

Maps in the Analysis of Insurgencies: The Case of ISIS

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WHEN THE MONGOLS INVADED PARTS OF EUROPE IN THE EARLY THIRTEENTH century, they possessed an uncontested cavalry, highly sophisticated siege weapons, great discipline, and unmatched tactics and strategies.¹ They defeated the great empires of the East and tried to achieve similar successes by expanding west into a vulnerable Europe that was weakened by the struggle between the Holy Roman Emperor Frederick II and Pope Gregory IX. After the Mongols succeeded in invading Poland and Hungary, however, they abruptly retreated from Europe amid serious preparations to invade Austria. While historians give many reasons for the sudden withdrawal of the Mongols, some argue that “they halted just beyond the Danube because this was the furthest extent of the Eurasian steppe,” which created some difficulties related to “the number of horses the Mongols had and the amount of grazing ground available in Hungary and in the rest of Europe.”² If this reasoning is true, we can say that the availability of grazing represented a boundary or limitation for the Mongols’ invasion of Europe.

While researchers can find other historical cases of military campaigns that faced similar limiting conditions or boundaries, this article applies a similar concept to modern insurgencies, using ISIS as a case study. It explores answers to the following questions: Are there any “boundaries” that limited the expansion of ISIS in Syria and Iraq, and if yes, what are the conditions that defined them? Can this concept apply to other insurgencies, or does ISIS represent a unique type of insurgency? Finally, how can this concept help in analyzing modern insurgencies in their different stages of development?

It is important to note that the variables included in this analysis do not exclusively define the conditions for the success or failure of an insurgency. Many other factors can come into play. The significance of the variables analyzed here, however, allows for a good understanding of certain dynamics related to the rise and fall of insurgencies.

Conditions for a Successful Insurgency

Typical insurgencies usually resort to guerrilla warfare strategies based on popular mobilization. When researchers refer to guerrilla warfare strategies, many of them reference the methods and theories crafted by Mao Zedong and promulgated in his famous pamphlet, titled *Guerrilla Warfare*, during the Chinese resistance to the Japanese occupation in 1937. The introduction to a translation of this pamphlet summarizes the main requirements for successful guerrilla warfare as recommended by Mao.³ The first condition is the “organization, consolidation, and preservation of regional base areas situated in isolated and difficult terrain.” As explained by military historian B.H. Liddell Hart, “rugged or forest country is the most favorable for guerrillas. Deserts have diminished in value for them with the development of mechanized ground forces and aircraft.”⁴ The second is a cooperating and sympathetic population that provides logistical and informational support, in addition to providing the main source of

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recruitment. Better knowledge of the terrain and the ability to dissolve among the population enable the guerillas to be in “an impenetrable fog” while the enemy “stands on a lighted stage.”⁵ As a result, the guerrillas engage the enemy only when the conditions are in their favor, and they withdraw when the tides are against them as they aim to draw the enemy into a protracted conflict.

Mao conceived guerilla war as progressing in three phases: the *organization/consolidation/preservation* phase, the *expansion* phase, and the *decisive/destruction of the enemy* phase.⁶ In the first phase, the insurgents establish isolated base areas for recruitment, training, and indoctrination. In the second phase, the insurgents increase their capabilities in personnel and weapons and conduct more attacks on enemy targets. In the decisive phase, the insurgents become powerful enough to conduct conventional military operations to destroy the enemy and increase their territorial control.

Many researchers argue that guerilla warfare strategies can be applied by different insurgencies regardless of their ideology. The operational problem in guerilla warfare, according to one argument, is

overcoming the conventional military superiority of the state (or occupying power) through an asymmetrical campaign based on the support (and resources) of a constituent population. While the [Marxist insurgency] will attempt to draw support from among a revolutionary class (classically, the peasantry), the non-Marxist insurgency will define its natural constituency along different lines (e.g., ethnicity, communal affiliation, or regional identity).⁷

Researchers who study Salafi jihadist groups observe that these groups have applied insurgency strategies, especially those recommended by Mao.⁸ For instance, the “Strategic Plan for Reinforcing the Political Position of the Islamic State of Iraq,” circulated by Iraqi jihadists between December 2009 and January 2010, recommended using guerrilla tactics to weaken the Iraqi units in areas where the government had a weak presence, in an attempt to create security gaps. These gaps would allow jihadists to seize these areas and benefit from the resources abandoned by the Iraqi forces. The authors of the plan did not forget the second necessary condition for a successful insurgency recommended by Mao: the population. They explained that jihadists would not succeed in establishing their state in Iraq without gaining the loyalty of the Sunni tribes.⁹ A few years earlier, an al Qaeda franchise released an online book titled *The Management of Savagery* by an unknown author named Abu Bakr Naji. The book presented a similar strategy to what was presented later in the “Strategic Plan,” describing how the jihadists should aim at creating “security vacuums or ‘regions of savagery’ in the periphery of the state.”¹⁰ The jihadists would then control these regions and try to gain the support of the tribes by providing security and public goods, establishing Islamic law, and indoctrinating the people. After establishing a network of these controlled regions, the book urged jihadists to try to merge these regions into an Islamic state.

An article titled “New Masters of Revolutionary Warfare: The Islamic State Movement (2002–2016)” took the argument one step further by applying a detailed analysis of how the jihadist groups that preceded the Islamic State implemented Mao’s three phases of revolutionary warfare between 2003 and 2014.¹¹ In the building phase, following the American invasion of Iraq in 2003,

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Abu Musab al-Zarqawi established a network of jihadists in several weak regions of the country. His organization, al Qaeda in Iraq (AQI), moved to the expansion phase over the next three years and took control of most of Anbar province in 2006. The Islamic State of Iraq (ISI) declared itself in October 2006, a few months after al-Zarqawi was killed by a coalition air strike. The United States, however, by supporting the Sunni *Sahwa* (Awakening) councils in Diyala and Anbar provinces, expelled ISI from the region in 2007 and forced it back to the preservation/building phase. Despite this setback, the political problems in Iraq and the start of the Syrian conflict in 2011 gave ISI a chance to recover and move to the expansion phase again with the capture of Mosul in 2014.

This article applies a similar concept to analyze the expansion and retreat of ISIS after 2014 based on Mao's three phases of revolutionary warfare but with a different methodology. The use of maps and spatial data to analyze these phases adds a new dimension to the analysis: terrain and population are considered to be necessary conditions for the success of any insurgency, and consequently can define both its potential and limitations.

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Spatial Analysis of Insurgencies: ISIS as a Case Study

Geographic information systems, spatial analysis, and maps have been used as powerful analytic tools in different fields of study, including crime and terrorism. For instance, a special report by the US Department of Justice highlights the importance of using different mapping techniques to study crime patterns and identify criminal “hot spots.”¹² In the case of terrorism, a study analyzed the spatial and temporal patterns of terrorist attacks in Iraq between 2004 and 2006 in an attempt to predict and counter future attacks.¹³ Another study focused on possible logistical constraints for the spread of insurgency in Russia's Northern Caucasus by analyzing the effect of existing road networks on the spread of violence.¹⁴

The methodology presented in this article uses spatial data to map the development of an insurgency—ISIS, as a case study—through the different stages outlined by Mao. The study evaluates how each stage relates to the two main conditions for a successful insurgency—regional bases located in isolated and difficult terrain and a sympathetic population for logistical and informational support—according to four variables. Two variables relate to geographic features (terrain and land cover), and the other two relate to the population (population density and the geospatial distribution of ethnoreligious groups in Syria and Iraq). The advance and retreat of ISIS in Syria and Iraq for the period between June 2014 and December 2017 is mapped with respect to the variables of terrain and population, using snapshots of critical moments in the conflict. This method may reveal ISIS's progress from one phase to another according to Mao's terminology, and may also help clarify why the advances and retreats occurred as they did.

ISIS is an adequate case study for our analysis for two reasons. First, ISIS passed through different stages of expansion and retreat between 2014 and 2017, thus providing a sufficient time frame and adequate data for the analysis. Second, ISIS is viewed by some experts as a unique case because it did not follow the strategies used by other insurgencies. Therefore, if the results of this present analysis contradict this view by showing that ISIS fits into Mao's framework of protracted war, then its findings may be usefully generalized as a model for analyzing other insurgencies.

Mapping ISIS's Territorial Expansion and Retreat

The start of the Syrian conflict in 2011 gave the Islamic State of Iraq (ISI) a chance to recover from its defeat in Iraq in 2007. Once it took control of areas in northern and eastern Syria, including the city of Ar Raqqa in 2013, ISIS succeeded in expanding back into Iraq.¹⁵ In the summer of 2014, ISIS forces seized the city of Mosul on 10 June, followed by Tikrit on 11 June.¹⁶ By 21 June, ISIS had already consolidated its capabilities in regions where the presence of the Syrian and Iraqi governments was weak, mainly in northeastern Syria and in the

Ninawa and Anbar provinces in Iraq.

On 5 July, at the Great Mosque of al-Nuri in Mosul, ISIS leader Abu Bakr al-Baghdadi declared himself caliph of the restyled "Islamic State." The invasion of Mosul in 2014 marked the group's move from the consolidation phase to the early expansion phase. The population density map in figure 1 reveals that until this stage, ISIS controlled areas of low population density. Regardless of the loyalty of the population, ISIS did not expand into regions of high population density, including Mosul, until it had the material capability to control them.

Moreover, these areas were dominated by a sympathetic Sunni population, as shown in figure 2. The supportive population played a critical role at this stage, as it did in Fallujah, which, although geographically close to Baghdad, has historically been resistant to the government and was the first region to come under ISIS control, in January 2014. Although the Sunni tribes played a major role in defeating AQI in these regions, ISIS used the sectarian divisions that dominated Iraq to present itself as a plausible and better alternative to the Iraqi government.

The elevation and dominant land cover maps (figures 3 and 4), however, show that the ISIS-controlled regions up to this stage are low-elevation areas (less than 250 meters) that are mostly desert or have sparse vegetation. This is rather strange for insurgencies, which generally prefer safe havens in mountainous or covered areas (forests, jungles, swamps, and the like) because such areas present real challenges for

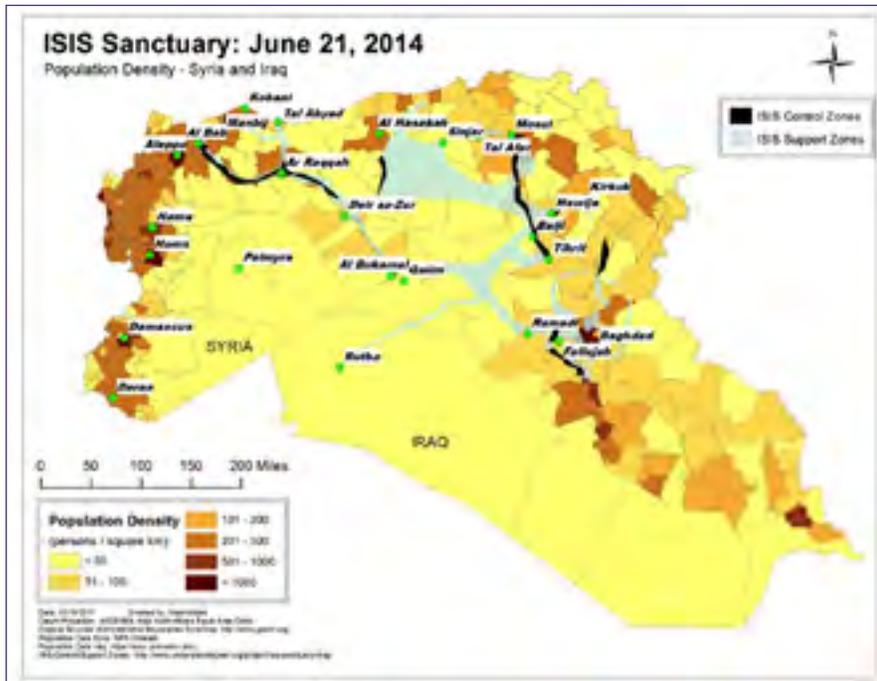


Figure 1. Population Density, 21 June 2014¹⁷

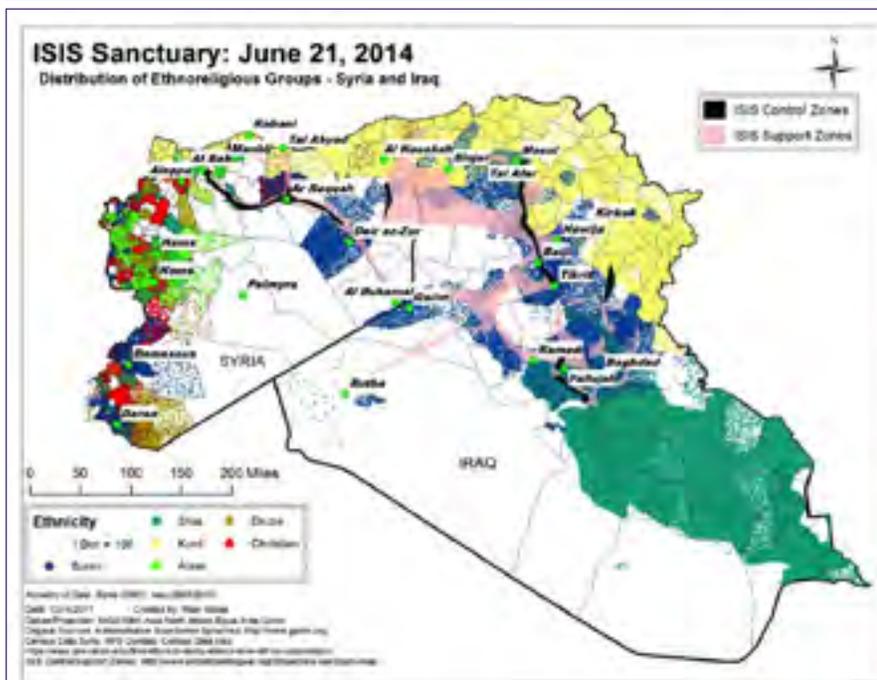


Figure 2. Distribution of Ethno-religious Groups, 21 June 2014

conventional forces. Examining these geographic maps in relation to the ethnoreligious map in figure 2, however, reveals that the mountainous areas in western Syria have mixed populations, while those in northern Iraq are purely Kurdish. In the consolidation phase, it appears that ISIS focused on areas that were distant from the strongholds of the Syrian and Iraqi governments irrespective of the terrain—which was probably more a matter of availability than of choice—and dominated by a religiously supportive population. Moreover, given its initial material weakness, ISIS likely preferred areas with low population density that were easier to control. These unsuitable geographic conditions, however, ultimately played a decisive role in the group's defeat in the later stages of the conflict, when ISIS lost these areas in a fast and dramatic way. It seems likely that the inhospitable conditions made ISIS extremely vulnerable, as would be expected for any similar insurgency.

In the months following the capture of Mosul and Tikrit, ISIS approached the end of the expansion phase and sought to move to the decisive phase with a boost in capabilities that included recruitment, financing, and weapons that it had seized in the occupation of Mosul. This allowed the terrorist group to conduct more attacks and occupy more territory in an attempt to connect its regional bases. In Iraq, ISIS seized Tal Afar, Baiji, Qaiim, and Rutba, culminating its successes with the capture of Sinjar in August 2014, where ISIS fighters committed a horrible massacre of thousands of ethnic Yazidis.¹⁸ In Syria, ISIS invaded Al Bab, Manbij, Tal Abyad, Deir az-Zur, Al Bukamal, and areas near Al Hasakah city. The map in figure 5, which shows ISIS-controlled areas as of September 2014, reveals that ISIS linked its areas of control in Syria and Iraq by seizing areas similar to the ones they controlled in the previous phase. The cities of Sinjar, Aleppo, Manbij, Tal Abyad, and Al Hasakah also had a supportive population and lay at the periphery of the state's control, but in this phase, ISIS clearly attempted to penetrate into regions with ethnically different populations and harder terrain. These military operations indicate that ISIS was moving toward the end of its expansion phase and into the decisive phase. In

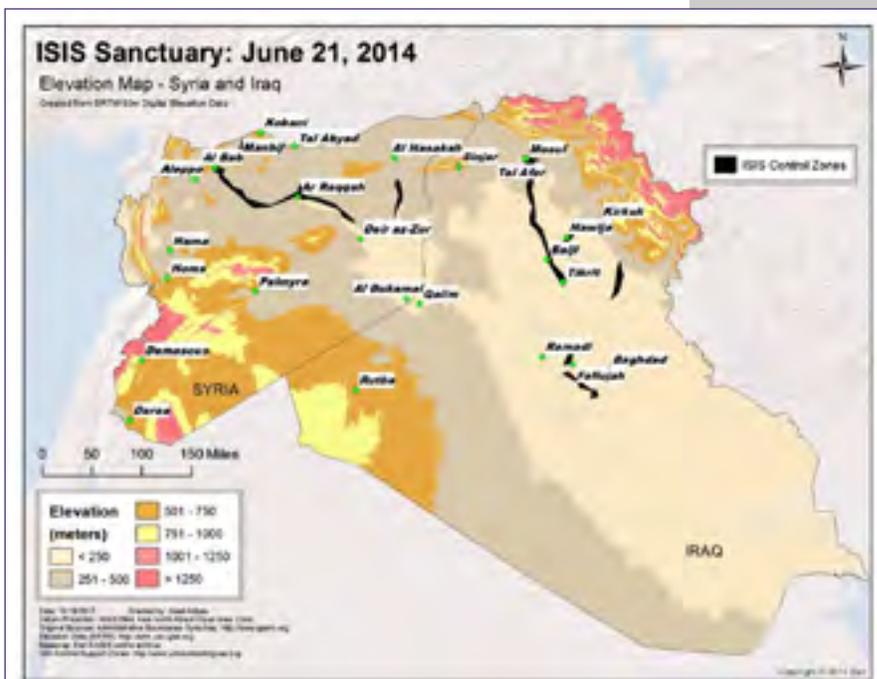


Figure 3. Elevation, 21 June 2014

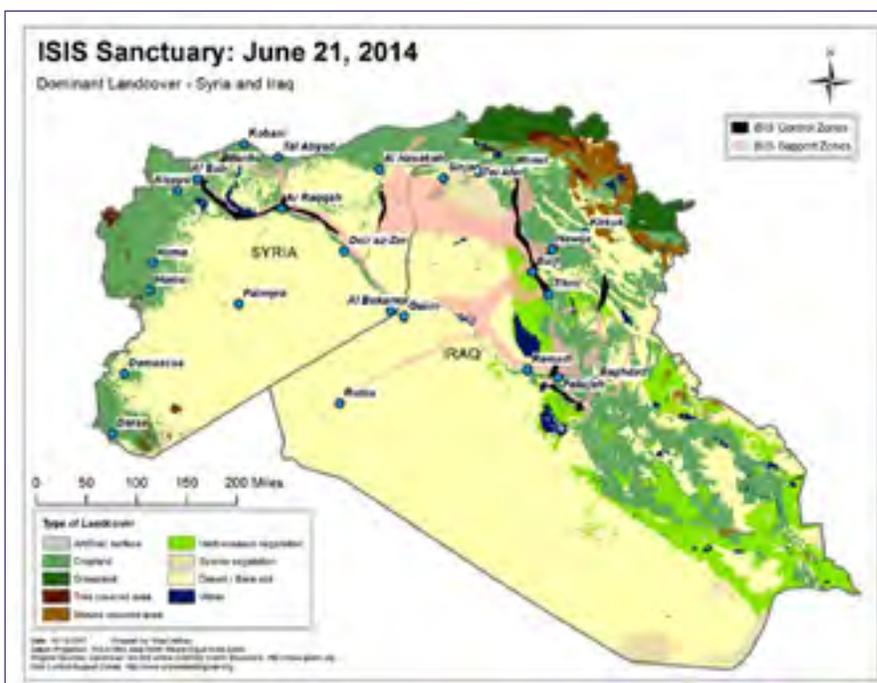


Figure 4. Dominant Land Cover, 21 June 2014

Figure 7 shows that the Syrian Kurdish regions attacked by ISIS in the autumn of 2014 had higher population densities than the areas ISIS controlled in the earlier phases of its insurgency. ISIS conducted conventional military operations exactly as Mao prescribed for this stage, mobilizing its forces and attacking in unobstructed terrain. It seems, however, that ISIS advanced prematurely to the decisive phase, by failing to take into account the US-led coalition's announcement in September 2014 that it was planning a military intervention. The airstrikes conducted by the coalition in support of the Kurdish forces in Kobani prevented ISIS from delivering a decisive defeat to the Kurds and helped the Kurdish People's Protection Units (YPG) win the battle of Kobani in December 2014. Kurdish forces fully recaptured the city on 27 January 2015.¹⁹ On the Iraqi front, coalition airstrikes halted the advance of ISIS and helped clear its fighters from Mount Sinjar in December 2014, and from some parts of Sinjar city.

As ISIS was forced back to the consolidation phase in the Kurdish areas of Syria and in Iraq, it moved ahead with the expansion phase against the Syrian regime.

The first few months of 2015 witnessed a mix of successes and defeats for ISIS in both Iraq and Syria. As ISIS was forced back to the consolidation phase in the Kurdish areas of Syria and in most of the regions where it operated in Iraq, it moved ahead with the expansion phase against the Syrian regime, which seemed extremely vulnerable during the first half of 2015. In April 2015, ISIS lost Tikrit to the Iraqi Security Forces (ISF), but it seized Ramadi and the strategic Al Walid–Al Tanf border crossing in May and the areas between Rutba and Al Walid in August. In Syria, ISIS saw major success expanding northeast of Palmyra, capturing the city of Palmyra on 20 May and Al Quaryatain on 26 May.²⁰

ISIS's expansion in Syria at the expense of the Syrian government carried all the signs of the decisive/destruction of the enemy phase. ISIS invaded Palmyra and its surrounding regions by conducting conventional military operations. The militants also expanded into regions of mixed Christian and Alawi populations near Al Quaryatain, into more difficult mountainous

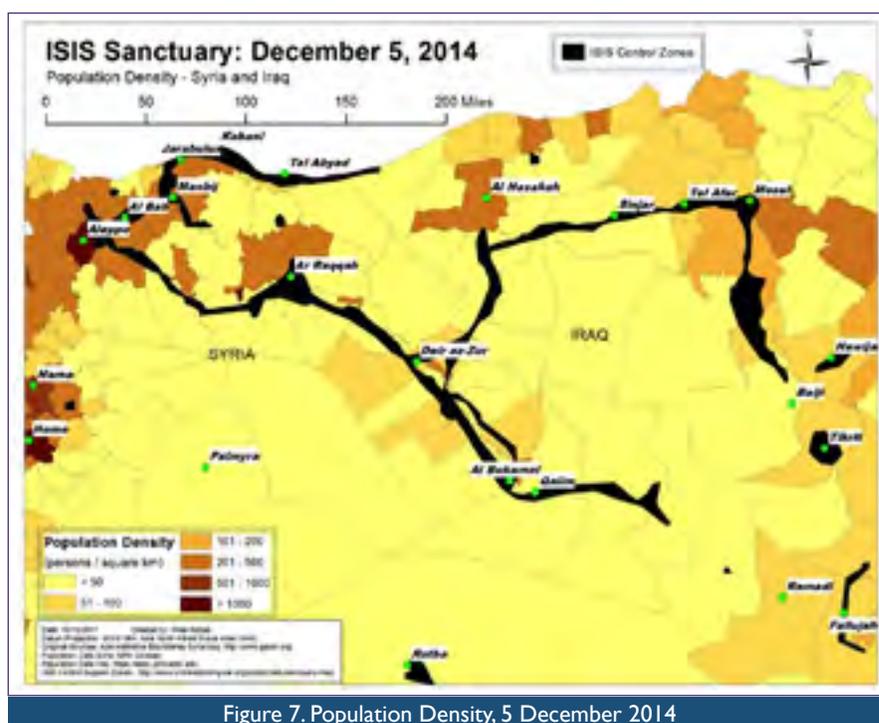


Figure 7. Population Density, 5 December 2014

terrain, and closer to the Syrian capital of Damascus during this same period, indicating a perception of power superiority over the Syrian regime. Figures 8 and 9 illustrate this phase of expansion.

Even as the Syrian regime seemed to be losing ground against ISIS in many areas, a Russian military intervention in September 2015 in support of the Syrian government reversed the tide in its favor.²¹ One more time, an external military intervention forced ISIS back into the consolidation phase. Facing opponents supported by two superpowers, ISIS lost ground in many parts of Iraq and Syria at the end of 2015 and the beginning of 2016.²² Pro-regime forces supported by Russian airstrikes retook Palmyra on 27 March 2016. The setbacks continued as ISIS militants lost control of the city of Manbij to the US-backed Syrian Democratic Forces (SDF) on 15 August. A few days later, Syrian opposition groups backed

by Turkey seized the town of Al Rai in Northern Aleppo province. These forces later moved south to take control of the town of Dabiq on 16 October, thus undercutting the narrative of ISIS, which claimed the town would be the location of the decisive end-of-times battle between Islam and the West. Meanwhile, Turkey also supported the forces that seized Jarablus from ISIS on 24 August 2016, and by September 2016, ISIS had no presence on the Syrian-Turkish border.²³

Although the pattern of losses that ISIS endured is related in part to the strategies of its adversaries, the overall picture reflects Mao's phases of revolutionary war. ISIS lost areas in a succession that was the reverse of what happened in the expansion phase: areas closer to the important strongholds of the state, higher population areas, and areas with adversarial ethnoreligious groups, especially Kurdish and Shia regions. In Syria, all the actors fighting ISIS have represented, in a way, the "state" fighting an insurgency. All these actors were working to establish their own version of a state and had the means to achieve their ambitions, especially with the support of an external power. The Syrian government, supported by the Russians, showed that it still had the power and legitimacy to preserve a united Syria by competing for the areas controlled by ISIS. Meanwhile, the Kurds did not hide their ambitions for an independent state and had the impression that if they—with the support of the United States—defeated ISIS, they would have the right to rule their regions. The Syrian opposition

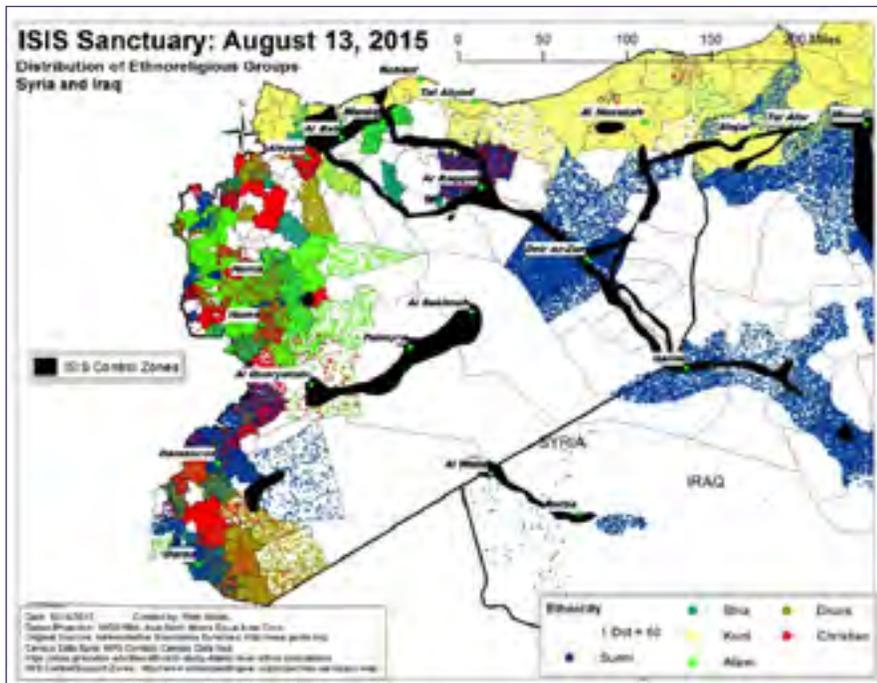


Figure 8. Distribution of Ethnoreligious Groups, 13 August 2015

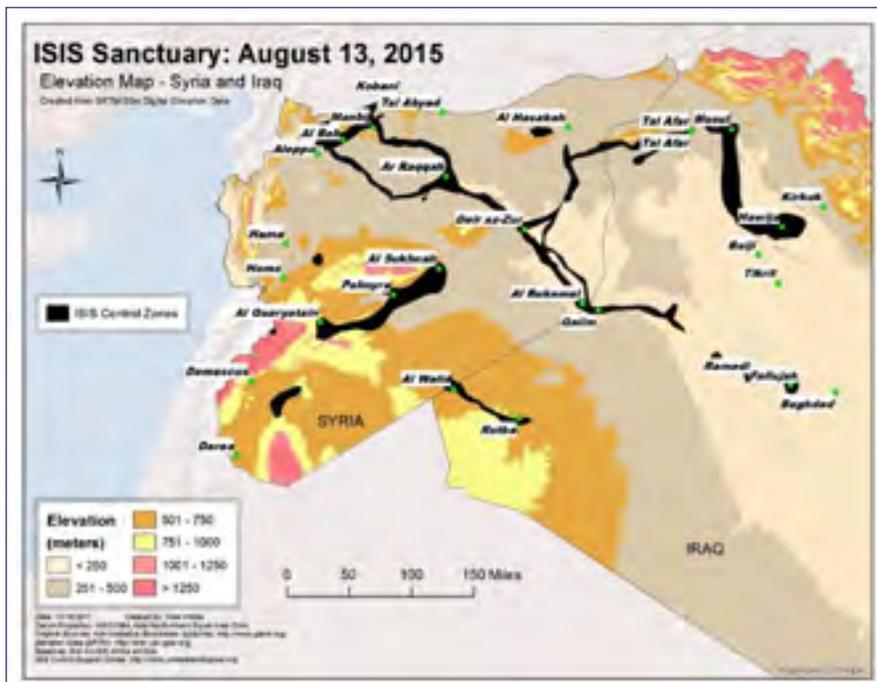


Figure 9. Elevation, 13 August 2015

groups, although weak at this stage, found support from Turkey, which wanted to keep the Kurds divided and away from its borders.

As a result, ISIS retreated against all three actors, withdrawing first from the areas where its opponents enjoyed a supportive ethnoreligious population or had strategic reasons for sustaining a significant military presence (see figure 10). For instance, the Syrian Army advanced east from its areas of control in Homs to retake control of Palmyra, which represented an important supply route between eastern and western Syria and would be central for the military operations advancing toward Deir az-Zur. In the north, while the Syrian Army advanced east of Aleppo (Syria's second major city), Turkey supported the opposition forces that seized Jarablus, a strategic town directly on its border with Syria, followed by Al Rai in Northern Aleppo province, in an attempt to control the important city of Al Bab and prevent the Kurds from joining their regions east and west of the Euphrates River. Meanwhile, the US-backed Syrian Democratic Forces, dominated by the Syrian Kurdish YPG, controlled the city of Manbij, an ethnically mixed town directly adjacent to the ethnic Kurdish areas.

In Iraq, a similar dynamic came into play. ISIS lost Sinjar city in November 2015, Ramadi in December 2015, Hit in April 2016, and Fallujah in June 2016.²⁴ ISIS first lost the areas closest to the Iraqi government's centers of power near Baghdad (Ramadi, Hit, and Fallujah) and those closest to the Kurdish regions, such as Sinjar. Mosul, which is closer to the Kurdistan region than Baghdad, was the next target. Because it is dominated by a Sunni Arab population, the Kurdish Peshmerga, although they controlled countryside outside the city, would have to wait for the Iraqi Army to attack Mosul itself. Figure 11 shows the progress of these military operations.

In 2017, ISIS retreated farther to the periphery of Syria, into mostly desert regions away from areas with high population, adversarial ethnoreligious groups,

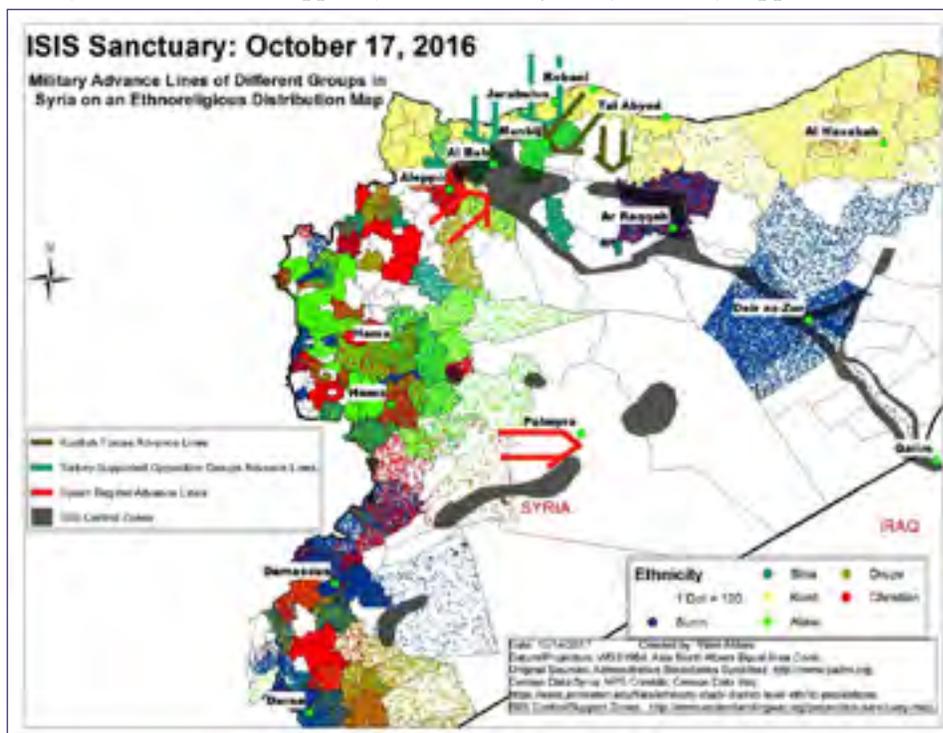


Figure 10. Military Advance Lines of Different Groups in Syria, 17 October 2016

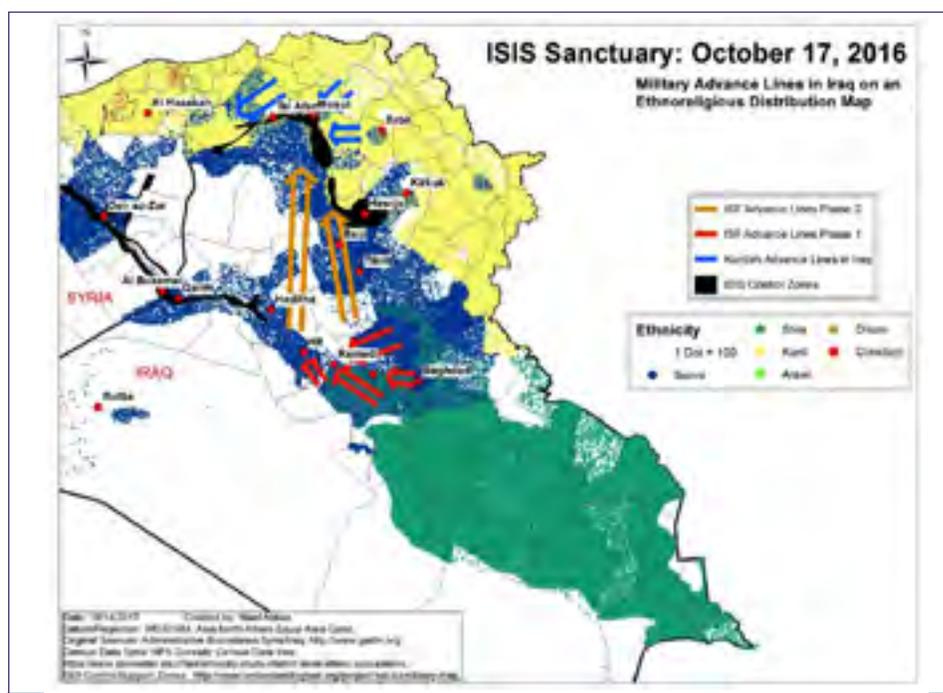


Figure 11. Military Advance Lines in Iraq, 17 October 2016

The Syrian regime's forces lifted the three-year siege of the industrial city of Deir az-Zur in September, followed by Al Mayadin in October; the Syrian army finally reached Al Bukamal on the Iraq border in November. At the same time, the Kurds attacked from their regions in northern Syria and took control of the eastern side of the Euphrates near Deir az-Zur.³⁰ In Iraq, the ISF completely liberated Mosul from ISIS's control in July, followed by Tal Afar in August and Hawija in October. The ISF finally expanded its operations towards the Iraq-Syria border to take control of Qaiim in November.³¹ Without any urban areas under its control, ISIS was forced to return to the preservation phase in the vast deserts on the border between Iraq and Syria, and hide among the local tribes. It seems, however, that the Iraqis had learned from their past experience with AQI; in November the launch of a military operation to clear ISIS from these desert areas was announced. At the same time, the Syrian government announced its intent to clear ISIS from the uninhabited areas along the Euphrates River on the other side of the border.

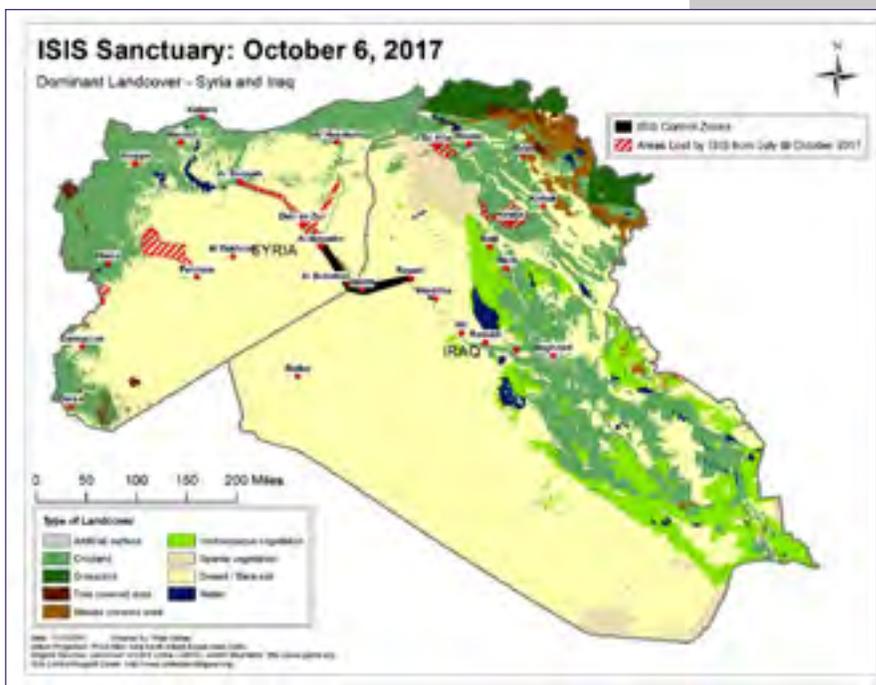


Figure 14. Dominant Landcover, 6 October 2017

Conclusion

ISIS followed Mao's three phases of revolutionary warfare in its expansion and retreat during the four years of conflict in Iraq and Syria between 2014 and 2017. It seems strange to expect a jihadist Islamist movement to follow the insurgency strategies historically linked to Marxist and national insurgencies. Contrary to the conventional wisdom on insurgencies, however, ISIS applied these strategies because, as explained by Mao, they are strategies not of choice but of necessity, "imposed by the initial material weakness of the opposition."³² Therefore, it is logical that any insurgency would resort to these strategies because they represent a natural tendency towards survival and self-preservation, and offer the best chance for an insurgency to achieve its goal of defeating a superior enemy. The methodology presented in this article, which uses maps and spatial analysis to analyze the conditions of terrain and population available for an insurgency at the different stages of its development, is a powerful tool for understanding and countering future insurgencies.

Studying the geographic and population conditions available to an insurgency can give an indication of the outcome of the conflict at an early stage. The geography of Syria and Iraq played a decisive role against ISIS. If the terrain in the Sunni areas where ISIS enjoyed some population support had been more favorable—for example, mountainous or forested—ISIS probably would have had a better chance of success, or at least better prospects for protracting the conflict even in the face of great military powers like the United States and Russia. In Afghanistan, for instance, the Taliban have survived a long US military

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campaign against them because they can take advantage of both a supportive population and difficult terrain. The prevalence of sympathetic Sunni tribes in many regions of Afghanistan, especially in the mountainous areas on Pakistan's border, have played a major role in the Taliban's ability to avoid a decisive defeat over the years. In the words of Mao Zedong, "If we do not fit guerrilla operations into their proper niche, we cannot promote them realistically."³³ Such a strategic failure is exactly what caused the dramatic defeat of ISIS. ISIS had no realistic prospects for a successful insurgency because it lacked the favorable conditions of both terrain and population, which set limitations on its expansion and success. In this context, Iraq and Syria can hardly represent the "proper niche" for ISIS or any other Sunni jihadist insurgency.

This analysis of ISIS as a case study shows that the conditions of terrain and population work in combination; having both favorable terrain and a sympathetic population at the same time is critical for the success of an insurgency. This adds to the challenges faced by insurgencies and lowers their prospects of success. On the one hand, an insurgency that limits itself to isolated, difficult terrain with low population density will not be able to grow and expand. On the other hand, an insurgency that enjoys high levels of popular support in open and accessible terrain will find it very hard to defend itself against a superior enemy.

Sympathetic Sunni tribes in the mountainous areas on Pakistan's border have played a major role in the Taliban's ability to avoid a decisive defeat.

Consequently, a government can focus its resources on depriving the insurgents of either of these conditions: favorable terrain or supportive population, depending on which is easier to achieve. A complete analysis of these conditions should precede the crafting of a counterinsurgency strategy to make it more efficient in defeating the insurgency. The proposed spatial analysis helps identify the most critically vulnerable regions, where the favorable conditions of terrain coincide with a large supportive population. Based on these findings, most military and intelligence resources should be allocated to these regions as a short-term solution. The government should also increase its presence in isolated areas regardless of the size of the population and the need to provide services. Over the long run, the government should develop infrastructure in the countryside and any isolated regions, a policy which can serve the state's goals in two ways: responding to the grievances of the population might lower the population's support for the insurgents' cause, and making these regions more accessible by investing in roads, airports, communication services, and other infrastructure would deprive the insurgents of much-needed isolated terrain.

Moreover, understanding the dynamics of advance and retreat for ISIS or any other insurgency in light of Mao's three stages of revolutionary war can help states craft corresponding counterinsurgency strategies. As Iraq has experienced twice so far, it is not enough to achieve a decisive military victory against an insurgency to guarantee it will not recover. The recommended strategy in this case is to follow ISIS to the areas that are most suitable for the building/preservation phase, in the remote deserts on the Iraq-Syria border, and respond to the grievances of the tribes in these regions to prevent any future support for the resurgence of ISIS. ❖

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NOTES

- 1 The views expressed here are those of the author alone and do not reflect the views of the Lebanese Armed Forces, government, or any other official entity.
- 2 Timotheus [pseud.], "The Mongol Invasion of Europe," All Empires Online History Community, 27 March 2007: http://allempires.com/article/index.php?q=invasion_mongol_europe. See also Denis Sinor, "The Mongols in the West," *Journal of Asian History* 33, no. 1 (1 January 1999): 1–44.
- 3 *Mao Tse-Tung on Guerrilla Warfare*, trans. Samuel B. Griffith (Washington, D.C.: HQ, US Marine Corps, 5 April 1989), 37.
- 4 B.H. Liddell Hart, *Strategy*, 2nd rev. ed. (New York: Meridian, 1991), 366.
- 5 *Ibid.*, 23.
- 6 *Mao Tse-Tung on Guerrilla Warfare*, 20–21.
- 7 Gordon H. McCormick, "People's Wars," in *Encyclopedia of Conflicts since World War II*, 2nd ed., ed. James Ciment, vol. 1–4 (New York: Routledge, 2015), 20: https://books.google.com/books?id=BpGXBwAAQBAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false
- 8 Jihadist publications have referenced these strategies, including the writings of Abu Ubayd al-Qurashi (who cited Robert Taber, William Lind, and Mao Zedong among others). See William McCants, *The ISIS Apocalypse: The History, Strategy, and Doomsday Vision of the Islamic State* (New York: St. Martin's Press, 2015), 81.
- 9 *Ibid.*, 79–82.
- 10 *Ibid.*, 83.
- 11 Craig Whiteside, "New Masters of Revolutionary Warfare: The Islamic State Movement (2002–2016)," *Perspectives on Terrorism* 10, no. 4 (August 2016): <http://www.terrorismanalysts.com/pt/index.php/pot/article/view/523/html>. Griffith uses slightly different terminology to describe these phases.
- 12 John E. Eck, Spencer Chainey, James G. Cameron, Michael Leitner, and Ronald E. Wilson, *Mapping Crime: Understanding Hot Spots* (Washington, D.C.: US Department of Justice, Office of Justice Programs, National Institute of Justice, 2005): <http://discovery.ucl.ac.uk/11291/1/11291.pdf>
- 13 Laura K. Siebeneck, Richard M. Medina, Ikuho Yamada, and George F. Hepner, "Spatial and Temporal Analyses of Terrorist Incidents in Iraq, 2004–2006," *Studies in Conflict & Terrorism* 32, no. 7 (July 2009): 591–610.
- 14 Yuri M. Zhukov, "Roads and the Diffusion of Insurgent Violence: The Logistics of Conflict in Russia's North Caucasus," *Political Geography* 31, no. 3 (March 2012): 144–56.
- 15 ISI became ISIS after an offshoot, the al-Nusra Front, expanded into Syria in 2013. See "Mapping Militant Organizations: The Islamic State," Stanford University, n.d.: <http://web.stanford.edu/group/mappingmilitants/cgi-bin/groups/view/1>
- 16 Jessica Lewis and Ahmed Ali, "The Fall of Mosul to the Islamic State of Iraq and al-Sham," *Institute for the Study of War* (blog), 10 June 2014: <http://iswresearch.blogspot.com/2014/06/the-fall-of-mosul-to-islamic-state-of.html>; "Developments in the Aftermath of the Fall of Mosul," *Institute for the Study of War* (blog), 11 June 2014: <http://iswresearch.blogspot.com/2014/06/developments-in-aftermath-of-fall-of.html>
- 17 All of the maps that accompany this article are the work of the author. The shape files for ISIS's control zones in Iraq and Syria were created based on the maps published by the *Institute for the Study of War*: <http://www.understandingwar.org/project/isis-sanctuary-map>. Elevation maps were created using digital elevation data (SRTM 90m) of Syria and Iraq from the CGIAR Consortium for Spatial Information: <http://srtm.csi.cgiar.org>. Land cover maps were created using worldwide land cover data from the ArcGIS online archive accessed from the ArcGIS software. Population density maps and ethnoreligious distribution maps were created using population data for Iraq from the Empirical Studies of Conflict (ESOC) Project: <https://esoc.princeton.edu/file-type/gis-data>. Population data for Syria came from the CORE lab at the US Naval Postgraduate School, and data for the administrative boundaries of Iraq and Syria came from the Global Administrative Areas spatial database: <http://www.gadm.org>
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