

Heggehammer's (2009) explanation of ideological hybridization of groups previewed a growing trend of ideological inconsistency within terrorist groups and among individual violent extremists. Gartenstein-Ross and Blackman (2022) refer to this concept as "fringe fluidity," the process by which "individuals transition from the embrace of one form of violent extremism to another" (p. 555). They focus in particular on people who switch from far-right (they use the term "neo-Nazism") to militant jihadist ("militant Islamism") beliefs in their exploration of these unique radicalization pathways that are different from the typically discussed pathway from non-radicalized to radicalized. Given the findings in the previous chapter, it is perhaps more accurate to refer to such a transition as not between ideologies or between groups but rather between "socio-ideologies" or narrative-network combinations. Gartenstein-Ross and Blackman (2022) explain that whereas an individual might initially radicalize to neo-Nazism through a typical pathway (specifically, through the confluence of needs, narrative, and network), "prior extremist involvement provides a pathway by which an individual may come to engage in a new extremist ideology cognitively or behaviorally" (p. 557). These individuals find points of convergence in the two extremist ideologies and already have a counter-normative worldview and a lowered threshold for violent action given their prior experiences. What Gartenstein-Ross and Blackman (2022) do not address, however, is why someone would move from a far-right to a militant jihadist violent extremist socio-ideology. One can understand how the process might occur and why such a process might differ from other pathways toward radicalization, but why would someone leave one violent extremist socio-ideology just to join a different one, especially one which was previously viewed as the enemy? Hypothesis 3 posits that because the need for significance, and not the specific socio-ideology, is the driving force underlying radicalization, if one socio-ideology is not sufficient to meet a high need for significance, the individual might try another, even if it stands in opposition

to their current socio-ideology. Just as a desperate and weak group might expand its list of identified enemies in order to attract new recruits and therefore gain significance (Heggehammer, 2009), an individual desperate for significance may similarly expand their list of acceptable means to significance in order to increase their chances of gaining respect and admiration from one group or another.

In another recent study of ideological inconsistency, Brace and colleagues (2024) explore the drivers of "a 'mixed, unclear, and unstable' (MUU) ideological profile" taking precedence in recent acts of violent extremism over "a single, clear and coherent belief system" (p. 103). Mixed, unclear, unstable ideologies, also referred to as "salad bar" ideologies, or "composite violent extremism," can be categorized as "ambiguous, mixed, fused, and convergent" (Brace et al., 2024, p. 106). Gartenstein-Ross and colleagues (2023) define those categories with regard to the content of their ideologies, whether they are "an amalgamation of prejudices, grievances, and subcultures that may undergird various extremist ideologies [i.e., ambiguous]," made up of "multiple distinct and discernible ideologies alongside other prejudices, grievances, or subcultures [i.e., mixed]," "one clearly discernible ideology [fused] with other distinct prejudices or grievances [i.e., fused]," or "one distinct ideology that has convergent prejudices and grievances with other ideologies [i.e., convergent," leading to adherents supporting or working with other ideological groups (pp. 9-13). Brace and colleagues (2024) similarly focus on the evolution of the content and dissemination of MUU ideologies, rather than the underlying psychological processes of their adherents. They posit that the online ecosystem in which violent extremism currently thrives allows for "the cross-pollination of ideas and themes across ideological spheres" whereas terrorist groups in decades past would have rarely interacted without a deliberate purpose for doing so (Brace et al., 2024, p. 107). In contrast, those who share website links (i.e., "outlinking") across ideological ecosystems may do so strategically but may also do so accidentally or naïvely. Outlinking results in not only the spread of ideological content but also the unification of, or at least interaction between, previously disparate communities (Brace et al., 2024). For an individual poster, outlinking provides the opportunity to be a valued member of multiple socio-ideologies, thereby increasing their significance gained: "some of the most active exoposters […] are not necessarily peripheral members of an extremist ecosystem; they can be the very same leading and influential 'hyper' or 'super' participants who simultaneously sustain the community via endolinks [i.e., posting links to the focal website on other platforms]" (Brace et al., 2024, p. 119). In other words, those who are most motivated to be valued leaders in their communities were often also the most motivated to adopt or at least disseminate other communities' ideologies as well. Community members with a less strongly activated need for significance would likely not feel the same need to expand.

So-called "salad bar" ideologies, as examined by Brace and colleagues (2024) and Gartenstein-Ross and colleagues (2023), and hybridization, as discussed by Heggehammer (2009), are compared by Hemmila and Perliger (2024), focusing on American far-right violent extremism. Specifically, the American violent extremist

far-right includes white supremacists, violent misogynists, and anti-government and anti-institutional violent extremists. Although these movements may have some overlapping goals, their ideologies are distinct but increasingly combined by violent extremist attackers who either adopt their own unique hodgepodge of ideologies or who belong to groups which combine several ideologies, such as ecofascist groups, which combine white supremacism with environmentalism. Hemmila and Perliger (2024) conclude that the American far-right has overlaps but has not hybridized in the way that Heggehammer (2009) describes, meaning that although "the groups may share some common enemies – specifically racial minorities – […] they do not coincide in their prioritization of enemies" (Hemmila & Perliger, 2024, p. 21). The different groups have distinct social and political goals and different operational interests. Interestingly, Hemmila and Perliger (2024) also find that the different American far-right groups "value different ingroup characteristics, indicating that the ingroup's desired identity varies across groups" (p. 21). Depending on the specific socio-ideology, race or gender may be valued most highly, or operational experience or criminal history may be more valued (Hemmila & Perliger, 2024). For the purpose of the present research, if groups have different values for their members, and thus different standards by which they decide if a member is worthy of significance, an individual seeking to maximize their significance by belonging to multiple networks with multiple ideologies would need only to emphasize or suppress different aspects of their identity in order to be accepted. For instance, they could emphasize their masculinity when posting in violent misogynist online channels, or their whiteness in white supremacist channels, or their criminal history in anti-government channels, allowing them to be accepted and lauded by multiple different groups and thus providing them with more available means to meet their need for significance.

Meleagrou-Hitchens and Ayad (2023) connect the spread of "salad bar" ideologies to the finding that most young people who commit acts of violent extremism in the United States do not belong to formal terrorist groups, as well as the outsized role the internet now plays in young people's radicalization processes. As Meleagrou-Hitchens and Ayad (2023) explain,

> To maintain control and ideological purity, formal groups tend to police the ideas and affiliations of their members, often leaving little room for them to engage with the ideas of alternative or rival movements. As formal group affiliation has reduced in importance for terrorist and violent extremist actors, so have the barriers to engagement with other relevant, and often overlapping, ideologies. Extremists today have more freedom to merge ideas from different extremist currents which may often share several key interests and concerns (p. 6).

Meleagrou-Hitchens and Ayad (2023) use several types of violent extremists to illustrate their argument, including ecofascists, self-described "National-Socialist Salafis," and violent conspiracy theorists. They focus, like many other studies of ideological inconsistency, on the commonalities in themes and grievances that are addressed by superficially different or even opposing ideologies. As noted previously,

they highlight that this phenomenon may be increasing due to decreased barriers to accessing these different ideologies, but they do not present a psychological explanation as to why people would seek out additional ideologies if they are already embedded in a movement (even if it is not a formal group) with its own ideology. However, all three of their explanations for the increase in the phenomenon, younger age, less formal groups, and online radicalization, can each be linked to an especially strong need for significance as the driver for adopting multiple different socio-ideologies. First, younger people may be attracted to the similar memes and gamification of both militant jihadism and far-right violent extremism of various flavors, as Meleagrou-Hitchens and Ayad (2023) suggest. Young people also tend to have a stronger need for significance (Arnett, 2000; Kroger, 2004), perhaps making them less likely to be satisfied with belonging to only one socio-ideology when there are multiple socio-ideologies that appeal to them. Second, as quoted above, less formal groups have less control over the ideologies to which their members adhere, thus decreasing the barriers to exposure to other ideologies. However, less formal groups are also less entitative, less "groupy," and therefore offer their members less significance through membership, since the rewards of belonging are weaker (Crawford & Salaman, 2012). Hence, members of less formal groups may feel that they need to belong to more than one group in order to meet their need for significance. Finally, the increasing extent to which radicalization and recruitment to violent extremism occurs online has made access to different socio-ideologies easier than it was previously, when people were limited to the socio-ideologies in their physical vicinity or those spread on early online forums rather than social media (Meleagrou-Hitchens & Ayad, 2023). Spending copious amounts of time online is also associated with a stronger need for significance, however (Kaya et al., 2024; Arpaci et al., 2018; Wang et al., 2015). Thus, people who spend more time online and are therefore exposed to a wider variety of violent extremist socio-ideologies likely have a stronger need for significance than people who spend less time online and are less attracted to multiple violent extremist socio-ideologies.

Ware and Waldo (2022) link the phenomenon of ideological inconsistency not only to the internet's increased role in contemporary radicalization but also to increased "leaderless resistance," a concept which scholars of terrorism have discussed in regard to far-right violent extremism in the United States in the 1990s (Kaplan, 1997) and to militant jihadism in the post-9/11 era (Sageman, 2011). Leaderless resistance refers to the trend among violent extremists to unite in small cells and launch attacks, or to attack as lone actors, without direction from an overarching hierarchical group. As argued in the preceding chapter, that a resistance is leaderless does not mean that each "resister" is an island. Rather, each belongs to a diffuse socio-ideology comprised of other individuals who share their beliefs, worldview, and justifications for violence. Even with three decades of leaderless resistance dominating the domestic violent extremism scene, argue Ware and Waldo (2022), however, most lone acts of terrorism still adhered to a single and rather rigid ideology, until recently. In recent years, write Ware and Waldo (2022), "as extremists have increasingly radicalized online, they have been able to mobilize outside both formal organizations and ideological traditions" (n.p.). A further danger of ideological inconsistency and

leaderless resistance facilitated by social media, as highlighted by Gartenstein-Ross and Blackman (2022), is that becoming disillusioned with one violent extremist ideology does not preclude an individual from engaging in acts of violent extremism, as they can simply select a new ideology to which they can adhere. Ware and Waldo (2022) posit that the original leaderless resistance ushered in an era of terrorism which transcended traditional hierarchies, and that the leaderless resistance of the social media age is one which transcends traditional terrorist "brands." Thus, the ideological inconsistency (described using many terms) that is increasingly present in the violent extremism landscape, especially in the United States, has been attributed to many different qualities of contemporary society, most notably increased social media use. However, an examination of the needs met by congregating in many different online groups and the ability for younger people to gain a sense of status and belonging in these groups suggests that ideological inconsistency can be explained psychologically through an understanding of the need for significance as dominant in the radicalization process.

Finally, and most relevant to the socio-ideological means model, Koehler (2020) applied social identity theory to movement between violent extremist socio-ideology. In four case studies of violent extremists who "switched sides," Koehler (2020) explains, "They identified a moment of personal crisis of questioning legitimacy in their old ingroup, leading to unsuccessful attempts to 'rescue' or 'improve' their environment" (p. 13). The participants in the study emphasized common core values between their two groups, but all also "clearly pointed out their social status enhancement through side switching" (p. 13). Though not supported by quantitative empirical results, Koehler's (2020) case studies suggest that people move between violent extremist groups in order to gain significance when they are no longer attaining significance through their present group. Their insistence on first trying to change their existing groups and second emphasizing that their new group shared the values of their old group highlights attempts, whether conscious or not, to reconcile narrative and network components of their socio-ideological means to significance. However, interviewees only came to recognize the "shared values" between the two opposing groups after deciding that they were no longer gaining significance from the first group. This suggests that increased need for significance resulted in the interviewees becoming open to an expanded set of socio-ideological means.

Need for Significance Expands the Set of Available Socio-Ideological Means

The previous section outlines why a dominant need for significance may explain why people would be attracted to multiple, even conflicting, socio-ideologies, and why this phenomenon has increased in cases of violent extremism recent years. However, from a broader psychological standpoint, it may still be difficult to understand how people could adhere to two or more socio-ideologies that are inconsistent with one another. For example, a "National-Socialist Salafi" as described by Meleagrou-Hitchens and Ayad (2023) must simultaneously believe that one must live in the same way that the Prophet's companions did (Ali, 2019) and associate with people who believe that the white race and Western civilization are superior to all other groups of

people (Berlet & Vysotsky, 2006), even if their focus is on shared misogyny or antisemitism (Meleagrou-Hitchens & Ayad, 2023).

This phenomenon may be explained through the lens of goal systems theory (Kruglanski et al., 2018). Specifically, Hypothesis 3, that the number of significance-granting socio-ideologies to which one is susceptible increases as the need for significance becomes more strongly activated, is a particular case of equifinality, wherein goal commitment increases the number of means to attaining that goal (Kruglanski, Pierro, & Sheveland, 2011). In terms of the socio-ideological means model, violent extremists who switch between different ideologies are displaying substitutability, "the opportunity of switching to alternative means if goal progress via a prior means was thwarted" (Kruglanski, Pierro, & Sheveland, 2011, p. 344). In other words, if one has reaped all of the significance they can from one violent extremist group and still feel a need for significance, they might switch groups. Alternatively, if after an ideological awakening a member of a violent extremist group no longer adheres to the violent socio-ideology of which they are a part, they may find that serving that socio-ideology no longer meets their need for significance and subsequently seek out a new, prosocial, socio-ideology to use as a means for significance gain (Speckhard & Ellenberg, 2022). Perhaps more cynically, if a member of a violent extremist group hears that they are about to be arrested and believe that such an experience will thwart their significance gain (as opposed to earning them "street cred"; Coppock & McGovern, 2014), they may declare that they are leaving violent extremism and seek out a new source of significance, even if they still sympathize with the violent extremist socio-ideology.

In their discussion of goal commitment, Kruglanski and colleagues (2011) discuss why the availability of multiple means increases expectancy of goal attainment and the perception of goal value, thereby increasing goal commitment. Conversely, Hypothesis 3 holds that increased goal activation increases perception of available means, including means which are counterfinal to other goals, such as more extreme means or means which are inconsistent with each other. This is consistent with Kruglanski and colleagues' (2014) description of radicalization itself as counterfinality and Kruglanski and colleagues' (2021) description of extremism as motivational imbalance, "whereby a given need gains dominance and overrides other basic concerns" (p. 2). Constraints on other means, whether they are morally repugnant or merely inconsistent with each other or with other goals, "are relaxed under motivational imbalance where the dominant need crowds out alternative needs" (Kruglanski et al., 2021, p. 2).

The ubiquity of online radicalization discussed in the previous chapters is also linked to the perception of more available means to meet the need for significance. When people radicalize in the traditional sense, it is because they have found a socio-ideology which informs them exactly what to do to meet their need for significance. Ideological inconsistency is made possible by the wealth of information as to how to meet the need for significance. Extensive research exists on the effects of information overload (Schneider, 1987) that can be leveraged to understand the phenomenon of

ideological inconsistency and the power of the need for significance in expanding the set of available socio-ideological means to meeting that goal. In the social media era, information overload has become a salient issue as people are constantly confronted with massive amounts of potentially useful information to the point that the presence of such information degrades their decision-making efficiency (Bawden & Robinson, 2009). Bawden and Robinson (2009) highlight "satisficing" as a means of coping with information overload, wherein people take in "just enough information to meet a need, rather than being overwhelmed by all the information available: just enough information is good enough" (p. 185). Ideological inconsistency is rare enough that one can assume that most people who radicalize online are significance satisficers – they take in just enough information to meet their need for significance. Some, however, appear to be significance maximizers – they will not be satisfied that they know how to meet their need for significance until they have considered all of the options and determined the best option(s) for gaining significance. The internet has allowed for this possibility. Whereas people in the last century or even the beginning of this century were limited to what information they could find, young people today have myriad socio-ideologies at their fingertips (Thompson, 2011).

Another means to coping with information overload is to cognitively select for the most relevant information, introducing heuristics and biases that can be both highly adaptive and result in negative outcomes when people select for belief-consistent, negatively valanced, information, rather than merely for the most accurate information (Hills, 2019). Such cognitive biases can result in extremism via the proliferation of echo chambers, as Hills (2019) warns, but as can a lack of reliance of cognitive biases and an acceptance of multiple pieces of conflicting information. Given limited processing power, people have a harder time understanding each piece of information as the amount of information they are presented with increases (Voinea et al., 2020). They may therefore understand less about each individual socio-ideology they see and be therefore more willing to assimilate several conflicting socio-ideologies into their worldview in order to gain significance. As a result, Missier's (2022) suggestion that digital literacy programs which help young people sort out which information is trustworthy and credible could prevent both traditional radicalization via echo chambers and ideologically inconsistent radicalization via information overload.

Empirical Evidence for the Need for Significance Predicting Ideological Inconsistency

A measure of ideological inconsistency was constructed using Thompson and Zanna's (1995) formula for attitude ambivalence in which ambivalence (or inconsistency) "equals the similarity of the magnitude of the components plus their intensity" (p. 263). Across Studies 1, 2, 3, and 4, ambition was significantly correlated with inconsistency of support for both boycotting and voting ($r = 0.21$, $p < 0.001$). In Studies 6 and 7, inconsistency of support for the contrasting values of security ("national security, family security, social order, cleanliness, reciprocation of favors") and universalism ("broad-mindedness, beauty of nature and arts, social

justice, a world at peace, equality, wisdom, unity with nature, environmental protection") was significantly correlated with ambition ($r = 0.35$, $p < 0.001$ for Study 6; $r = 0.27$, $p < 0.01$ for Study 7). Additionally, in Studies 6 and 7, the number of values participants rated as important (i.e., 4 or greater on a Likert scale from 0 to 8) was significantly correlated with ambition ($r = 0.58$, $p < 0.001$ for Study 6; $r = 0.56$, $p < 0.001$ for Study 7).

In the large European Values Study, inconsistency in support for both democracy and army rule in one's country was significantly negatively correlated with satisfaction in life ($r = -0.04$, $p < 0.001$) and the extent to which someone felt freedom and control in their life (reverse-scored, $r = 0.03$, $p < 0.001$), both measures of felt significance, suggesting that those with lower feelings of satisfaction and freedom would have more strongly activated needs for significance. Moreover, in a survey of self-described "incels," inconsistency in agreement with the statements "I would like help with my social skills" and "I would rape if I could get away with it," associated with two different incel socio-ideologies (Ellenberg, Speckhard, & Kruglanski, 2023) was significantly correlated with the number of significance-loss experiences the respondent reported in their lives ($r = 0.17$, $p < 0.01$).

This chapter illustrates the third hypothesis derived from the socio-ideological means model, that of ideological inconsistency. Ideological inconsistency has been a subject of increasing interest in the field of terrorism research but has not yet been explained from a social psychological perspective. Ideological inconsistency has likely become easier due to increasing online radicalization, and more common given the increase in young people radicalizing to violent extremism, but why someone would come to accept multiple opposing ideologies, to belong to multiple opposing groups, and to engage in actions which oppose one another has not yet been explained. As with so much in social psychology, as outlined in the theoretical and empirical underpinnings of Hypothesis 1, in the end, it all comes back to significance. Hypothesis 3 may be distilled to the "throw spaghetti at the wall and see what sticks" strategy of significance gain: when one's need for significance is high, if one has multiple different opportunities to meet that need, they will have no reason to select only one means. Instead, they will follow the prescriptions of as many socio-ideologies as are available to them, even if those socio-ideologies are counterfinal to other goals due to their extremity or inconsistency.

Chapter 5: General Discussion

What is the Relationship Between Networks and Narratives?

The socio-ideological means model of radicalization, expanded from and complementary to the 3N model of radicalization (Kruglanski, Bélanger, & Gunaratna, 2019) presented in this dissertation argues that radicalization to violent extremism is the consequence of a person with an activated need for significance selecting one or more socio-ideological means to meet their need. The second hypothesis, that the socio-ideological means to significance is comprised of two distinct but operationally inextricable parts, narrative and network, is applied most directly in this dissertation to the social psychological process underlying radicalization to violent extremism but is also relevant to many other spheres of life. Political partisanship may be explained as a form of socio-ideology wherein people categorize themselves into political groups based on shared worldviews (Jost et al., 2009) and simultaneously derive their worldviews and policy positions from their groups. Religious identity, too, is the result of a combined religious socio-ideology in which people's beliefs unite them with other believers who validate their beliefs. Racial and ethnic groups which may initially cluster together because of shared ancestry, phenotype, or discrimination and marginalization from the majority outgroup, share beliefs about the world and pass them down through ritual and tradition which simultaneously bond group members to one another, creating a socio-ideology. College students see other students at their school as members of their network not just because they go to school together but because they share a set of beliefs, at the very least, that the college they attend is worth attending (if they did not believe this, they likely would demonstrate no ingroup bias toward other students), or even more, that they share values of academic achievement, intellectual curiosity, and openness to new experiences which unite them with their fellow students, particularly those whose worldviews have led them to select the same college to attend.

One might highlight the minimal group paradigm (Tajfel et al., 1971) as proof that networks can exist without narratives. Yet, as discussed previously, the creation of groups based on any characteristic, no matter how minimal, leads people to infer a shared narrative among their fellow group members, even if this is not the case. Shared taste in art suggests a shared narrative about aesthetic value. Merely being randomly assigned to a group results in people talking with one another and discovering what they have in common, or simply assuming that they were placed in a group because they must share some sort of narrative.

What Do We Do When Our Narratives and Networks Contradict One Another?

One of the aims of this dissertation, and the methodology used in the eight studies conducted for the dissertation (see Appendices A and B), was to determine what people do when their beliefs and groups are in opposition. The results gleaned from

the studies, while unexpected, suggest that the question is inherently flawed. Instead, as posited by Hypothesis 2, narratives and networks, are, in reality, inextricably linked, forming one radicalization component – the "socio-ideology." So, networks that do not share one's narrative are abandoned or disregarded in favor of a network which does. And, narratives that are not shared by one's network are abandoned absent a psychotic disorder resulting in delusions (Coltheart et al., 2011). Therefore, perhaps a more appropriate question would be, what do we do when we feel that a part of our socio-ideology is no longer serving its purpose; when our current socio-ideology does not meet our need for significance?

We Change Our Networks to Match Our Narratives

The first option which is available in situations in which narratives and networks contradict each other is to change one's network to meet one's narrative, creating a significance-granting socio-ideology. Indeed, research on deradicalization of violent extremists has found that people whose beliefs change will often not leave their violent extremist groups until they have found an alternative network, whose members share their newfound beliefs, to join (Speckhard & Ellenberg, 2022). This suggests that ideological shifts prompt people to seek out new groups, and that an ideological shift may not be complete until the new narrative has been validated by a new network. Other research on ideological change has similarly found that religious conversion is an active process by which someone seeks out a new group when they find that their old group no longer meets their needs for identity, meaning, and purpose (Straus, 1979). Similarly, Rambo (1993) posited that religious conversion is typically preceded by some sort of crisis which leads to a cognitive change, thus prompting the person to seek a new group to meet their new cognitive needs. In other words, the ideology is not fully formed before the convert selects their new group, but they only seek out a new group because their ideology is changing. In the political arena, more ideologically cohesive (i.e., more entitative (Crawford & Salaman, 2012)) parties experience less party switching, meaning that politicians who are not satisfied with their own party's ideological strength are likely to seek out a new, ideologically stronger, political party that will better meet their social and psychological needs (O'Brien & Shomer, 2013). Additionally, in advanced democracies, politicians are more likely to switch parties when their parties endorse policy positions that are inconsistent with their ideologies (Klein, 2021), and Brazilian lawmakers and European parliamentarians were similarly found to switch parties for the sake of ideological consistency (Desposato, 2006; Hix & Noury, 2018). Moreover, Western European political parties with more authoritarian ideologies experience more party switching as well (Volpi, 2019), suggesting that rigid ideologies alone are not enough to prevent group members from changing groups. When politicians' narratives are not supported by their existing networks, meaning that they no longer have a cohesive, significance-granting socio-ideology, they switch networks to join one which shares their narrative.

We Change Our Narratives to Match Our Networks

The second option that is available when narratives and networks contradict each other is to change one's narrative to match that of one's network. Kilbourne and Richardson (1989) describe "interactionist" views of religious conversion as defining the conversion process as a journey that begins "not with faith but by trying on the roles, practices, and rituals that take place within a given religious group setting before they commit to the group's beliefs" (Snook et al., 2019, p. 231). In other words, people commit to the network and change their narrative to fit that of the group. Similarly, Long and Hadden (1983) discuss cult conversion in the context of socialization, positing that new members join cults through a "social process of creating and incorporating new members of a group from a pool of nonmembers, carried out by members and their allies" (p. 5). Adoption of the narrative is secondary to incorporation into the network. Similarly demonstrating that people often adopt narratives based on their network memberships, prior research has found that people are more likely to endorse a belief if they perceive that more people share that belief (Orticio et al., 2022). This finding does not apply to all groups, however; in-groups based on shared identities are more influential than outgroups (Crano, 2001), demonstrating that networks which do not share narratives do not hold sway over their members. In this regard, Cohen (2003) found that "attitudes toward a social policy depended almost exclusively upon the stated position of one's political party," and that "this effect overwhelmed the impact of both the policy's objective content and participants' ideological beliefs" (p. 808). Extensive research on social influence, both normative and informational, has demonstrated the immense power that networks wield in impacting people's narratives (Deutsch & Gerard, 1955; Cialdini & Goldstein, 2004). This research has found that such narrative changes often occur subconsciously, and that people often do not know that they are changing their narratives to fit those of their networks. Notably, Nolan and colleagues (2008) found that even though people rated normative beliefs as least influential in their conservation behaviors compared to other beliefs, normative beliefs were actually the strongest predictors of such behavior.

We Expand Our Set of Available Socio-Ideological Means to Significance

The first two options in the face of conflicting narratives and networks are derived from Hypothesis 2, that narratives and networks are functionally inextricable from one another; they may contradict each other, but not for very long. People derive their networks from their narratives and their narratives from their networks, and when one changes, for instance due to a religious awakening and subsequent conversion or to one's political party shifting policy positions, people shift their networks or narratives quickly, even subconsciously, to align with their new position. They do so not because they feel conflicted and forced to choose, but rather because once their narratives change, their networks no longer provide community and belonging, and once their networks change, their narratives no longer feel valid – in either case, their fundamental need for significance is no longer met by their existing socio-ideology. In some cases, however, when the need for significance is strong enough, people will aim to maximize their significance gain by adopting multiple socio-ideologies, even if they conflict with each other. For a politician with neo-conservative foreign policy

views but aiming to rise in the ranks of an increasingly isolationist political party, for example, this may result in convincing oneself that one can be a force for good in the party or that the party's policies will achieve one's own goals in the long run (Saletan, 2023). For a violent extremist who believes in a smorgasbord of conspiracy theories, this may result in a mass shooting attack and published manifesto aiming to appeal to violent misogynists, white supremacists, and anti-government accelerationists alike (Ware, 2022). Or, to a Shia, Iran-sponsored terrorist group aiming to increase its autonomy and power, this may result in collaboration with a Sunni terrorist group whose ideology paints Shia as idol worshippers (Tejeda, 2024).

Directions for Future Research

The hypotheses posed in the present dissertation were not directly tested and are, first and foremost, lessons learned from the eight studies proposed and conducted for this project. The exploratory statistical support provided for the three hypotheses presented in this dissertation is gleaned from prior research and exploratory analyses of data collected for the purpose of testing different hypotheses. Therefore, future research is necessary to test these hypotheses and provide more direct support for the overarching socio-ideological means model of radicalization.

First, research is necessary to test the first hypothesis of significance dominance – that one's susceptibility to a significance-granting socio-ideology increases as the need for significance becomes stronger. One such study could randomly assign participants to read a) a statement from a group with which they identify, claiming that the group is under threat and urging them to take whatever actions are necessary to protect their group; or b) a statement from a group with which they identify, claiming that the group is safe and secure and not in need of any special defense, thus activating the need for significance for the first group and suppressing it for the second. Participants would then complete the Radical Intentions Scale (Moskalenko & McCauley, 2009). If Hypothesis 1 is supported, participants who saw the first statement should score higher on the Radical Intentions Scale than participants who saw the second statement. Another study could similarly present participants with a statement from a group with which they identify urging them to engage in radical action in their defense (such as damaging property, Moskalenko & McCauley, 2009), either activate or satisfy the need for significance using a validated writing task used to manipulate this need (Webber et al., 2018b), ask participants how likely they are to engage in property damage in defense of their group, and then ask participants the extent to which they believe that engaging in property damage would lead to significance gain. If Hypothesis 1 is supported, participants with an activated need for significance should be more likely to engage in property damage than participants with a sated need for significance.

Second, research is also necessary to test the second hypothesis of narrative-network functional inextricability – that perceiving that network members share one's narrative increases commitment to that narrative and increases commitment to the

network, creating a single, significance-granting socio-ideology. Because narratives and networks are often developed over years of experience and are therefore difficult to effectively manipulate, longitudinal research may be a better course of action for testing this hypothesis than experimental research. For example, one such study could collect data on the political views on several issues of incoming freshmen in college and on the average political views on the same issues of large political student organizations, such as College Democrats and College Republicans. Follow-up studies with the same freshmen could be conducted monthly over the course of the year, measuring the same political views as well as their group memberships. If Hypothesis 2 is supported, students whose initial views are more similar to the average views of the political organizations should be more likely to join those groups, but students who join those groups should also report their political views becoming more consistent with the average views of their organization over time. Another study could survey people in religious conversion classes and measure whether people were more motivated by a changed narrative (e.g., a new belief system inspired by religious literature) or a changed network (e.g., a fiancé who insisted they convert before getting married) in their decision to convert. Over time, participants' adherence to their new religion's belief system and embeddedness in their new religious group would be measured. If Hypothesis 2 is supported, these variables should be strongly positively correlated, but people who began their conversion process because of a narrative shift should report a stronger increase in network embeddedness over time, demonstrating an effort to align their network with their narrative, and people who began their conversion process because of a network shift should report a stronger increase in belief system adherence over time, demonstrating an effort to align their narrative with their network.

Finally, research is necessary to test the third hypothesis of significance-driven ideological inconsistency – that people with high needs for significance will be susceptible to a greater number of significance-granting socio-ideologies than people with lower needs for significance. As with Hypothesis 2, testing Hypothesis 3 also requires accepting that people's long-held socio-ideologies are unlikely to be manipulable. The quest for significance is manipulable (Kruglanski et al., 2022), but Hypothesis 3 necessitates an assumption that people who adopt multiple socio-ideologies already have a higher quest for significance than people who do not, so attempting to induce a higher quest for significance in half of a sample of people with multiple socio-ideologies may result in a ceiling effect in the results. However, natural experiments could arise in response to global flashpoint events which create narrative divisions within existing networks. For example, a longitudinal study launched in response to a crisis event (i.e., what Leander and colleagues (2020) refer to as "rapid response research") could ask students the extent to which their peers and families support different positions about the crisis, the extent to which they identify with each of those groups (for example, by using Swann and colleagues' (2009) identity fusion scale), their need for significance, and the extent to which they support those positions. In follow-up studies, if Hypothesis 3 is supported, students should increasingly align their beliefs with those of the group with which they identify more strongly, but students with a stronger need for significance whose families and peers

support different positions should maintain high levels of support for both positions. Another way of testing Hypothesis 3 would be to measure the extent to which people identify with different social groups to which they belong (e.g., their gender identity, racial or ethnic group, religious group, sexual identity, etc.) and their quest for significance. Participants would then complete the Radical Intentions Scale (Moskalenko & McCauley, 2009) for each of the groups to which they belong. For most participants, their radical intentions should be highest for the group with which they identify most strongly, but if Hypothesis 3 is supported, participants with a higher quest for significance should report greater radical intentions related to a greater number of their identities than participants with a lower quest for significance.

Conclusion

Most social psychological theories of radicalization include at least three components: a motivational component, an ideological component, and a social component. In accordance with arguments that theories should be as general and as parsimonious as possible (Sober, 1981; Epstein, 1984), this dissertation presents a two-component model of radicalization expanded from and complementary to the 3N model of radicalization (Kruglanski, Bélanger, & Gunaratna, 2019) from which three hypotheses are derived. The two components can be described as such: first, the motivational component – the significance dominance hypothesis – and second, the socio-ideological component – the narrative-network functional inextricability hypothesis. The third hypothesis is derived from both components, that as the need for significance becomes stronger, the greater the set of available socio-ideological means becomes, growing to include more extreme socio-ideologies (Kruglanski et al., 2021) and ideologies which are inconsistent with each other. As described in the preceding chapters, the socio-ideological means model aims to provide clarity and parsimony to social psychological and other models of radicalization dating back five decades and is also supported by implications from social psychological theories of the relationship between networks and narratives posited for over a century. The socio-ideological means model also provides insights into contemporary trends in the global terrorism landscape, including the prevalence and consequences of online radicalization, increasing attacks by "lone" actors, and, relatedly, increasing attacks apparently motivated by a "mishmash" of "salad bar ideologies," according to FBI Director Christopher Wray (Barrett, 2020). Finally, the socio-ideological means model provides directions for future research on radicalization, political positions and party-switching, religious conversion, and other social psychological phenomena.

Appendix A

Study 1

Study 1 utilized a one-way, three level (high ambition, low ambition, or control), between-subjects design. Study 1 tested the hypothesis that higher ambition would predict a greater likelihood of following the narrative, whereas lower ambition would predict a greater likelihood of following the network.

Method

Materials and Measures

Ambition Manipulation. After several pilot tests of a variety of possible mechanisms for manipulating ambition, Study 1 utilized a basic writing tasks wherein participants were randomly assigned to either a) write about why ambition is a good thing for five minutes (i.e., high ambition condition), b) write about why ambition can be harmful for five minutes (i.e., low ambition condition), or c) describe their most recent meal for five minutes (i.e., control condition).

Manipulation Check. The efficacy of the manipulation was checked using the Ambition Scale (Resta et al., 2022). Participants indicated their agreement on a five-point Likert scale (1 = "Definitely disagree" to 5 = "Definitely agree") with 10 statements describing characteristics of ambitious people, such as "One of my goals is to do something that leaves a mark." In Study 1, the ambition manipulation was not effective, and there was no difference in ambition between people in the low, control, or high ambition conditions ($F(1, 93) = 0.225$, $p = 0.636$). Across all participants, reliability of the ambition scale was excellent, Cronbach's $\alpha = 0.91$.

Vignettes. Participants were randomly shown one of two "narrative" vignettes and one of two "network" vignettes, one of which promoted voting in order to support an important cause, and the other of which promoted boycotting an election in order to support an important cause. The cause described in the vignette varied depending on the cause which participants indicated was most important to them at the beginning of the study. The "narrative" vignettes presented values-driven arguments as to why participants should vote or boycott, whereas the "network" vignettes stated that the majority of members of an (unnamed) important activist group (representing the cause participants previously selected as most important to them) supported either voting in or boycotting the election. The narrative vignettes were followed by five-question quizzes to reinforce the values described in the vignettes.

Action Likelihood. Participants' likelihood of adhering to the narrative versus the network in acting in support of their important cause was measured through two items, which were tagged as "narrative" or "network" depending on which vignettes the participants saw. These items were: "How likely are you to fight for [IMPORTANT CAUSE] by voting in the next election," and "How likely are you to fight for [IMPORTANT CAUSE] by boycotting the next election as a protest?" Each item was rated on a Likert scale from 1 ("Very unlikely") to 7 ("Very likely").

Self-Ascribed Epistemic Authority Scale. Self-ascribed epistemic authority was used as a covariate in this study, measured using the Epistemic Authority Scale (Raviv et al., 1993; Raviv et al., 2003). Participants indicated their agreement on a six-point Likert scale (1 = "Definitely disagree" to 6 = "Definitely agree") with nine statements regarding their reliance on a source's knowledge, such as "In my opinion, he/she is careful to be precise with facts." The source assessed in this study is the self, so questions were phrased as following: "In my opinion, I am careful to be precise with facts." In Study 1, internal reliability was moderate, $\alpha = 0.75$.

Power Scale. Need for power was used as a covariate in this study, measured using the Social-Motivation Power Scale (Good & Good, 1972). Participants answered "yes" or "no" to 17 items related to participants' motivation to attain positions of power, such as, "Did you ever seek election to a class office in high school," and "Are you now or have you ever been a military officer," and "In the future, do you hope to run for political office?" In Study 1, internal reliability was moderate, $\alpha = 0.71$.

Self-Esteem Scale. Self-esteem was used as a covariate in this study, measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Participants rated ten items, such as "On the whole, I am satisfied with myself" and "I take a positive attitude toward myself," on a four-point Likert scale (1 = "Strongly agree" to 4 = "Strongly disagree"). Higher scores therefore reflect lower self-esteem. In Study 1, internal reliability was good, $\alpha = 0.87$.

Maximizing Tendency Scale. Given that ambition is proposed to reflect a maximizing tendency toward significance, the Maximizing Tendency Scale (Diab, Gillespie, & Highhouse, 2008), adapted so that statements referred to significance, was included as a covariate. Participants rated nine statements, such as, "When it comes to feeling significant and like I matter, I don't like having to settle for 'good enough,'" and "When it comes to feeling significant and like I matter, I am uncomfortable making decisions before I know all of my options," on a five-point Likert scale (1 = "Completely disagree" to 5 = "Completely agree"). In Study 1, internal reliability was good, $\alpha = 0.82$.

Voting History. Whether participants voted in the 2020 election was also included as a covariate. Participants answered "yes" or "no" to a single item: Did you vote in the 2020 presidential election?"

Participants and Procedures

A G*Power analysis for a one-way MANCOVA with a 0.25 effect size, alpha of 0.05, power of 0.90, and five covariates recommended a sample size of 60. I used a 0.25 effect size based on Cohen's (1988) recommendation of small, medium, and large effect sizes as 0.2, 0.5, and 0.8, respectively. I recruited 101 participants through Prolific, all of whom were eligible to vote in the 2024 U.S. election and thought that one of the four issue areas (climate change, gun rights, racial justice, pro-life policies) was very important in the election. Pro-life participants were recruited separately and therefore did not need to select their most important topic. For the remaining 75 participants, the first step in the study after providing informed consent was to select which of the three topics (climate change, gun rights, racial justice) was most important to them. The rest of the study was identical for all participants. Study 1

included 101 participants (60% women; 68% white; M_{Age} = 35.37, SD_{Age} = 11.57). Due to prior difficulties recruiting pro-life participants in the pilot studies, 25 pro-life participants were recruited in a targeted Prolific study. Of the remaining 75 participants, 40 selected climate change as their most important issue, 12 selected gun rights, and 23 selected racial justice.

Participants were randomly assigned to one of three writing tasks, as described above. After completing this task, participants completed the Ambition Scale (Resta et al., 2022). The participants were then randomly assigned to read either a) a "narrative" vignette promoting voting and b) a "network" vignette promoting boycotting the next election, or a) a "narrative" vignette promoting boycotting the next election and b) a "network" vignette promoting voting. The order of the vignettes was counterbalanced in order to control for order effects. The specific content of the vignettes was determined by the political issue initially selected by the participants. For example, a participant who indicated that their most important political issue is racial justice will see either a) an article describing voting as a sacred American ritual which should be used to protect the fundamental value of racial equality and to pursue the noble cause of racial justice and b) a statement that the majority of members of an important racial justice activist group supported boycotting the election, or a) an article describing boycotting elections as a longtime, proven method for pursuing and achieving the sacred value of racial justice and b) a statement that the majority of members of an important racial justice activist group supporting voting in the election.

After reading the narrative vignettes, participants answered five multiple-choice questions about the vignette that they just read. The, the participants were asked to indicate their likelihood of voting and of boycotting the next election in order to demonstrate their commitment to their important cause. For example, the participant described above saw the following two questions: "How likely are you to fight for racial justice by voting in the next election," and "How likely are you to fight for racial justice by boycotting the next election as a protest?" Next, participants completed the covariate scales listed previously, which were presented in a random order. Finally, participants were debriefed and told that the vignettes they read were fabricated and that it is important to vote. They were thanked and paid $4.00 for their participation.

Design

Study 1 was a one-way, three-level between-subjects design which used a one-way MANCOVA in which likelihood of following the narrative and likelihood of following the network were the outcome variables, measured ambition was the predictor, and self-ascribed epistemic authority, power, self-esteem, maximizing tendency, and voting likelihood were included as covariates.

Participants' answers to the writing task were used as a data quality check, and those (n = 6) who did not write a response to the question posed to them (e.g., wrote about the topic that was most important to them in the election instead of writing about why

ambition can be dangerous, wrote that they did not think ambition could ever be dangerous when asked to do so) were excluded from the analyses.

Additionally, the ambition manipulation was not effective, and there was no difference in ambition between people in the low, control, or high ambition conditions ($F(1, 93) = 0.225$, $p = 0.636$). Therefore, the continuous measure of ambition was used as the key predictor for Hypothesis 1, rather than the experimental condition.

Results

Descriptive statistics and correlations for each of the variables measured in Study 1 are presented in Table 1.

A one-way MANCOVA revealed that measured ambition was not a significant predictor of likelihood of following the narrative nor likelihood of following the network, (Wilks' $\lambda = 0.99$, $F_{(2,76)} = 0.54$, $p = .59$, $\eta^2_p = .014$). None of the covariates were significant predictors of narrative and network likelihood, either.

Discussion and Limitations

The first study conducted for this dissertation posed several limitations. First, the sample size was not large enough to detect a small effect size. Unfortunately, I used an effect size of 0.25 as a default and was unaware of more recent recommendations of using an effect size of 0.10 in power analyses (Gignac & Szodorai, 2016). However, a small sample size likely did not contribute to the failure of the ambition manipulation, as the participants in the control group had the highest score on the ambition measure, followed by participants in the low ambition group. Participants in the high ambition condition had the lowest score on the ambition measure. This manipulation was expected to work given its similarity to value-affirmation tasks (Crocker et al., 2008). However, it may not have been as effective among participants who did not already see ambition as important, as value-affirmation tasks typically ask participants to select which value to write about rather than being assigned one. Additionally, although measured ambition was positively correlated with likelihood of following the narrative, *Pearson's r* was so small ($r = 0.11$, $p = 0.30$) as to suggest that a larger sample size might not have detected a significant effect.

A second limitation beyond the sample size, then, was the failure of the ambition manipulation. Although six participants were excluded because they did not complete the manipulation task correctly, the rest of the participants wrote meaningfully and at length about the topic they were assigned. However, a reverse-priming effect may have occurred in which someone who thinks of themselves as not being very ambitious writes about the importance of ambition, feels reinforced in their belief that they are not ambitious, and responds to the questionnaire about ambition accordingly. Similarly, someone who sees themselves as very ambitious and thinks ambition is important might, after being told to write about the dangers of ambition, feel more set in their view of ambition if they were to write arguments they did not

believe (Laran, Dalton, & Andrade, 2011). Although the manipulation was not effective, measured ambition also did not have an effect on likelihood of following narrative or network, however, so it is unlikely that a more effective manipulation would have revealed an undetected effect of ambition that was not detected in the present study.

Study 2

Study 2 utilized a one-way, three level (high self-ascribed epistemic authority, low self-ascribed epistemic authority, or control), between-subjects design. Study 2 tested the hypothesis that higher self-ascribed epistemic authority would predict a greater likelihood of following the narrative, whereas lower self-ascribed epistemic authority would predict a greater likelihood of following the network.

Method

Materials and Measures

Self-Ascribed Epistemic Authority Manipulation. To manipulate participants' self-ascribed epistemic authority, Study 2 utilized a basic writing task wherein participants were randomly assigned to either a) write about a time they felt like an expert on the topic they previously selected as being important to them for five minutes (i.e., high SAEA condition), b) write about a time they felt like an amateur or novice about the topic they previously selected as being important to them for five minutes (i.e., low SAEA condition), or c) describe their most recent meal for five minutes (i.e., control condition).

Manipulation Check. Self-ascribed epistemic authority was used as a covariate in this study, measured using the Epistemic Authority Scale (Raviv et al., 1993; Raviv et al., 2003). Participants indicated their agreement on a six-point Likert scale (1 = "Definitely disagree" to 6 = "Definitely agree") with nine statements regarding their reliance on a source's knowledge, such as "In my opinion, he/she is careful to be precise with facts." The source assessed in this study is the self, so questions were phrased as following: "In my opinion, I am careful to be precise with facts." In Study 2, For those who completed the self-ascribed epistemic authority manipulation correctly, the manipulation was effective ($F(1, 87) = 5.946$, $p < 0.05$), with a significant difference between those in the high ($M = 46.31$, $SD = 7.69$; Cronbach's $\alpha = 0.85$) and low ($M = 41.93$, $SD = 7.35$; Cronbach's $\alpha = 0.81$) *SAEA* conditions but not between the high and low conditions and the control condition ($M = 45.64$, $SD = 5.48$; Cronbach's $\alpha = 0.72$). Across all participants, reliability of the ambition scale was good, Cronbach's $\alpha = 0.80$.

Vignettes. Participants were randomly shown one of two "narrative" vignettes and one of two "network" vignettes, one of which promoted voting in order to support an important cause, and the other of which promoted boycotting an election in order to support an important cause. The cause described in the vignette varied depending on the cause which participants indicated was most important to them at the beginning of the study. The "narrative" vignettes presented values-driven arguments as to why participants should vote or boycott, whereas the "network" vignettes stated that the

majority of members of an (unnamed) important activist group (representing the cause participants previously selected as most important to them) supported either voting in or boycotting the election. The narrative vignettes were followed by five-question quizzes to reinforce the values described in the vignettes.

Action Likelihood. Participants' likelihood of adhering to the narrative versus the network in acting in support of their important cause was measured through two items, which were tagged as "narrative" or "network" depending on which vignettes the participants saw. These items were: "How likely are you to fight for [IMPORTANT CAUSE] by voting in the next election," and "How likely are you to fight for [IMPORTANT CAUSE] by boycotting the next election as a protest?" Each item was rated on a Likert scale from 1 ("Very unlikely") to 7 ("Very likely").

Ambition Scale. The efficacy of the manipulation was checked using the Ambition Scale (Resta et al., 2022). Participants indicated their agreement on a five-point Likert scale (1 = "Definitely disagree" to 5 = "Definitely agree") with 10 statements describing characteristics of ambitious people, such as "One of my goals is to do something that leaves a mark." In Study 2, internal reliability was excellent, $\alpha = 0.93$.

Power Scale. Need for power was used as a covariate in this study, measured using the Social-Motivation Power Scale (Good & Good, 1972). Participants answered "yes" or "no" to 17 items related to participants' motivation to attain positions of power, such as, "Did you ever seek election to a class office in high school," and "Are you now or have you ever been a military officer," and "In the future, do you hope to run for political office?" In Study 2, internal reliability was good, $\alpha = 0.85$.

Self-Esteem Scale. Self-esteem was used as a covariate in this study, measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Participants rated ten items, such as "On the whole, I am satisfied with myself" and "I take a positive attitude toward myself," on a four-point Likert scale (1 = "Strongly agree" to 4 = "Strongly disagree"). Higher scores therefore reflect lower self-esteem. In Study 2, internal reliability was excellent, $\alpha = 0.91$.

Maximizing Tendency Scale. Given that ambition is proposed to reflect a maximizing tendency toward significance, the Maximizing Tendency Scale (Diab, Gillespie, & Highhouse, 2008), adapted so that statements referred to significance, was included as a covariate. Participants rated nine statements, such as, "When it comes to feeling significant and like I matter, I don't like having to settle for 'good enough,'" and "When it comes to feeling significant and like I matter, I am uncomfortable making decisions before I know all of my options," on a five-point Likert scale (1 = "Completely disagree" to 5 = "Completely agree"). In Study 2, internal reliability was good, $\alpha = 0.89$.

Voting History. Whether participants voted in the 2020 election was also included as a covariate. Participants answered "yes" or "no" to a single item: Did you vote in the 2020 presidential election?"

Participants and Procedures

A G*Power analysis for a one-way MANCOVA, 0.25 effect size, alpha of 0.05, power of 0.90, and five covariates recommended a sample size of 60. I used a 0.25 effect size based on Cohen's (1988) recommendation of small, medium, and large effect sizes as 0.2, 0.5, and 0.8, respectively. I recruited 100 participants through

Prolific, all of whom were eligible to vote in the 2024 U.S. election and thought that one of the four issue areas (climate change, gun rights, racial justice, pro-life policies) was very important in the election. As noted previously, pro-life participants were recruited separately and therefore did not need to select their most important topic. For the remaining 75 participants, the first step in the study after providing informed consent was to select which of the three topics (climate change, gun rights, racial justice) was most important to them. The rest of the study was identical for all participants. Study 2 included 100 participants (69% women; 63% white; M_{Age} = 39.02, SD_{Age} = 11.83). Due to prior difficulties recruiting pro-life participants in the pilot studies, 25 pro-life participants were recruited in a targeted Prolific study. Of the remaining 75 participants, 33 selected climate change as their most important issue, 10 selected gun rights, and 32 selected racial justice.

Participants were randomly assigned to one of three writing tasks, as described above. After completing this task, participants completed the Epistemic Authority Scale (Raviv et al., 1993; Raviv et al., 2003). The participants were then randomly assigned to read either a) a "narrative" vignette promoting voting and b) a "network" vignette promoting boycotting the next election, or a) a "narrative" vignette promoting boycotting the next election and b) a "network" vignette promoting voting. The order of the vignettes was counterbalanced in order to control for order effects. The specific content of the vignettes was determined by the political issue initially selected by the participants. For example, a participant who indicated that their most important political issue is racial justice will see either a) an article describing voting as a sacred American ritual which should be used to protect the fundamental value of racial equality and to pursue the noble cause of racial justice and b) a statement that the majority of members of an important racial justice activist group supported boycotting the election, or a) an article describing boycotting elections as a longtime, proven method for pursuing and achieving the sacred value of racial justice and b) a statement that the majority of members of an important racial justice activist group supporting voting in the election.

After reading the narrative vignettes, participants answered five multiple-choice questions about the vignette that they just read. The participants were asked to indicate their likelihood of voting and of boycotting the next election in order to demonstrate their commitment to their important cause. For example, the participant described above saw the following two questions: "How likely are you to fight for racial justice by voting in the next election," and "How likely are you to fight for racial justice by boycotting the next election as a protest?" Next, participants completed the covariate scales listed previously, which were presented in a random order. Finally, participants were debriefed and told that the vignettes they read were fabricated and that it is important to vote. They were thanked and paid $4.00 for their participation.

Design

Study 2 was a one-way, three-level between-subjects design which used a one-way MANCOVA in which likelihood of following the narrative and likelihood of

following the network were the outcome variables, self-ascribed epistemic authority was the predictor, and ambition, power, self-esteem, maximizing tendency, and voting likelihood were the covariates.

Participants' answers to the writing task were used as a data quality check, and those (n = 11) who did not write a response to the question posed to them (e.g., wrote about the topic that was most important to them in the election instead of writing about a time they felt like an expert on the topic, wrote that they had never felt like an expert on the topic, or wrote about a time they felt like an expert on an unrelated topic) were excluded from the analyses.

For those who completed the self-ascribed epistemic authority manipulation correctly, the manipulation was effective ($F(1, 87) = 5.946$, $p < 0.05$), with a significant difference between those in the high ($M = 46.31$, $SD = 7.69$) and low ($M = 41.93$, $SD = 7.35$) *SAEA* conditions but not between the high and low conditions and the control condition ($M = 45.64$, $SD = 5.48$).

Results

Descriptive statistics for each of the variables measured in Study 2 are presented in Table 2.

A one-way MANCOVA revealed that self-ascribed epistemic authority condition was not a significant predictor of likelihood of following the narrative nor likelihood of following the network, (Wilks' $\lambda = 0.96$, $F_{(4,130)} = 0.60$ $p = .67$, $\eta^2_p = .018$). Of the covariates, only self-esteem significantly predicted likelihood of following the narrative and network, (Wilks' $\lambda = 0.89$, $F_{(2,65)} = 4.01$ $p < 0.05$, $\eta^2_p = .11$). Specifically, people with higher self-esteem were more likely to follow the narrative than people with lower self-esteem, ($F_{(1,66)} = 7.13$ $p < 0.05$, $\eta^2_p = .097$).

Discussion and Limitations

The second study conducted for this dissertation posed several limitations. Like the first study, the sample size was not large enough to detect a small effect size. Unfortunately, I used an effect size of 0.25 as a default and was unaware of more recent recommendations of using an effect size of 0.10 in power analyses (Gignac & Szodorai, 2016). Notably, although the SAEA condition was not a significant predictor of following the narrative nor network, means revealed that participants in the high SAEA condition did have the highest likelihood of following the network (m = 4.73, sd = 2.44) and participants in the low SAEA condition had the lowest likelihood of following the network (m = 3.67, sd = 2.40). Additionally, participants in the high SAEA condition had the lowest likelihood of following the narrative (m = 4.27, sd = 2.51) and participants in the low SAEA condition had the highest likelihood of following the narrative (m = 4.60, sd = 2.55). These results are in the opposite direction to that hypothesized, as people with high SAEA were predicted to be more likely to follow the narrative and less likely to follow the network. Thus, it is unlikely that a larger sample size would have detected the hypothesized effect.

Study 3

Study 3 used two two (high ambition or low ambition in one model and high SAEA or low SAEA in the other) by three (high prestige, low prestige, or control) between-subjects designs. Study 3 tested the hypothesis that that when a group is more prestigious, the effects of low ambition and low self-ascribed epistemic authority on preference for network over narrative will be amplified.

Method

Materials and Measures

Ambition Manipulation. After several pilot tests of a variety of possible mechanisms for manipulating ambition, Study 3 utilized a basic writing tasks wherein participants were randomly assigned to either a) write about why ambition is a good thing for five minutes (i.e., high ambition condition), or b) write about why ambition can be harmful for five minutes (i.e., low ambition condition).

Ambition Manipulation Check. The efficacy of the manipulation was checked using the Ambition Scale (Resta et al., 2022). Participants indicated their agreement on a five-point Likert scale (1 = "Definitely disagree" to 5 = "Definitely agree") with 10 statements describing characteristics of ambitious people, such as "One of my goals is to do something that leaves a mark." In Study 3, the ambition manipulation was effective ($F(1, 69) = 9.06$, $p < 0.01$), with a significant difference in ambition between those in the high ($M = 4.09$, $SD = 0.69$, Cronbach's $\alpha = 0.87$) and low ($M = 3.59$, $SD = 0.73$, Cronbach's $\alpha = 0.87$) ambition conditions. Across all participants, reliability of the ambition scale was good, Cronbach's $\alpha = 0.88$.

Self-Ascribed Epistemic Authority Manipulation. To manipulate participants' self-ascribed epistemic authority, Study 3 utilized a basic writing task wherein participants were randomly assigned to either a) write about a time they felt like an expert on the topic they previously selected as being important to them for five minutes (i.e., high SAEA condition), or b) write about a time they felt like an amateur or novice about the topic they previously selected as being important to them for five minutes (i.e., low SAEA condition).

Self-Ascribed Epistemic Authority Manipulation Check. Self-ascribed epistemic authority was measured using the Epistemic Authority Scale (Raviv et al., 1993; Raviv et al., 2003). Participants indicated their agreement on a six-point Likert scale (1 = "Definitely disagree" to 6 = "Definitely agree") with nine statements regarding their reliance on a source's knowledge, such as "In my opinion, he/she is careful to be precise with facts." The source assessed in this study is the self, so questions were phrased as following: "In my opinion, I am careful to be precise with facts." In Study 3, the SAEA manipulation was not effective, and there was no difference in SAEA scores between participants in the high and low conditions ($F(1, 54) = 0.58$, $p = 0.45$). Across all participants, reliability of the ambition scale was good, Cronbach's $\alpha = 0.80$.

Vignettes. Participants were randomly shown one of two "narrative" vignettes and one of two "network" vignettes, one of which promoted voting in order to support an important cause, and the other of which promoted boycotting an election in order to

support an important cause. The cause described in the vignette varied depending on the cause which participants indicated was most important to them at the beginning of the study. The "narrative" vignettes presented values-driven arguments as to why participants should vote or boycott, whereas the "network" vignettes stated that the majority of members of an (unnamed) activist group (representing the cause participants previously selected as most important to them) supported either voting in or boycotting the election. The narrative vignettes were followed by five-question quizzes to reinforce the values described in the vignettes. For the network statements, participants were randomly assigned to see a statement describing the activist group as important (i.e., control condition and the descriptor used for the groups in the vignettes in Studies 1 and 2), prestigious, or non-prestigious. The prestige manipulation was presented as part of the vignettes and the participants were not presented with a separate manipulation check to examine whether participants perceived the group in the vignette as prestigious.

Action Likelihood. Participants' likelihood of adhering to the narrative versus the network in acting in support of their important cause was measured through two items, which were tagged as "narrative" or "network" depending on which vignettes the participants saw. These items were: "How likely are you to fight for [IMPORTANT CAUSE] by voting in the next election," and "How likely are you to fight for [IMPORTANT CAUSE] by boycotting the next election as a protest?" Each item was rated on a Likert scale from 1 ("Very unlikely") to 7 ("Very likely").

Power Scale. Need for power was used as a covariate in this study, measured using the Social-Motivation Power Scale (Good & Good, 1972). Participants answered "yes" or "no" to 17 items related to participants' motivation to attain positions of power, such as, "Did you ever seek election to a class office in high school," and "Are you now or have you ever been a military officer," and "In the future, do you hope to run for political office?" In Study 3, internal reliability was good, $\alpha = 0.86$.

Self-Esteem Scale. Self-esteem was used as a covariate in this study, measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Participants rated ten items, such as "On the whole, I am satisfied with myself" and "I take a positive attitude toward myself," on a four-point Likert scale (1 = "Strongly agree" to 4 = "Strongly disagree"). Higher scores therefore reflect lower self-esteem. In Study 3, internal reliability was excellent, $\alpha = 0.90$.

Maximizing Tendency Scale. Given that ambition is proposed to reflect a maximizing tendency toward significance, the Maximizing Tendency Scale (Diab, Gillespie, & Highhouse, 2008), adapted so that statements referred to significance, was included as a covariate. Participants rated nine statements, such as, "When it comes to feeling significant and like I matter, I don't like having to settle for 'good enough,'" and "When it comes to feeling significant and like I matter, I am uncomfortable making decisions before I know all of my options," on a five-point Likert scale (1 = "Completely disagree" to 5 = "Completely agree"). In Study 3, internal reliability was good, $\alpha = 0.86$.

Voting History. Whether participants voted in the 2020 election was also included as a covariate. Participants answered "yes" or "no" to a single item: Did you vote in the 2020 presidential election?"

Participants and Procedures

A G*Power analysis for a 2x3 MANCOVA with two dependent variables, 0.25 effect size, alpha of 0.05, power of 0.90, and five covariates) recommended a sample size of 36. I used a 0.25 effect size based on Cohen's (1988) recommendation of small, medium, and large effect sizes as 0.2, 0.5, and 0.8, respectively. I recruited 76 (one participants' response was delayed in Qualtrics and therefore I recruited one additional participant before the response was recorded) participants for Study 3 through Prolific, all of whom were eligible to vote in the 2024 U.S. election and thought that one of the four issue areas (climate change, gun rights, racial justice, pro-life policies) was very important in the election. As noted previously, pro-life participants were recruited separately and therefore did not need to select their most important topic. For the remaining 56 participants, the first step in the study after providing informed consent was to select which of the three topics (climate change, gun rights, racial justice) was most important to them. The rest of the study was identical for all participants. Study 3 included 76 participants (47.4% women; 55.3% white; M_{Age} = 40.14, SD_{Age} = 11.99). Due to prior difficulties recruiting pro-life participants in the pilot studies, 20 pro-life participants were recruited in a targeted Prolific study. Of the remaining 56 participants, 24 selected climate change as their most important issue, eight selected gun rights, and 23 selected racial justice.

Participants were randomly assigned to the high or low ambition conditions and the high or low SAEA conditions, the order of which was randomized. The participants were then randomly assigned to read either a) a "narrative" vignette promoting voting and b) a "network" vignette promoting boycotting the next election, or a) a "narrative" vignette promoting boycotting the next election and b) a "network" vignette promoting voting. The order of the vignettes was counterbalanced in order to control for order effects. The specific content of the vignettes was determined by the political issue initially selected by the participants, and the network vignette included the network prestige manipulation, which was randomly assigned. For example, a participant who indicated that their most important political issue is racial justice saw either a) an article describing voting as a sacred American ritual which should be used to protect the fundamental value of racial equality and to pursue the noble cause of racial justice and b) a statement that the majority of members of an [important/prestigious/unprestigious] racial justice activist group supported boycotting the election, or a) an article describing boycotting elections as a longtime, proven method for pursuing and achieving the sacred value of racial justice and b) a statement that the majority of members of an [important/prestigious/unprestigious] racial justice activist group supported voting in the election.

The participants were then asked to indicate their likelihood of voting and of boycotting the next election in order to demonstrate their commitment to their important cause. For example, the participant described above saw the following two questions: "How likely are you to fight for racial justice by voting in the next election," and "How likely are you to fight for racial justice by boycotting the next election as a protest?" Next, participants completed the covariate scales listed previously, which were presented in a random order. Finally, participants were

debriefed and told that the vignettes they read were fabricated and that it is important to vote. They were thanked and paid $6.00 for their participation.

Design

Study 3 utilized two 2x3 factorial designs in which likelihood of following the narrative and likelihood of following the network were the outcome variables. In the first model, ambition and prestige were the predictors, and self-ascribed epistemic authority, power, self-esteem, maximizing tendency, and voting likelihood were the covariates. In the second model, self-ascribed epistemic authority and prestige were the predictors, and ambition, power, self-esteem, maximizing tendency, and voting likelihood were the covariates.

Participants' answers to the writing tasks were used as a data quality check, and those who did not write a response to the question posed to them for either the SAEA (n = 20 participants excluded) or ambition (n = 5 participants excluded) manipulations were excluded from the analyses.

For those who completed the ambition manipulation correctly, the manipulation was effective ($F(1, 69) = 9.06$, $p < 0.01$), with a significant difference in ambition between those in the high ($M = 4.09$, $SD = 0.69$) and low ($M = 3.59$, $SD = 0.73$) ambition conditions.

For those who completed the self-ascribed epistemic authority manipulation correctly, the manipulation was not effective ($F(1, 54) = 0.58$, $p = 0.45$), with no significant difference between those in the high and low SAEA conditions.

Results

Descriptive statistics and correlations for each of the variables measured in Study 3 are presented in Table 3.

The first MANCOVA revealed that the interaction between ambition condition and prestige was not a significant predictor of likelihood of following the narrative nor likelihood of following the network, (Wilks' $\lambda = 0.96$, $F_{(4,46)} = 0.24$, $p = .91$, $\eta^2_p = .021$). None of the covariates were significant predictors in the model.

The second MANCOVA revealed that the interaction between measured self-ascribed epistemic authority and prestige was not a significant predictor of likelihood of following the narrative nor likelihood of following the network, (Wilks' $\lambda = 0.83$, $F_{(4,46)} = 1.15$, $p = .35$, $\eta^2_p = .091$). None of the covariates were significant predictors in the model.

Discussion and Limitations

The third study conducted for this dissertation posed several limitations. Like the first two studies, the sample size was not large enough to detect a small effect size. Unfortunately, I used an effect size of 0.25 as a default and was unaware of more recent recommendations of using an effect size of 0.10 in power analyses (Gignac &

Szodorai, 2016). Notably, although prestige condition was not a significant predictor of following the narrative nor network, contrary to the hypothesis for Study 3, means revealed that participants in the high prestige condition had the lowest likelihood of following the network (m = 4.00, sd = 2.24) and the highest likelihood of following the narrative (m = 4.40, sd = 2.50), while people in the low prestige condition had the highest likelihood of following the network (m = 4.79, sd = 2.12) and the lowest likelihood of following the narrative (m = 3.42, sd = 2.14) suggesting that a larger sample size may not have produced the hypothesized effect. Additionally, while means by ambition condition were in the hypothesized direction for following the narrative, with people in the high ambition condition reporting a higher likelihood of following the narrative (m = 4.27, sd = 2.43) than people in the low ambition condition (m = 4.17, sd = 2.44), means for the ambition condition also showed that people in the high ambition condition reported a higher likelihood of following the network (m = 4.46, sd = 2.42) than people in the low ambition condition (m = 3.51, sd = 2.36). These results were contrary to the hypothesized effect. Finally, measured SAEA was significantly positively correlated with likelihood of following the network (r = 0.25, $p < 0.05$) and negatively correlated with likelihood of following the narrative (r = -0.06, p = 0.61), contrary to the hypothesized effect. These results suggest that a larger sample size would have been unlikely to produce the hypothesized effects.

Another limitation of Study 3 is that there was no manipulation check for the prestige manipulation. Because the manipulation was merely to read that a group was prestigious or not prestigious (or important, the term used to describe the networks in Studies 1 and 2), it is entirely possible that many participants did not read the statement at all or, if they did, that they did not believe that the group really was or was not prestigious because they were not given the name of the group. This was done on purpose, as naming the group as a real activist group would likely have resulted in participants drawing their own conclusions about the group based on prior knowledge, and naming it as a fictional group may have led to participants assuming that the group was neither prestigious nor important because they had never heard of it. In a future study, the effectiveness of the manipulation could be assessed using the epistemic authority measure (Raviv et al., 1993; Raviv et al., 2003) applied to the group, given the tendency for people to infer epistemic authority based on indicators of prestige (Lassiter, 2022). Notably, there was no significant effect of the prestige manipulation on likelihood of following the network, and participants in the low prestige group had the highest mean likelihood of following the network (m = 5.23, sd = 2.09) whereas participants in the control (m = 3.93, sd = 2.53) and high prestige (m = 3.94, sd = 2.05) groups had nearly the same network likelihood scores, contrary to the predicted effect of high prestige increasing the attractiveness of the network. Therefore, future studies might also use different network prestige manipulations, such as presenting college students with university rankings and acceptance rates as an indicator of prestige of their university (e.g., Dearden, Grewal, & Lilien, 2019).

Study 4

Study 4 used two two (high ambition or low ambition in one model and high SAEA or low SAEA in the other) by three (large group, small group, or control) between-subjects designs. Study 4 tested the hypothesis that the positive effects of high ambition and high SAEA on following the narrative over the network would be suppressed if the network was large.

Method

Materials and Measures

Ambition Manipulation. After several pilot tests of a variety of possible mechanisms for manipulating ambition, Study 4 utilized a basic writing tasks wherein participants were randomly assigned to either a) write about why ambition is a good thing for five minutes (i.e., high ambition condition), b) write about why ambition can be harmful for five minutes (i.e., low ambition condition), or c) describe their most recent meal for five minutes (i.e., control condition).

Ambition Manipulation Check. The efficacy of the manipulation was checked using the Ambition Scale (Resta et al., 2022). Participants indicated their agreement on a five-point Likert scale (1 = "Definitely disagree" to 5 = "Definitely agree") with 10 statements describing characteristics of ambitious people, such as "One of my goals is to do something that leaves a mark." In Study 4, the ambition manipulation was not effective, with no difference in ambition between participants in the high and low conditions. Across all participants, reliability of the ambition scale was excellent, Cronbach's $\alpha = 0.94$.

Self-Ascribed Epistemic Authority Manipulation. To manipulate participants' self-ascribed epistemic authority, Study 4 utilized a basic writing task wherein participants were randomly assigned to either a) write about a time they felt like an expert on the topic they previously selected as being important to them for five minutes (i.e., high SAEA condition), b) write about a time they felt like an amateur or novice about the topic they previously selected as being important to them for five minutes (i.e., low SAEA condition), or c) describe their most recent meal for five minutes (i.e., control condition).

Self-Ascribed Epistemic Authority Manipulation Check. Self-ascribed epistemic authority was measured using the Epistemic Authority Scale (Raviv et al., 1993; Raviv et al., 2003). Participants indicated their agreement on a six-point Likert scale (1 = "Definitely disagree" to 6 = "Definitely agree") with nine statements regarding their reliance on a source's knowledge, such as "In my opinion, he/she is careful to be precise with facts." The source assessed in this study is the self, so questions were phrased as following: "In my opinion, I am careful to be precise with facts." In Study 4, the manipulation was not effective, and there was no difference in SAEA between participants in the high and low conditions. Across all participants, reliability of the SAEA scale was good, Cronbach's $\alpha = 0.86$.

Vignettes. Participants were randomly shown one of two "narrative" vignettes and one of two "network" vignettes, one of which promoted voting in order to support an important cause, and the other of which promoted boycotting an election in order to support an important cause. The cause described in the vignette varied depending on

the cause which participants indicated was most important to them at the beginning of the study. The "narrative" vignettes presented values-driven arguments as to why participants should vote or boycott, whereas the "network" vignettes stated that the majority of members of an (unnamed) activist group (representing the cause participants previously selected as most important to them) supported either voting in or boycotting the election. The narrative vignettes were followed by five-question quizzes to reinforce the values described in the vignettes. For the network statements, participants were randomly assigned to see a statement describing the activist group as important (i.e., control condition), large, or small. The network size manipulation was presented as part of the vignettes and the participants were not presented with a separate manipulation check to examine whether participants perceived the group in the vignette as large or small.

Action Likelihood. Participants' likelihood of adhering to the narrative versus the network in acting in support of their important cause was measured through two items, which were tagged as "narrative" or "network" depending on which vignettes the participants saw. These items were: "How likely are you to fight for [IMPORTANT CAUSE] by voting in the next election," and "How likely are you to fight for [IMPORTANT CAUSE] by boycotting the next election as a protest?" Each item was rated on a Likert scale from 1 ("Very unlikely") to 7 ("Very likely").

Power Scale. Need for power was used as a covariate in this study, measured using the Social-Motivation Power Scale (Good & Good, 1972). Participants answered "yes" or "no" to 17 items related to participants' motivation to attain positions of power, such as, "Did you ever seek election to a class office in high school," and "Are you now or have you ever been a military officer," and "In the future, do you hope to run for political office?" In Study 4, internal reliability was good, $\alpha = 0.81$.

Self-Esteem Scale. Self-esteem was used as a covariate in this study, measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Participants rated ten items, such as "On the whole, I am satisfied with myself" and "I take a positive attitude toward myself," on a four-point Likert scale (1 = "Strongly agree" to 4 = "Strongly disagree"). Higher scores therefore reflect lower self-esteem. In Study 4, internal reliability was good, $\alpha = 0.89$.

Maximizing Tendency Scale. Given that ambition is proposed to reflect a maximizing tendency toward significance, the Maximizing Tendency Scale (Diab, Gillespie, & Highhouse, 2008), adapted so that statements referred to significance, was included as a covariate. Participants rated nine statements, such as, "When it comes to feeling significant and like I matter, I don't like having to settle for 'good enough,'" and "When it comes to feeling significant and like I matter, I am uncomfortable making decisions before I know all of my options," on a five-point Likert scale (1 = "Completely disagree" to 5 = "Completely agree"). In Study 4, internal reliability was good, $\alpha = 0.85$.

Voting History. Whether participants voted in the 2020 election was also included as a covariate. Participants answered "yes" or "no" to a single item: Did you vote in the 2020 presidential election?"

Participants and Procedures

A G*Power analysis for a 2x3 MANCOVA with two dependent variables, 0.25 effect size, alpha of 0.05, power of 0.90, and five covariates) recommended a sample size of 36. I used a 0.25 effect size based on Cohen's (1988) recommendation of small, medium, and large effect sizes as 0.2, 0.5, and 0.8, respectively. I recruited 75 participants for Study 4 through Prolific, all of whom were eligible to vote in the 2024 U.S. election and thought that one of the four issue areas (climate change, gun rights, racial justice, pro-life policies) was very important in the election. As noted previously, pro-life participants were recruited separately and therefore did not need to select their most important topic. For the remaining 56 participants, the first step in the study after providing informed consent was to select which of the three topics (climate change, gun rights, racial justice) was most important to them. The rest of the study was identical for all participants. Study 4 included 75 participants (62.7% women; 60.0% white; M_{Age} = 38.80, SD_{Age} = 12.75). Due to prior difficulties recruiting pro-life participants in the pilot studies, 19 pro-life participants were recruited in a targeted Prolific study. Of the remaining 56 participants, 11 selected climate change as their most important issue, 17 selected gun rights, and 28 selected racial justice.

Participants were randomly assigned to the high or low ambition conditions and the high or low SAEA conditions, the order of which was randomized. The participants were then randomly assigned to read either a) a "narrative" vignette promoting voting and b) a "network" vignette promoting boycotting the next election, or a) a "narrative" vignette promoting boycotting the next election and b) a "network" vignette promoting voting. The order of the vignettes was counterbalanced in order to control for order effects. The specific content of the vignettes was determined by the political issue initially selected by the participants, and the network vignette included the network size manipulation, which was randomly assigned. For example, a participant who indicated that their most important political issue is racial justice saw either a) an article describing voting as a sacred American ritual which should be used to protect the fundamental value of racial equality and to pursue the noble cause of racial justice and b) a statement that the majority of members of an [important/large/small] racial justice activist group supported boycotting the election, or a) an article describing boycotting elections as a longtime, proven method for pursuing and achieving the sacred value of racial justice and b) a statement that the majority of members of an [important/large/small] racial justice activist group supported voting in the election.

The participants were then asked to indicate their likelihood of voting and of boycotting the next election in order to demonstrate their commitment to their important cause. For example, the participant described above saw the following two questions: "How likely are you to fight for racial justice by voting in the next election," and "How likely are you to fight for racial justice by boycotting the next election as a protest?" Next, participants completed the covariate scales listed previously, which were presented in a random order. Finally, participants were

debriefed and told that the vignettes they read were fabricated and that it is important to vote. They were thanked and paid $6.00 for their participation.

Design

Study 4 utilized two models in which likelihood of following the narrative and likelihood of following the network were the outcome variables. In the first model, measured ambition and group size were the predictors, and self-ascribed epistemic authority, power, self-esteem, maximizing tendency, and voting likelihood were the covariates. In the second model, measured self-ascribed epistemic authority and group size were the predictors, and ambition, power, self-esteem, maximizing tendency, and voting likelihood were the covariates.

Participants' answers to the writing tasks were used as a data quality check, and those who did not write a response to the question posed to them for either the SAEA (n = 23 participants excluded) or ambition (n = 6 participants excluded) manipulations were excluded from the analyses.

For those who completed the ambition manipulation correctly, the manipulation was not effective ($F(1, 67) = 0.282$, $p = 0.60$), with no difference between those in the high and low ambition conditions.

For those who completed the self-ascribed epistemic authority manipulation correctly, the manipulation was not effective ($F(1, 49) = 1.32$, $p = 0.257$), with no difference between those in the high and low SAEA conditions.

Results

Descriptive statistics and correlations for each of the variables measured in Study 4 are presented in Table 4.

The first MANCOVA revealed that the interaction between measured ambition and group size was not a significant predictor of likelihood of following the narrative nor likelihood of following the network, (Wilks' $\lambda = 0.96$, $F_{(2,106)} = 0.50$ $p = .73$, $\eta^2_p = .018$). None of the covariates were significant predictors in the model.

The second MANCOVA revealed that the interaction between measured self-ascribed epistemic authority and group size was not a significant predictor of likelihood of following the narrative nor likelihood of following the network, (Wilks' $\lambda = 0.97$, $F_{(4,106)} = 0.46$, $p = .76$, $\eta^2_p = .017$). None of the covariates were significant predictors in the model.

Discussion and Limitations

The fourth study conducted for this dissertation posed several limitations. Like the first three studies, the sample size was not large enough to detect a small effect size because I used outdated guidelines in the power analysis. Notably, although the size condition was not a significant predictor of following the narrative nor network,

participants in the large group condition reported a higher likelihood of following the narrative ($m = 5.09$, $sd = 2.11$) than participants in the small group condition ($m = 3.91$, $sd = 2.21$) and a lower likelihood of following the network ($m = 4.09$, $sd = 2.48$) than participants in the small group condition ($m = 4.26$, $sd = 2.36$). These results are contrary to the expected effects, suggesting that a larger sample size would not have revealed the expected effects. Additionally, SAEA was positively correlated with likelihood of following the network ($r = 0.26$, $p < 0.05$) and not correlated with likelihood of following the narrative ($r = 0.004$, $p = 0.97$), again contrary to the expected effects. Ambition was also positively correlated with likelihood of following the network ($r = 0.29$, $p < 0.05$) and negatively correlated with likelihood of following the narrative ($r = -0.07$, $p = 0.58$), again suggesting that a larger sample size would not have revealed the expected effects.

As with Study 3, there was no manipulation check for the group size manipulation. Because the manipulation was merely to read that a group was large or small (or important, the term used to describe the networks in Studies 1 and 2), it is possible that many participants did not read the statement at all or, if they did, that they did not believe that the group really was large or small because they were not given the name of the group. As in Study 3, this was done on purpose, as naming the group as a real activist group would likely have resulted in participants drawing their own conclusions about the group based on prior knowledge, and naming it as a fictional group may have led to participants assuming that the group was neither large nor important because they had never heard of it. In a future study, the effectiveness of the manipulation could be assessed by asking participants to estimate the number of people in the group. Though people may have different ideas as to what constitutes a large or small group, on average, participants in the large group condition should estimate a larger size of the group than participants in the small group condition if the manipulation is effective. Notably, there was no significant effect of the size manipulation on likelihood of following the network, but participants in the small group had the lowest mean likelihood of following the network ($m = 2.93$, $sd = 2.02$) whereas participants in the control group had the highest likelihood of following the network ($m = 4.26$, $sd = 2.40$), perhaps because the control group was described as important. Participants in the large group condition had the second-highest likelihood of following the network ($m = 3.38$, $sd = 2.25$). Therefore, future studies might eliminate the "important" descriptor from the control condition.

A key limitation across all four originally proposed studies was that it was possible that participants were not convinced by the narrative and network vignettes and overwhelmingly reported being likely to vote and unlikely to boycott the election. As a prerequisite for participating in the study, all of the participants selected a political issue that was "very important" to them, meaning that all of the participants were already politically engaged to some extent. They therefore likely had existing narratives and networks which promoted voting and discouraged boycotting and were unlikely to be convinced to go against those existing beliefs and groups based on a short stimulus in an online study. Therefore, Study 5 aimed to assess whether participants' ambition and self-ascribed epistemic authority, as well as their

perception of the prestige and size of their networks, was associated with their tendency to behave in accordance with their existing narratives or networks.

Appendix B

Study 5

Study 5 was aimed at testing all four hypotheses from Studies 1-4 using a correlational rather than experimental methodology. Although causal inferences cannot be drawn from correlational designs, there are several benefits to "just asking" participants rather than trying to manipulate them or trying to measure their attitudes indirectly or implicitly (Van Dessel et al., 2020). Studies 1-4 demonstrated the difficulty in manipulating the extent to which politically engaged participants see political behaviors as consistent with a given narrative in a single sitting, and that it is also quite difficult to manipulate people's perceptions of their social networks. Therefore, in Study 5, participants were simply asked to report the extent to which they viewed their networks as prestigious or large; the extent to which their network norms supported voting in, boycotting, and participating in protests related to the election; the extent to which they viewed voting in, boycotting, and participating in protests related to the election as consistent with their values (i.e., their narrative); and their likelihood of voting in, boycotting, and participating in protests related to the 2024 election. Study 5 also measured the extent to which participants viewed each behavior as significance-granting, with the hypothesis that people with higher ambition would be more likely to vote, boycott, and participate in election-related protests than people with lower ambition because they viewed doing so as significance-granting.

Method

Materials and Measures

Ambition Scale. Ambition was measured using the Ambition Scale (Resta et al., 2022). Participants indicated their agreement on a five-point Likert scale (1 = "Definitely disagree" to 5 = "Definitely agree") with 10 statements describing characteristics of ambitious people, such as "One of my goals is to do something that leaves a mark." In Study 5, reliability of the ambition scale was excellent, Cronbach's $\alpha = 0.91$.

Self-Ascribed Epistemic Authority Scale. Self-ascribed epistemic authority was measured using the Epistemic Authority Scale (Raviv et al., 1993; Raviv et al., 2003). Participants indicated their agreement on a six-point Likert scale (1 = "Definitely disagree" to 6 = "Definitely agree") with nine statements regarding their reliance on a source's knowledge, such as "In my opinion, he/she is careful to be precise with facts." The source assessed in this study is the self, so questions were phrased as following: "In my opinion, I am careful to be precise with facts." In Study 5, reliability of the SAEA scale was good, Cronbach's $\alpha = 0.82$.

Power Scale. Need for power was used as a covariate in this study, measured using the Social-Motivation Power Scale (Good & Good, 1972). Participants answered "yes" or "no" to 17 items related to participants' motivation to attain positions of

power, such as, “Did you ever seek election to a class office in high school,” and “Are you now or have you ever been a military officer,” and “In the future, do you hope to run for political office?” In Study 5, internal reliability was good, $\alpha = 0.85$.

Self-Esteem Scale. Self-esteem was used as a covariate in this study, measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Participants rated ten items, such as “On the whole, I am satisfied with myself” and “I take a positive attitude toward myself,” on a four-point Likert scale (1 = “Strongly agree” to 4 = “Strongly disagree”). Higher scores therefore reflect lower self-esteem. In Study 5, internal reliability was excellent, $\alpha = 0.94$.

Maximizing Tendency Scale. Given that ambition is proposed to reflect a maximizing tendency toward significance, the Maximizing Tendency Scale (Diab, Gillespie, & Highhouse, 2008), adapted so that statements referred to significance, was included as a covariate. Participants rated nine statements, such as, “When it comes to feeling significant and like I matter, I don’t like having to settle for ‘good enough,’” and “When it comes to feeling significant and like I matter, I am uncomfortable making decisions before I know all of my options,” on a five-point Likert scale (1 = “Completely disagree” to 5 = “Completely agree”). In Study 5, internal reliability was good, $\alpha = 0.86$.

Voting History. Whether participants voted in the 2020 election was also included as a covariate. Participants answered “yes” or “no” to a single item: Did you vote in the 2020 presidential election?”

Perceived Network Size. For this variable, participants were asked a single question: “Think of your social network: The community of people you know and interact with regularly, in person and online. Compared to other people’s social networks, how big is your social network?” Participants chose from one of five answers: “My network is much smaller than other people’s networks,” “My network is a bit smaller than other people’s networks,” “My network is about the same size as other people’s networks,” “My network is a bit bigger than other people’s networks,” and “My network is much bigger than other people’s networks.” These answers were scored as 1-5, respectively.

Perceived Network Prestige. For this variable, participants were asked a single question: “Think of your social network: The community of people you know and interact with regularly, in person and online. Compared to other people’s social networks, how prestigious (respected, impressive, influential, powerful) is your social network?” Participants chose from one of five answers: “My network is much less prestigious than other people’s networks,” “My network is a bit less prestigious than other people’s networks,” “My network is about as prestigious as other people’s networks,” “My network is a bit more prestigious than other people’s networks,” and “My network is much more prestigious than other people’s networks.” These answers were scored as 1-5, respectively.

Perceived Network Norms. Network norms were calculated as the means of two items representing descriptive (“People in my network are going to [vote in/boycott/participate in protests related to] the 2024 election”) and injunctive (“People in my network want me to [vote in/boycott/participate in protests or demonstrations related to] the 2024 election”) norms, adapted from questions used to measure injunctive and descriptive norms that have been generalized to a variety of contexts, including recycling (White et al., 2009), speeding (Cestac et al., 2014), sun

protection (Bodimeade et al., 2014), and healthy eating (Staunton et al., 2014). Participants indicated the extent to which they agreed with each of these six statements on a Likert scale from 1 (“Strongly Disagree”) to 7 (“Strongly Agree”). For the two items related to voting, reliability was moderate, $\alpha = 0.78$. For the two items related to boycotting, reliability was good, $\alpha = 0.81$. For the two items related to protesting, reliability was good, $\alpha = 0.89$.

Values. Whether voting, boycotting, and protesting was perceived as consistent with participants’ values was measured as participants’ agreement with three identically worded statements: “[Voting in/Boycotting/Participating in protests or demonstrations related to] the 2024 election is consistent with my values and worldview.” Participants indicated their agreement with each of these statements on a Likert scale from 1 (“Strongly Disagree”) to 7 (“Strongly Agree”).

Perception of Voting, Boycotting, and Protesting as Significance-Granting. These variables were measured as the mean score of a six-item scale adapted from the Quest for Significance Scale (Molinario et al., 2021), asked three times – once related to voting, once related to boycotting, and once related to participating in protests or demonstrations. Participants indicated their agreement with statements such as “[Voting in/Boycotting/Participating in protests or demonstrations related to] the 2024 election will make me feel respected,” “[Voting in/Boycotting/Participating in protests or demonstrations related to] the 2024 election will make me feel appreciated,” and “[Voting in/Boycotting/Participating in protests or demonstrations related to] the 2024 election will make me feel important” on a Likert scale from 1 (“Strongly Disagree”) to 7 (“Strongly Agree”). For the scale related to voting, reliability was excellent, $\alpha = 0.95$. For the scale related to boycotting, reliability was excellent, $\alpha = 0.97$. For the scale related to protesting, reliability was excellent, $\alpha = 0.98$.

Action Likelihood. Participants’ likelihood of engaging in the three types of normative and non-normative political action was measured using three items using identical language: “How likely are you to [vote in/boycott/participate in protests related to] the 2024 election?” Each item was rated on a Likert scale from 1 (“Very unlikely”) to 7 (“Very likely”).

Participants and Procedures

Study 5 included 200 participants (50.0% women; 76.0% white; $M_{Age} = 41.48$, $SD_{Age} = 13.84$) recruited through Prolific. A screener was used to select for equal numbers of self-identified Democrats ($n = 68$), Republicans ($n = 67$), and Independents ($n = 67$).

A G*Power analysis for a linear multiple regression with 0.25 effect size, $\alpha = 0.05$, power of 0.90, and 13 predictors (including interaction terms) recommended a sample size of 102. I used a 0.25 effect size based on Cohen’s (1988) recommendation of small, medium, and large effect sizes as 0.2, 0.5, and 0.8, respectively. I recruited 200 participants from the online research platform Prolific, all of whom were eligible to vote in the 2024 election. No deception was involved in the procedure. After indicating their informed consent, participants completed survey blocks including a) the original variables: ambition, SAEA, power, self-esteem, maximization, and voting

history; b) items related to participants' perceptions of their social networks' size, prestige, and norms; c) items related to the extent to which they saw voting, boycotting, and protesting as consistent with their values; and d) the extent to which they saw voting, boycotting, and protesting as significance-granting. The order of the scales within each block was randomized to control for order effects. After completing the study, participants were thanked and paid $2.00.

Design

Study 5 utilized three mediation models, each with ambition as the predictor. The first used perception of voting as significance-granting as the mediator and likelihood of voting as the outcome, the second used perception of boycotting as significance-granting as the mediator and likelihood of boycotting as the outcome, and the third used perception of protesting as significance-granting as the mediator and likelihood of protesting as the outcome. All three models included SAEA, power, self-esteem, maximization, and voting history as covariates.

Study 5 also utilized 18 linear regression models to predict likelihood of voting, boycotting, and protesting, each of which included power, self-esteem, maximization, and voting history as covariates, as well as either ambition or SAEA (whichever was not used in an interaction term):

1. Voting likelihood predicted by the interaction between ambition and voting values
2. Voting likelihood predicted by the interaction between ambition, network norms about voting, and network prestige
3. Voting likelihood predicted by the interaction between ambition, network norms about voting, and network size
4. Boycott likelihood predicted by the interaction between ambition and boycott values
5. Boycott likelihood predicted by the interaction between ambition, network norms about boycotting, and network prestige
6. Boycott likelihood predicted by the interaction between ambition, network norms about boycotting, and network size
7. Protest likelihood predicted by the interaction between ambition and protest values
8. Protest likelihood predicted by the interaction between ambition, network norms about protesting, and network prestige
9. Protest likelihood predicted by the interaction between ambition, network norms about protesting, and network size
10. Voting likelihood predicted by the interaction between SAEA and voting values
11. Voting likelihood predicted by the interaction between SAEA, network norms about voting, and network prestige
12. Voting likelihood predicted by the interaction between SAEA, network norms about voting, and network size
13. Boycott likelihood predicted by the interaction between SAEA and boycott values

14. Boycott likelihood predicted by the interaction between SAEA, network norms about boycotting, and network prestige
15. Boycott likelihood predicted by the interaction between SAEA, network norms about boycotting, and network size
16. Protest likelihood predicted by the interaction between SAEA and protest values
17. Protest likelihood predicted by the interaction between SAEA, network norms about protesting, and network prestige
18. Protest likelihood predicted by the interaction between SAEA, network norms about protesting, and network size

Results

Descriptive statistics and correlations for each of the variables measured in Study 5 are presented in Tables 5 (voting variables), 6 (boycott variables), and 7 (protest variables).

Mediation Models

I first tested a mediation model including ambition as the predictor, perception of voting as significance-granting as the mediator, and likelihood of voting as the outcome. I also included SAEA, power, self-esteem, maximization, and voting history as covariates. There was no effect of ambition on perception of voting as significance-granting ($b = 0.13$, $p = 0.46$), but people with a greater tendency toward maximization of significance ($b = 0.07$, $p < 0.001$) and those who voted in 2020 ($b = 0.66$, $p < 0.05$) were significantly more likely to perceive voting to be significance-granting. Perception of voting as significance-granting was indeed a significant predictor of voting ($b = 0.46$, $p < 0.001$).

I next tested a mediation model including ambition as the predictor, perception of boycotting the election as significance granting as the mediator, and likelihood of boycotting the election as the outcome. I also included SAEA, power, self-esteem, maximization, and voting history as covariates. There was no effect of ambition on perception of boycotting as significance granting ($b = 0.16$, $p = 0.14$), but people with a greater power motivation were significantly more likely to perceive boycotting as significance granting ($b = 0.05$, $p < 0.05$). Perception of boycotting as significance granting was indeed a significant predictor of likelihood of boycotting ($b = 0.72$, $p < 0.001$).

Finally, I tested a mediation model including ambition as the predictor, perception of protesting the election as significance granting as the mediator, and likelihood of boycotting the election as the outcome. I also included SAEA, power, self-esteem, maximization, and voting history as covariates. Again, there was no effect of ambition on perception of protesting as significance granting ($b = -0.02$, $p = 0.88$), but perception of protesting as significance granting was indeed a significant predictor of likelihood of protesting ($b = 0.63$, $p < 0.001$).

Linear Regression Models

Model 1 tested whether voting likelihood was predicted by the interaction between ambition and voting values. The overall model was significant, $F(8, 173) = 30.05$, $p < 0.001$, $R^2 = 0.58$. However, the interaction between ambition and voting values was not significant, $b = -0.10$, $p = 0.12$.

Model 2 tested whether voting likelihood was predicted by the interaction between ambition, network norms about voting, and network prestige. The overall model was significant, $F(12, 169) = 11.52$, $p < 0.001$, $R^2 = 0.45$. However, the interaction between ambition, network norms about voting, and network prestige was not significant, $b = -0.08$, $p = 0.31$.

Model 3 tested whether voting likelihood was predicted by the interaction between ambition, network norms about voting, and network size. The overall model was significant, $F(12, 170) = 11.72$, $p < 0.001$, $R^2 = 0.45$. However, the interaction between ambition, network norms about voting, and network prestige was not significant, $b = -0.10$, $p = 0.32$.

Model 4 tested whether boycott likelihood was predicted by the interaction between ambition and boycott values. The overall model was significant, $F(8, 174) = 21.86$, $p < 0.001$, $R^2 = 0.50$. However, the interaction between ambition and boycott values was not significant, $b = 0.02$, $p = 0.77$.

Model 5 tested whether boycott likelihood was predicted by the interaction between ambition, network norms about boycotting, and network prestige. The overall model was significant, $F(12, 169) = 5.71$, $p < 0.001$, $R^2 = 0.29$. However, the interaction between ambition, network norms about boycotting, and network prestige was not significant, $b = 0.09$, $p = 0.25$.

Model 6 tested whether boycott likelihood was predicted by the interaction between ambition, network norms about boycotting, and network size. The overall model was significant, $F(12, 170) = 6.17$, $p < 0.001$, $R^2 = 0.30$. However, the interaction between ambition, network norms about boycotting, and network prestige was not significant, $b = 0.05$, $p = 0.64$.

Model 7 tested whether protest likelihood was predicted by the interaction between ambition and protest values. The overall model was significant, $F(8, 173) = 22.76$, $p < 0.001$, $R^2 = 0.51$. However, the interaction between ambition and protest values was not significant, $b = 0.05$, $p = 0.37$.

Model 8 tested whether protest likelihood was predicted by the interaction between ambition, network norms about protesting, and network prestige. The overall model was significant, $F(12, 168) = 8.84$, $p < 0.001$, $R^2 = 0.39$. However, the interaction between ambition, network norms about protesting, and network prestige was not significant, $b = 0.004$, $p = 0.97$.

Model 9 tested whether protest likelihood was predicted by the interaction between ambition, network norms about protesting, and network size. The overall model was significant, $F(12, 169) = 10.50$, $p < 0.001$, $R^2 = 0.43$. However, the interaction between ambition, network norms about protesting, and network prestige was not significant, $b = -0.15$, $p = 0.17$.

Model 10 tested whether voting likelihood was predicted by the interaction between SAEA and voting values. The overall model was significant, $F(8, 173) = 29.39$, $p < 0.001$, $R^2 = 0.58$. However, the interaction between SAEA and voting values was not significant, $b = 0.003$, $p = 0.65$.

Model 11 tested whether voting likelihood was predicted by the interaction between SAEA, network norms about voting, and network prestige. The overall model was significant, $F(12, 169) = 11.11$, $p < 0.001$, $R^2 = 0.44$. However, the interaction between SAEA, network norms about voting, and network prestige was not significant, $b = 0.003$, $p = 0.81$.

Model 12 tested whether voting likelihood was predicted by the interaction between SAEA, network norms about voting, and network size. The overall model was significant, $F(12, 170) = 11.58$, $p < 0.001$, $R^2 = 0.45$. However, the interaction between SAEA, network norms about voting, and network prestige was not significant, $b = 0.00$, $p = 0.99$.

Model 13 tested whether boycott likelihood was predicted by the interaction between SAEA and boycott values. The overall model was significant, $F(8, 174) = 22.86$, $p < 0.001$, $R^2 = 0.51$. Additionally, the interaction between SAEA and boycott values was significant *without* the Bonferroni correction, $b = 0.01$, $p = 0.045$, though the number of predictors included in the model (8) necessitates a lower p-value (0.00625) in order to reach statistical significance (Hochberg & Tamhane, 1987).

Model 14 tested whether boycott likelihood was predicted by the interaction between SAEA, network norms about boycotting, and network prestige. The overall model was significant, $F(12, 169) = 6.32$, $p < 0.001$, $R^2 = 0.31$. The interaction between SAEA, network norms about boycotting, and network prestige was significant *without* the Bonferroni correction, $b = 0.03$, $p = 0.008$, though the number of predictors included in the model (12) necessitates a lower p-value (0.0042) in order to reach statistical significance (Hochberg & Tamhane, 1987).

Model 15 tested whether boycott likelihood was predicted by the interaction between SAEA, network norms about boycotting, and network size. The overall model was significant, $F(12, 170) = 6.20$, $p < 0.001$, $R^2 = 0.30$. The interaction between SAEA, network norms about boycotting, and network size was significant *without* the Bonferroni correction, $b = 0.03$, $p = 0.015$, though the number of predictors included in the model (12) necessitates a lower p-value (0.0042) in order to reach statistical significance (Hochberg & Tamhane, 1987).

Model 16 tested whether protest likelihood was predicted by the interaction between SAEA and protest values. The overall model was significant, $F(8, 173) = 22.56$, $p < 0.001$, $R^2 = 0.51$. However, the interaction between SAEA and protest values was not significant, $b = 0.002$, $p = 0.84$.

Model 17 tested whether protest likelihood was predicted by the interaction between SAEA, network norms about protesting, and network prestige. The overall model was significant, $F(12, 168) = 9.11$, $p < 0.001$, $R^2 = 0.39$. However, the interaction between SAEA, network norms about protesting, and network prestige was not significant, $b = 0.005$, $p = 0.69$.

Model 18 tested whether protest likelihood was predicted by the interaction between SAEA, network norms about protesting, and network size. The overall model was significant, $F(12, 169) = 10.17$, $p < 0.001$, $R^2 = 0.42$. However, the interaction between SAEA, network norms about protesting, and network prestige was not significant, $b = -0.01$, $p = 0.37$.

Discussion and Limitations

Study 5 tested three mediation and 18 moderation models in an attempt to test the proposed hypotheses without the limitation posed by the failed manipulations from Studies 1 to 4. Narratives and networks are typically developed over years of experience, so Study 5 aimed to test if participants' ambition and self-ascribed epistemic authority was associated with their likelihood of behaving more consistently with their narratives (i.e., reporting being more likely to vote if one perceived voting as consistent with their values) or behaving more consistently with their networks (i.e., reporting being more likely to vote if one perceives their network as supporting voting), and if these effects were moderated by participants' perceptions of their networks as prestigious or large.

Across the models tested, only those which involved the association between perceiving an action as significance-granting and reporting being likely to engage in that action were significant. It was still possible, however, that the behaviors measured as dependent variables were too different in their degree of normativity, meaning that voting is likely normative for people who, as in Studies 1 to 4, had to identify a political issue as very important to them or self-identify with a political party, whereas boycotting an election is not normative. Therefore, it is possible that ambition and SAEA had less of an effect on these types of hyper-normative or hyper-nonnormative behaviors than they would on behaviors which were less salient in the months leading up to a presidential election.

Study 6

Studies 6 and 7 aimed to correct for several limitations posed by Studies 1-5. These experiments manipulated ambition (Study 6) and self-ascribed epistemic authority (Study 7) without using the writing tasks which were not always effective in Studies 1-4 and asked participants to indicate their support for a policy which prioritizes

either humanitarian aid or security (both normative political behaviors as opposed to voting or boycotting, one of which is normative and the other of which is not, especially in a presidential election year) when they are told that it is supported by either members of an outgroup or an ingroup. These studies also did not manipulate narratives and instead measured participants' values, namely those related to humanitarian aid (benevolence) and security.

Method

Materials and Measures

Self-Ascribed Epistemic Authority Scale. Self-ascribed epistemic authority was measured using the Epistemic Authority Scale (Raviv et al., 1993; Raviv et al., 2003). Participants indicated their agreement on a six-point Likert scale (1 = "Definitely disagree" to 6 = "Definitely agree") with nine statements regarding their reliance on a source's knowledge, such as "In my opinion, he/she is careful to be precise with facts." The source assessed in this study is the self, so questions were phrased as following: "In my opinion, I am careful to be precise with facts." In Study 6, reliability of the SAEA scale was good, Cronbach's $\alpha = 0.83$.

Power Scale. Need for power was used as a covariate in this study, measured using the Social-Motivation Power Scale (Good & Good, 1972). Participants answered "yes" or "no" to 17 items related to participants' motivation to attain positions of power, such as, "Did you ever seek election to a class office in high school," and "Are you now or have you ever been a military officer," and "In the future, do you hope to run for political office?" In Study 6, internal reliability was good, $\alpha = 0.85$.

Self-Esteem Scale. Self-esteem was used as a covariate in this study, measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Participants rated ten items, such as "On the whole, I am satisfied with myself" and "I take a positive attitude toward myself," on a four-point Likert scale (1 = "Strongly agree" to 4 = "Strongly disagree"). Higher scores therefore reflect lower self-esteem. In Study 6, internal reliability was excellent, $\alpha = 0.94$.

Maximizing Tendency Scale. Given that ambition is proposed to reflect a maximizing tendency toward significance, the Maximizing Tendency Scale (Diab, Gillespie, & Highhouse, 2008), adapted so that statements referred to significance, was included as a covariate. Participants rated nine statements, such as, "When it comes to feeling significant and like I matter, I don't like having to settle for 'good enough,'" and "When it comes to feeling significant and like I matter, I am uncomfortable making decisions before I know all of my options," on a five-point Likert scale (1 = "Completely disagree" to 5 = "Completely agree"). In Study 6, internal reliability was good, $\alpha = 0.87$.

Values. Participants' values were measured using the Short Schwartz Values Survey (Lindeman & Verkasalo, 2005). For each of 10 values (power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security), participants were asked to rate the value's importance on a scale from 0 (opposed to one's values) to 8 (the value is of supreme importance). Participants were provided with a short definition of each of the values.

Ambition Manipulation. After participants completed the set of questionnaires, they were told to wait while "results" were calculated. They were then randomly assigned to see a screen telling them that the results of the personality assessment they just completed indicated that they had a high or low level of ambition. This false-feedback manipulation was modeled after those used extensively in experimental psychology (e.g., Guadagno & Burger, 2007; Wild et al., 2008). A manipulation check was not included so as not to prime participants in the low ambition condition to think about ambition in the positive terms used in the ambition scale (Resta et al., 2023). However, it is possible that the manipulation was not effective, particularly if participants were reading quickly and did not absorb the false-feedback information.
Vignettes. Participants were randomly assigned to see one of four vignettes. The first vignette asked them to participate in a poll regarding their support for a NATO proposal to increase humanitarian aid funding and decrease defense spending (humanitarian aid proposal). They were then told that 83 percent of American citizens supported the proposal (ingroup support). The second vignette presented the same humanitarian aid proposal, but participants were told that 83 percent of French citizens supported the proposal (outgroup support). The third vignette asked participants to participate in a poll regarding their support for a NATO proposal to increase defense spending and decrease humanitarian aid funding (defense proposal). They were then told that 83 percent of American citizens supported the proposal (ingroup support). The fourth vignette presented the defense proposal but with outgroup support.
Support. Participants were asked to indicate their support for the proposal they saw in the vignette on a scale from 1 (do not support the proposal) to 7 (completely support the proposal).

Participants and Procedures

Study 6 included 100 participants recruited through Cloud Research, which was selected for its reputation for high-quality data. No participants were excluded from the analyses.

After indicating their informed consent, participants completed questionnaires measuring self-ascribed epistemic authority, self-esteem, power, maximizing tendencies, and values, presented in a random order. They were then randomly assigned to see either the high or low ambition statement. Finally, they were randomly presented with one of the four proposals listed above and asked about their support for the proposal. Finally, they were debriefed and informed that neither the results of the "personality assessment" nor the "NATO proposal" were real. Participants were thanked and paid $5.00 for their participation.

Design

Study 6 was tested using a linear regression model with a two interaction terms. Support for the proposal was the outcome variable and ambition condition, ingroup/outgroup condition, and value consistency (i.e., security values for those who saw the defense proposal and benevolence values for those who saw the humanitarian aid proposal) were the predictors, with interactions between ambition and group and

ambition and values. Self-ascribed epistemic authority, power, self-esteem, and maximizing tendencies were included in the model as covariates.

Results

Descriptive statistics and correlations for each of the variables measured in Study 6 are presented in Table 8.

The model was not significant, $F(9, 77) = 1.37$, $p = 0.22$, $R^2 = 0.14$. Neither the interaction between ambition condition and group condition ($b = -0.13$, $p = 0.86$) nor the interaction between ambition condition and value consistency ($b = -0.07$, $p = 0.73$) were significant predictors of participants' support for the proposal.

Study 7

Study 7 was identical to Study 6 but manipulated self-ascribed epistemic authority rather than ambition.

Method

Materials and Measures

Ambition Scale. Ambition was measured using the Ambition Scale (Resta et al., 2022). Participants indicated their agreement on a five-point Likert scale (1 = "Definitely disagree" to 5 = "Definitely agree") with 10 statements describing characteristics of ambitious people, such as "One of my goals is to do something that leaves a mark." In Study 7, reliability of the ambition scale was excellent, Cronbach's $\alpha = 0.94$.

Power Scale. Need for power was used as a covariate in this study, measured using the Social-Motivation Power Scale (Good & Good, 1972). Participants answered "yes" or "no" to 17 items related to participants' motivation to attain positions of power, such as, "Did you ever seek election to a class office in high school," and "Are you now or have you ever been a military officer," and "In the future, do you hope to run for political office?" In Study 7, internal reliability was moderate, $\alpha = 0.78$.

Self-Esteem Scale. Self-esteem was used as a covariate in this study, measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Participants rated ten items, such as "On the whole, I am satisfied with myself" and "I take a positive attitude toward myself," on a four-point Likert scale (1 = "Strongly agree" to 4 = "Strongly disagree"). Higher scores therefore reflect lower self-esteem. In Study 7, internal reliability was excellent, $\alpha = 0.95$.

Maximizing Tendency Scale. Given that ambition is proposed to reflect a maximizing tendency toward significance, the Maximizing Tendency Scale (Diab, Gillespie, & Highhouse, 2008), adapted so that statements referred to significance, was included as a covariate. Participants rated nine statements, such as, "When it comes to feeling significant and like I matter, I don't like having to settle for 'good enough,'" and "When it comes to feeling significant and like I matter, I am uncomfortable making decisions before I know all of my options," on a five-point

Likert scale (1 = "Completely disagree" to 5 = "Completely agree"). In Study 7, internal reliability was good, $\alpha = 0.87$.

Values. Participants' values were measured using the Short Schwartz Values Survey (Lindeman & Verkasalo, 2005). For each of 10 values (power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security), participants were asked to rate the value's importance on a scale from 0 (opposed to one's values) to 8 (the value is of supreme importance). Participants were provided with a short definition of each of the values.

Self-Ascribed Epistemic Authority Manipulation. After participants completed the set of questionnaires, they completed a 20-item "general knowledge" test which included trivia questions consisting primarily of questions about history, science, and geography. They were then randomly assigned to see either a statement that they had a high level of general knowledge and that they should be confident in their knowledge and expertise or a statement that they had a low level of general knowledge and that they should be hesitant to trust their expertise when making decisions. This false-feedback manipulation was modeled after those used extensively in experimental psychology (e.g., Guadagno & Burger, 2007; Wild et al., 2008). A manipulation check was not included, and it is possible that the manipulation was not effective, particularly if participants were reading quickly and did not absorb the false-feedback information.

Vignettes. Participants were randomly assigned to see one of four vignettes. The first vignette asked them to participate in a poll regarding their support for a NATO proposal to increase humanitarian aid funding and decrease defense spending (humanitarian aid proposal). They were then told that 83 percent of American citizens supported the proposal (ingroup support). The second vignette presented the same humanitarian aid proposal, but participants were told that 83 percent of French citizens supported the proposal (outgroup support). The third vignette asked participants to participate in a poll regarding their support for a NATO proposal to increase defense spending and decrease humanitarian aid funding (defense proposal). They were then told that 83 percent of American citizens supported the proposal (ingroup support). The fourth vignette presented the defense proposal but with outgroup support.

Support. Participants were asked to indicate their support for the proposal they saw in the vignette on a scale from 1 (do not support the proposal) to 7 (completely support the proposal).

Participants and Procedures

Study 7 included 100 participants recruited through Cloud Research, which was selected for its reputation for high-quality data. No participants were excluded from the analyses.

After indicating their informed consent, participants completed questionnaires measuring ambition, self-esteem, power, maximizing tendencies, and values, presented in a random order. They then completed the "general knowledge" assessment. They were then randomly assigned to see either the high or low self-ascribed epistemic authority statement. Finally, they were randomly presented with

one of the four proposals listed above and asked about their support for the proposal. Finally, they were debriefed and informed that neither the results of the "general knowledge assessment" nor the "NATO proposal" were real. Participants were thanked and paid $5.00 for their participation.

Design

Study 7 was tested using a linear regression model with a two interaction terms. Support for the proposal was the outcome variable and SAEA condition, ingroup/outgroup condition, and value consistency (i.e., security values for those who saw the defense proposal and benevolence values for those who saw the humanitarian aid proposal) were the predictors, with interactions between SAEA and group and ambition and values. Ambition, power, self-esteem, and maximizing tendencies were included in the model as covariates.

Results

Descriptive statistics and correlations for each of the variables measured in Study 7 are presented in Table 9.

The model was significant, $F(9, 84) = 3.02$, $p < 0.01$, $R^2 = 0.24$. Additionally, the interaction between SAEA condition and group condition was significant *without* the Bonferroni correction, $b = 1.41$, $p = 0.048$, though the number of predictors included in the model (9) necessitates a lower p-value (0.0055) in order to reach statistical significance (Hochberg & Tamhane, 1987). The interaction between SAEA condition and value consistency was not significant, $b = 0.22$, $p = 0.25$.

Discussion and Limitations

Studies 6 and 7 were conducted concurrently and the data did appear to be of higher quality as promised by Cloud Research, compared with the data collected through Prolific. The use of well-established false-feedback manipulations was expected to improve upon the inducement of ambition and self-ascribed epistemic authority compared to the writing tasks used in Studies 1 to 4, but the lack of a manipulation check precludes the ability to compare the effectiveness of these manipulations. However, models were also tested using measured SAEA in Study 6 and ambition in Study 7 as the independent variables. Neither of these models was significant, so it is unlikely that more effective manipulations of ambition and SAEA would have produced the hypothesized results.

Study 8

Finally, Study 8 was conducted to test whether ambition and self-ascribed epistemic authority predicted likelihood of following one's ingroup or a logical argument (i.e., a narrative) to support a proposal that was unrelated to a sense of significance (unlike political behaviors) and for which participants would be unlikely to have pre-existing views (unlike voting or defense spending).

Materials and Measures

Self-Ascribed Epistemic Authority Scale. Self-ascribed epistemic authority was measured using the Epistemic Authority Scale (Raviv et al., 1993; Raviv et al., 2003). Participants indicated their agreement on a six-point Likert scale (1 = "Definitely disagree" to 6 = "Definitely agree") with nine statements regarding their reliance on a source's knowledge, such as "In my opinion, he/she is careful to be precise with facts." The source assessed in this study is the self, so questions were phrased as following: "In my opinion, I am careful to be precise with facts." In Study 8, reliability of the SAEA scale was moderate, Cronbach's $\alpha = 0.71$.

Ambition Scale. Ambition was measured using the Ambition Scale (Resta et al., 2022). Participants indicated their agreement on a five-point Likert scale (1 = "Definitely disagree" to 5 = "Definitely agree") with 10 statements describing characteristics of ambitious people, such as "One of my goals is to do something that leaves a mark." In Study 8, reliability of the ambition scale was good, Cronbach's $\alpha = 0.89$.

Power Scale. Need for power was used as a covariate in this study, measured using the Social-Motivation Power Scale (Good & Good, 1972). Participants answered "yes" or "no" to 17 items related to participants' motivation to attain positions of power, such as, "Did you ever seek election to a class office in high school," and "Are you now or have you ever been a military officer," and "In the future, do you hope to run for political office?" In Study 8, internal reliability was moderate, $\alpha = 0.74$.

Self-Esteem Scale. Self-esteem was used as a covariate in this study, measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Participants rated ten items, such as "On the whole, I am satisfied with myself" and "I take a positive attitude toward myself," on a four-point Likert scale (1 = "Strongly agree" to 4 = "Strongly disagree"). Higher scores therefore reflect lower self-esteem. In Study 8, internal reliability was good, $\alpha = 0.89$.

Maximizing Tendency Scale. Given that ambition is proposed to reflect a maximizing tendency toward significance, the Maximizing Tendency Scale (Diab, Gillespie, & Highhouse, 2008), adapted so that statements referred to significance, was included as a covariate. Participants rated nine statements, such as, "When it comes to feeling significant and like I matter, I don't like having to settle for 'good enough,'" and "When it comes to feeling significant and like I matter, I am uncomfortable making decisions before I know all of my options," on a five-point Likert scale (1 = "Completely disagree" to 5 = "Completely agree"). In Study 8, internal reliability was moderate, $\alpha = 0.78$.

Vignettes. Participants were randomly shown one of two prompts, each asking participants to participate in a poll in which they were asked to imagine that a technology company, "EduQuantum," was producing a new software, "Intellipath," to be incorporated into ELMS for next semester. Participants were either shown a narrative that supported the program ("A great deal of research has found that Intellipath will have major benefits for students") and a network that opposed it ("Despite the empirical support for Intellipath, the majority of UMD students we have polled are opposed to Intellipath being incorporated into ELMS") or a narrative that opposed the program ("Research has not found any evidence that Intellipath will have

any benefit to students") and a network that supported it ("Interestingly, despite this lack of empirical support for Intellipath, the majority of UMD students we have polled are in favor of Intellipath").

Support. Participants were asked to rate on a scale from 1 to 10, where 10 meant that they strongly supported the Intellipath program, how strongly they supported the Intellipath program. Depending on which vignette they saw, this answer was coded as either support for the narrative or support for the network.

Opposition. Participants were asked to rate on a scale from 1 to 10, where 10 meant that they strongly opposed the Intellipath program, how strongly they opposed the Intellipath program. Depending on which vignette they saw, this answer was coded as either support for the narrative or support for the network.

Participants and Procedures

Study 8 included 197 participants recruited through University of Maryland's SONA system; all participants were UMD undergraduate students.

After indicating their informed consent, participants completed questionnaires measuring ambition, self-esteem, power, maximizing tendencies, and values, presented in a random order. They were then randomly assigned to see one of the two vignettes described above and were asked about their support for and opposition to the program. Finally, they were debriefed and informed that neither Intellipath nor the poll was real. Participants were thanked and granted 0.5 SONA credits for their participation.

Design

Study 8 was tested using MANCOVA in which narrative and network support were the outcome variables, ambition and self-ascribed epistemic authority were the predictors of interest, and power, self-esteem, and maximizing tendencies were included as covariates.

Results

Descriptive statistics and correlations for each of the variables measured in Study 8 are presented in Table 10.

The model revealed that neither ambition (Wilks' $\lambda = 0.99$, $F_{(2,167)} = 0.93$ $p = .40$, $\eta^2_p = .011$) nor self-ascribed epistemic authority (Wilks' $\lambda = 0.997$, $F_{(2,167)} = 0.23$ $p = .79$, $\eta^2_p = .003$) was a significant predictor of likelihood of following the narrative nor likelihood of following the network. None of the covariates were significant predictors of following the narrative or network, either.

Discussion and Limitations

Study 8 attempted to eliminate the limitations from Study 1-7 associated with presenting participants with politically salient issues about which they probably already had pre-existing opinions. Specifically, participants likely already had views on voting, boycotting, protesting, defense spending, and humanitarian aid spending based on years of experience and deeply held beliefs shared with their social groups

that were unlikely to change based on any stimulus given in a short online survey. Therefore, Study 8, with the help of artificial intelligence, presented participants with the name of a new technology created by a fictional company that was either supported by a logical argument (a narrative) but opposed by their ingroup (other University of Maryland students) or opposed by a logical argument but supported by their ingroup. This strategy, while eliminating the possibility that participants would have pre-existing views on the topic, with the exception of views about technology in general, also appeared to eliminate the relevance of the topic as well. As demonstrated in Study 5, participants' likelihood of voting, boycotting, and protesting were strongly associated with their perception of those behaviors as significance-granting. Although participants' perception of adopting the new technology as significance-granting was not measured in Study 8, the language describing the technology gave no indication that supporting or opposing it would have an impact on participants' sense of significance beyond stating that the technology would or would not have a benefit to students – what those benefits would be was not specified. Indeed, the most common response to both the question about supporting the proposal and opposing the proposal was 5 on a scale from 1 to 10, indicating that participants did not feel strongly enough about narrative or network support for or opposition to the proposal to support or oppose it themselves.

Tables

Table 1. Study 1 Descriptive and Correlational Results

Variables	*M* (*SD*)	Ambition	SAEA	Power	Self-Esteem	Maximization	Narrative Likelihood	Network Likelihood
Ambition	3.40 (0.83)		0.12	0.28**	-0.35**	0.56**	0.11	0.07
SAEA	43.59 (6.44)			-0.08	-0.50**	0.44**	0.21*	-0.03
Power	2.71 (2.26)				-0.07	0.17	0.18	-0.06
Self-Esteem	20.97 (4.96)					-0.39**	-0.19	0.06
Maximization	32.07 (6.06)						0.19	0.05
Narrative Likelihood	4.19 (2.56)							-0.69**
Network Likelihood	3.96 (2.59)							

Table 2. Study 1 Descriptive and Correlational Results

Variables	*M* (*SD*)	Ambition	SAEA	Power	Self-Esteem	Maximization	Narrative Likelihood	Network Likelihood
Ambition	3.67 (0.88)		0.12	0.31**	-0.28**	0.67**	0.22*	0.04
SAEA	44.58 (7.01)			-0.14	-0.07	0.06	-0.21	0.25*
Power	3.13 (3.27)				-0.07	0.12	0.03	0.14
Self-Esteem	21.20 (6.90)					-0.30**	0.20	-0.22*
Maximization	33.53 (6.41)						0.12	0.04
Narrative Likelihood	4.43 (2.45)							-0.66**
Network Likelihood	4.13 (2.44)							

Table 3. Study 1 Descriptive and Correlational Results

Variables	*M* (*SD*)	Ambition	SAEA	Power	Self-Esteem	Maximization	Narrative Likelihood	Network Likelihood
Ambition	3.90 (0.69)		0.40**	0.41**	-0.19	0.58**	0.11	0.05
SAEA	44.52 (7.34)			0.07	-0.31*	0.51**	-0.11	0.36**
Power	3.72 (3.55)				.02	.06	.10	.16

Self-Esteem	18.48 (6.70)				-0.39**	0.27	-0.34*	
Maximization	34.78 (6.14)					-0.17	0.33*	
Narrative Likelihood	4.14 (2.45)						-0.49**	
Network Likelihood	3.94 (2.35)							

Table 4. Study 1 Descriptive and Correlational Results

Variables	*M* (*SD*)	Ambition	SAEA	Power	Self-Esteem	Maximization	Narrative Likelihood	Network Likelihood
Ambition	3.68 (0.88)		0.62**	0.33*	-0.27	0.72**	-0.07	0.38**
SAEA	43.96 (8.65)			0.33*	-0.48**	0.55**	0.06	0.24
Power	4.06 (3.40)				-0.04	0.15	0.08	0.24
Self-Esteem	19.45 (5.69)					-0.56**	-0.12	0.11
Maximization	33.21 (6.43)						0.02	0.12
Narrative Likelihood	5.13 (1.89)							-0.42**
Network Likelihood	3.59 (2.27)							

Table 5. Study 5 - Voting Descriptive and Correlational Results

Variables	*M* (*SD*)	Ambition	SAEA	Power	Self-Esteem	Maximization	Voting Values	Voting Norms	Voting Significance	Voting Likelihood
Ambition	3.30 (0.86)		0.41**	0.40*	-0.31**	0.51**	-0.7	0.08	0.16*	0.03
SAEA	43.58 (6.83)			0.16*	-0.42**	0.32**	0.10	0.18*	0.08	0.06
Power	2.76 (3.15)				-0.23**	0.18*	-0.001	0.07	0.02	0.04
Self-Esteem	20.48 (6.80)					-0.22**	-0.12	-0.18*	0.02	-0.03
Maximization	30.99 (6.35)						0.13	0.18**	0.31**	0.10
Voting Values	5.72 (1.61)							0.58**	0.49**	0.72**
Voting Norms	5.72 (1.25)								0.40**	0.60**
Voting Significance	3.78 (1.53)									0.45**
Voting Likelihood	6.11 (1.65)									

Table 6. Study 5 - Boycotting Descriptive and Correlational Results

Variables	*M* (*SD*)	Ambition	SAEA	Power	Self-Esteem	Maximization	Boycott Values	Boycott Norms	Boycott Significance	Boycott Likelihood
Ambition	3.30 (0.86)		0.41**	0.40*	-0.31**	0.51**	0.06	0.06	0.17*	0.05
SAEA	43.58 (6.83)			0.16*	-0.42**	0.32**	-0.05	-0.08	-0.02	0.04
Power	2.76 (3.15)				-0.23**	0.18*	0.10	0.24	0.21	0.04
Self-Esteem	20.48 (6.80)					-0.22**	0.10	0.09	0.07	0.07
Maximization	30.99 (6.35)						-0.02	-0.10	0.06	-0.04
Boycott Values	1.92 (1.57)							0.56**	0.48**	0.67**
Boycott Norms	1.87 (1.20)								0.52**	0.47**
Boycott Significance	1.50 (0.97)									0.47**
Boycott Likelihood	1.53 (1.33)									

Table 7. Study 5 - Protesting Descriptive and Correlational Results

Variables	*M* (*SD*)	Ambition	SAEA	Power	Self-Esteem	Maximization	Protest Values	Protest Norms	Protest Significance	Protest Likelihood
Ambition	3.30 (0.86)		0.41**	0.40*	-0.31**	0.51**	0.01	0.09	0.06	0.01
SAEA	43.58 (6.83)			0.16*	-0.42**	0.32**	0.04	-0.06	-0.06	0.02
Power	2.76 (3.15)				-0.23**	-0.22**	0.01	0.06	0.08	0.04
Self-Esteem	20.48 (6.80)					-0.22**	0.01	0.06	0.08	0.04
Maximization	30.99 (6.35)						.01	-0.001	0.05	0.05
Protest Values	2.57 (1.77)							0.60**	0.61**	0.69**
Protest Norms	2.10 (1.22)								0.53**	0.61**
Protest Significance	2.06 (1.34)									0.59**
Protest Likelihood	1.84 (1.49)									

Table 8. Study 6 Descriptive and Correlational Results

Variables	*M* (*SD*)	Ambition	SAEA	Power	Self-Esteem	Maximization	Proposal Support
Ambition	3.52 (0.89)		0.35**	0.26*	-0.58**	0.63**	0.17

SAEA	43.59 (7.52)			-0.04	-0.44**	0.37**	-0.04
Power	2.78 (3.08)				-0.23*	0.16	0.23*
Self-Esteem	20.22 (7.00)					-0.37**	0.06
Maximization	32.13 (6.96)						0.05
Proposal Support	4.51 (1.67)						

Table 9. Study 7 Descriptive and Correlational Results

Variables	*M* (*SD*)	Ambition	SAEA	Power	Self-Esteem	Maximization	Proposal Support
Ambition	3.27 (0.98)		0.40**	0.34**	-0.34**	0.70**	-0.11
SAEA	44.35 (8.72)			0.21*	-0.46**	0.40**	-0.10
Power	2.28 (2.59)				-0.07	0.27**	-0.13
Self-Esteem	20.54 (7.96)					-0.21*	0.23*
Maximization	31.11 (7.17)						0.05
Proposal Support	4.40 (1.78)						

Table 10. Study 8 Descriptive and Correlational Results

Variables	*M* (*SD*)	Ambition	SAEA	Power	Self-Esteem	Maximization	Narrative Support	Network Support
Ambition	3.96 (0.68)		0.34**	0.31*	-0.22**	0.55**	0.078	-0.062
SAEA	40.35 (5.69)			-0.09	-0.48**	0.30**	0.05	-0.04
Power	2.96 (2.67)				0.06	0.09	0.06	-0.06
Self-Esteem	21.26 (5.21)					-0.27**	0.04	-0.03
Maximization	31.95 (5.21)						-0.03	0.05
Narrative Support	5.11 (2.56)							-0.65**
Network Support	4.64 (2.48)							

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