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Contents

Articles

Using Casualty Assessment and Weighted Hit Rates to Calibrate Spatial Patterns of Boko Haram Insurgency for Emergency Response Preparedness

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Abstract

Since the beginning of the current millennium, Boko Haram has terrorised the residents of Northern Nigeria with devastating and high profile campaigns resuming in 2010. First responders struggle to cope with planning for and responding to the aftermath of these attacks. This paper describes analysis that can help emergency services pre-empt the geography and magnitude of susceptibility to attacks and the potential of the terrorists to generate severe attacks. The data used for the study were five years of terrorist activities. Results suggest that the efficiency of Boko Haram is not necessarily random and that attacks are generally well calculated to hit communities with disproportionate concentrations of vulnerable residents. The analysis is the first attempt to examine how a spatial segmentation framework might offer insight and intelligence towards understanding the configuration of terrorism for operational response.

Keywords: Nigeria; Insurgency; Terrorism; Boko Haram; Geodemographics, Spatial Analysis; Emergency Response.

Introduction

The global terrorism and counter-terrorism landscape have been transformed in a number of fundamental ways since the Islamic terrorist group al-Qaeda launched coordinated attacks on the United States on September 11, 2001. There is a noticeable spike in terror incidents driven by blurred lines of command and control (Tucker, 2008; Githens-Mazer and Lambert, 2010). Similarly, some of the motivations for terror remain politically vague. Others are characterised by various forms of religious or mystical impetus (Rausch, 2015). Additionally, terrorists have become highly skilled in the use of cyber-space and manipulative media platforms (Chuipka, 2016).

Whilst a lot of lessons have been learned about the origins, motivations and evolution of terrorist groups, new terror cell units continue to spring up (Englund and Stohl, 2016; Benedikter and Ouedraogo, 2017) and the foot soldiers of these groups are burgeoning. The capability of terrorist groups to recruit locally and across borders continues to present a challenge for efficient and effective counter-terrorism strategies. Several authors (Romagnoli, 2016; Falk, 2016; Gillombardo, 2016; Jenkins, 2017) agree that almost two decades since 9/11, not only do the perpetrators still exhibit the intent and capability to launch similar attacks, they have succeeded in motivating the emergence of other groups operating in new geographical enclaves.

Since 2002, Boko Haram has operated primarily in the North East Geopolitical Zone of Nigeria, killing and

maiming thousands of innocent victims. The ideological orientation of Boko Haram is underpinned by Salafi jihadism which is based on a belief in "physical" jihadism and the Salafi movement of returning to what adherents believe to be true Sunni Islam (Cook, 2011).

In 2009, Boko Haram was violently suppressed by the Nigerian Army (Aghedo and Osumah, 2014) under the order of late President Umaru Musa Yar'Adua. However, members of the terrorist organisation regrouped and re-surfaced in 2010 with high- profile attacks across the three geopolitical zones in Northern Nigeria. The global periscope focused on Boko Haram after the acclaimed kidnapping of 276 school girls from their dormitory in the town of Chibok in 2014 (Attah, 2016; Chiluwa and Ifukor, 2015). Some authors and stakeholders suggest that the 276 figure over-estimates the number of girls kidnapped from Chibok (Abubakar, 2015; Alter, 2015).

Since its re-emergence in 2010, Boko Haram has consistently featured amongst the deadliest terrorist organisations on the globe (Ligon et al., 2017). There are multiple dynamics which contribute towards shaping Nigeria's socio-political landscape in ways that have facilitated the rise of a group like Boko Haram. Persisting inequalities have contributed towards the polarisation of Nigeria, creating a north-south socio-economic divide. Northern Nigeria consistently lags behind the south on virtually all core development indices like educational attainment and social mobility (Cook, 2011; Aghedo and Osumah, 2014). There are many interlocking factors responsible for this yawning gap, ranging from political and leadership deficit to cultural and religious issues. Additional Nigerian dynamics which facilitate the rise of a group like Boko Haram include pervasive public sector corruption, recurring ethnic and sectarian conflicts, porous international borders, and a depleted intelligence and national security skeleton (Cook, 2011). These dynamics combine to erode national ambition and social capital and often result in disillusionment amongst the citizenry (Kieghe, 2016). Disillusioned population groups serve as easy prey for a group like Boko Haram which is constantly in search for potential recruits (Onuoha, 2014).

The remainder of this article details the examination of spatial structure and some contextual correlates of Boko Haram attacks in Nigeria from 2010 to 2015. A spatial segmentation framework is used to exhume patterns which may be operationally beneficial for first responders or the security personal combating the terrorists. This analysis makes a modest contribution towards a better understanding of the insurgency problem facing Northern Nigerians. Additionally, the methodological framework of the analysis has the potential to serve as a basis for intelligent forecasting of future attacks.

Some Challenges Confronting Emergency Response Management in Nigeria

Nigeria's emergency response framework mirrors the administrative geography of the country. The National Emergency Management Authority (NEMA) has lead responsibility for coordinating emergencies and disasters at the federal level (Fagbemi, 2011). Each of Nigeria's 36 states have also been mandated by Nigeria's central government to establish State Emergency Management Agencies (SEMAs) and Local Emergency Management Agencies (LEMAs) (NEMA, 2010). The core rationale behind this hierarchical structure is the need to avoid duplication of efforts. The three emergency management authorities are responsible for developing capabilities to prepare, prevent, respond to, and recover citizens from emergencies and disasters (NEMA, 2010). In addition to the three levels of emergency management authorities, the military, police and para-military forces are also key players within Nigeria's emergency management system.

A range of multi-faceted factors contribute towards Nigeria's challenges to readily and rapidly respond to the insurgency in the northern part of the country, particularly at the local level. Some of these factors include

military funding inadequacies (Ajayi and Nwogwugwu, 2014), incompatibility of emergency management structures at the local, state and federal levels of government (Pichette, 2015), weakness in data infrastructure and analytical competences (Pérouse de Montclos, 2016), inadequacy of public education mechanisms (Awofeso et al., 2003), lack of collaboration amongst relevant agencies (Agbiboa and Maiangwa, 2014) and corruption (Kieghe, 2016).

Nigeria comprises 774 Local Government Areas (LGAs). Due to inconsistent funding and technical weaknesses, Vulnerability and Capability Analysis (VCA) have only been implemented in 21 of these LGAs (Fagbemi, 2011). Furthermore, the refusal of some Nigerian states to comply with the directive of the federal government to establish SEMAs remains lamentable. Whilst the NEMA Act stipulates that NEMA should liaise with State Emergency Management Committees, to assess and monitor the distribution of relief materials to disaster victims, only 25 out of 36 states have functional SEMAs (Nnodim, 2016). Some of the states without functional SEMAs are situated in northern Nigeria where Boko Haram insurgency is currently concentrated.

Whilst a substantial number of scholarly contributions have been made towards aspects of the dynamics of the insurgency in the northern part of Nigeria, these have focused largely on theoretical and policy debates. There is significant paucity in the use of empirical techniques for understanding patterns and dimensions of the conflict for operational decision-making. Currently, NEMA and SEMA find it challenging to optimise the speed and volume of critical assistance delivery immediately after the onset of insurgency attacks. This is partly due to methodological constraints in systematically pre-empting where insurgents might strike and estimating the probable scale of humanitarian assistance that different types of communities might require (Valenti, 2015). Additionally, international humanitarian organisations have called for improvement in modelling and visualisation of at-risk communities. Christian Aid[1] recommends the development of early warning and early response systems with predictive capabilities alongside training provision (Christian Aid, 2016). It is believed that some methodological aspects of the research study summarised in this article may prove useful for such early warning response systems.

Potential of Utilising Spatial Segmentation Profiling for Emergency Response Preparedness

Geographical Information Systems (GIS) add considerable context to spatial decision making. Geodemographic classifications are spatial segmentations that use multi-criteria and geo-statistical techniques to group places and people into clusters of similarity (Harris et al., 2005). There is a significant amount of interest in the development and adaptation of geodemographic problem-solving approaches across much of the developed world (Vickers and Rees, 2006; Willis et al., 2010; Kimura et al., 2011; Singleton and Spielman, 2014) with minimal application in developing countries (Ojo and Ezepue, 2011; Ojo et al., 2012; Ojo et al., 2013).

Geodemographic modelling of the social, economic and demographic conditions of small areas within the framework of GIS has been used successfully for a wide range of human development sectors such as education and health (Brown, et al., 1999; Webber, 2005; Farr and Evans, 2005; Shelton et al., 2006, Abbas et al., 2009; Singleton, 2010; Singleton et al., 2012; Goodwin and Sykes, 2012; Sabater, 2015; Leventhal, 2016). Applications to the profiling of traditional criminogenic activities is also common (Ashby and Longley, 2005; Breetzke and Horn, 2009). However, the potential of geodemographic profiling remains under-exploited in studying insurgency and terrorism. It has been suggested that geodemographic segmentations may be used

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1   Christian Aid is a UK registered charity that provides urgent practical and effective assistance where need is great, tackling the effects of poverty as well as its root causes.

to offer a strategic review of neighbourhoods and to identify potential terrorist cells (Ashby et al., 2008). To the best of our knowledge there is no evidence in academic and policy literature, of the application of geodemographic segmentation for profiling and mapping terrorism.

Geodemographic segmentations are generally developed by adapting clustering algorithms to relatively big multivariate spatial datasets (Ojo et al., 2012). This allows small areas to be grouped on the basis of their similarity in taxonomic space. A key reason for doing this is that there may be links identified with the classification of these small areas and other processes such as insurgency and terrorism. For example, spatial segmentations have been found useful in predicting educational behaviour (Brundson et al., 2011) as well as health dynamics (Kimura et al., 2011). In a similar vein, it is presumed that spatial segmentations could be used as a basis for identifying those community groups that may be more exposed to terrorists' activities or where terrorist attacks are likely to yield disproportionately higher degrees of casualties. Such detailed level of insight can be particularly powerful for first responders.

Geodemographic segmentations serve as useful analytical tools for drilling down to local analytical scales of geography. This helps to eliminate bias in the geographical disbursement of national operational resources and responses to conflict and chaos zones. There is strong evidence of the potent power of social sorting tools for targeting and monitoring the impact of security interventions (Lyon, 2007). Additionally, spatial segmentations have been used by Regional, State and Local Authorities to drive national social marketing agendas (Powell, et al., 2007). This can be particularly useful when trying to educate local populations about the drivers of tensions in fragile communities.

Detailed pen-portraits of characteristics of local residents often accompany geodemographic segmentations. Therefore, linking terrorism data with spatial segmentation yields more powerful insight beyond pointing out the locations of these terror incidents. Such data linkage helps to elucidate (in qualitative terms) some of the information underlying complex quantitative detail. Due to their multivariate quality, geodemographic segmentations offer the opportunity to develop new hypothesis about dynamic activities (Abbas et al., 2009).

Although the availability of geodemographics is not yet widespread across Africa (Ojo and Ezepue, 2011), relevant statutory emergency response agencies in Nigeria can access an open-source geodemographic system (Ojo et al., 2012). Similarly, rapid global digital revolution has led to the development of several open-source Geographical Information Systems (GIS) (Travis, 2015). These non-commercial software packages are freely accessible to first responders in Nigeria. However, these statutory agencies often lack the requisite methodological and technical know-how required to effectively utilise some of these systems (Ojo and Ezepue, 2011).

Datasets

Two datasets were used in synergy for the study reported in this article. The first is the Armed Conflict Location and Event Data (ACLED). The ACLED is one of the most comprehensive public collection of political violence and protest data for developing countries including Nigeria. The dataset contains variables which capture information on the specific dates and locations of political violence and protest, the types of event, the groups involved, fatalities, and changes in territorial control (Raleigh et al., 2010). Additional variables within the dataset record the battles, killings, riots, and recruitment activities of rebels, governments, militias, armed groups, protesters and civilians.

For the purpose of the analysis reported in this article, 1,664 unique terrorist events linked to Boko Haram

between 2010 and 2015 were extracted from the ACLED repository after consulting the relevant codebook (Raleigh and Dowd, 2017). The spatial distribution of the extracted data is shown Figure 1. A large number of terror strikes were concentrated in the North East Geopolitical Zone.

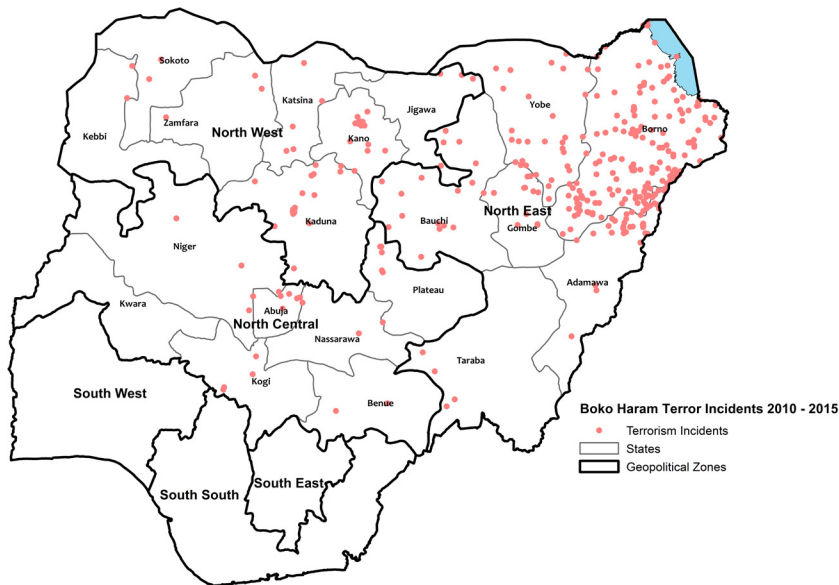*Figure 1: Distribution of Boko Haram Terror Incidents (2010 – 2015)*

The second dataset – The Nigerian LGA Geodemographic Classification System (NIGECS) serves as the framework for capturing the contextual characteristics of the areal targets of the terrorists. The geodemographic segmentation encapsulates variables derived from the Nigerian Census and other national surveys (Ojo et al., 2012).

Super-groups	Groups	Sub-groups
1 **Green Towns**	**1.1** Conventional Green Towns **1.2** Underprivileged Green Towns **1.3** Flourishing Green Towns **1.4** Struggling Green Towns	1.1.1 | 1.1.2 | 1.1.3 | 1.2.1 | 1.2.2 | 1.3.1 | 1.3.2 | 1.3.3 | 1.4.1 | 1.4.2 | 1.4.3 |
2 **Emerging Localities**	**2.1** Moderately Emerging Localities **2.2** Comfortable Emerging Localities **2.3** Transient Emerging Localities	2.1.1 | 2.1.2 | 2.1.3 | 2.2.1 | 2.2.2 | 2.2.3 | 2.3.1 | 2.3.2 | 2.3.3 |
3 **Intermediate Territories**	**3.1** Constrained Intermediate Territories **3.2** Well-to-do Intermediate Territories **3.3** Deprived Intermediate Territories **3.4** Customary Intermediate Territories	3.1.1 | 3.1.2 | 3.2.1 | 3.2.2 | 3.2.3 | 3.3.1 | 3.3.2 | 3.4.1 | 3.4.2 |
4 **Diluted Societies**	**4.1** Thriving Diluted Societies **4.2** Labouring Diluted Societies **4.3** Deprived Diluted Societies **4.4** Modest Diluted Societies	4.1.1 | 4.1.2 | 4.2.1 | 4.2.2 | 4.2.3 | 4.3.1 | 4.3.2 | 4.4.1 | 4.4.2 | 4.4.3 |
5 **Country Dwellings**	**5.1** Toiling Country Dwellings **5.2** Deprived Country Dwellings **5.3** Middle-class Country Dwellings	5.1.1 | 5.1.2 | 5.2.1 | 5.2.2 | 5.3.1 | 5.3.2 | 5.3.3 |
6 **Urban Nodes**	**6.1** Prosperous Urban Nodes **6.2** Disadvantaged Urban Nodes **6.3** Average Urban Nodes **6.4** Affluent Urban Nodes **6.5** Striving Urban Nodes	6.1.1 | 6.1.2 | 6.2.1 | 6.2.2 | 6.3.1 | 6.3.2 | 6.4.1 | 6.4.2 | 6.4.3 | 6.5.1 | 6.5.2 |

Figure 2: Hierarchical Structure of the Nigerian Geodemographic Classification System

Almost 35,000 data points spread across 10 thematic domains were fused together using a multicriteria clustering procedure (Ojo et al., 2012; Ojo, 2010). The data domains include Agriculture, Demographics, Education, Employment, Health, Household Composition, Household Infrastructure, Housing, Socio-economics and Women and Children. The clustering procedure generated six clusters called Super-groups. Two further hierarchies – Groups (23 clusters) and Sub-groups (57 clusters) were also created using the same clustering criterion. All 774 Local Government Areas (LGAs) in Nigeria were assigned to a corresponding Super-group, Group and Sub-group cluster based on the prevailing characteristics of the resident population. Figure 2 shows the hierarchical structure of the entire system whilst Figure 3 showcases the spatial distribution of the geodemographic clusters at the Group level. It is noteworthy that three area types do not exist in northern Nigeria. These include Underprivileged Green Towns, Deprived Intermediate Territories and Customary Intermediate Territories.
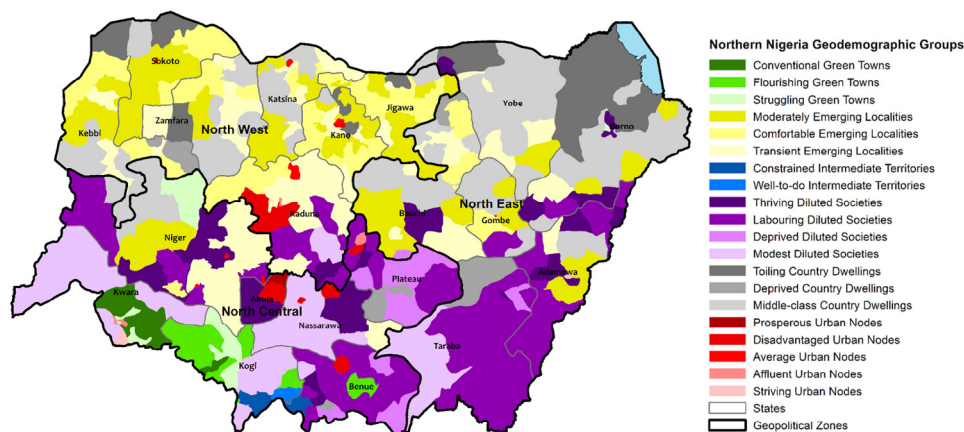
Figure 3: Geodemographic Segments of Northern Nigeria

Green Towns concentrate mostly in the South Western corner of Nigeria and can also be found in the North Central, South South, South East and North East Geopolitical Zones. Other variables such as desertification however affects the spatial spread of Green town concentration in the North East (Ojo, 2010). Unlike the southern geopolitical zones, these areas do not have huge spatial availability of Green towns due to the fast encroaching Saharan desert.

With large concentrations in the North West and pockets of the North East and North Central zones, Emerging Localities encapsulate 166 LGAs. While population density is below the national average (452 persons per Km^2), the mean household size of these areas is quite high at 6.1 persons.

A majority of Intermediate Territories can be found within the South East. They are also scattered across the South South and some areas of the North Central Geopolitical Zones. With a mean household size of 4.6 persons, they make up 114 LGAs and have an above average mean population density of 709 persons per square kilometre (Ojo, 2010).

While Diluted Societies concentrate in the North Central Area of Nigeria, they can also be found in every other geopolitical zone. They make up 126 LGAs and have the highest mean household size of 5.4 persons. Their average population density is 643 persons per square kilometre.

Country Dwellings spread across the North East and North Western parts of Nigeria. They can also be found in the North Central Geopolitical Zone and they make up a total of 82 LGAs. These area types have a mean household size of 5.1 persons and an average population density of 144 persons per square kilometre.

With a mean household size of 4.6 persons and a very high population density of 5117 persons per square kilometre, Urban Nodes are scattered across the country and do not necessarily concentrate in any geopolitical zone. However, the North East has the lowest share of Urban Nodes (Ojo, 2010).

Operational Question and Methodology

The study reported in this article sought to arouse some possible hypotheses about the rationale for the patterns of Boko Haram attacks. More importantly, the analysis generates some explanations for the following prominent operational question which continues to puzzle first responders and similar law enforcement agencies in Nigeria's northern region.

Research Question: What is the spatial configuration and contextual descriptors of communities that are likely to suffer severe attacks and those that are expected to be susceptible to insurgency activities?

The theoretical foundation of this study is the rational choice theory (Cornish and Clarke, 1986). Terrorism is considered a type of crime, therefore it is assumed that the decision-making protocol of terrorists and criminals are generally similar (Clarke and Newman, 2006). Terrorist attacks are not random because the perpetrators have finite resources often deployed within the boundaries of a risk-reward calculus. In general, attacks are launched when the perceived reward exceeds the perceived risk (Pape, 2003). Conversely it is arguable that they can decide to launch attacks even though perceived risks outweigh rewards like attacking a fully functional military formation/barracks. This type of assault will make the news and project them as brave and daring. The fundamental conjecture is that terrorists consider the level of attractiveness of all potential targets before they strike. This implies that not all targets are equally eye-catching to terrorists. Secondly, terrorists do not have a monopoly of personnel and resources; therefore, they plan their attacks within the boundaries of these constraints.

There is an assumption that terrorists generally have a pre-determined level of carnage which they intend causing when they launch attacks (Jackson and Frelinger, 2009). The level of carnage will also vary from one location to another.

A total of 22,429 fatalities were recorded in the dataset harvested from the ACLED repository (Raleigh and Dowd, 2017). To model aggregated severity of attacks, all unique terrorist fatalities resulting from Boko Haram activities were geo-coded and linked to their corresponding geodemographic typologies. Two metrics were initially calculated – (1) the prevalence rate of fatalities (Aggregated fatalities per 100,000 inhabitants) and (2) the incidence rate (Aggregated fatalities per terrorist attack). Casualty Assessment Matrices (CAMs) were subsequently developed by comparing the two metrics. This was achieved by standardising the prevalence and incidence rates using an inter-decile range standardisation approach. This method is a slight variation of Wallace and Denham (1996) range standardisation method. The range standardisation is calculated by comparing the minimum and maximum values of a distribution. However, the inter-decile range standardisation is calculated by relating the median, tenth and ninetieth percentiles of a distribution as shown in the notation given in Equation 1.

$$\frac{x_i - X_{med}}{X_{90th} - X_{10th}} \quad (1)$$

Where,

x_i is the value of the variable to be standardised

x_{med} is the median of the distribution

x_{90th} is the 90th percentile

x_{10th} is the 10th percentile

For an area to be deemed highly susceptible, Boko Haram must be efficient in the deployment of their activities in the area. There is no general consensus as to the most appropriate measure of geographical susceptibility in terrorism analysis. This analysis considered a measure to ascertain the efficiency of Boko Haram. The hit rate is the proportion of terrorist attacks that successfully lead to at least one fatality in each geodemographic cluster (Bowers et al., 2004). This quantity varies with the frequency of attacks. Those LGAs

with higher frequency of incidents yield lower hit rates relative to their counterparts with fewer incidents. To mitigate this drawback, a weighted hit rate (WHR) measure is used. This allows the model to factor in the relative effect of the frequency of incidents. The WHR is given by the notation in Equation 2.

$$(2)$$

$$WHR = \left(\frac{n}{N}\right) \times \frac{\left\{\frac{N_i}{\sum_{i=1}^{k} N_i}\right\}}{\left\{\frac{P_i}{\sum_{i=1}^{k} P_i}\right\}}$$

Where,

n is the number of incidents resulting in fatalities

N is the total number of incidents for the corresponding geodemographic typology

k is the total number of area typologies

P is the total population in each area typology

The efficiency of Boko Haram terrorists is gauged by the density of fatal incidents. The WHR is interpreted as the quotient between the efficiency rate of Boko Haram in each geodemographic typology and the relative likelihood for an attack to occur in that typology.

Severity and Susceptibility to Attacks

Results from the analysis of prevalence and incidence by geodemographic typologies are presented in Table 1. Not all 23 geodemographic groups shown in Figure 2 were used because some area typologies cannot be found in the north of Nigeria. Therefore, sixteen group level typologies with reported fatalities were chosen. With regard to the results in Table 1, fatalities are excessively widespread within two types of groups – Struggling Green Towns and Toiling Country Dwelling.

Table 1: Aggregated Prevalence and Incidence Rates of Fatality by Geodemographic Groups (2010 – 2015)

Group Codes	Geodemographic Groups	Incidents Share (%)	Fatalities Share (%)	Population Share (%)	Prevalence Rate (Fatalities per 100,000 Inhabitants)	Incidence Rate (Fatalities per Terrorist Attack)
1.1	Conventional Green Towns	0.06	0.08	0.97	2.31	19
1.3	Flourishing Green Towns	0.36	0.08	2.73	0.77	3
1.4	Struggling Green Towns	20.01	14.56	1.95	196.7	10
2.1	Moderately Emerging Localities	11.54	12.39	16.16	20.18	14
2.2	Comfortable Emerging Localities	1.44	1.72	10.92	4.15	16
2.3	Transient Emerging Localities	8.65	6.49	14.11	12.11	10
4.1	Thriving Diluted Societies	6.13	5.04	6.55	20.25	11
4.2	Labouring Diluted Societies	8.77	8.03	10.43	20.25	12
4.4	Modest Diluted Societies	0.30	0.21	5.07	1.07	9
5.1	Toiling Country Dwellings	12.56	24.89	4.64	141.08	27
5.2	Deprived Country Dwellings	0.06	0.04	1.42	0.66	8
5.3	Middle-class Country Dwellings	20.79	19.95	12.57	41.77	13
6.1	Prosperous Urban Nodes	1.32	0.71	0.43	43.56	7
6.2	Disadvantaged Urban Nodes	0.24	0.4	3.47	3.04	23
6.3	Average Urban Nodes	6.61	4.01	6.73	15.7	8
6.4	Affluent Urban Nodes	1.14	1.4	1.87	19.79	17

Struggling Green Towns are areas dominated by people in older age categories with high levels of population density. These areas are also more likely to have higher than average concentration of widowed and vulnerable population groups.

Toiling Country Dwellings are also disproportionately disadvantaged in terms of their likelihood of suffering huge numbers of casualty when Boko Haram strikes. In Northern Nigeria, Borno State has the largest number of LGAs categorised as Toiling Country Dwellings. There are average level representations of children. Single parent households are not much but there is an above average presence of separated couples (Ojo, 2010). Toiling Country Dwellings also exhibit the highest level of frequency of fatalities (incidence).

Incidence rates are also quite high within Disadvantaged Urban Nodes. These are areas with an above average representation of people aged between 15 and 59 years. Unmarried persons are substantially representative within these areas. Households with at least one pensioner are also disproportionately high. It is also not uncommon to find households of over 5 residents (Ojo, 2010).

The significantly high prevalence rates of fatality suffered by residents of Struggling Green Towns and Toiling Country Dwellings is somewhat linked to the repeated volume of attacks experienced in these areas. Together, both geodemographic clusters account for a third of all attacks. However, one of the highlights of the analysis is that it exposes high fatality rates (44 fatalities per 100,000 people) within Prosperous Urban Nodes where the frequency of attacks is quite low. The findings suggest well-calculated attacks in areas with disproportionately high representations of unmarried middle aged persons. Large numbers of pensioner households and single parents can also be found in these areas.
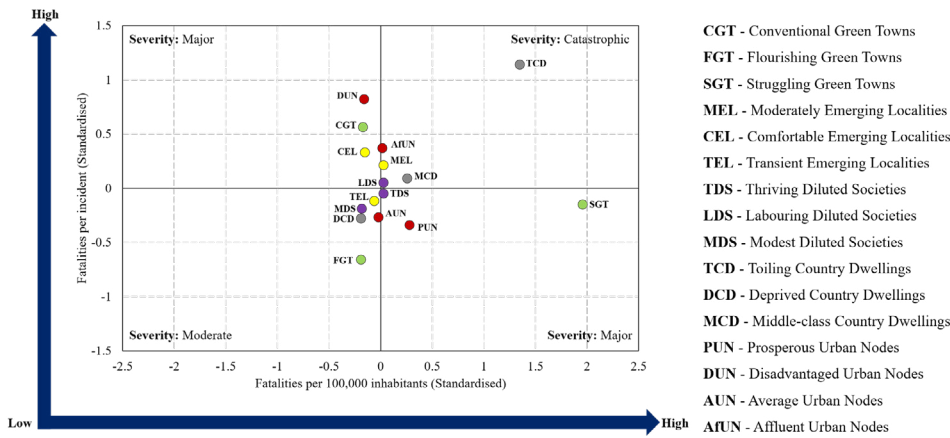
CGT - Conventional Green Towns
FGT - Flourishing Green Towns
SGT - Struggling Green Towns
MEL - Moderately Emerging Localities
CEL - Comfortable Emerging Localities
TEL - Transient Emerging Localities
TDS - Thriving Diluted Societies
LDS - Labouring Diluted Societies
MDS - Modest Diluted Societies
TCD - Toiling Country Dwellings
DCD - Deprived Country Dwellings
MCD - Middle-class Country Dwellings
PUN - Prosperous Urban Nodes
DUN - Disadvantaged Urban Nodes
AUN - Average Urban Nodes
AfUN - Affluent Urban Nodes

Figure 4: Casualty Assessment Matrix

The Casualty Assessment Matrix (CAM) is essentially a scatter plot of the standardised prevalence and incidence rates. Results are shown in Figure 4. For the assessment of severity, both prevalence and incidence rates are considered equally important. Therefore, neither was prioritised over the other. Prevalence is descriptive, often demonstrating need. On the other hand, incidence is useful for studying the underlying causes or examining the order in which events occur. Those geodemographic groups with higher than average levels of both prevalence and incidence of fatalities are designated catastrophic in terms of the expected levels of severity of the situation. Areas where the levels of severity are expected to be major are characterised by high prevalence with low incidence or low prevalence with high incidence. Moderate levels of severity combine low prevalence with low incidence rates.
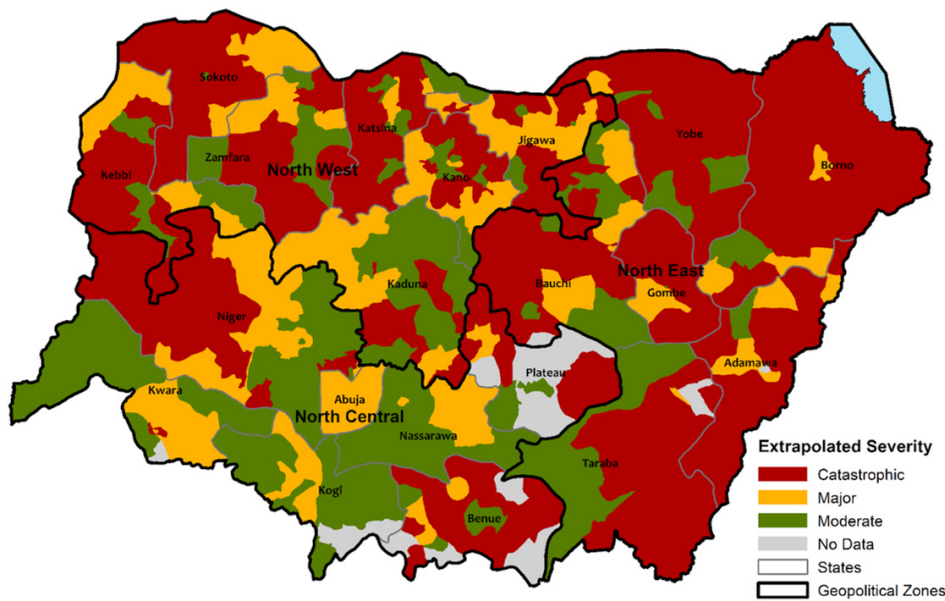

Figure 5: Potential to Generate Catastrophic, Major and Moderate Attacks

On the basis of outputs from the analysis, Figure 5 highlights those areas where insurgents have the potential to generate catastrophic, major or moderate levels of severity when they attack. These spatial divisions are an

extrapolation of the CAM analysis of the geodemographic groups. The map demonstrates the usefulness of this approach for emergency response planning for instance, in a fragile security zone. By highlighting those areas with a high predisposition for fatalities, the results could assist both policy and sensitisation efforts in these areas. Results show that Toiling Country Dwellings exhibit traits that make these area types the most vulnerable to catastrophic levels of severity.
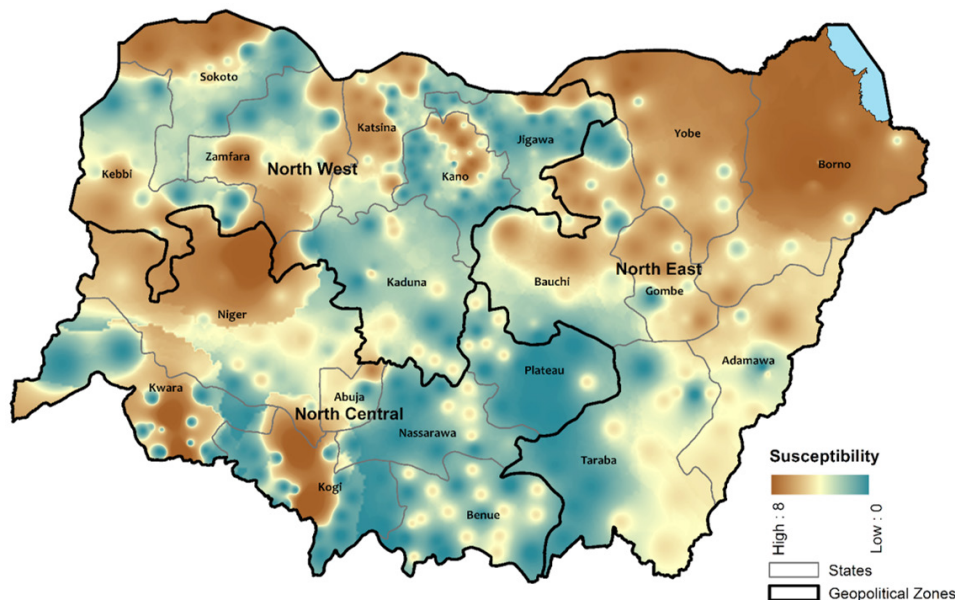

Figure 6: Geography and Magnitude of Susceptibility to Boko Haram Attacks

Figure 6 shows a heat map of the quotient between the efficiency rate of Boko Haram in each geodemographic typology and the relative likelihood for an attack to occur in that typology. The susceptibility modelling results suggest that areas that are highly susceptible to Boko Haram attacks are characterised by people in older age categories. Though households of 1 to 2 persons are very common, the population density in such areas are much higher than average. Again, these areas have a large concentration of widowed population groups. The findings from this analysis suggest that these types of communities (Struggling Green Towns), which includes the capital of Borno State, are 8 times more susceptible to Boko Haram activities. Toiling Country Dwellings which are next in the queue in terms of susceptibility are only twice as vulnerable. These areas exhibit literacy rates that are below the national average with high incidence of uneducated household heads. General access to primary school is low and there are low rates of secondary school completion. Our results reveal marked inequalities in terms of susceptibility to attacks.

Some Implications for Security Evaluation and Emergency Response

The authors clarify how the spatial patterns illustrated may be used by local, state, and federal emergency response agencies to effectively respond to Boko Haram attacks. The arguments are generally hermeneutic since the research findings should be construed in light of additional knowledge in the agencies which lie outside the scope of the paper.

The focus of the security and emergency response agencies should be to combine the evidence base detailed in this paper with additional covert information for the purpose of smarter decision-making. The weighted hit rate of the attacks modelled in Equation 2, intuitively provides a comparative measure of the relative expected levels of fatalities across different communities, normed by prevalence rates and base populations.

This information and related measures are conveyed visually in figures 1-6 in the paper. The results show how terrorist activities are differentially spatially concentrated in different Northern states, with higher activities in Yobe, Borno, Kano, Gombe, Bauchi, and North Eastern Adamawa states, compared to the sparsely-distributed occurrences in North Western states (Kebbi and Sokoto) and North Central states (Niger, Taraba, Kaduna), and the Abuja FCT. It seems that the closeness to Sokoto, which is the seat of the Islamic Caliphate in Northern Nigeria (Enwerem, 1995) may be associated with less intensity, possibly complete absence of the attacks in these geographic areas, compared to the North-Eastern states. This insight requires an understanding of the differences in containment strategies in the different states and geo-political regions, and importantly the impact of different Muslim sects on the patterns and severities of attacks.

Results from this analysis further suggest that attacks in major cities like Kano, Kaduna, and Abuja may be connected to a strategy of causing more visible impacts on the part of the terrorists. These insights again need to inform the nature of emergency response especially at the federal level.

Overall, the evidence base should be used to strengthen the awareness of the importance of geodemographic analysis in security analysis and responses on the parts of the local, state and federal emergency response agencies. Again, the insights need to be combined with what is already known by these agencies regarding the case stories of victims and their families, and how their experiences differ by their socio-economic backgrounds.

Conclusion

Sadly, coping with increased terrorist activities and threats have become a part of the daily lives of Northern Nigerian. Whilst public safety and increased policing and military presence is paramount, it is integral for the decision-making process of armed forces and emergency service providers to be underpinned by properly scrutinised evidence. The overwhelming response of the Nigerian governments has been to increase security in public spaces – and rightfully so. However, the analyses reported in this paper indicate that the terrorists are quite meticulous. Zones of susceptibility and severity of attacks correlate with the presence of vulnerable residents. The combination of a geodemographic framework with open data on terrorist activities helps to organise security analysis for first responders. Furthermore, results from this analysis can be used to facilitate information sharing and integration during emergency preparation and response. Arguably, this can help to stimulate better communication, increased situational awareness and analysis including agile decision making for more effective risk management and emergency response by statutory emergency response agencies.

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Commentary

Drones in War: *The Controversies Surrounding the United States' Expanded Use of Drones*

by Emanuel Gregory Boussios

Abstract

The Obama administration, during his presidency, had embarked on a mission to redefine the guidelines for the development and deployment of unmanned aerial vehicles (UAVs), also known as drones. There are a number of debates surrounding the use of drones, the most contentious of which have been as to whether governments have legal authorization to do so, and of how combatant status is defined under current international law. The most salient issue today regarding the deployment of drones has been the "culture of secrecy." In Obama's first second term, his administration promised significant improvements on openness and scrutiny for U.S. drones strikes in a major speech in May 2013. Although the US has presented a public move to distill the US drone policy more out of the shadows, the actual mechanism by which the US is actually, in practice, employing armed drones and executing targeted killings still presents serious international legal questions. Recently, the White House had proposed that the Pentagon would take over much of the drone operations from the CIA, whereby making drone strikes more transparent. Yet, during this same period, the Obama administration has not shifted key aspects of the drone program to that of being unclassified in form. Given the alarming increase in the use of drones and the sophistication and ease by which such weapons can be used in violent situations, the time is now for the Trump administration to take action on critical alterations of the current policy in the use of drones.

Introduction[1]

The Trump administration has embarked on a mission to redefine the guidelines for the deployment of unmanned aerial vehicles (UAVs), also known as drones, thereby altering significantly the policy set by his predecessor. Yet, early in his presidency, the Trump administration has failed to delineate a clear doctrine on the use of drones for military use. By creating such a doctrine, the United States (US) as a military leviathan, would have the opportunity to set the terms of the debate and to create the necessary international attention and cooperation on establishing universal guidelines on drone warfare. There are a number of debates surrounding the use of drones, the most contentious of which have been as to whether governments have *legal authorization* to do so, and of how *combatant status* is defined under current international law. The most salient issue today regarding the deployment of drones has been the "culture of secrecy." In Obama's second term, his administration promised significant improvements on openness and scrutiny for U.S. drones strikes in a major speech in May 2013. The Trump administration has since reversed

the policy of the Obama administration thereby reopening a turf war between the CIA and the Pentagon. This policy shift is problematic in a number of ways, in particular since this loosens the rules of engagement on targeted killing outside conventional war zones.

The US is the unquestionable leader in drone technology; it is a leader on the UAV market, and expands its experience in the use of drones for military purposes. However, as the use of armed drones remains largely unregulated, as advances in technology push the price of armed drones down, thereby making them available to an increasing number of state and non-state actors, it is imperative that an armed drones' regime is established. The objective of this paper is to address this issue. The argument is structured as follows. First, a few points on the features and the evolution of the drone market are made. By means of outlining what is at stake, in the next section, the intricacies and contentious issues related to armed drones' use are discussed. Finally, the prospect of a US-led effort at devising an armed drones' regime is outlined. Conclusions and recommendations follow.

1. Features and evolution of the drones' market

Drones generally fall into two categories: those that are used for reconnaissance and surveillance purposes, and those that are armed with weapons for military purposes. The use of drones has grown enormously in recent years, in part, because unlike manned aircraft they can fly long missions. In addition, drones can be armed which suits its use for military operations. For example, a British drone, Zephyr, can fly non-stop for nearly 340 hours ("Zephyr, the High Altitude," 2016), are less costly, and have no (immediate) military casualties. Although the cost per flight hour varies by drone type, Predator and Reaper drones cost about $2,500-3,500 per flight hour, while larger armed systems such as the Global Hawk drone cost about 10 times as much (Southworth, 2013). As of November 2013, 87 nations possess some form of drones and conduct various kinds of surveillance either over their own territories or beyond (Taylor, 2013), and at least ten countries have armed drones (Dillow, 2016). Given the extraordinary demand for UAVs, hundreds of companies are currently developing small and large scale drone technology. Teal Group's 2015 market study estimates that UAV production will soar from current worldwide UAV production of $4 billion annually to $14 billion, totaling $93 billion in the next ten years (Finnegan, 2015). This raises a serious question: What happens when an overwhelming majority of nations have drones? Several experts (Tucker, 2014) foresee that virtually every country will be able to build or acquire drones capable of firing missiles within the next ten years. Experts question whether (Tucker, 2014), it is too late for the United States to do anything about it? Armed aerial drones will be used for targeted killings, terrorism and the government suppression of civil unrest. The United States, in conjunction with the international community, may benefit from recognizing this dangerous trend and helping reconstruct international laws to more effectively deal with the use of drones. There are still no internationally agreed rules on targeted killing outside conventional war zones. Restricting the use of drones worldwide will likely reduce future conflicts. For instance, in February 2016, a Nigerian military crew used a Chinese-built Rainbow drone against Boko Haram, an extremist militia allied with Islamic State, in northeastern Nigeria's remote Sambisa Forest. Although the news did little to alter the regional balance of power, Nigeria thus joined the small but fast-growing club of countries that have been utilizing armed drones for targeted killing. While some countries, including Russia and Iran, designed and built their own missile-firing drone fleets, India and Jordan, reportedly bought theirs from Israel (Hennigan, 2016). "It is a good illustration of how this technology has gone global, what was recently considered abnormal is the new normal of technology and war" (Hennigan, 2016). Over time, such developments could

significantly alter the balance of power in certain regions. Therefore, undertaking initiatives to control drone usage now could hedge against this worrisome trend in the future.

The United States has been a leader in driving the UAV revolution and its use in the field. According to 2015 unclassified report, the US Department of Defense now has well over 7,000 aerial drones (Keck, 2015), compared with just 50 a decade ago. In the 2017 budget proposal alone, the US military has allocated approximately $4.61 billion for drone-related spending, including drone research and development ("Drone Spending," 2016). In 2012, the U.S. Air Force trained more UAV pilots than jet pilots for the first time in history. This increase in expenditure has played itself out in the battlefield. President Bush ordered about 50 drone strikes, but under Obama's watch, there had been roughly 500 strikes. In addition, while Bush had used armed drones mostly in Pakistan, Obama deployed them in Yemen, Libya, and Somalia (Luce, 2016). By at least one measure at this point in his presidency, Trump has been more interventionist than Obama (Zenko, 2017): in authorizing drone strikes and special operations raids in non-battlefield settings (namely, in Pakistan, Yemen, and Somalia). During President Obama's two terms in office, he approved 542 such targeted strikes in 2,920 days—one every 5.4 days. From his inauguration through today, President Trump had approved at least 36 drone strikes or raids in 45 days—one every 1.25 days. These include three drone strikes in Yemen on January 20, 21, and 22; the January 28 Navy SEAL raid in Yemen; one reported strike in Pakistan on March 1; more than thirty strikes in Yemen on March 2 and 3; and at least one more on March 6 (Zenko, 2017).

2. Armed Drone Operations: contentious issues

As the use of armed drones intensifies and the debate on a prospective armed drones' regime is only about to start, several questions regarding their use and implications are raised. These questions revolve around the following issues: secrecy and transparency related to the use of armed drones; legality of their use and accountability of the implications of their use; control over unauthorized use of armed drones and access to drone technology by non-state actors; mental health issues of the military personnel operating armed drones; ethical dimensions of the evolving nature of combat; extraterritoriality (Pejic, 2014) and collaboration (Pejic, 2016) with the host countries' authorities; the issue of 'blowbacks', and finally international armed drones' regime. In the following sections, a few of these highly contentious and complex issues will be discussed briefly.

Covert Drone Operations

On 23 May 2013, United States President Obama, for the very first time, comprehensively addressed the use of drones in a speech, which The New York Times' Editorial called 'the most important statement on counterterrorism policy since the 2001 attacks, a momentous turning point in post-9/11 America' ("The End of…", 2013) According to Paulussen and Dorsey (2015), the substance of the speech was significant:

> "In short, the US sees itself in a just armed conflict against al-Qaida, the Taliban, and their associated forces, which legally justifies the strikes, and these strikes, outside of a 'hot battlefield' (but still within the US armed conflict paradigm), will be targeted, as a matter of policy, against al-Qaida and its associated forces when capture is not feasible, whenever they 'pose a continuing and imminent threat to the American people and when there are no other governments capable of effectively addressing the threat', and when there is 'near certainty that no civilians will be killed or injured'."

Although the US had presented a public move to bring the US drone policy more out of the shadows, the US is actually, in practice, still employing armed drones and executing targeted killings which presents serious international legal questions. The Obama administration had proposed, and had taken steps towards, the Pentagon taking over much of the drone operations from the CIA, whereby making drone strikes more transparent. The day after President Trump took office, his administration returned this authority to the CIA. President Trump had made accelerating the fight against the Islamic State group and other terrorist organizations a key component of his campaign, and he has made this his administrations' current policy. Under the drone policy of the Obama administration, the CIA could locate a suspect, but the armed forces would execute the actual strike. Unlike the Pentagon, the CIA does not need to divulge drone strikes — or any resulting civilian casualties. The authorities Trump has granted to the CIA restore much of the power it once had, in essence unravelling all of the 2013 presidential policy guidance of President Obama, and returning the former level of secrecy to drone operations.

Legality, extraterritoriality, international collaboration and blowbacks

While armed drones were first used in the Balkans war, the utilization of such weaponry has dramatically increased since that time. More specifically drones have been used regularly in Afghanistan, Iraq and Libya; President Obama had also built up a network of about a dozen drone bases abroad, from Niger to Kuwait. In October 2016, the Pentagon announced that Specially Designated Global Terrorist (SDGT) Farouq al-Qahtani (also known as Nayf Salam Muhammad Ujaym al Hababi), a senior al Qaeda leader in Afghanistan, had been killed in a drone strike in Kunar, Afghanistan. In February 2017, a high-level al-Qaeda leader in Syria, Abu al-Khayr al-Masri was killed in Syria (Algerholm, 2017). This has been part of a greater international response in the sub-Sahara region. The deployment of French surveillance drones in Mali was reported in October (2012) (Cole, 2013). [In the military intervention in Libya—US drone strikes were credited for ending the exile of former Libyan President Muammar Gaddafi.] The UN reported in August 2015 that most US strikes in Afghanistan were by unmanned aerial vehicles (Fielding-Smith and Serle, 2015). In a 21-page report, the UN special rapporteur on human rights, Ben Emmerson, records a dramatic reduction in drone strikes in 2013 in Pakistan (in response to Pakistani government pressure) but increases in Afghanistan and, towards the end of the year, in Yemen (Ross and Sterle, 2014).

There is also a substantial debate taking place over the issue of *combatant status*, of which targeted assassinations of suspected 'combatants' test the legal limits of Trump administration's power. While the U.S. government maintains that drone strikes have undermined the Al-Qaeda leadership, critics have argued whether or not the strikes are compatible with the principle of distinction under international law. According to Article 48 of the Protocol Additional to the Geneva Convention (AP I, 1977), "In order to ensure respect for an protection of the civilian population and civilian objects, the Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives" (Henckaerts and Doswald-Beck, 2005). The UN Charter, and numerous international treaties, prohibits carrying out the targeted killing of individuals on foreign soil outside of armed conflict, except in extraordinary circumstances. Generally such extraordinary circumstances are understood to involve imminent threats of physical violence, where no other alternative exists but to employ lethal force. The controversy stems from whether the Yemeni government (Yemen is a critical U.S. ally) had officially supported this action *or* did the U.S. in fact violate its airspace to kill a suspected *combatant*. Of further importance is this critical question:

what is more dangerous, al Qaeda's vows to retaliate or the reaction of the Yemeni people to the US's violation of their country's airspace and to the murder of a man many of them considered their own (despite his US citizenship)? Although drone strikes give the appearance of toughness and have enormous short-term benefits, the damage done to political alliances over the *long term* is of great concern.

Whether drone use is *legally authorized* is dependent on location and purpose. In specific 'declared' combat zones (i.e. Afghanistan) drone use has *clear rules of* engagement. According to the UN Charter, countries can use force for self-defense. Since the U.S. had solid international legal footing for attacking Afghanistan after 9/11 in self-defense, critics have argued that in areas where the US is not involved in armed conflict, it cannot lawfully resort to military force. [The US Congress authorized the use of military force after 9/11, which allowed the president to target those who "planned, authorised, committed, or aided the terrorist attacks" of 9/11—which interpreted to mean Al-Qaeda—but some have questioned whether drone strikes are justified under the post-9/11 authorization and therefore would require additional congressional authorization.] In less clear cases, such as undeclared combat zones (i.e. U.S. drone use in Pakistan, Yemen) the US is expected to work with the government of the country in which it operates drones abiding by a key exception to the Article 2(4) of the UN Charter prohibition on the use of force. The Pakistani government has, at times, reacted angrily to what they view as unilateral actions there, which is a significant lapse in meeting the requirement of the use of force being carried out with the consent of the 'host' state. Such long term damage to alliances and to U.S. national interest in this case is known as 'blowback' – incidents that arise in later years as a latent result of actions taken today. Whereas the CIA in the 1980's was 'secretly' arming the mujahedeen fighters (led by Osama Bin Laden) against the USSR's war in Afghanistan, it is well-known that these so-called freedom fighters crafted the deadly bombings of 9/11. Today, this 'blowback' could later appear in Libya, Somalia, Pakistan and Yemen whose residents will internalise the distress and hatred that resulted from the hundreds of drone strikes that have taken place in their country over the last decade. According to Thompson (2016), while the (Obama) administration estimated in July (2016) that ill-aimed drones had killed as many as 116 civilians in Libya, Somalia, Pakistan, and Yemen between 2009 and 2015, independent analysts suggested the toll was three times as high. Critics of the targeted drone program question whether this "collateral damage," create more militants than they kill. Could the spread of jihadist organisations and militant attacks throughout the world serve as evidence that targeted killings may be exacerbating the problem?

Health issues

While the British and US Reaper and Predator drones are physically in Afghanistan, control is via satellite from a US Air Force base outside Las Vegas, Nevada. This is likely to be a game changer. The use of this type of weaponry and technology allows the point of critical human decision making to move physically off the battlefield and also, increasingly, chronologically away from the time of kinetic action. Absent the risk of casualties or prisoners of war, the U.S. government can engage in military operations with a lower political price. Indeed, of critical concern is the extent to which operators become 'trigger happy' with remote controlled armaments, situated as they are in complete safety, distant from the conflict zone. Perhaps as warmaking becomes safer (with the removal of soldiers from the actual horrors of war) and mobilization less difficult, there is a very real danger of losing the deterrent that such horrors provide. Several critics (Chow, 2013), however, have indicated that perhaps this danger is indeed overblown. A 2010 study of Air Force personnel found that 17 percent of Predator or Reaper drone operators, and 25 percent of Global Hawk

operators, show signs of what the Air Force terms "clinical distress," which includes depression, anxiety and other symptoms that interfere with job performance or disrupt family life. For comparison, approximately 28 percent of U.S. soldiers returning from Iraq are diagnosed with clinical distress, according to the Air Force (Chow, 2013). Although a repeat survey administered in 2012 showed lower levels of "clinical distress" (Chappelle et al, 2014), the implications are the same. The rapidly evolving technology comprising weapon-deploying drone operations along with shifting conflicts across the globe may result in a continuously changing operational environment leading to fluctuations in the sources and rates of distress relevant to the provision of mental health care (Chappelle et al, 2014). Advocates for manned aircraft systems argue that the human element enhances the operator's situational awareness, instinct and ability to make a judgment based on one's senses and intellect. For drone operators *their reality* is that the precision and accuracy of these drone attacks are as good as the intelligence on the ground. Many drone operators have seen close-up video of what the military calls "collateral damage," casualties involving women, children or other civilians that is unnerving and unsettling to them contributing to this combat stress (Khan, 2011). As one drone operator had put it, "We always wonder if we killed the right people, if we endangered the wrong people, if we destroyed an innocent civilian's life all because of a bad image or angle (Linebaugh, 2013)." Even if the end result appears to be a success, it leaves a hint of doubt as to how accurate their confirmation of weapons and hostile individuals were.

3. *Towards a Trump Drone Doctrine*

This is a critical time for the Trump administration to initiate conversation that can lead to an international doctrine regarding the use of drones and related technologies. The US is certainly not the only power using drones. China is a growing power in military technologies, including drones. France is the leader in drone production in Europe. The point is that the spread of the drone technology makes it accessible to a growing number of countries and non-state actors. In this context, the really serious questions include: what happens when an overwhelming majority of countries use armed drones? Which principles to apply to devise an effective international armed drones' regime? How to effectively limit unauthorized use of armed drones? Several experts foresee that virtually every country will be able to build or acquire drones capable of firing missiles within the next ten years (Tucker, 2014). It is feasible therefore that armed drones will be used for targeted killings, terrorism and the government suppression of civil unrest. Efforts to establish multilateral agreements to limit armed drone sales have been weak. The United States and more than 40 other countries signed a declaration establishing five guiding principles for the export and use of armed drones, but signatories have been reluctant to ratify it ("The Unstoppable Spread…", 2016). Several countries with significant military industries, including Russia, China, France, Israel and Brazil, failed to sign the declaration. It is worth noting that several of the signatory countries are currently developing their own armed drone capabilities and will likely try to reach the status of exporters at some stage ("The Unstoppable Spread…", 2016). Simply put, if no effective armed drones' regime is put in place, the scenarios related to armed drones' use can get ever more dramatic.

Although the US government has started to make efforts to establish policies and to engage in the growing debate over drone usage, more needs to be done. Most likely, it will require a focused effort on the part of President Trump. The ability to set the terms of the debate, and to create the necessary international attention and cooperation, would be enhanced if presented in a major presidential speech. This would initiate an important debate in Congress, and of course, internationally. There are several important issues

that President Trump needs to address: The first is that of revising the current international law to cover the development and use of these new technologies. — war acts vs. covert acts— (i.e. The UN Charter and "use of force"). A Trump administration could take the lead here by shifting the responsibilities regarding drone use back to the Pentagon. However, this is unlikely considering that President Trump has returned drone operations back to the CIA. Under this arrangement most drone attacks are covert, designed to kill enemy targets without leaving American fingerprints and carried out without consideration of public opinion or the approval of Congress. Greater transparency is appropriate as it would unshield drone attacks from public view, and would eliminate the secrecy of such actions. The second issue involves establishing clear delineations between the military vs. civilian intelligence agency use of such technologies, and the proper role for Congress and the President regarding drone use. The Trump administration could establish clear guidelines on the use of drones for military use, just as state governments have been doing with regard to civilian use of drones. Although this may be unpopular within certain military circles, this would raise the confidence of political leaders in other nations who have been hesitant to set such guidelines absent actions taken by the US government. The EU, a close US ally, has been largely silent (in public) on the legality of US policy regarding drone use, although there is some evidence, in private, of pushback because of the secrecy of US operations (Tayler, ,2014). Given that the EU has remained largely absent from these public discussions[2] it is ever the more critical for the US to take the lead now. The third issue, and perhaps the most important, involves the coordination of 'development and use' doctrines by the United States and its allies. The United Nations would be seem to be a natural choice as a venue for creating these guidelines, but enforcement is an issue and given President Trump's disdain for UN inclusion in military matters, it is unlikely that it will be the starting point. Perhaps NATO would be a logical and more reasonable means to initiate global conversation on a doctrine guiding the development and use of drones The United States has a preeminent position within NATO and a global military presence. By taking the initiative now, President Trump has the opportunity to provide the momentum necessary to motivate other leaders and nations to establish an effective doctrine.

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2   The EU has so far failed to set out any vision of its own about when the use of lethal force against designated individuals is legitimate. Nor is there any indication that European states have made a serious effort to influence the development of US policy or to begin discussions on formulating common standards for the kinds of military operations that UAVs facilitate (Martins, 2015)

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Book Review

Sarah V. Marsden: *Reintegrating Extremists: Deradicalisation and Desistance (Palgrave Macmillan)*

reviewed by Roger P Warren

This is a review of a book entitled *Reintegrating Extremists: Deradicalisation and Desistance* by Dr Sarah V. Marsden. It examines the reintegration and deradicalisation of former prisoners or those considered 'at risk' of involvement in extremism in the UK. The book leverages criminological theory and empirical findings that result in analysis that argues that reintegration is a more appropriate framework than deradicalisation, and proposes mechanisms by which individuals can be supported to move away from extremism. It is unreservedly recommended for both scholars and practitioners.

With the backdrop of the 2011 violent uprisings in Libya and Syria that witnessed the involvement of many Arab and Western foreign fighters, *Reintegrating Extremists: Deradicalisation and Desistance* is a particularly timely book that acknowledges the reality of some individuals eventually returning home, and recognises the importance of their reintegration in their country of residence. Dr Sarah V. Marsden, currently a lecturer in the Department of Politics, Philosophy and Religion at Lancaster University (UK), has done a magisterial job researching the challenges of such reintegration, and offers a meaningful and practical way forward. Her book is an empirically informed study that relies on several years of research learning from community-based and statutory organisations involved with those considered 'at risk' of involvement in violent extremism, and those who have been convicted for terrorism offences in the UK. This research which leveraged criminological theory, included 33 semi-structured interviews with representatives of community based organisations, the police, local councils, and probation officers.

The three central arguments of the book involve a model by which individuals can be supported to move away from extremism and 'sustain a crime-free life' (p. 32). The first argument is the need to focus on their reintegration and a concomitant move away from the notion of deradicalisation. This entails learning how statutory and community-based organisations can focus on supporting agency and reintegration. The second argument calls for developing resilience to negative peer pressure and the effect of political and social events that may inform the motivation to reoffend. This entails the encouragement of a broader social identity (beyond the group), and the involvement of critical thinking. The final argument suggests the need to redirect the motivation to (re)offend by considering how individuals may be encouraged to pursue primary human goods (including relatedness, spirituality, community and agency). The arguments are persuasive, yet the author correctly caveats the success of such a model citing 'the distrust' between former prisoners and probation officers (p. 90), and the existence of only 'cautious optimism that in some cases practitioners may be able to facilitate a move from extremism' (p. 106).

The book is well crafted and usefully unpacks the deradicalisation construct in a nuanced way. Whilst arguing for the three mechanisms (reintegration, resilience, and redirecting the initial motivation to offend – noted earlier), Dr Marsden demonstrates great perspicacity by adopting a holistic view of former prisoners

or those considered 'at risk' of involvement in extremism, whilst at the same time, stressing the importance of context (p. 9). This is done by adopting a contextualised and individualised approach, shying away from the 'one size fits all' approach, that is often employed in deradicalisation models. The book suggests that the most appropriate coherent model of practice, based on the Good Lives Model (GLM), should focus on personal strengths, the promotion of individual agency, and an ecological approach to the individual. Such a model moves away from the risk-orientated model of deradicalisation, and instead leverages the benefits of a more clearly strengths-based approach. This reintegration model firmly situates former prisoners in their personal, social and political context. This approach notably eschews the attempt to deconstruct 'radical' attitudes or beliefs in the way the deradicalisation construct implies, rather it focusses on the reintegration of individuals back into a specific community setting, and by 'developing a commitment to a different ideological system – or moral community' (p. 80).

The greatest strength of the book lies in its empirical foundation and thorough research – both to the highest academic standards. Whilst drawing on established theory, the book moves beyond the walls of the library, and out into 'the real world' to interview those practitioners on the frontline of reintegrating politically motivated former prisoners and those considered 'at risk' of involvement in extremism – namely representatives of community based organisations, the police, local councils, and probation officers. Additionally, the book also includes recommendations for the reintegration of contemporary foreign fighters, including the need 'that returnees feel they have a home state that is willing and able to facilitate their reintegration back into society' (p. 6) – recommendations that perhaps contentious, have enormous implications for current and future policy and practice.

Whilst there appeared to be no cracks in what was very sound research and analysis, there were three areas that may have benefited from greater explanation. First, as part of the resilience model, Dr Marsden suggests the importance of 'critical thinking … through education … in order to develop skills to deepen [probationers'] understanding of politics, religion and ultimately better understand their place in the world' (p. 69). Whilst this may have merit, it is still broadly accepted that many of those involved in politically motivated violent offences, are educated; for example, the 2017 Manchester bomber (Salam Abedi), and the leader of the 7/7 attacks in London (Muhammad Sadiq Khan), were both university educated. This suggests that practitioners will also need to be equipped with the required political-religious knowledge, and perhaps the implicit requirement to have special educators who are not only qualified to offer such an education, but also (for some) to have credibility (in the eyes of the probationers) – for example perhaps former Islamist activists such as Ed Hussain and Maajid Nawaz. Second, there appeared a counter-argument to the notion that some former prisoners may have a 'stigma associated with the offence' (p. 117). It is perhaps equally likely that former prisoners may also enjoy a certain kudos, influence, and notoriety that may sustain the notion of charismatic authority – as displayed by former prisoners and detainees from the Northern Ireland Maze prison and the US detention facility at Guantanamo Bay, Cuba. Finally, there were a few loose terms, for example 'global jihadist ideology' (p. 67), that would have benefited from a clear definition.

In conclusion, *Reintegrating Extremists: Deradicalisation and Desistance* is an excellent book – thoroughly researched and analysed, and one that makes a significant contribution to ongoing debates amongst policy makers, practitioners, and academics. It is a topical issue for governments around the world, in particular with the possibility of increased numbers of returning foreign fighters (from Syria and Iraq). Dr Marsden's argument is both compelling and persuasive, and her book should be used as a springboard for greater debate amongst those most involved in the reintegration and deradicalisation of former prisoners, or those considered 'at risk' of involvement in extremism.

About the Reviewer: **Roger P. Warren** *was educated at the Royal Military Academy Sandhurst and the University of St Andrews, the author's background is based on thirty years of British military experience much of it in the Arab world. Research interests include:Arab foreign fighters and their nexus to involvement in Islamist terrorism, defensive jihad,radicalisation (in its broadest form),the impact of combat on foreign fighters (indoctrination, the Lucifer Effect, obedience to authority),de-radicalisation / reintegration / rehabilitation strategies, political Islam and 'suicide' terrorism and 'martyrdom' operations. He was awarded his PhD (that studied Arab foreign fighters) in 2017.*

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