Session: Combating Terrorist Networks: Current Research in Social Network Analysis for the New Warfighting Environment

Paper Title: Combating Terrorist Networks: an evolutionary approach

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Abstract

This paper will briefly examine how Al Qaeda evolved from an insurgency assistance group to a terrorist network of sophistication and global reach. It argues that Al Qaeda filled the needs of Islamist insurgencies and then developed into a complex system of networks by co-opting other groups, hijacking their agendas and transforming their ideologies. Al Qaeda thus has global and local aspects. Locally-oriented "associate" organizations may have somewhat variant structures and will vary in their goals, targets, and ideology. In some ways, these groups are more vulnerable to discovery by local authorities and disruption. They tend to lack the training, professionalism, education and capacity to ensure strict security measures and discipline within their own ranks. They lack resources such as weaponry and human social capital, such as experience or specific kinds of knowledge that Al Qaeda has been able to provide. Because they are only loosely coupled to the parent organization, both parent and "child" network receive "force multiplier" benefits while minimizing risks and costs.

Introduction

An organization is a collectivity conceived of and maintained by individuals. These individuals may leave, die, or change allegiances, but the organization can endure. Remaining members can take up the roles of lost others, new recruits can be added and the structure can be enlarged or rearranged. Although an organization can be said to have a kind of artificial life of its own, it is not the same as natural life. In biological evolution, species change, die, and emerge based on principles of natural selection. Evolution is not simply a process of random change; it is change that is in some way driven by selective pressures. In biological evolution, Darwin postulated three subsidiary conditions for his theory of natural selection.

1. Organisms are usually slightly different from one another.
2. More organisms are born than can possibly survive.
3. The organisms best suited to the natural environment tend to survive, and thus leave more offspring.

The notion of competition drives Darwin's model. In a similar way, John Arquilla and David Ronfeldt argue that it will take "strong networks to fight networks."

> The strength of the network, perhaps especially the all-channel design, depends on its functioning well across all five levels. The strongest networks will be those in which the organizational design is sustained by a winning story and a well-defined doctrine, and in personal and social ties at the base. Each level, and the overall design, may benefit from redundancy and diversity. Each level's characteristics are like to affect those of the other level (ibid.).

Arquilla and Ronfeldt's formulation of competition is that of direct conflict, rather than an evolutionary selection processes. Network configuration and design is the most critical to the practice of "netwar," which they define as "an emerging mode of conflict (and crime) at societal

levels, short of traditional military warfare, in which the protagonists use network forms of organization and related doctrines, strategies, and technologies attuned to the information age."

How is it that transnational terrorist networks came to be? While certainly information age technology has assisted in the development of these networks, enabling them to communicate with greater secrecy, frequency, and precision than before, how is it that locally-based, violent groups, focused primarily on regional or national goals, "suddenly" seem to resolve the differences among themselves and create relationships of cooperation "spontaneously" develop?

In this paper, I will show that the Al Qaeda terrorist network evolved out of insurgency movements, under a variety of pressures over fifteen years. It developed because of its ability to fill an important political economic niche as an alternative to state sponsorship, which hitherto had been critical to an insurgency's survival, evolving into a robust, flexible and adaptive organization.

Restating Arquilla and Ronfeldt's argument in evolutionary terms, I propose that any organizational network requires the following to survive in a competitive environment: (1) organizational fitness (flexibility, congruence, ability to adapt to changing constraints on resources); (2) social fitness (its ability to inspire cohesiveness and discipline among its own members and to create links to other organizations and influence their actions; (3) the doctrinal level (its collaborative strategies and methods); (4) the technological level (the information systems in use); (5) its narrative and praxis fitness (to what degree its narratives, actions, and strategies enhance its prestige and influence with its target audience, including the public, other cooperating partner agencies, and its own membership to obtain their objectives.) However, terrorist networks are special. They require critical resources (weapons, training, safe haven, experienced strategists and tacticians, specialized knowledge) typically provided by nation states in the past. Human social capital—knowledge, expertise, trust relationships, ability to reciprocate and trade, etc—is a premium asset. They require technological variety, to escape detection. They must have methods of operation that ensure secrecy and protection even against determined, technologically and methodologically capable adversaries. And they must not lose control of their narrative.

In this paper, I will describe how Al Qaeda developed out of insurgencies over a long period of struggle, co-option and invention. Early on, Osama bin Laden focused on human social capital, in training the best operatives and leaders, and finding the most committed and able to put in positions of leadership either within its own ranks or in associate organizations. By training and indoctrinating thousands of cadres from all over the Islamic world, bin Laden created a vast pool of potential leaders, managers, and foot soldiers. This strategy was in large part successful because of the enormous power vacuum that developed following the withdrawal of superpower support of insurgent movements worldwide.

The evolution of political insurgency

Insurgency and terrorism are somewhat different social phenomena. In *Trends in Outside Support for Insurgent Movements*, Byman, et. al., define insurgency by using a quote from a CIA pamphlet, *Guide to the Analysis of Insurgency,* published in the 1980s:

> Insurgency is a protracted political-military activity directed toward completely or partially controlling the resources of a country through the use of irregular military forces and illegal political organizations. Insurgent activity—including guerrilla warfare, terrorism, and political mobilization, for example, propaganda, recruitment, front and covert party organization, and international activity—is designed to weaken government control and legitimacy while increasing insurgent control and legitimacy. The common denominator of most insurgent groups is their desire to control a particular area. This objective differentiates insurgent groups from purely terrorist organizations, whose objectives do not include the creation of an alternative government capable of controlling a given area or country (CIA n.d., p. 2, quoted in Byman, Chalk, Hoffman, Rosneau, and Brannon, 2002, p. 4-5)

Byman, Chalk, et al., explain that insurgency differs from modern transnational terrorism in several key ways: (1) insurgents engage in "a *range* of activities, most notably guerrilla warfare, but also political mobilization and attendant efforts to attract support from abroad" (2) "terrorism in this context is a specific tactic that insurgents use as part of a broader strategy to control a particular geographic area. . . that is, terrorism is an auxiliary mode of violence rather than an exclusive one" ; and (3) size. Insurgencies frequently have hundreds or thousands of members; terrorist groups tend to be much smaller (ibid.).

Today, insurgency and terrorism are largely conflated, the differences ignored or downplayed. This conflation makes it difficult to appreciate the development of terrorist networks and their relationships with local insurgencies and "foot soldier" entities on which they rely to carry out acts of terror. Terrorist networks are on the one hand, partially derived from local insurgencies, and on the other hand, they utilize local insurgencies to fulfill their global ambitions. Terrorist networks differ from insurgencies in that they have evolved from locally-oriented political organizations that engage in acts of terror into a complex, adaptive *system* (Davis and Jenkins 2002, p. 13) of loosely structured organizations that work across national borders to promote larger regional and global ambitions primarily through the sponsorship of violent events.

The evolution of Islamist political insurgencies into the free-floating transnational terrorist organization of Al Qaeda was a product of several factors: (1) deep cuts in critical resources such as training, weaponry, and intelligence from state sponsors; (2) the development of a large cadre of personnel with the required training, commitment, and experience that could replace some of those resources; (3) high connectivity among groups and organizations; (4) well qualified leaders cut off from nation-state affiliation and control; (5) access to safe havens and substitute resources, often arranged by trade, gift, or other reciprocal arrangements.

Al Qaeda's beginnings reflect the evolution of a locally oriented insurgency group into a transnational network. The original organization was called The Afghan Service Bureau (or

MAK). The brainchild of Dr. Abdullah Azzam, a leading Islamist cleric and member of the Jordanian Muslim Brotherhood with experience in fighting with insurgency groups in Jordan, Azzam teamed up with Osama bin Laden to create MAK in 1984 (Gunaratna 2002: 18) to assist Afghans attempting to repel the Soviet invasion by recruiting, training, and assisting foreign volunteers, primarily Arabs, to participate in the fight for Afghanistan.

The sponsorship of nation-states was critical to the success of MAK, with CIA, Pakistan's ISI, and Saudi Arabian intelligence agencies providing munitions, intelligence, and logistic support to insurgent effort.

> MAK's Emir (leader), Azzam, and his Deputy Emir, Osama, worked closely with Pakistan, particularly its formidable ISI. They also had close contacts with the Saudi government and Saudi philanthropists and with the Muslim Brotherhood. The ISI was both the CIA's conduit for arms transfers and the principal trainers of the Afghan and foreign *mujahedin* [combatants]. The CIA provided sophisticated weaponry, including ground-to-air "Stinger" missiles and satellite imagery of Soviet troop deployments (Gunaratna 2002: 20).

By the time the Soviet-Afghan War was drawing to a close, MAK had developed an independent global reach. Osama bin Laden and Azzam had traveled widely recruiting volunteers, not only throughout the Middle East, but also to the U.S. and Germany, with several mosques and charities, including the Kifah refugee center in Brooklyn, NY, serving as outreach offices. MAK had built several training camps and guesthouses in Pakistan and Afghanistan. They worked closely with the Saudi government to assist and advice in the disbursement of funds to over twenty Islamic NGOs. Although no records were kept of the number of foreign combatants who passed through the guest houses and camps of the MAK until 1989, rough estimates of the number of these *mujahedin* vary between 25,000 and 50,000, with estimates of Afghan insurgents trained varying between 175,000 and 250,000 (Bergen 2001: 59-60).

During the Cold War, the United States and the Soviet Union were the most generous sponsors of insurgent movements worldwide (Byman, Chalk, et. al. 2002 , Metz 1993). At the end of the Cold War, Dr. Steven Metz of the Army War College's Strategic Studies Institute predicted that the social, political and economic changes of the post-Cold War era, particularly the loss of superpower support, would lead to an evolution of these insurgencies, driving them to innovate.

> There will be many forms of low-level, protracted violence as the post-cold war global security system coalesces. Of these, insurgency--the use of low-level, protracted violence to overthrow a political system or force some sort of fundamental change in the political and economic status quo--will certainly persist. After all, it has been one of the most pervasive types of conflict throughout history and today is epidemic.[2] For many countries of the world, simmering internal war is a permanent condition.[3] As long as there are

> people frustrated to the point of violence but too weak to challenge a regime in conventional military ways, insurgency will persist. It will, however, evolve from its cold war form.
>
> A number of factors will drive or force the evolution of insurgency. Internationally, the most obvious is the demise of the Soviet Union and its proxies. This dried up the assistance, training, inspiration, and ideological unity which, during the cold war, sustained insurgencies.[4] Insurgents will still search for outside assistance in the post-cold war world, but the source and motives of outside supporters will be more complex than during the cold war (Metz 1993, p. 6).

Metz argued that these insurgencies would innovate using the capabilities, experience and resources--especially the massive amounts of arms transferred to insurgencies during the Cold War—they had acquired under the U.S. and Soviet aid programs (Metz 1993: 7, 11). But another evolutionary pressure, the need to develop new funding sources to replace the loss of U.S. and Soviet programs, also affected these movements. Those driven by Marxist ideologies largely collapsed (Byman, Chalk, et. al. 2002: 5), while state sponsorship available from other source "paled in comparison" to the levels of funding previously available.

> Although countries as diverse as Libya, Iran, and the United States have aided rebels far from their borders, state support is primarily a local rather than international phenomenon. With a decline in superpower involvement also came a decline in the scale of assistance. The United States provided billions of dollars to the Afghan mujahedin and hundreds of millions of dollars to the Nicaraguan contras. By comparison, most state supporters now lack the tremendous resources that Washington and Moscow lavished on their insurgent proxies during the Cold War. Pakistan, one of the most generous sponsors of insurgent groups in the 1990s, provided tens of millions of dollars to its favored movements (Byman, Chalk, et. al, 2002: 17).

As state sponsorship has been curtailed, insurgent groups have been motivated to look elsewhere for financial sponsorship to support their struggles. This is where the new transnational terrorist networks like Al Qaeda have found an opportunity: by providing needed monetary, training, and equipment support, transnational terrorist groups are able to co-opt and transform local insurgent movements into smaller, more localized terrorist "subnets."

From Insurgency to Transnational Terrorism

> In June of 2001, two terrorist organizations, Al Qaeda and Egyptian Islamic Jihad, formally merged into one. The name of the new entity—Qaeda al-Jihad—reflects the long and interdependent history of these two groups. Although Osama bin Laden, the founder of Al Qaeda, has become the public face of Islamic terrorism, the members of Islamic Jihad and its guiding figure, Ayman al-Zawahiri, have provided the backbone of the larger organization's leadership. . .Bin Laden and Zawahiri were bound to discover each other among the radical Islamists who were drawn to Afghanistan after the Soviet invasion in 1979. For one thing, both were very much modern men. Bin Laden, who was in his early twenties, was already an international businessman; Zawahiri, six years older, a surgeon from a notable Egyptian family. They were both members of the educated classes, intensely pious, quiet-spoken, and politically stifled by the regimes in their own countries. Each man filled a need in the other. Bin Laden, an idealist with vague political ideas, sought direction, and Zawahiri, a seasoned propagandist, supplied it. "Bin Laden had followers, but they weren't organized," recalls Essam Deraz, an Egyptian filmmaker who made several documentaries about the mujahideen during the Soviet-Afghan war. "The people with Zawahiri had extraordinary capabilities—doctors, engineers, soldiers. They had experience in secret work. They knew how to organize themselves and create cells. And they became the leaders (Wright 2002)."

With the attenuation of state sponsorship, insurgency groups did indeed evolve. They began to rely more on immigrant communities established in other countries, including the West. In the 1980s, MAK, the precursor of Al Qaeda, had thirty outreach offices in the United States. Diaspora (émigré) communities could be connected to their cause by telephone and the Internet, serving to further their fundraising efforts through sophisticated propaganda techniques (Byman, Chalk, et. al. 2001: 42-45, Gunaratna 2002: 12) and to form the base of “foot soldier” organizations. In addition to direct contributions by these émigré communities, many groups invest funds in legitimate businesses, take funds from non-government, benevolent organizations, charities, and people smuggling. Access to arms, military training, safe havens, and other material resources is not something immigrant communities typically contribute (Byman, Chalk 2001: 59), however, many nations, including France and Britain, admitted immigrants with connections to a variety of Islamist groups, including those that were associated, or became associated, to Al Qaeda.

MAK did have the knowledge, experience and connections to fill the gap created by the diminution of state sponsorship of insurgent groups. While Osama spent much of his time on the

Pakistan-Afghan border dealing directly with the needs of the fighters, Azzam began to formulate the idea for a new organization to spread the Islamist ideology that he was developing and put into operation his notion of an Islamist "strike team," able to move in and assist Islamist struggles in other parts of the world, such as Chechnya and Kashmir. This new organization, Al Qaeda, would harness the energies and abilities of the Afghan volunteers towards new campaigns.).

Not long after the establishment of Al Qaeda, Bin Laden and Azzam began to have disagreements about its direction. Osama had been approached by some of his Egyptian fighters, who wanted to study terrorist tactics to mount a campaign against the Egyptian government. Azzam considered such tactics futile and was unwilling to see Al Qaeda move in the direction of terrorist assaults. Disagreements about resource use, ownership, goals, and other incidentals mounted. Bin Laden began to rely increasingly on his Egyptian allies, especially Ayman al Zawahiri. On November 24, 1989, these allies carried out an attack on Azzam, bombing his car while he and his two sons were on the war to Friday prayers in Peshawar. Osama, Azzam's designated successor, now had full control over the resources of MAK and Al Qaeda, and began to shape it into a transnational terror organization (Gunaratna 2002: 21-23).

> Even before the departure of Soviet troops in 1989, MAK's socio-economic, political and military infrastructure had steadfastly begun evolving into Al Qaeda. The resources at MAK's disposal were diverted by Al Qaeda away from Afghanistan into regional conflicts where Islamist guerillas were involved, principally in Kashmir and Chechnya, but also in Mindanao, Tajikistan, Uzbekistan, Somalia, Malaysia, Indonesia, Georgia, Nagorno-Karabakh, Azerbaijan, Yemen, Algeria, and Egypt. . . Al Qaeda, using the humanitarian cover of MAK and some Islamist charities, infiltrated many of these conflicts, sending cadres to train further recruits and take part in the actual fighting (ibid., p. 5).

In the 1990s, U.S. pressures on nation states to end sponsorship of terrorist organizations initially caused problems for the violent insurgents. Movement of headquarters and the dispersion of people and assets across the few nations willing to take them forged even stronger ties of friendship and cooperation among like-minded organizations. This was aided by Al Qaeda's training program, whose graduates returned to their home countries to join local Islamist organizations, mosques, charities, and militant groups, and by bin Laden's own efforts to minimize difference between Sh'ia and Sunni, and emphasize a global vision of Islamic transcendence in which local constituents would see their ambitions realized. Social ties between groups were established, first by common association in Afghanistan, Sudan, Libya and other havens, and later by shared commitment to a common narrative emphasizing a global jihad against the West that was in no way in conflict with the very local goals of insurgencies.

Byman, Chalk, et. al. (2001) note that peer to peer assistance between insurgencies has been shown to be highly effective. However, because insurgency groups have the control of a particular geographic region or nation-state as their goal, other local groups are more likely to be competitors than allies. Wealthy individuals and religious organizations can also make

substantial contributions to local insurgencies, but there were limitations as to what kinds of support that could provide. Bin Laden's abilities to leverage peer relationships is due to his ability on the one hand to minimize issues of ideology and to the extensive transnational network of friends, allies, and former mujahedin that he controls. This has enabled peer-to-peer cooperation to the point where state sponsorship is less critical to Islamist terror groups, to the point that Al Qaeda has even been able to get cooperation from Sh'ia organizations like Hezbollah. State sponsors continue to be a factor that can make the critical difference, providing what other kinds of sponsors—except for Al Qaeda--usually cannot: safe havens and sanctuaries, military training, and weaponry. Al Qaeda is a very important exception.

The Evolution of the Al Qaeda Network

In the 1970s and well into the 1980s, social scientists working from a social network analysis perspective explored how informal social networks functioned, building theories and developing new understanding about human behavior in complex societies in the process. Research during this period showed that informal network organization offered particular kinds of advantages over more formalized, hierarchical, functionally organized groups.

Social scientist Stanley Milgram (1967) coined the term, "the strength of weak ties."--individuals (or organizations) with many diverse ties can adapt to changing circumstances more quickly and withstand disaster better than those with fewer but "stronger" ties. From the late 1980s, terrorist organizations discovered what business organizations (and social network theorists) had already known for some time: network-like structures of cooperating organizations can augment manpower, increase the available information and expertise, improve access to critical resources, shorten critical paths to goals, and create useful redundancies to ensure mission success.

Social network theorists like Milgram can explain Al Qaeda's success as a an example of the superiority of loosely knit network organizations over tightly controlled hierarchical organizations, so long as the system of rewards, reciprocities, and advantages can be clearly understood and accepted, and so long as they outweigh the costs and risks. In business, the notion of "rewards" is commonly in terms of an increase in profit and/or a reduction in costs. Cost of Al Qaeda affiliation and association is generally in terms of risk of being targeted by state intelligence and military agencies, thus many if not most groups who cooperate with Al Qaeda are very secretive about this connection. The rewards of affiliation, access to the military training, weaponry, funds, and other assistance, have tended to outweigh the perceived risks, at least until 9/11.

Al Qaeda's relationship with the Taliban government in Afghanistan enabled it to take over and maintain MAK's camps. It also trained recruits in Sudan, Yemen, Chechnya, Tajikistan, Somalia, the Philippines, and Indonesia. Estimates of the number of graduates of these camps range from 25 to 50 thousand (Gunaratna 2002 p. 21) non-Afghan nationals. In the beginning Pakistan's ISI and Saudi intelligence assisted by advising Osama bin Laden, and there is evidence that he had access to British and U.S. intelligence manuals in developing teaching materials. At least one former member of the U.S. military served as a trainer in these camps; Al Qaeda encouraged its recruits to join their national military if they could in order to improve

their skills. Al Qaeda also developed cooperative relationships with Hezbollah, which culminated in the loan of some of their bomb experts to assist in technical training of Al Qaeda members. The technical excellence of training provided by Al Qaeda has drawn top quality students to its camps; these students returned to their local Islamist organizations deeply inculcated with the Al Qaeda message of the importance of working against the West in every corner of the globe.

The real key to Al Qaeda's success has been its ability to create a loosely coupled system of associate organizations and transform their mindset from concentration on *territorial* objectives to the objective of the global jihad against the West. From the early1990s and onward, bin Laden has worked to absorb, co-opt and create entirely new regionally based Islamist networks by placing hand-picked graduates from the Afghan training camps in leadership and training positions within those organizations. These networks are substantially different from local insurgencies in mindset, professionalism, doctrine, and objectives. They share common training and indoctrination in Al Qaeda military training camps, not only in Afghanistan, but also in Indonesia, the Philippines, and Malaysia. Arab veterans of the Afghan war serve to coordinate, direct and facilitate Al Qaeda's agenda by maintaining dual memberships in Al Qaeda and in these associate organizations, such as the Abu Sayyaf Group in the Philippines and Jemaah Islammiya in peninsular South East Asia. These local "subnets" are not as tightly controlled as the major "trunk" networks, and thus are free to use their new capabilities not only on Western targets but also on locally defined targets of interest, subject to some controls by the hierarchy.

Al Qaeda is in many ways, a "viral organization" that infiltrates local and national groups, "hijacks" their agendas, reorganizes their internal structure and "reprograms" them for violent action against the West. Some organizations are more difficult to penetrate than others. In such cases, Al Qaeda has created entirely new groups or encouraged a splinter group to break off and then co-opt and shape the new group in their own image. If two or more insurgent groups are active in a given location, Al Qaeda has the option of supporting one over the other, providing it with superior resources, training, and weaponry and thus giving the sponsored group a competitive advantage over its rivals.

The Plight of the Subnet: Al Qaeda and the Disruption of Jemaah Islamiyya

At the close of World War II, a number of Islamic political parties emerged in the contest for independence. One of these was Darul Islam, or House of Islam. After independence was gained in 1949, Darul Islam continued its guerilla insurgency to secure an Islamic state. The Indonesia government tried to suppress this insurgency but was never completely successful. In 1985, several radical clerics and leaders fled to Malaysia to avoid arrest by the Suharto government (Singapore 2002, p. 10). These individuals regrouped under the name *Jemaah Islammiya* or JI. One of JI's leaders, Abdullah Sungkar, left Malaysia to participate in the Soviet-Afghan war, where he met Osama bin Laden and establishing the relationships that would transform JI into an Al Qaeda subnet in the future. He later sent groups from JI to train in Afghanistan. According to the Singapore government's report, at the close of the war, Al Qaeda sent a number of operatives into Southeast Asia, acting as advisers and resource persons for JI and other radical Islamist organizations and co-opting local leaders into Al Qaeda, even while they continued to serve in their local organizations (ibid.).

The Malaysian JI gave birth to the Indonesian JI after the fall Suharto enabled JI leaders to return to Indonesia in 1998, and a Singapore branch, led by a charismatic young preacher who spent 20 days in one of Al Qaeda's camps, was created in 1989 or 1989. Another Australian branch was also created. In the early stages, the various branches were constructed along very broad lines, similarly to Al Qaeda: a leader or emir, the shura or consultative board, and then below them, the five regional heads: Indonesia, Singapore/ Malaysia, Southern Philippines/Sabah and Sulawesi and Australia (Singapore 2002 p. 10). The Singapore branch was a sub branch reporting to the Malaysian regional head.

In the beginning, the structure of the network below the regional office level was a bit similar to that of Al Qaeda. In the Singapore branch, for instance, there were several functional committees: a missionary committee, a business/treasury committee that supervised donations and handled monies and investments for JI-related businesses, operations, security, and communications committees . Then, after 1999, a great change was initiated. All the committees were required to turn from their previous functions to the main mission of terrorist attacks.

The "link man" to Al Qaeda is Riduan Isamuddin, known as Hambali. Hambali is an Al Qaeda graduate with known close connections to Al Qaeda notables such as Mohammed Atef. He is currently on the run, wanted for a number of terrorist activities, including the murder of Joe Fernandez, a Kedah state assemblyman, in 2000.

Rather than seeing other Islamist groups as competitors, the loose coupling system has promoted joint planning, sharing of resources, and thus acted as a force multiplier for numerically smaller, less sophisticated groups. The Al Qaeda pedigree provides groups with a certain amount of trust and a template for coordinated actions that is validated by its success. From 1999 until its disruption in 2002, JI facilitated participated and facilitated in the a number of terrorist acts in concert with other Islamist groups in the region, including many acts of terror on the Malakus islands against Christians that claimed 5000 lives, the Christmas Eve bombings in churches in the several cities in Indonesia, and funding of the bombing of a light rail train in Manila that killed 22 people.

The benefits to Al Qaeda were ample. JI provided the local, on the ground intelligence for possible operations, including extensive video surveillance of U.S. ships, buildings, and operations in Southeast Asia, with no risk to their own, better trained (and thus more valuable) personnel. They worked out plans of attack that were studied and vetted by the Al Qaeda organization before they went forward. Al Qaeda appears to have control over the anti-Western campaign, while local groups seem to control more nation-centered operations. And, when one group fails and is dispersed, such as happened with JI after the Bali bombing, the links to other associate groups are hard to discern, hard to prove, and are complicated by transnational jurisdictions.

The benefits to the associate groups are also many. Connection to the network brings connection to others in the region that may be able to provide resources (training, funding, weapons and materials, expertise, advice, or a safe haven) that formerly could only be found through state sponsorship. Thus, Al Qaeda

and its associate groups have symbiotic attachments. However, the regional network approach is very likely to survive the death of Al Qaeda itself, as the local subnets "learn" how to cooperate and use networking as a powerful force multiplier.

Examples of Al Qaeda taking over other small organizations and creating subnet replicas of itself abound. In the early 1990s, Al Qaeda "conducted a massive practical ideological campaign of FIS (Islamic Salvation Front) and other Algerian Islamist political parties and terrorist groups with the aim of demonising France among Algerians, including the large émigré community living in Paris. . .(Gunaratna 2002, p.121)," absorbed Egyptian Islamic Group and Egyptian Islamic Jihad into its structure, maintains close working relationships with Libya Islamic Fighting Group (ibid., p. 143), and dozens of other organizations all over the world. Even Latin America sees some Al Qaeda involvement; in Uruguay, members of Islamic Group of Egypt have been arrested in a scattering of events from 1999 to 2002. Rohan Gunaratna, one of the top experts on Al Qaeda's organization and history, writes that Islamic Group of Egypt has "merged with Al Qaeda at strategic, operational and tactical levels and functions almost as one organization (ibid., 164-165).

> Al Qaeda pursues its objectives through a network of cells, associate terrorist and guerilla groups and other affiliated organizations, and shares expertise, transfers resources, discusses strategy and even conducts joint operations with some or all of them. While Al Qaeda cells mostly operate in the West, its associate groups are more numerous in the South or developing world, while its affiliates operate in Muslim societies or countries with Islamic communities. Al Qaeda's own cadres are better motivated, trained and disciplined than its own members and tend to be more mobile and have a wider reach, while Al Qaeda's associates operate on a local level. While associate groups tackle tactical targets, strategic targets are Al Qaeda's responsibility. According to the CIA, Al Qaeda can draw on the support of 6-7 million radical Muslims worldwide, of which 120,000 of them are willing to take up arms (ibid. p. 95).

My objective in this paper has been to show how Al Qaeda's complex network evolved out of insurgencies and how it continues to rely on insurgent movements to provide its global reach in operations. Today, it perturbs and infiltrates insurgent, immigrant, and political groups, connecting them in loose, cooperative associations which it directs and from which it benefits. Military, law enforcement and state efforts have engaged targets at the associate group level and at the top leadership level. There is another level that we might consider: the disruption of linking relationships. We might also consider the question of evolution and change of these relationships. What environmental factors can be changed to encourage disassociation and non-cooperation among the loosely coupled groups?

Returning to Arquilla and Ronfeldt's argument, I propose that any organizational network requires the following to survive in a competitive environment: (1) organizational fitness (flexibility, congruence, ability to adapt to changing constraints on resources); (2) social fitness (its ability to inspire cohesiveness and discipline among its own members and to create links to other organizations and influence their actions; (3) the doctrinal level (its collaborative strategies and methods); (4) the technological level (the information systems in use); (5) its narrative and praxis fitness (to what degree its narratives, actions, and strategies enhance its prestige and influence with its target audience, including the public, other cooperating partner agencies, and its own membership to obtain their objectives.) However, associate groups only have to be fit enough to provide benefits to Al Qaeda at low risk. The diversity of these organizations allows them to tailor their narrative and practices to fit their local populations and political environments. They do not have to be particularly robust or long-lived. They do not have to have a great deal of resources, other than trusted, trainable personnel, to serve as Al Qaeda proxies who are willing to serve in this capacity.

The death of Al Qaeda will not necessarily kill its subnets, most of which are self-sufficient and strengthened by the many ties that have been forged in the last decade with Al Qaeda's help. This suggests that regional approaches may be one of the more effective strategies to reducing the threat of these subnets in the future.

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