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# Mechanisms of 3N Model on Radicalization: Testing the Mediation by Group Identity and Ideology of the Relationship between Need for Significance and Violent Extremism

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## ABSTRACT

This paper seeks to examine the mechanisms of the 3N model (need, narrative, and network) by testing a serial mediation model of group identity and ideology. We propose two rival hypotheses: need for significance predicts violent extremism, and its relationship is serially mediated by (1) group identity and ideology (Model 1); (2) ideology and group identity (Model 2). To test the hypotheses, we conducted a survey of 137 terrorism detainees from prisons across Indonesia. The results revealed that Model 1 had a better fit than Model 2, suggesting the important role of group processes in developing violent extremism's ideology.

## ARTICLE HISTORY

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Existing works of literature do not have adequate answers yet to the question of whether an individual factor works alone in driving support for violent extremism, or it may still require a group process? In the social media era, this question is even more critical given that individuals may become radical for a shorter time, and the younger age become targeted.<sup>1</sup> It seems that online radicalization allows individuals to involve in terrorism without involvement in a group process. Built on this theoretical and practical urgency, the present study keen to understand the psychological mechanism that can explain the role of an individual psychological factor on support for violent extremism.

Previous studies have provided some initial evidence to understand how radicalization occurs at both personal and group levels. One of the primary studies can be seen in the works of Kruglanski.<sup>2</sup> This group of works highlights the role of the individual needs to matter and for significance as a motivation that drives people to join terrorist groups. The significance quest theory (SQT) suggests that support for political extremism can arise from individual disadvantage experiences with or without group involvements. The idea is people are motivated to restore significance, and groups can take the role to achieve this goal.<sup>3</sup>

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Although the works of SQT have provided a framework to understand extremist groups' role in restoring individuals' need for significance, the psychological mechanisms that can explain why it is the case remained unclear. This study aims to explain the role of need for significance in predicting support for violent extremism by examining the role of group identity and ideology. We specifically keen to address these two questions: is it group characteristics (i.e. extremist group) that attract individuals with insignificance experiences, enabling them to learn and adopt violent ideology and, consequently, increase support violent extremism?; or is it a violent ideology that attracts people with insignificance experiences at the first place, and thus it leads them to identify with an extremist group, and consequently increase support for violent extremism?

The role of identification to extremist groups can be explained as follow. People are motivated to restore their insignificance at a reasonable time and effort. By relying on a group, individuals can save their time and cognitive effort to deal with their insignificance issues. In this sense, the extremist group can provide quick support for individuals to re-validate their self-concept and restore their significance. This idea is in line with previous studies which suggest that people join violent extremist groups to meet the needs of certainty,<sup>4</sup> need for significance<sup>5</sup> and group identity.<sup>6</sup> Previous studies have shown that adverse events cause individuals interested in groups with higher entitativity, such as extremist groups.<sup>7</sup> Once people join extremist groups, violent ideology begins to occupy their political horizon, where violence is justified as an appropriate strategy to achieve group goals.

The other group of research underlines the role of ideology.<sup>8</sup> Here, ideology is defined as a certain collective belief system that supports group activities as an appropriate mean to achieve group goals. Extremism ideology specifically refers to political ideologies and methods that are employed by political actors to justify violence as an appropriate means to achieve violent extremism. This ideology is a new belief system that provides a moral justification for group members to behave violently toward particular groups of people.<sup>9</sup> In this sense, ideology plays two critical roles. First, ideology is a shared belief system,<sup>10</sup> which prescribes the actions to reach group significance. Second, ideology is a narrative used as a moral justification so that outgroup violence is acceptable and even desirable.<sup>11</sup> Thus, the ideology has an important role in justifying a method group can apply to achieve a group goal.<sup>12</sup> Although many previous studies have examined ideology's role, it remains unclear whether ideology serves as a causal factor or justifications.<sup>13</sup>

A study using social network analysis on terrorist groups in Indonesia shows that actors who play an essential role in terrorist networks are operational leaders who have ties of trust rather than ideological relationships.<sup>14</sup> This idea has also been described by Sageman,<sup>15</sup> which argues that social bonds play a more critical role than ideology in terrorist cell networks. In a similar vein to Milla et al.<sup>16</sup> and Sageman's idea,<sup>17</sup> the other group of researchers attempted to examine the role of group process,<sup>18</sup> but in this area of terrorism studies, research produced limited data concerning terrorist group processes.

To integrate the existing literature, Kruglanski et al. propose the 3N model.<sup>19</sup> This model attempts to incorporate the need, narrative, and network on the individual and group levels of the radicalization process. One of the prominent studies address this

issue conducted by Belanger et al. that has tested the 3N model,<sup>20</sup> where social exclusion was measured as a predictor for support radicalism in the general population. They found that that moral justification is one of the psychological mechanisms linking social alienation to supporting political violence.

This study suggests that groups can induce a sense of significance to group members by giving ideological justification systems to support violence to overcome the significant loss experiences.<sup>21</sup> It will then make violent behavior becomes morally justified. Similarly, Horváth-Sántha explains the cognitive mechanism of this process<sup>22</sup>. They suggest that when individuals go through adverse events, such as social alienation, they would be more likely to experience “cognitive opening,” which means they become more open to new beliefs and values. If that condition led them to extremist groups, they would then be more open to the ideology of violence. However, none of these studies have discussed the 3N mechanism in extremist-specific populations have not been discussed.

Although Kruglanski et al.<sup>23</sup> have attempted to integrate the individual and group level of the radicalization process with their 3N model, they have not empirically tested the direction of psychological mechanisms in the model. The present study aims to fill the gap by examining three predictors to measure the three needs: the quest for significance through jihad, violent ideology, group identity, and support for violent extremism as an outcome variable extremism. We propose two competing hypotheses. The first mechanism might work as follows. When individuals have a strong need for fulfillment of significance, they will be more likely to be interested in extremist ideology. This interest may arise because such ideology promises a meaningful dramatic change of one’s sense of meaning. Once people have attracted to extremist ideology, they would then be interested in joining extremist groups. Such groups will function as an agent that can support them to transform their ideology into real action. They aspire to perform a violent action for group benefits because their self-sacrifice behavior is considered heroic, and eventually, it can strengthen their self-worth and feeling of significance.<sup>24</sup>

In the second hypothesis, we propose that the need for significance will lead people to join extremist groups. The reason is; first, groups may activate the importance of group goals for individuals to restore their sense of meaning.<sup>25</sup> Second, such a group could provide clear direction to individuals about what they should do in meaningless situations.<sup>26</sup> In this sense, individuals with significant loss may experience a loss of direction about what they should do to be a significant person. Third, in line with social identity theory, group membership may also allow individuals to increase their self-esteem through meaningful roles assigned by the group.<sup>27</sup> Once they have joined the group, the leaders will influence individuals to adopt a violent ideology. The leaders will attempt to convince the group members that the violence is justified because it is to achieve sacred group goals, and the action is aimed only for the particular group. It thus then morally justified.

We tested the hypothesis on terrorist groups in Indonesia. The empirical data from the extremist groups sample is critical because they have experienced the radicalization process leading them to commit violent extremism. This specific sample is thus expected to provide a more precise explanation. In terms of context, Indonesia has some unique characteristics of terrorism activism. First, Indonesia is considered a

non-conflict area, but every year, this region is still facing terrorist attacks. Second, Indonesia is one of the countries targeted by global jihad groups such as ISIS and its affiliates for recruitment.<sup>28</sup> These two contextual backgrounds is very different compared to Palestine, Iraq, Syria or Afghanistan, which are known as war zones or conflict area, and Sri Lanka, where Kruglanski and his colleagues test the model. From a theoretical standpoint, we argue that individual-level support for terrorism needs to be examined in non-conflict areas because, in this context, social-political causes are not salient, and thus individual factors may play a more significant role. However, as suggested by the SQT, we argue that this individual motivational factor would remain to require a group-level process to transform into violent extremism. Before specifically outlined our hypothesis, we will briefly discuss previous literature on the role of quest for significance, ideology, and group identity on violent extremism, particularly terrorism.

### Significance Quest Theory

A quest for significance is conceptualized as a fundamental desire to achieve a sense of respect, or more colloquially, to “matter” and “be someone.”<sup>29</sup> Quest for significance theory suggests that there are two ways in which a significant goal can arise to motivate behavior.<sup>30</sup> First, one may experience a loss of significance. In this regard, an individual may experience a loss of significance from humiliation, injustice and personal failure, or social rejection and exclusion.<sup>31</sup> This experience of loss will make an individual have greater readiness for self-sacrifice. As reported by Bélanger, Schumpe, Menon, Conde Ng., and Nociti,<sup>32</sup> when someone in the social exclusion (experience significance loss) condition, he was more willing to self-sacrifice for a cause than those who did not experience a significant loss. This self-sacrifice to achieve a group goal can be observed in the jihadist phenomenon, such as a suicide bomber that is demonstrated extreme self-sacrifice. Second, the significant goal may also arise by the opportunities for gain, portrayed by Milla et al. as glory, romanticism, and heroism.<sup>33</sup> Individuals are motivated to achieve significance for the reason of dignity and self-worth, not for the reason of retribution or confession for committed sin.

The quest for meaning can be attained by attaching oneself to a more significant cause,<sup>34</sup> and this self-transcendence can be achieved through attachment to the social group, group identification, value group memberships, and act on behalf of the group.<sup>35</sup> As illustrated by Dugas and Kruglanski,<sup>36</sup> to stimulate the goal of significance, one has to identify violent extremism as an effective means for achieving significance. The significance motive must be dominant and important to shift the commitment from alternative goals. In the case of Islamic terrorism, once individuals identified with a jihadist group, they will adopt the Salafi jihadi ideology with a particular interpretation that war is the only way to achieve the goal and also justified that jihad can be applied outside conflict area.

A crucial characteristic of the significance quest is its anchorage in “sacred values.”<sup>37</sup> These sacred values are defined as what is worthwhile, moral, and admirable, what constitutes the “good life” that one should aspire to, and what actions individuals should undertake in given circumstances. In this sense, we argue that violent

jihad is considered as a sacred value and mandatory, which becomes the focal goal, and the only way individuals should take to fulfill the meaning of being a good Muslim and earning the highest reward from Allah and gaining respect from the community.

### **Group Identity Attain to Significance**

Social identity theory posits that individuals enhance their self-esteem through group memberships.<sup>38</sup> In radical groups, the fulfillment of significance is achieved through meaningful roles provided by groups. Those who can accomplish the role expectation will gain honor. Group membership may also restore significance because it can provide a collective identity and thus reduce one's fear of death.<sup>39</sup> Terror management theory suggests that death represents the ultimate insignificance.<sup>40</sup> Researches have demonstrated that making one's collective identity can shift individual orientation to collective orientation, which can lead individuals to be more willing to act for the group's sake. As found in a study by Orehek, Sasota, Kruglanski, Dechesne & Ridgeway,<sup>41</sup> individuals who were primed with an interdependent self-construal would less fear of death and more willing to face harm for the group benefits than individuals who were primed with an independent self-construal. This finding helps to explain how radical groups, such as ISIS, can meet individuals' needs to restore a sense of significance by providing candidates with a sense of respect and belonging to the group.<sup>42</sup>

According to the collective shift hypothesis from the SQT perspective, individuals who experience a decline in their sense of significance as a result of personal failure will attempt to restore their personal significance by shifting orientation to a collectivistic orientation, in some case by engaging in collective action.<sup>43</sup> It can be explained that individuals who have experienced failure will tend to join groups to restore their significance and, consequently, tend to be more aggressive toward outgroups. Relevant to Kruglanski and Orehek's proposition,<sup>44</sup> that the individual who defines themselves according to their group memberships would be more supportive of aggression against outgroups, including the use of terrorism. As suggested earlier, this is because they adopt collective orientation, which will make them more willing to sacrifice themselves for group benefit. From the perspective of social identity theory, the violence strategy is chosen due to ingroup identification combined with dis-identification with the outgroup.<sup>45</sup> The idea is that group leaders highlight the non-human aspects of outgroups, combined with the real threat of outgroups to the ingroup. In this case, violence would be justified. At this point, we argue that extremist individuals may need support from a group to reinforce their violent ideology. By sacrifice self for the group, individuals would be able to restore their significance loss.

### **Ideology Justifying Violence Extremism**

Kruglanski and colleagues described how different complexity of a value system of narratives associates with extreme behavior.<sup>46</sup> The narrative that highlights the complexity of a value system (e.g. advocating work-life balance) may decrease extreme

behavior appeal and restore moderation. In this regard, moderate ideology was associated with a perception of multiple values as approximately equally important, whereas ideological extremism was associated with one value dominating others.<sup>47</sup>

People need a narrative as a means to interpret how to achieve the goal. Ideology is relevant to radicalization because it denotes radical activity as a means to the goal of personal significance.<sup>48</sup> This also explains how some individuals are attracted to particular ideologies such as violence and terrorism, while others are not. Kruglanski and Gelfand explain how radicalization occurs by introducing the role of an ideological factor because awakening the quest for significance does not yet increase the likelihood of radicalization or terrorism.<sup>49</sup> In this way, the group ideology justifies violence in defense of sacred values<sup>50</sup> and defines terrorism as an effective and morally acceptable means of significance restoration.<sup>51</sup>

Dugas and Kruglanski also explain ideology as justification.<sup>52</sup> They describe that terrorism justifying ideology is a particular collective belief system that recognizes extremist activity as the appropriate means to satisfy one's significance quest. When a certain group establishes terrorism justifying ideology, they have to ensure that the method of terrorism must be perceived as both morally justified and effective. In this regard, Salafi jihadism justifies that terrorism is jihad and allows practicing jihad outside of the conflict area. This ideology was represented by groups like Al-Qaeda and other Islamic jihadi groups. As portrayed by Hellmich,<sup>53</sup> Salafi-jihadist promotes jihad proactively and violently against Islam's enemies. Salafi jihadists believe that Islam's glory can only be achieved by waging jihad as war, and the defeat of Islam was caused by the unwillingness of Muslims to practice the command of *jihad qital* (war) as the only interpretation of *jihad fi sabilillah*.<sup>54</sup>

## Hypotheses

**H1:** The higher need for significance predicts higher support for violent extremism.

**H2a:** The relationship of need for significance and violent extremism would be serially mediated by group identity and violent ideology.

**H2b:** The relationship of need for significance and violence extremism would be serially mediated by violence ideology, and group identity would be serially mediated by violence ideology and group identity.

## Method

### Participants

Participants in this study were prisoners of terrorism cases, who were recruited from 36 prisons in Indonesia. A total of 135 male terrorist detainees were recruited from deradicalization programs between 2015–2017 in cooperation with the National Agency for Combating Terrorism (BNPT). The participants were selected based on the recommendations from prison officials and each terrorist detainee's consent. Their ages ranged from 16 to 55 years old ( $M=35.19$ ,  $SD=7.41$ ). They have been imprisoned from 0.2 to 36 years ( $M=6.10$ ,  $SD=4.79$ ).

## **Procedure and Materials**

Data were collected using questionnaires administered by a research assistant through face-to-face interviews. The interviewers were trained by a team of researchers (first author and second author) who also interviewed participants themselves. Participant consent was gained verbally by asking through prison officials if they were willing to participate. The prison officials asked prisoners directly if they would be willing to participate in this interview. If they were willing to participate, then with the approval from the authority, the detainees were brought to meet the interviewer. Each interview lasted 45-90 min. There were several variables asked in the questionnaire (e.g. religious fundamentalism, perceived injustice and perceived threat, also support for democracy), but for this study, we report significant quest, group identity, ideology, and violent extremism. All scales were measure on 4-point scales. All items had missing values between 0.7% to 5.2%; thus, we used expectation maximization (EM) to replace the missing value.

### **Need for Significance**

We employed four items to measure the need for significance. These items measure how strongly participants believed that jihad is one of strategy they can take to fulfill the need of meaningful life (i.e. My life is felt so meaningful if I could sacrifice myself for jihad against the enemies of Allah, I believe *jihad* is my way to reach a noble life, I feel my life is meaningful if I could defend Muslims' needs; as a Muslim, I feel meaningless if I let my fellow Muslims are oppressed). This scale had satisfactory reliability with composite reliability (CR)= .875 or above 0.70 as a cutoff point reliability index.

### **Group Identity**

We used two five items to measure group identity. The items asked how strongly participants attach to the mujahid group (i.e. I like to be part of mujahidin who do jihad for the glory of Islam and Muslims, I feel proud to be mujahidin (*thoifah man-shuroh*) who are obliged to do jihad; I feel close to mujahidin figures who fight for Islam, even though Western think they are terrorist, I frequently imagine myself as Mujahid who fight in Allah's way with fully happy; Being mujahid influences my lifestyle and way of thinking until now). This scale had satisfactory reliability with composite reliability (CR)= .899.

### **Ideology**

We measured ideology, particularly Salafi jihadism ideology, by asking participants to indicate to what extent they agree that jihad in the outside conflict area is justified. This justification is a typical interpretation for jihadist groups who support terrorism. There were three items: "The attack on World Trade Center in New York, America, in 2001, by some of the Muslim groups are a form of jihad"; "Imam Samudra, Amrozi, Noordin M.Top, and Osama bin Laden are examples of people who committed the real jihad"; and "the fight to establish Islamic state is only possible with assaulting

strategies and war.” This scale had satisfying reliability with and composite reliability (CR)= .836.

**Violent Extremism.** We used four items to measure violent extremism. However, one item was dropped because it has poor factor loading (i.e. Participate in attacks on mosques and followers of Shia). Participants were asked to indicate how strongly they agree on jihad only can be performed as war (*qital*) or support for violence without any alternative interpretation. The three items were: “Taking properties of the *kafir* (non-Muslim people) for the Jihad purpose, even if not in conflict area”; “The people of Islam enemy permitted to be killed”; and “Attacking in Indonesia is revenge on the oppression of fellow Muslim in Palestine, Syria, and Afghanistan.” The loading factor satisfied, ranging from .483 to .849. This scale had satisfactory reliability with composite reliability (CR)= .768.

## Results

### Preliminary Results

Mean, standard deviations, and zero-order correlations are presented in Table 1. Correlational analysis revealed that all variables had positive and significant relationships.

### Model Evaluation

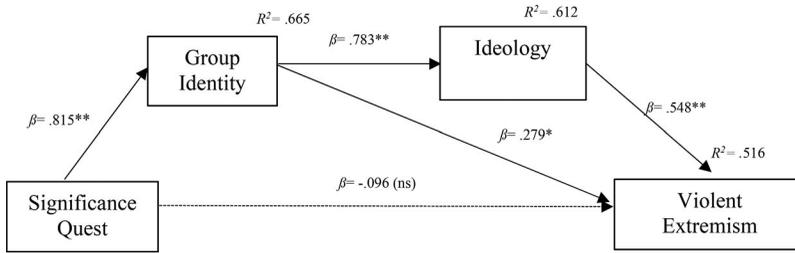
To examine hypotheses, we conducted a path analysis using mean score. We run the analysis with AMOS 24, using bootstrapping with 1000 resamples. Overall, the analysis revealed that our proposed Model 1 had a good fit with  $\chi^2(1) = 2.954, p = .086$ , NFI = .992, CFI = .995, GFI = .989, SRMR = .019, although the RMSEA value was .121. We found that Model 2 did not fit the data well,  $\chi^2(1) = 62.369, p = .000$ , NFI = .833, CFI = .833, GFI = .843, RMSEA = .677, SRMR = .091. Therefore, we decided to interpret the associations and mediation effect in Model 1 only because the fit in Model 1 was significantly better than in Model 2.

Figure 1 summarizes the results that describe the associations among the variables. These findings support the main predictions of the 3N model. Significance quest was significantly associated with group identity ( $\beta = .815, p < .01$ ); group identity had a significant association with ideology ( $\beta = .783, p < .01$ ); and violent extremism ideology significantly associated with violent extremism ( $\beta = .279, p < .05$ ). Ideology was also found to have a significant association with violent extremism ( $\beta = .548, p < .01$ ).

**Table 1.** Mean, standard deviation, and correlations.

	Min	Max	Mean	SD	1	2	3	3
1. Significant Quest	1	4	3.069	.612	1	.815**	.691**	.512**
2. Group identity	1	4	2.915	.646		1	.783**	.632**
3. Ideology	1	4	2.728	.724			1	.702**
4. Violent Extremism	1	4	2.686	.673				1

\*\* $p < .01$ .



**Figure 1.** The mediation model of need for significance and violence extremism by group identity and ideology.

**Table 2.** Mediation analysis.

Path	Mediator	Indirect Effect	<i>p</i>	Boot.S.E.	Confidence Interval 95% (Bootstrapping)	
					Lower	Upper
Significance quest→ violence extremism	Group identity	.251	.009	.098	.061	.455
Significance quest→ violence extremism	Group Identity (M1) and Ideology (M2)	.386	.002	.082	.235	.556

\*  $p < .05$ , \*\*  $p < .01$ .

However, contrary to the 3N model's suggestion, no significant association was detected between significance quest and violent extremism.

At the second stage of analysis, we tested indirect effects from the significance quest to violent extremism. As predicted in our hypothesis, we found that group identity had a significant mediation effect on the relationship of significance quest and violent extremism ( $B = .251$ ,  $p < .05$ , Boot.S.E. = .098, CI 95% Bootstrapping = .061, .445). A serial mediation analysis showed that the effect of significance quest and violent extremism was serially mediated by group identity and ideology ( $B = .386$ ,  $p < .01$ , Boot.S.E. = .082, CI 95% Bootstrapping = .235, .556). For the full report, see Table 2.

## Discussion

This present study aimed to test the relation of the need of significance, group and ideology predict support violence extremism based on the 3N model, need, narrative, and network, in a terrorist sample and to test possible mechanisms for violent extremism. We examined two possible models. Model 1 examines the serial mediation effect of group identity and violence ideology in explaining the relationship between need for significance and violent extremism. Model 2 examines the serial mediation effect of violent ideology and group identity in explaining the relationship of need for significance and violent extremism. Our analysis shows that Model 1 is better to explain the relationships of the variables than model 2. We specifically found that the need for significance is not significantly associated with violent extremism when ideology and group identity are controlled. However, we indeed find that need for significance positively and significantly correlated with group identity and ideology. It means that individuals with a higher need for significance tend to have a higher group identification and a higher support of violent ideology.

This study is adequate enough to demonstrate the mechanism of the 3N model that was previously proposed by Kruglanski, Belanger, and Gunaratna.<sup>55</sup> Besides the mechanism of the need, narrative, and network, our study affirms that the need for significance alone, without a group engagement, cannot predict violent extremism. In this case, the need for significance is a need that exists in all individuals, regardless of whether they are extremist or not so that the need for significance that is fulfilled through joining a group is not always fulfilled by groups that are pro-violence. For individual who suffered from loss of significance and have an immediate need to restore their significance, would be more willing to accept a violent strategy. Our study provides novel empirical evidence into the significance quest theory in radicalism by offering a set of explanations of why the need for significance will lead people to be interested in violent extremism. It amplifies what is described by Kruglanski and Gelfand that group and ideology has an essential role in providing meanings to individuals.<sup>56</sup> It is also suggested by Webber and Kruglanski,<sup>57</sup> individuals can be provoked to join terrorist organizations to restore their need to be significant. Since that radical groups are perceived as having important goals and involving in allies that have such goals, it has correspondence with the attempts to feel significant.<sup>58</sup>

Once individuals identify themselves with a particular terrorist group, they would be exposed to violent ideology. From the social influence theory, it has extensively documented that ingroup members are strongly concerned about their group's views.<sup>59</sup> The higher group identification, the more likely they abide by what group members do and what most group members expect them to do.<sup>60</sup> In the context of terrorism, they are most likely adherent to Salafi jihadism ideology that serve terrorism justifying ideology. They interpret the term *jihad fi sabilillah* as *jihad qital* (war) like war, which can be implemented at outside conflict areas. This result was also confirmed for other extremist ideologies. As shown by Kleinmann's study on Sunni militants in the United States was revealed that 90% of his participants were radicalized through group processes, such as through interactions with a charismatic leader, radical friends or family, or connection to militant groups on the internet.<sup>61</sup> Taken together, this study suggests the importance of providing alternative groups with alternative ideology are keys to counter violent extremism.

Although the present study has provided valuable theoretical contributions, it must be acknowledged that this study has limitations. One limitation of current research is its low internal validity due to the correlational nature. Therefore, it is difficult to conclude the causal effect relationship. Testing the model in the general population uses longitudinal study since that experiment method might not be permitted by ethics will be useful to test the theoretical model of 3N. We also have limitations to describe the role of the need for significance in violent extremism. We measure the need for significance by asking terrorist detainees to explain to what extent they believe that jihad can restore their personal significance. In other words, it measures to what extent they think that jihad is an opportunity for significant gain. It would be valuable in future studies to measure significant quest in a more general definition, such as whether individuals who suffered from loss of significance in the past and whether they attain to be a significant person in the future. Since that we test the model in the specific population, in Indonesia terrorist group, it would be useful if we can also compare the model from the general population.

## Notes

1. Emma Morris, "Children: Extremism and Online Radicalization," *Journal of Children and Media* 10, no. 4 (October 2016): 508–14, <https://doi.org/10.1080/17482798.2016.1234736>.
2. Arie W. Kruglanski, Michele J. Gelfand, Jocelyn J. Bélanger, Anna Sheveland, Malkanthi Hetiarachchi, and Rohan Gunaratna, "The Psychology of Radicalization and Deradicalization: How Significance Quest Impacts Violent Extremism," *Political Psychology* 35 (January 2014): 69–93, <https://doi.org/10.1111/pops.12163>; Arie W. Kruglanski, Michele J. Gelfand, Jocelyn J. Bélanger, Malkanthi Hetiarachchi, and Rohan Gunaratna, "Significance Quest Theory as the Driver of Radicalization towards Terrorism," in *Resilience and Resolve: Communities Against Terrorism*, ed. Jolene Jerard and Salim Mohamed Nasir (London: Imperial College Press, 2015), 17–30, [https://doi.org/10.1142/9781783267743\\_0002](https://doi.org/10.1142/9781783267743_0002); Webber and Kruglanski, "The Social Psychological Makings of a Terrorist."
3. Katarzyna Jasko, Gary LaFree, and Arie W. Kruglanski, "Quest for Significance and Violent Extremism: The Case of Domestic Radicalization," *Political Psychology* 38, no. 5 (November 2016): 815–31, <https://doi.org/10.1111/pops.12376>.
4. Michael A. Hogg, "Self-Uncertainty, Social Identity, and the Solace of Extremism," in *Extremism and the Psychology of Uncertainty*, ed. Michael A Hogg and Danielle L. Blaylock (John Wiley and Sons, 2011); Paul G. Grieve and Michael A. Hogg, "Subjective Uncertainty and Intergroup Discrimination in the Minimal Group Situation," *Personality and Social Psychology Bulletin* 25, no. 8 (August 1999): 926–40, <https://doi.org/10.1177/01461672992511002>; Barbara-Ann Mullin and Michael A. Hogg, "Dimensions of Subjective Uncertainty in Social Identification and Minimal Intergroup Discrimination," *British Journal of Social Psychology* 37, no. 3 (September 1998): 345–65, <https://doi.org/10.1111/j.2044-8309.1998.tb01176.x>.
5. Arie W. Kruglanski and Edward Orehek, "The Need for Certainty as a Psychological Nexus for Individuals and Society," in *Extremism and the Psychology of Uncertainty*, ed. Michael A Hogg and Danielle L. Blaylock (John Wiley and Sons, 2011); Arie W. Kruglanski, Xiaoyan Chen, Mark Dechesne, Shira Fishman, and Edward Orehek, "Fully Committed: Suicide Bombers' Motivation and the Quest for Personal Significance," *Political Psychology* 30, no. 3 (2009): 331–57, <https://doi.org/10.1111/j.1467-9221.2009.00698.x>; Kruglanski, Gelfand, Bélanger, Sheveland, Hetiarachchi, and Gunaratna, "The Psychology of Radicalization and Deradicalization."
6. Jeff Victoroff, "The Mind of the Terrorist: A Review and Critique of Psychological Approaches," *Journal of Conflict Resolution* 49, no. 1 (2005): 3–42, <https://doi.org/10.1177/0022002704272040>; Seth J. Schwartz, Curtis S. Dunkel, and Alan S. Waterman, "Terrorism: An Identity Theory Perspective," *Studies in Conflict & Terrorism* 32, no. 6 (May 2009): 537–59, <https://doi.org/10.1080/10576100902888453>; Mirra Noor Milla, Joevarian Hudiyana, and Haykal Hafizul Arifin, "Attitude Toward Rehabilitation as a Key Predictor for Adopting Alternative Identities in Deradicalization Programs: An Investigation of Terrorist Detainees' Profiles," *Asian Journal of Social Psychology* 23, no. 1 (July 2019): 15–28, <https://doi.org/10.1111/ajsp.12380>.
7. Michael A. Hogg, Arie W. Kruglanski, and Kees van den Bos, "Uncertainty and the Roots of Extremism," *Journal of Social Issues* 69, no. 3 (2013): 407–18, <https://doi.org/10.1111/josi.12021>.
8. Martha Crenshaw, "An Organizational Approach to the Analysis of Political Terrorism," *Orbis* 29 (1985): 465–89; Fathali M. Moghaddam, "The Staircase to Terrorism: A Psychological Exploration," *American Psychologist* 60, no. 2 (2005): 161–9, <https://doi.org/10.1037/0003-066x.60.2.161>; Webber and Kruglanski, "The Social Psychological Makings of a Terrorist"; Simona Trip, Carmen Hortensia Bora, Mihai Marian, Angelica Halmajan, and Marias Ioan Drugas, "Psychological Mechanisms Involved in Radicalization and Extremism. A Rational Emotive Behavioral Conceptualization," *Frontiers in Psychology* 10 (March 2019), <https://doi.org/10.3389/fpsyg.2019.00437>.

9. Jocelyn J. Bélanger, Manuel Moyano, Hayat Muhammad, Lindsay Richardson, Marc-André K. Lafrenière, Patrick McCaffery, Karyne Framand, and Noémie Nociti, “Radicalization Leading to Violence: A Test of the 3N Model,” *Frontiers in Psychiatry* 10 (February 2019), <https://doi.org/10.3389/fpsy.2019.00042>.
10. Curtis D. Hardin and E. Tory Higgins, “Shared Reality: How Social Verification Makes the Subjective Objective,” in *Handbook of Motivation and Cognition: The Interpersonal Context*, Vol. 3, ed. Richard M. Sorrentino and E. Tory Higgins (New York: Guilford Press, 1996), 28–84, <http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=1996-98385-002&loginpage=Login.asp>; John T. Jost, Alison Ledgerwood, and Curtis D. Hardin, “Shared Reality, System Justification, and the Relational Basis of Ideological Beliefs,” *Social and Personality Psychology Compass* 2 (2008): 171–86.
11. Kruglanski, Gelfand, Bélanger, Sheveland, Hetiarachchi, and Gunaratna, “The Psychology of Radicalization and Deradicalization: How Significance Quest Impacts Violent Extremism”; Albert Bandura, “Moral Disengagement in the Perpetration of Inhumanities,” *Personality and Social Psychology Review* 3, no. 3 (August 1999): 193–209, [https://doi.org/10.1207/s15327957pspr0303\\_3](https://doi.org/10.1207/s15327957pspr0303_3); Albert Bandura, Claudio Barbaranelli, Gian Vittorio Caprara, and Concetta Pastorelli, “Mechanisms of Moral Disengagement in the Exercise of Moral Agency,” *Journal of Personality and Social Psychology* 71, no. 2 (1996): 364–74, <https://doi.org/10.1037/0022-3514.71.2.364>; Bélanger, Moyano, Muhammad, Richardson, Lafrenière, McCaffery, Framand, and Nociti, “Radicalization Leading to Violence: A Test of the 3N Model.”
12. Erica Molinaro, Arie W. Kruglanski, Flavia Bonaiuto, Mirilia Bonnes, Lavinia Cicero, Ferdinando Fornara, Massimiliano Scopelliti, Jeroen Admiraal, Almut Beringer, Tom Dedeurwaerdere, et al. “Motivations to Act for the Protection of Nature Biodiversity and the Environment: A Matter of “Significance,”” *Environment and Behavior* 52, no. 10 (January 2019): 1133–63, <https://doi.org/10.1177/0013916518824376>.
13. Oluf Gøtzsche-Astrup, “The Time for Causal Designs: Review and Evaluation of Empirical Support for Mechanisms of Political Radicalisation,” *Aggression and Violent Behavior* 39 (2018): 90–9, <https://doi.org/10.1016/j.avb.2018.02.003>.
14. Mirra Noor Milla, Joevarian Hudiyan, Wahyu Cahyono, and Hamdi Muluk, “Is the Role of Ideologists Central in Terrorist Networks? A Social Network Analysis of Indonesian Terrorist Groups,” *Frontiers in Psychology* 11 (March 2020): 1–11, <https://doi.org/10.3389/fpsyg.2020.00333>.
15. Mark Sageman, *Understanding Terror Networks* (Philadelphia: University of Pennsylvania Press, 2004).
16. Milla, Hudiyan, Cahyono, and Muluk, “Is the Role of Ideologists Central in Terrorist Networks? A Social Network Analysis of Indonesian Terrorist Groups.”
17. Sageman, *Understanding Terror Networks*.
18. Hogg, “Self-Uncertainty, Social Identity, and the Solace of Extremism”; Justin Reedy, John Gastil, and Michael Gabbay, “Terrorism and Small Groups,” *Small Group Research* 44, no. 6 (October 2013): 599–626, <https://doi.org/10.1177/1046496413501892>.
19. Arie W. Kruglanski, Jocelyn J. Bélanger, and Rohan Gunaratna, *The Three Pillars of Radicalization: Needs, Narratives, and Networks* (Oxford: Oxford University Press, 2019), <https://doi.org/10.1093/oso/9780190851125.001.0001>.
20. Bélanger, Moyano, Muhammad, Richardson, Lafrenière, McCaffery, Framand, and Nociti, “Radicalization Leading to Violence: A Test of the 3N Model.”
21. Ibid.
22. Hanga Horváth-Sántha, “Radicalization into Salafi Jihadism: Some Patterns and Profiles in Europe 2015–2017,” *Honvédségi Szemle –Hungarian Defence Review* 145, no. 2 (2017): 26–47, <https://honvedelem.hu/images/media/5f58bfe5ce52b574704220.pdf>.
23. Kruglanski, Gelfand, Bélanger, Sheveland, Hetiarachchi, and Gunaratna, “The Psychology of Radicalization and Deradicalization: How Significance Quest Impacts Violent Extremism.”
24. Mirra Noor Milla, Idhamsyah Eka Putra, and Ahmad Naufalul Umam, “Stories from Jihadists: Significance, Identity, and Radicalization through the Call for Jihad,” *Peace and*

- Conflict: Journal of Peace Psychology* 25, no. 2 (May 2019): 111–21, <https://doi.org/10.1037/pac0000371>.
25. Molinario, Kruglanski, Bonaiuto, Bonnes, Cicero, Fornara, Scopelliti, Admiraal, Beringer, Dedeurwaerdere, et al., “Motivations to Act for the Protection of Nature Biodiversity and the Environment: A Matter of “Significance””
  26. Michael A. Hogg, David K. Sherman, Joel Dierselhuis, Angela T. Maitner, and Graham Moffitt, “Uncertainty, Entitativity, and Group Identification,” *Journal of Experimental Social Psychology* 43, no. 1 (January 2007): 135–42, <https://doi.org/10.1016/j.jesp.2005.12.008>.
  27. Michael A. Hogg, “Social Identity,” in *Handbook of Self and Identity*, ed. Mark R. Leary Tangney and June Price Tangney (New York: The Guilford Press, 2003), 462–79.
  28. Kumar Ramakrishna, “Understanding Youth Radicalization in the Age of ISIS: A Psychosocial Analysis,” *E-International Relations*, 11 February 2016, <https://www.e-ir.info/2016/02/11/understanding-youth-radicalization-in-the-age-of-isis-a-psychosocial-analysis/>.
  29. Kruglanski, Chen, Dechesne, Fishman, and Orehek, “Fully Committed: Suicide Bombers’ Motivation and the Quest for Personal Significance”; Arie W. Kruglanski and MichelleJ. Gelfand, “Motivation, Ideology, and the Social Process in Radicalization,” *APS Observer*, 2013; Michelle Dugas and Arie W. Kruglanski, “The Quest for Significance Model of Radicalization: Implications for the Management of Terrorist Detainees,” *Behavioral Sciences & the Law* 32, no. 3 (May 2014): 423–39, <https://doi.org/10.1002/bsl.2122>.
  30. Dugas and Kruglanski, “The Quest for Significance Model of Radicalization: Implications for the Management of Terrorist Detainees”; Kruglanski, Gelfand, Bélanger, Sheveland, Hetiarachchi, and Gunaratna, “The Psychology of Radicalization and Deradicalization: How Significance Quest Impacts Violent Extremism.”
  31. Dugas and Kruglanski, “The Quest for Significance Model of Radicalization: Implications for the Management of Terrorist Detainees”; Jasko, LaFree, and Kruglanski, “Quest for Significance and Violent Extremism: The Case of Domestic Radicalization”; Sageman, *Understanding Terror Network*.
  32. Jocelyn J. Bélanger, Birga M. Schumpe, Bhavna Menon, J. Ng, Noémie Nociti, V. Zeigler-Hill, and T. K. Shackelford, “Self-Sacrifice for a Cause: A Review and an Integrative Model,” in *The SAGE Handbook of Personality and Individual Differences: Volume II: Origins of Personality and Individual Differences* (Thousand Oaks, CA: SAGE Publications Ltd, n.d.), 465–85, <https://doi.org/10.4135/9781526451200.n25>.
  33. Milla, Putra, and Umam, “Stories from Jihadists: Significance, Identity, and Radicalization through the Call for Jihad.”
  34. Martin E. P. Seligman, *Authentic Happiness: Using the New Positive Psychology to Realise Your Potential For Lasting Fulfilment* (Free Press, 2002).
  35. Arie W. Kruglanski and Edward Orehek, “The Role of the Quest for Personal Significance in Motivating Terrorism,” in *The Psychology of Social Conflict and Aggression*, ed. Joseph P. Forgas, Arie W. Kruglanski, and Kiplong D. Williams (New York: Psychology Press, 2011), 153–66.
  36. Dugas and Kruglanski, “The Quest for Significance Model of Radicalization: Implications for the Management of Terrorist Detainees.”
  37. Scott Atran, Robert Axelrod, and Richard Davis, “Sacred Barriers to Conflict Resolution,” *Science* 317, no. 5841 (August 2007): 1039–40, <https://doi.org/10.1126/science.1144241>; Scott Atran, “Pathways to and from Violent Extremism: The Case for Science-Based Field Research Statement before the Senate Armed Services Subcommittee on Emerging Threats & Capabilities,” 2010, [https://jeannicod.ccsd.cnrs.fr/ijn\\_00505380](https://jeannicod.ccsd.cnrs.fr/ijn_00505380).
  38. Dominic Abrams and Michael A. Hogg, “Comments on the Motivational Status of Self-Esteem in Social Identity and Intergroup Discrimination,” *European Journal of Social Psychology* 18, no. 4 (August 1988): 317–34, <https://doi.org/10.1002/ejsp.2420180403>; Vincenzo Iacoviello, Jacques Berent, Natasha Stine Frederic, and Andrea Pereira, “The Impact of Ingroup Favoritism on Self-Esteem: A Normative Perspective,” *Journal of*

- Experimental Social Psychology* 71 (July 2017): 31–41, <https://doi.org/10.1016/j.jesp.2016.12.013>.
39. Kruglanski and Orehek, “The Role of the Quest for Personal Significance in Motivating Terrorism”; Webber and Kruglanski, “The Social Psychological Makings of a Terrorist”; Arie W. Kruglanski and David Webber, “The Psychology of Radicalization,” *Zeitschrift Für Internationale Strafrechtsdogmatik* 9, no. 9 (2014): 379–88, [https://doi.org/http://www.zis-online.com/dat/artikel/2014\\_9\\_843.pdf](https://doi.org/http://www.zis-online.com/dat/artikel/2014_9_843.pdf).
  40. Jeff Greenberg, Tom Pyszczynski, and Sheldon Solomon, “The Causes and Consequences of a Need for Self-Esteem: A Terror Management Theory,” in *Public Self and Private Self* (Springer New York, 1986), 189–212, [https://doi.org/10.1007/978-1-4613-9564-5\\_10](https://doi.org/10.1007/978-1-4613-9564-5_10); Tom Pyszczynski, Sheldon Solomon, and Jeff Greenberg, “Thirty Years of Terror Management Theory,” in *Advances in Experimental Social Psychology* (Elsevier, 2015), 1–70, <https://doi.org/10.1016/bs.aesp.2015.03.001>.
  41. Edward Orehek, Jo A. Sasota, Arie W. Kruglanski, Mark Dechesne, and Leianna Ridgeway, “Interdependent Self-Construals Mitigate the Fear of Death and Augment the Willingness to Become a Martyr,” *Journal of Personality and Social Psychology* 107, no. 2 (August 2014): 265–75, <https://doi.org/10.1037/a0036675>.
  42. Bertjan Doosje, Fathali M. Moghaddam, Arie W. Kruglanski, Arjan De Wolf, Liesbeth Mann, and Allard R. Feddes, “Terrorism, Radicalization and de-Radicalization,” *Current Opinion in Psychology* 11 (October 2016): 79–84, <https://doi.org/10.1016/j.copsyc.2016.06.008>.
  43. Kruglanski and Orehek, “The Role of the Quest for Personal Significance in Motivating Terrorism.”
  44. Ibid.
  45. Doosje, Moghaddam, Kruglanski, De Wolf, Mann, and Feddes, “Terrorism, Radicalization and de-Radicalization.”
  46. Arie W. Kruglanski, Katarzyna Jasko, Marina Chernikova, Michelle Dugas, and David Webber, “To the Fringe and Back: Violent Extremism and the Psychology of Deviance,” *American Psychologist* 72, no. 3 (April 2017): 217–30, <https://doi.org/10.1037/amp0000091>.
  47. Philip E. Tetlock, “Cognitive Style and Political Belief Systems in the British House of Commons,” *Journal of Personality and Social Psychology* 46, no. 2 (1984): 365–75, <https://doi.org/10.1037/0022-3514.46.2.365>; Philip E. Tetlock, “A Value Pluralism Model of Ideological Reasoning,” *Journal of Personality and Social Psychology* 50, no. 4 (1986): 819–27, <https://doi.org/10.1037/0022-3514.50.4.819>.
  48. Kruglanski and Gelfand, “Motivation, Ideology, and the Social Process in Radicalization.”
  49. Ibid.
  50. Atran, “Pathways to and from Violent Extremism: The Case for Science-Based Field Research Statement before the Senate Armed Services Subcommittee on Emerging Threats & Capabilities.”
  51. Kruglanski and Gelfand, “Motivation, Ideology, and the Social Process in Radicalization.”
  52. Dugas and Kruglanski, “The Quest for Significance Model of Radicalization: Implications for the Management of Terrorist Detainees.”
  53. Christina Hellmich, “Creating the Ideology of Al Qaeda: From Hypocrites to Salafi-Jihadists,” *Studies in Conflict & Terrorism* 31, no. 2 (February 2008): 111–24, <https://doi.org/10.1080/10576100701812852>.
  54. Mirra N. Milla, *Mengapa Memilih Jalan Teror* (Yogyakarta: Gadjah Mada University Press, 2010).
  55. Kruglanski, Bélanger, and Gunaratna, *The Three Pillars of Radicalization: Needs, Narratives, and Networks*.
  56. Kruglanski and Gelfand, “Motivation, Ideology, and the Social Process in Radicalization.”
  57. Webber and Kruglanski, “The Social Psychological Makings of a Terrorist.”
  58. Jasko, LaFree, and Kruglanski, “Quest for Significance and Violent Extremism: The Case of Domestic Radicalization.”
  59. Dominic Abrams and Michael A. Hogg, *Social Identity Theory: Constructive and Critical Advances* (Springer-Verlag Publishing, 1990).

60. Solomon E. Asch, "Opinions and Social Pressure," *Scientific American* 193, no. 5 (November 1955): 31–5, <https://doi.org/10.1038/scientificamerican1155-31>; Winnifred R. Louis, "Collective Action — and Then What ?," *Psychology* 65, no. 4 (2009): 727–48, <https://doi.org/10.1111/j.1540-4560.2009.01623.x>; Stanley Milgram, *Obedience to Authority: An Experimental View* (New York: Harper & Row, 1974); Michael A. Hogg and Namrata Mahajan, "Domains of Self-Uncertainty and Their Relationship to Group Identification," *Journal of Theoretical Social Psychology* 2, no. 3 (April 2018): 67–75, <https://doi.org/10.1002/jts5.20>.
61. Scott Matthew Kleinmann, "Radicalization of Homegrown Sunni Militants in the United States: Comparing Converts and Non-Converts," *Studies in Conflict & Terrorism* 35, no. 4 (April 2012): 278–97, <https://doi.org/10.1080/1057610x.2012.656299>.

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