



## TWO OPEN SOURCE NUCLEAR TERRORISM PROJECTS

IGCC Nuclear Security D.C. Policy Series

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## IN BRIEF: TWO PROJECTS

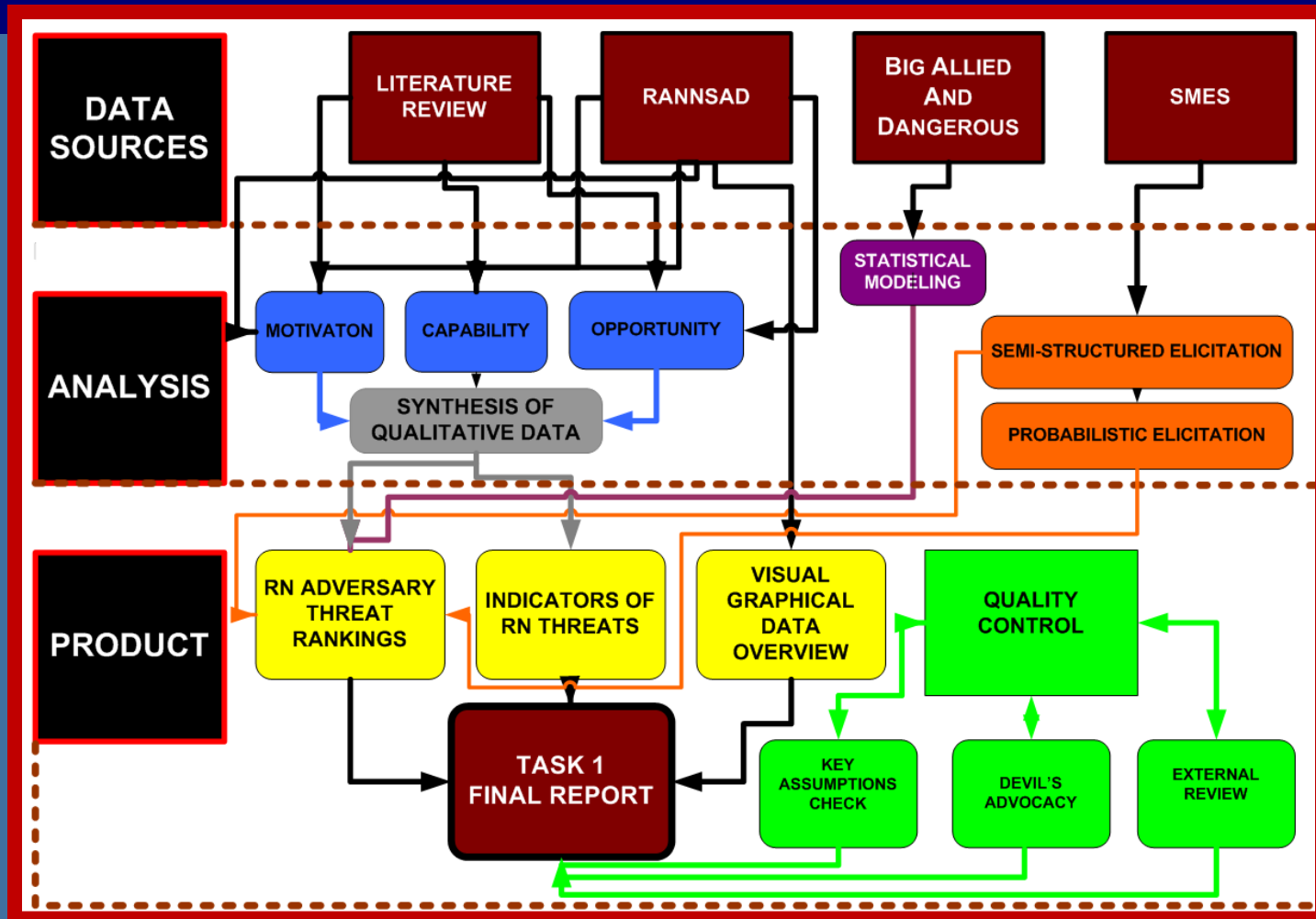
### 1. *Anatomizing Likely RN-Armed VNSA Adversaries*

A. Qualitative Findings

B. RANNSAD

### 2. *VNSA RN Command & Control*

# 1: Determining Likely VNSA RN Threats to the U.S.: Adding Qualitative Approaches



Gary A. Ackerman, Charles P. Blair, Jeffrey M. Bale, Victor Asal and R. Karl Rethemeyer, *Anatomizing Radiological and Nuclear Non-State Adversaries: Identifying the Adversary*. Report prepared for the Science and Technology Directorate, Department of Homeland Security, grant number N00140510629 (College Park, MD.: National Consortium for the Study of Terrorism and Responses to Terrorism, 2009).



## Ranking Radiological Non-State Adversaries to the U.S. Homeland *Qualitative Approaches*

Literature Review		Elicitation	
1	Al-Qā'ida central	1	Al-Qā'ida central
2	Lashkar-e Tayyiba	2	Unidentified Sunni jihadist group (foreign-based)
3	Fringe U.S. militia groups (possibly individuals associated with a Volksfront/ National Alliance hybrid)	3	Unidentified Sunni jihadist group (U.S.-based)
4	Home-grown right-wing individuals not associated with any terrorist group (secular or nominally religious)	4	Newly-emerging Iraq-forged mujahidin networks (Unidentified Sunni jihadist group)
5	Newly-emerging Iraq-forged mujahidin networks	5	Shi'i jihadist unaffiliated cell (U.S.-based)
6	AQIM	6	Unidentified Shi'i jihadist group (U.S.-based)
7	Newly-emerging apocalyptic millenarian groups	7	Foreign-based Sunni jihadist unaffiliated cell
8	Extreme Right-Wing racist loner	8	Unidentified disgruntled scientist w/access (U.S.-based)
9	Al-Takfir wa al-Hijra	9	Unidentified Shi'i jihadist group (foreign-based)
10	Home-grown American group adhering to millenarian beliefs and practices (e.g. Christian Identity)	10	Unidentified apocalyptic millenarian cult (U.S.-based)
11	Pakistani neo-Taliban elements	11	Unidentified Right-Wing group (incl. Christian Identity; militia movement; tax protesters; supremacists) (U.S.-based)
12	Mentally unbalanced individuals	12	U.S.-based lone Sunni jihadist
13	Severely disgruntled nuclear scientists	13	U.S.-based lone actor with a personal grudge or idiosyncratic motivation
14	Chechen jihadists	14	U.S.-based unaffiliated cell from a New Religious Movement
15	Newly-emerging jihadist cells in West	15	U.S.-based lone actor - Right-Wing
16	Chechen-like North Caucasus jihadists	16	U.S.-based lone actor from a New Religious Movement



## Ranking Nuclear Non-State Adversaries to the U.S. Homeland *Qualitative Approaches*

Qualitative Analysis		Elicitation	
1	Al-Qa'ida central	1	Unidentified disgruntled scientist w/access (US-based)
2	Other Sunni jihadists	2	Al-Qa'ida central
3	Chechen jihadists	3	Pakistani neo-Taliban elements
4	Disgruntled nuclear scientists	4	Unidentified apocalyptic millenarian cult (foreign-based)
5	Newly emerging apocalyptic millenarian groups	5	Unidentified Sunni jihadist group (foreign-based)
6	A state-sponsored terrorist group with support from a rogue nuclear capable nation	6	Unaffiliated Sunni jihadist cell (foreign-based)
		7	Unidentified Sunni jihadist group (US-based)
		8	Unidentified Shi'i jihadist group (foreign-based)
		9	Unidentified apocalyptic millenarian cult (US-based)
		10	Unaffiliated Sunni jihadist cell (US-based)
		11	Unidentified Shi'i jihadist group (US-based)
		12	US-based unaffiliated cell - Right-wing
		13	US-based lone actor with a personal grudge or idiosyncratic motivation
		14	Ultrnationalists (US-based)



## Ranking Nuclear Non-State Adversaries to the U.S. Homeland : Including the Findings of Asal and Rethemeyer

Qualitative Analysis		Quantitative Modeling		Elicitation	
1	Al-Qa'ida central	1	Al-Qa'ida central	1	Unidentified disgruntled scientist w/access (US-based)
2	Other Sunni jihadists	2	HAMĀS	2	Al-Qa'ida central
3	Chechen jihadists	3	<u>Lashkar-e-Taiba (LeT)</u>	3	Pakistani neo-Taliban elements
4	Disgruntled nuclear scientists	4	Revolutionary Armed Forces of Colombia (FARC)	4	Unidentified apocalyptic millenarian cult (foreign-based)
5	Newly emerging apocalyptic millenarian groups	5	Al-Qa'ida Organization in the Land of the Two Rivers	5	Unidentified Sunni jihadist group (foreign-based)
6	A state-sponsored terrorist group with support from a rogue nuclear capable nation	6	United Self-Defense Forces of Colombia (AUC)	6	Unaffiliated Sunni jihadist cell (foreign-based)
		7	<u>Pattani United Liberation Organization (PULO)</u>	7	Unidentified Sunni jihadist group (US-based)
		8	Palestinian Islamic Jihad (PIJ)	8	Unidentified Shi'i jihadist group (foreign-based)
		9	<u>Islami Chhatra Shibir (ICS)</u>	9	Unidentified apocalyptic millenarian cult (US-based)
		10	Free Aceh Movement (GAM)	10	Unaffiliated Sunni jihadist cell (US-based)
		11	<u>Lashkar-e-Jhangvi (LeJ)</u>	11	Unidentified Shi'i jihadist group (US-based)
		12	<u>Hizballāh</u>	12	US-based unaffiliated cell - Right-wing
		13	Taliban	13	US-based lone actor with a personal grudge or idiosyncratic motivation



## RANNSAD

### Radiological and Nuclear Non-State Adversaries Database\*

\* Gary A. Ackerman, Charles P. Blair, Jeffrey M. Bale, Victor Asal and R. Karl Rethemeyer, *Anatomizing Radiological and Nuclear Non-State Adversaries: Identifying the Adversary*. Report prepared for the Science and Technology Directorate, Department of Homeland Security, grant number N00140510629 (College Park, MD.: National Consortium for the Study of Terrorism and Responses to Terrorism, 2009).



## Forms of the Three RANNSAD Event Types

a) 45 total Perpetrator Profiles

Nine incidents are *highly doubtful*.  
< Incidents subtracted >

Seven incidents are likely *smuggling*.  
< Incidents subtracted >

b) = Perpetrator profiles of the 29 likely end-users involved in genuine RN incidents or plots

Eight incidents are connected only with *facility attacks*.  
< Incidents subtracted >

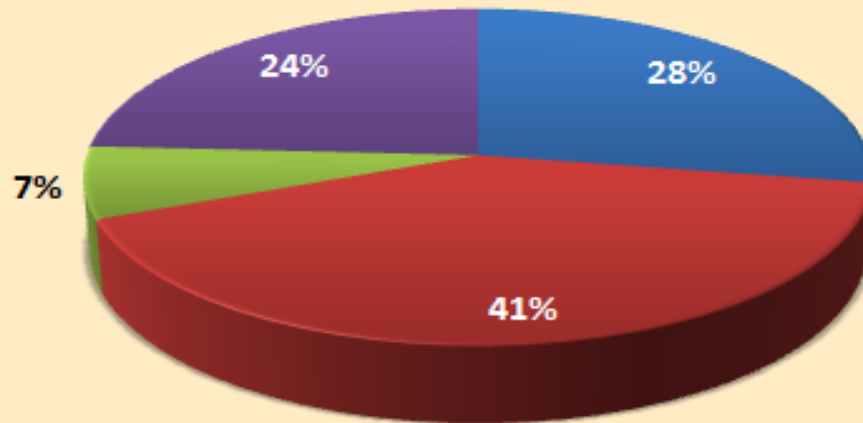
c) = Perpetrator profiles of the 21 genuine perpetrators involved in activities besides attacks on facilities



## Perpetrator Type

(Excluding dubious and possible smuggling cases, n=29)

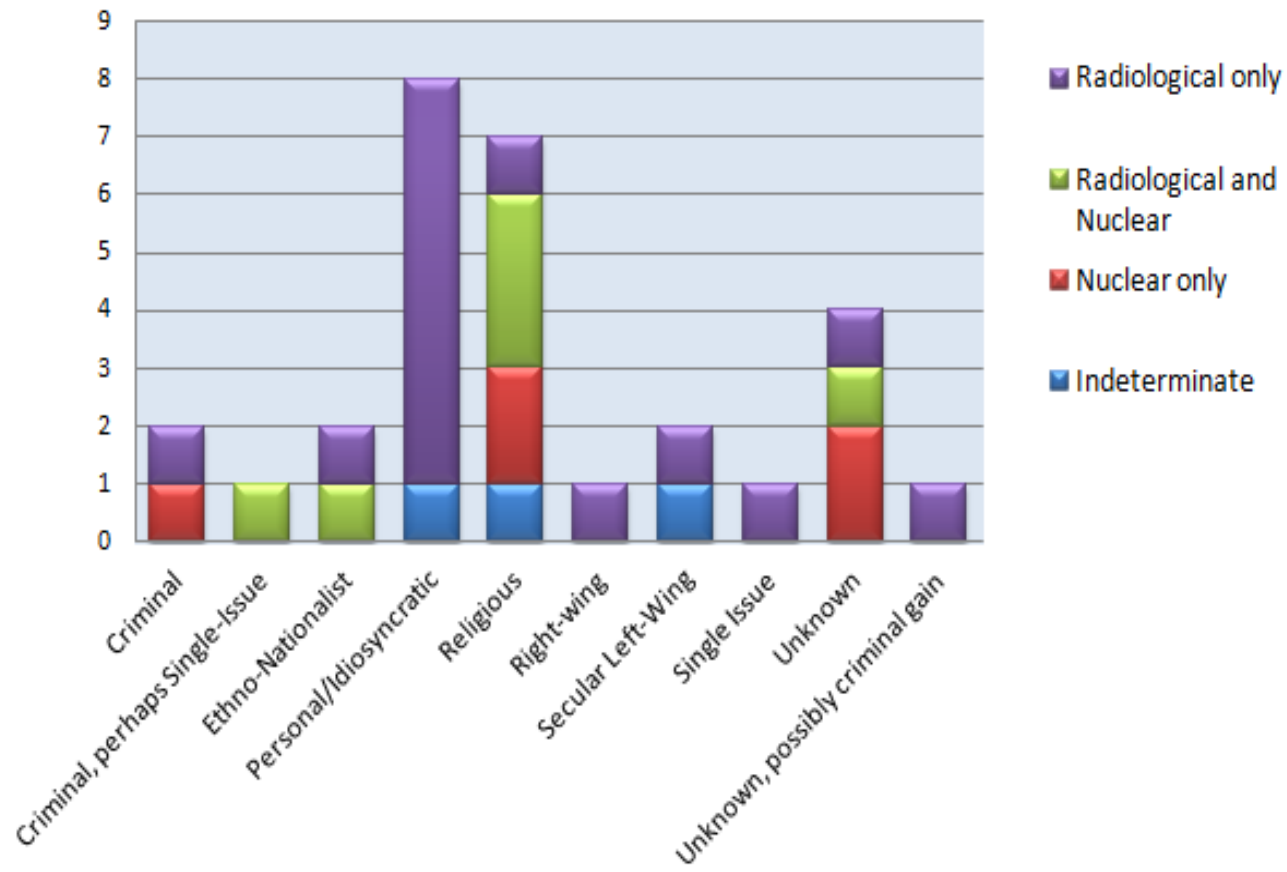
- Formal Organization
- Lone Actor
- Small Unaffiliated Cell
- Unknown





## Ideology

(Excluding dubious and possible smuggling cases, n=29)

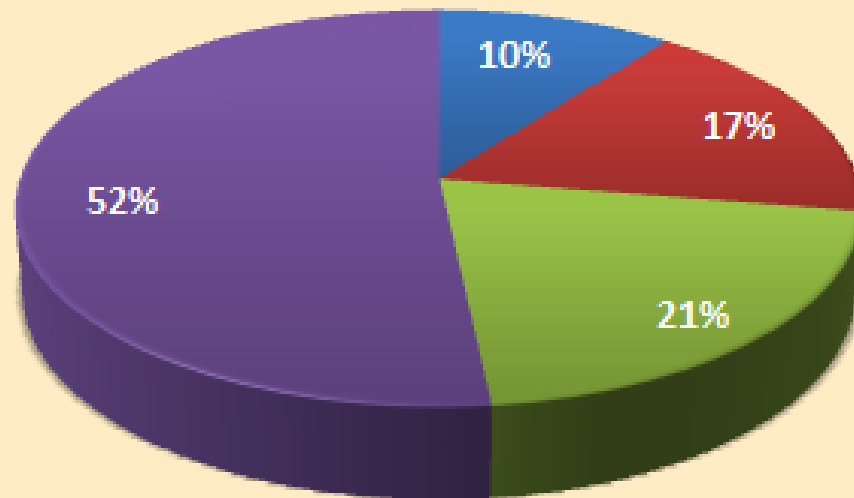




## Agent Distribution

(Excluding dubious and possible smuggling cases, n=29)

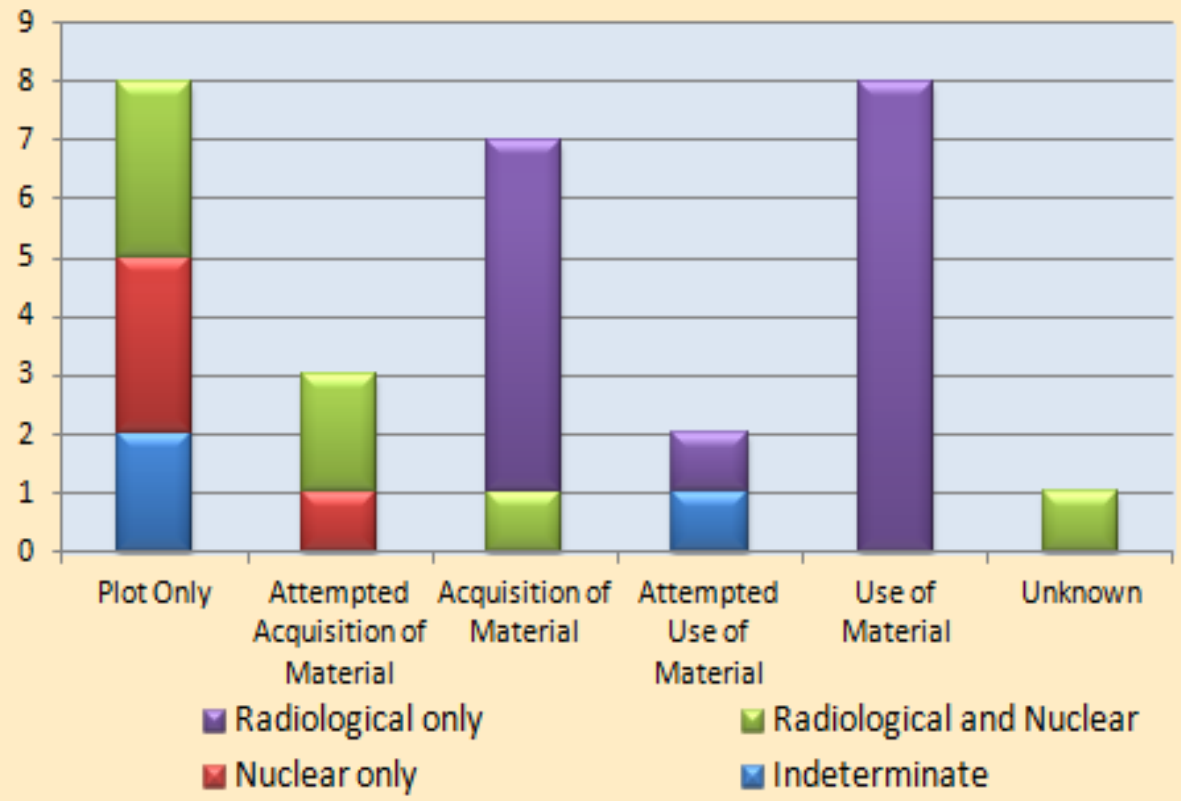
- Indeterminate
- Nuclear only
- Radiological and Nuclear
- Radiological only





## Highest Activity Recorded

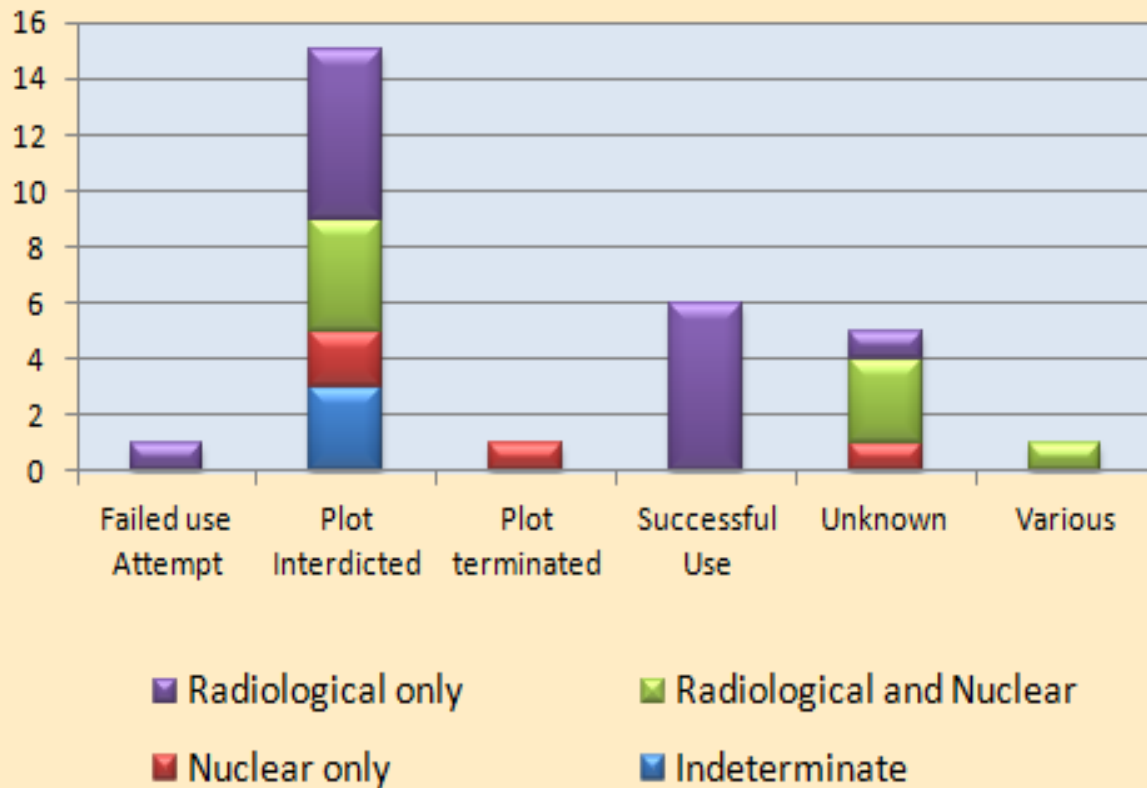
(Excluding dubious and possible smuggling cases, n=29)





## Reason for Outcome

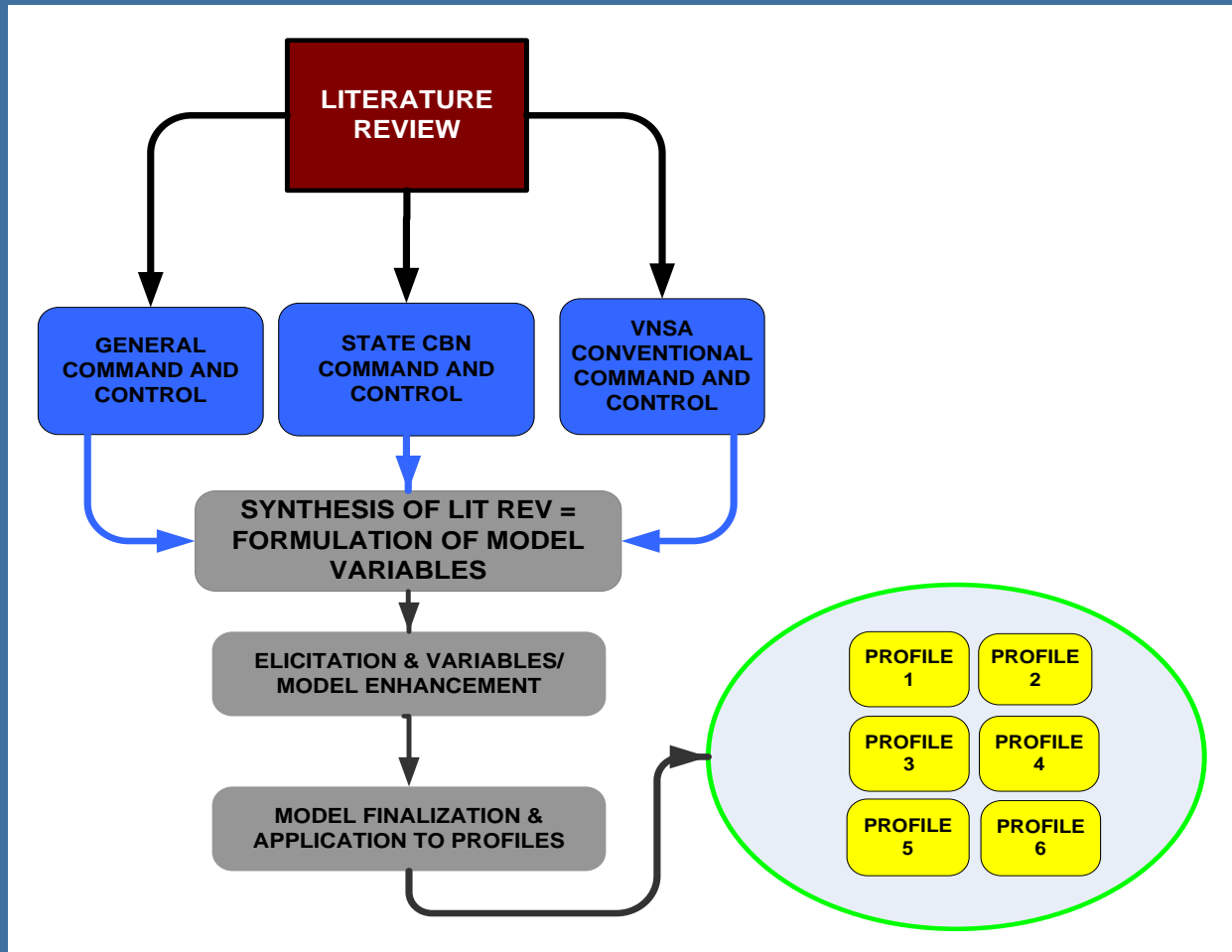
Excluding dubious and possible smuggling cases, n=29)





## 2. VNNSA RN Command & Control

## VNSA RN Command & Control: Broad Methodology



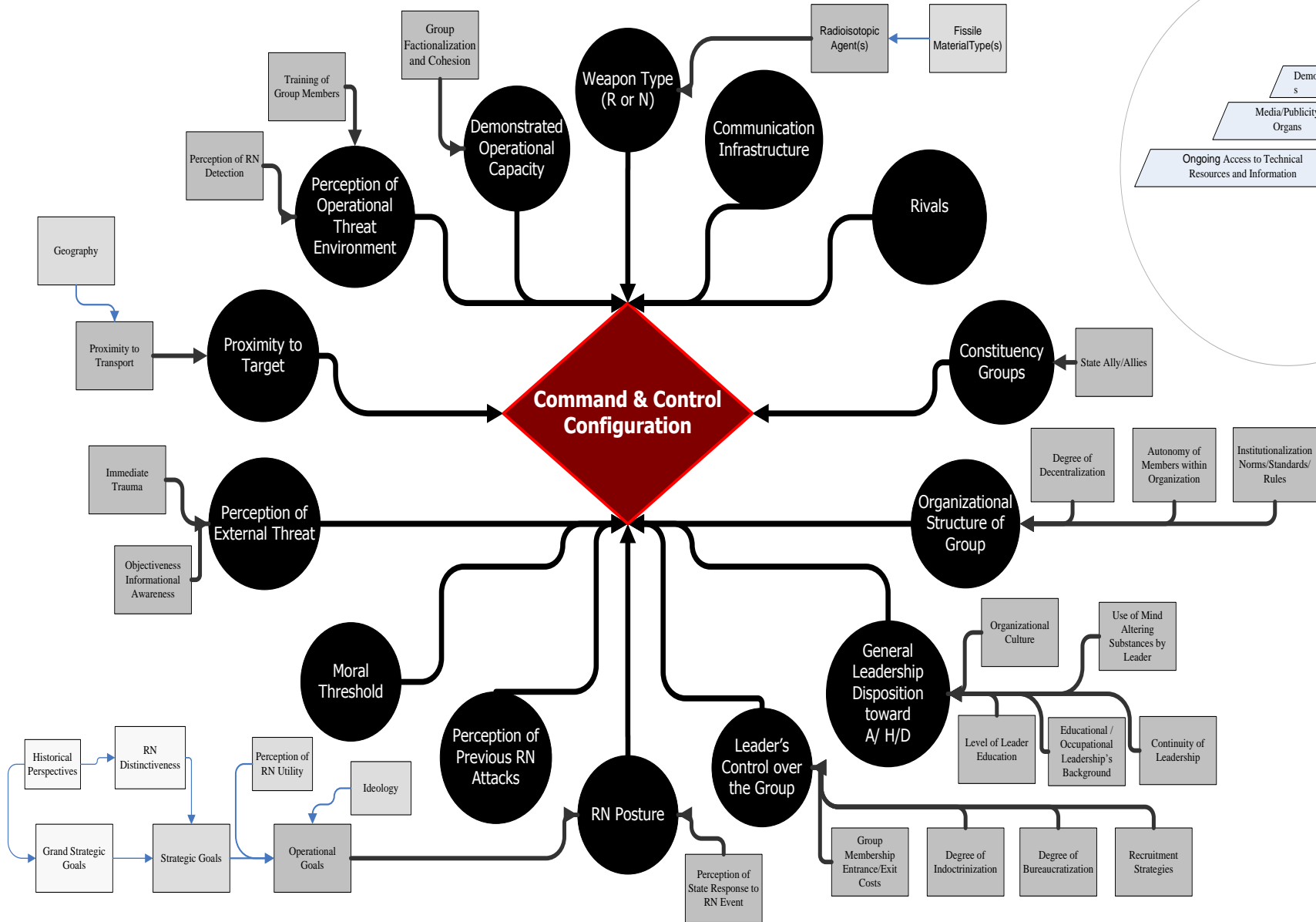
**OPERATIONAL LIFECYCLE STAGE MODIFIER**

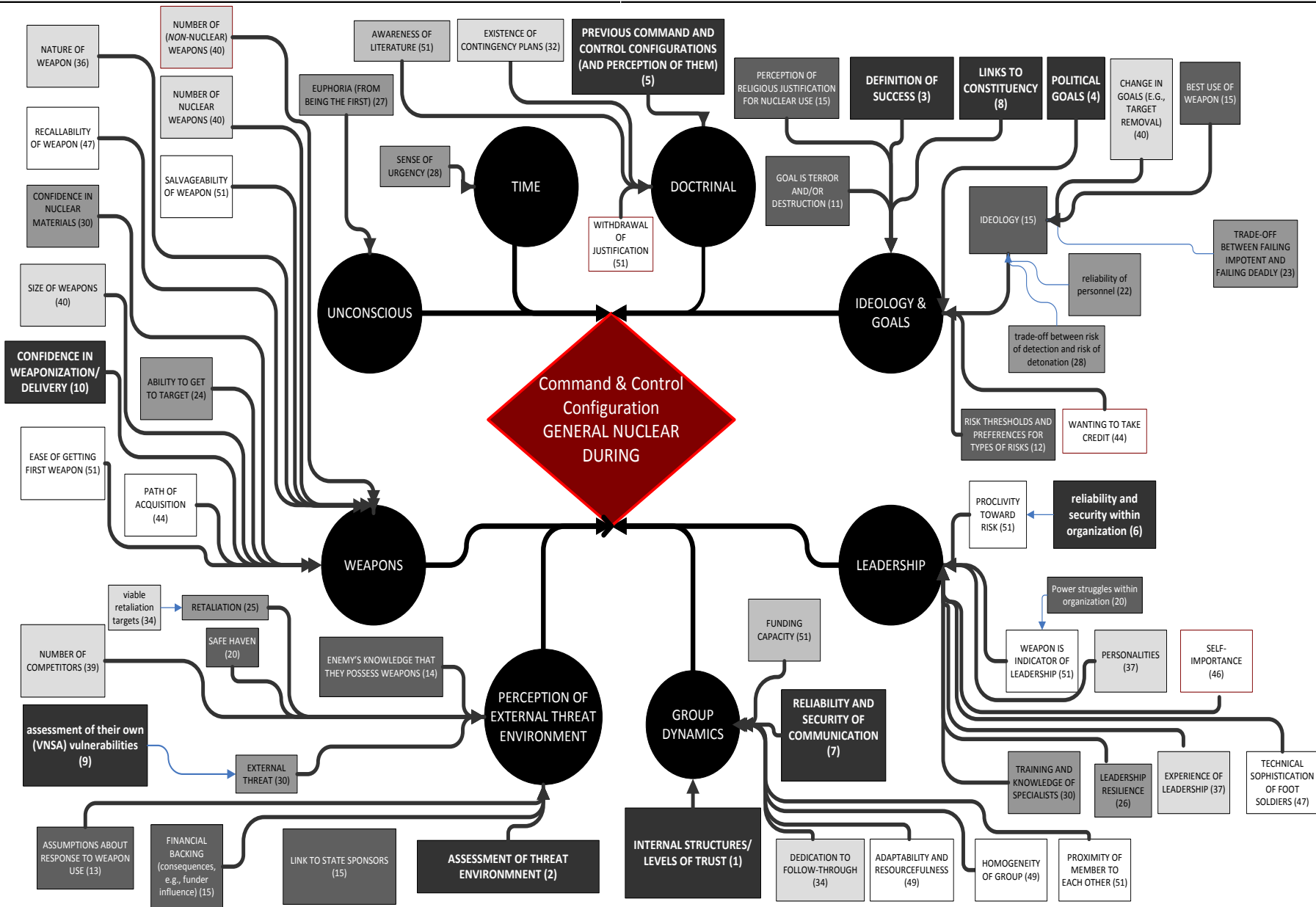
**TIME HORIZON DISCOUNT RATE MODIFIER**

**RISK THRESHOLD MODIFIER**

**PERCEPTUAL AND AFFECT BIASES MODIFIER**

**DEFINITION OF OPERATIONAL SUCCESS MODIFIER**



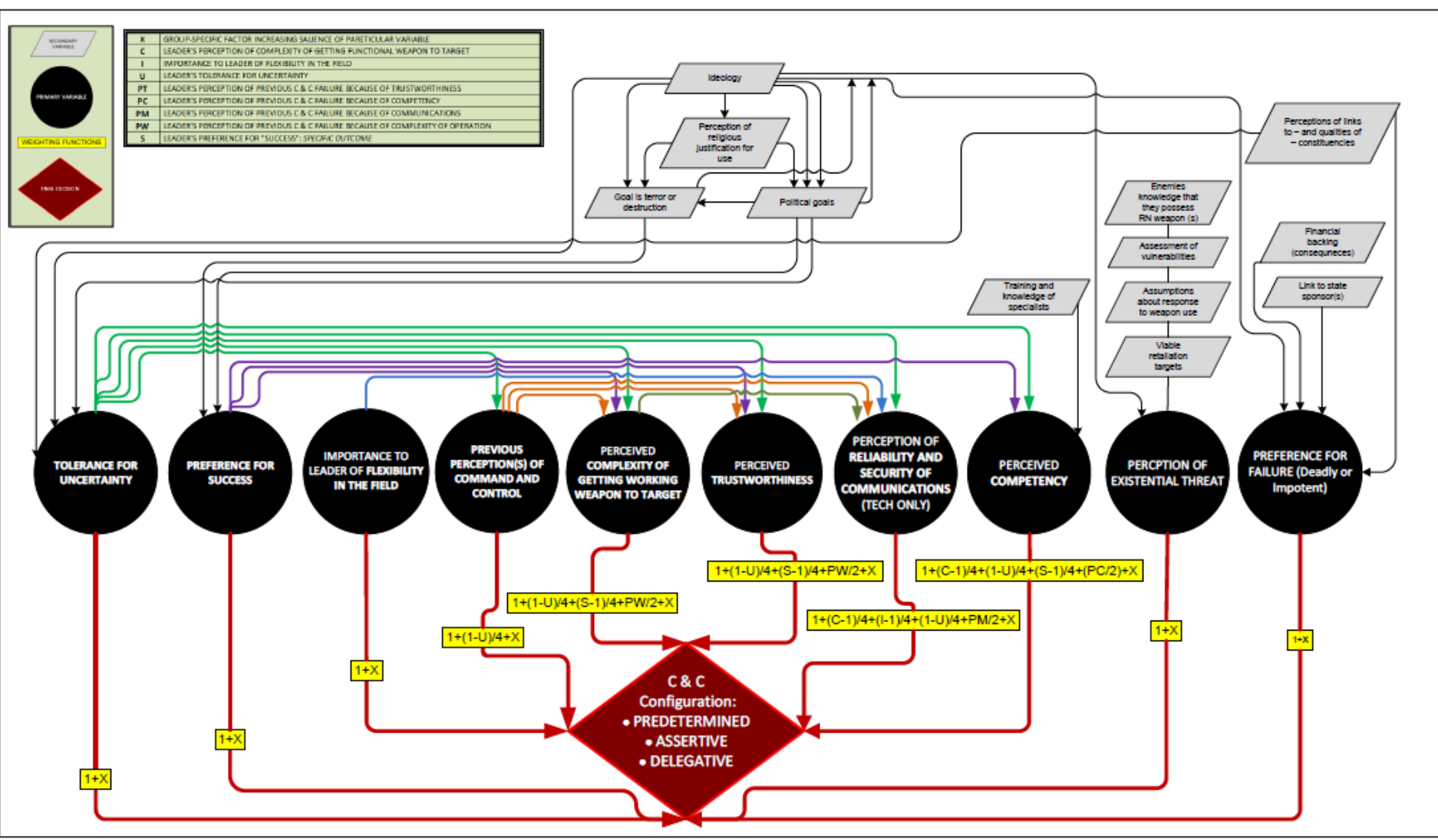




## Ultimately Narrowed to 10 Primary Weighed Variables

VARIABLE (VALUE)	PRIMARY/SECONDARY	PRE-DETERMINED	Necessary	Sufficient	ASSERTIVE	Necessary	Sufficient	DELEGATIVE	Necessary	Sufficient	COMMENTS
COMPETENCY high	P	0	0	0	0	0	0	0	.	0	Competency to follow instruction, to follow procedures, to avoid detection, proper intercommunications. (All the human things of the capabilities).
COMPETENCY medium		0	0	0	0	0	0	-	X		
COMPETENCY low		-	0	0	0	0	0	---	0	0	
TRUSTWORTHINESS high	P	0	.	0	0	0	0	0	0	0	willingness to follow instructions; how confident align with the leaders
TRUSTWORTHINESS medium		-	X	0	0	X	0	---	X	0	
TRUSTWORTHINESS low		--	0	0	-	0	X	---	0	0	
COMMUNICATIONS high	P	0	0	0	0	X	0	0	0	0	Leader's perception of the reliability and security of technical infrastructure.
COMMUNICATIONS medium		0	0	0	--	0	0	0	0	0	
COMMUNICATIONS low		0	0	0	---	0	0	0	0	0	
COMPLEXITY WEAPON TO TARGET high	P	--	0	0	++	0	X	-	0	0	Leader's perception of getting a working weapon
COMPLEXITY WEAPON TO TARGET medium		-	0	0	+	0	0	0	0	0	
COMPLEXITY WEAPON TO TARGET low		0	0	0	0	0	0	0	0	0	
IMPORTANCE TO LEADER OF FLEXIBILITY IN THE FIELD high	P	---	0	0	0	0	0	0	0	0	This a new value on the dependent variable opposed to <i>perception</i> variable
IMPORTANCE TO LEADER OF FLEXIBILITY IN THE FIELD medium		--	0	0	0	0	0	0	0	0	
IMPORTANCE TO LEADER OF FLEXIBILITY IN THE FIELD low		0	X	0	0	0	0	0	0	0	
PERCEPTION OF EXISTENTIAL THREAT high	P	+	0	0	--	0	0	+	0	X	
PERCEPTION OF EXISTENTIAL THREAT medium		0	0	0	-	0	0	0	0	0	
PERCEPTION OF EXISTENTIAL THREAT low		0	0	0	0	0	0	0	0	0	
TOLERANCE FOR UNCERTAINTY high	P	0	0	0	0	0	0	++	.	0	for all "mediums" we are implying at least medium and sufficient" in other if "medium" is checked "high"
TOLERANCE FOR UNCERTAINTY medium		0	0	0	0	0	0	0	X	0	
TOLERANCE FOR UNCERTAINTY low		++	0	0	+	0	0	--	0	0	

# FINAL VNSA RN C&C MODEL





## Model Application to Six Groups/Movements

- AQ Central
- AQAP
- AQ – Semi-Fictional Domestic (US) Cell
- TTP
- Apocalyptic Millenarian Group/Cult
- US Right-Wing

# U.S. RIGHT-WING "EXTREMIST" ACTORS

WORKING VISUAL NARRATIVE –  
FOR ILLUSTRATION PURPOSES ONLY

Blair, FAS  
October 2011

## PERCEIVED SEMINAL HISTORICAL VARIABLES

**FOURTEENTH AMENDMENT 1868**

**FIFTEENTH AMENDMENT 1870**

Plessy v Ferguson  
1896

Johnson Reed Act  
1924  
(emigration laws 1920s)

Brown v Board of Education  
1954

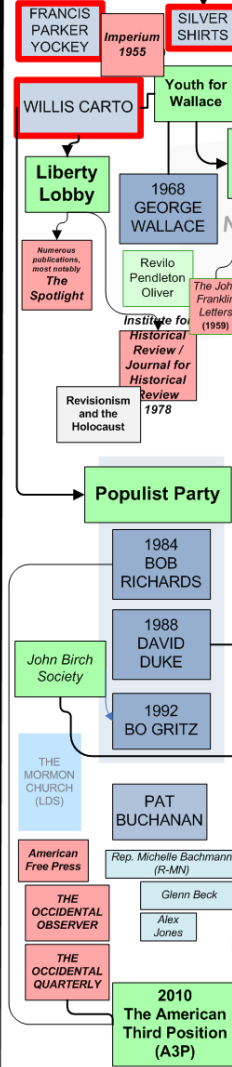
Roe v Wade

"Don't Ask Don't Tell"  
1993

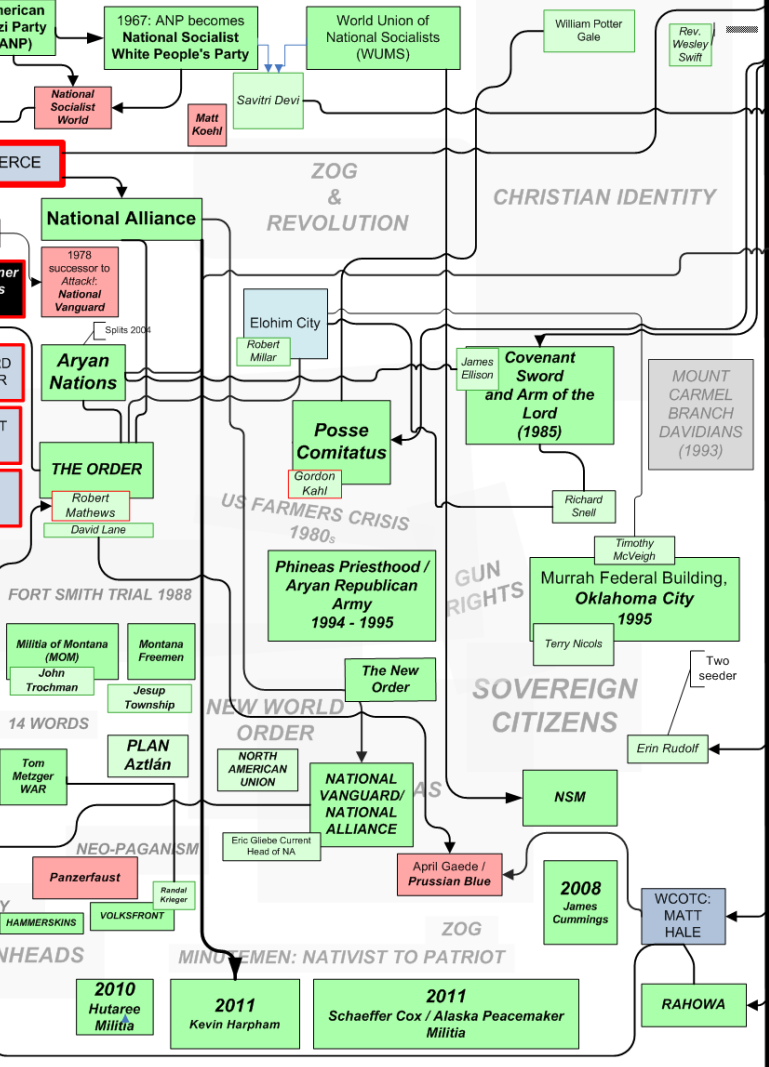
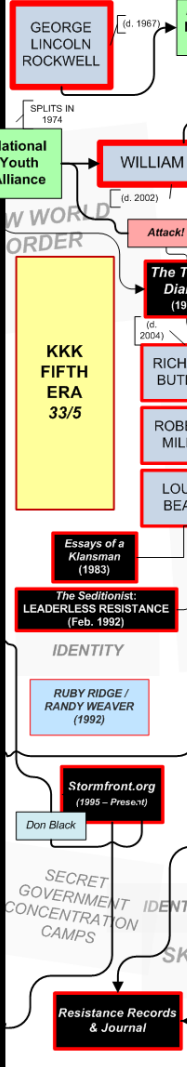
Brady Bill  
1993

African American as President  
January 2009

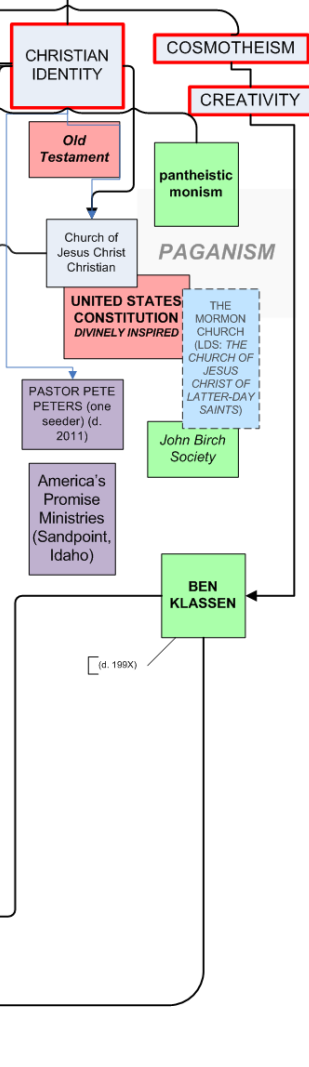
## MAINSTREAMING



## VANGUARDISM



## RELIGION





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