



DECISION SUPPORT SYSTEMS, inc.

D S S I

METATEMPO: SURVIVING GLOBALIZATION

HUNTING THE SLEEPERS

**TRACKING AL-QAIDA'S
COVERT OPERATIVES**

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GETTING STARTED

Hunting the Sleepers is available on the web at: <http://www.metatempo.com/huntingthesleepers.pdf>.

This document is a 'companion' piece to **An Analysis of Al-Qaida Tradecraft**, which can be found at <http://www.metatempo.com/analysis-alqaida-tradecraft.html>.

In the process of preparing this document for public consumption, it became clear that an earlier document, pre-11September2001, would need to be made available. **Toward an Ontology of Integrated Intelligence & Conflict**, which can be found at <http://www.metatempo.com/DSSIOntology.PDF>, is a theory of special operations, with a particular focus on information operations. Regarding the 'war on terror,' a theory and doctrine are emerging, and we've made considerable headway toward a structure for what used to be referred to as the 'revolution after next.'

Three additional documents are supplementary to **Hunting the Sleepers**:

Al-Qaida Threat Brief available at:

<http://www.metatempo.com/AlQaidaThreatBrief.PDF>

Battlefield Operating System: Information Operations Coded Communication System available at:

<http://www.metatempo.com/BOScode.PDF>

Secure Communications Operational Tradecraft available at:

<http://www.metatempo.com/SecureCommo.PDF>

Readers interested in Al-Qaida may also find **Al-Qaida's Endgame? A Strategic Scenario Analysis** of some use. It is available at:

<http://www.metatempo.com/alqaida-game.pdf>

Information is the best defense, as well as the most viable weapon in any conflict, this being no exception. While a large body of material, the author feels the availability takes the fight out from behind closed doors and into everyday life—where it's being fought already.

Nurture your mind with great thoughts. To believe in the heroic makes heroes.

—Disraeli

INTRODUCTION

Regardless of the success or failure of operations against Al-Qaida, the overriding issue is the prevention of innocent deaths. Al-Qaida has trained thousands, perhaps tens of thousands, of operatives—soldiers, ‘sleeper’ agents, terrorist cell members, support personnel, etc.

The West has precision munitions, high-tech weaponry that can skillfully be targeted against physical locations. In fact, the West can bring to bear an overwhelming level of ‘force projection’—the ability to do damage and kill by remote-control.

Al-Qaida too has its own ‘precision munitions’—human beings trained, prepared, and pointed at the weak-spots and vulnerabilities endemic in the West, and Western-influenced countries. The physical damage such human munitions can do is limited, but growing—weapons of mass destruction (WMDs), once reserved to a handful of Nation-States, are demonstrably now in the hands of those willing to use them. Unlike the Nation-States, deterrence doesn’t work—these operators work in the shadows, covertly living among the innocent they seek to slay. Even the threat of such covert operatives disrupts and degrades the economies of the West—there is no stability, there is no security, nothing has permanence. Human munitions may remain limited in ‘mass attrition,’ but they are precision munitions aimed strategically at the processes of Western life—open societies, social contracts, free and fair markets, ordinary people living in the polity of the political economies.

Whether in the West ‘proper’—the United States, the United Kingdom, Germany, France, etc.—or in Western-influenced countries—Syria, Lebanon, Jordan, Egypt, Saudi Arabia—the threat is that Al-Qaida will strike, perhaps catastrophically. It is therefore essential to understand how Al-Qaida functions, how sleepers function, in order to identify and neutralize them. The term ‘neutralize’ is not a euphemism—more may be lost by killing members of Al-Qaida, even leadership, than other available solutions.

There should also be two lessons that the serious nature of this threat teaches:

- Ignorance of the world is not a solution, nor is inaction. Going to sleep means being awoken by nightmares
- Allowing the circumstances that led to many thousands of individuals choosing the path of Al-Qaida—mass death and suicide—is unacceptable. There is an Islamic saying, “Why is the kettle boiling? An abundance of heat.” Short-term thinking, short-term planning, and short-term solutions aren’t—they’re pushing the problem into the future, where it will come back greater in magnitude because of the opportunity to grow. A century of irresponsibility has come home to roost

Al-Qaida is a dramatic example of what occurs—a dreadful environment, brutalization of the individual, looking for control over one’s life or at least one’s death, etc. The survivors of such a context, the membership of Al-Qaida, are to paraphrase Shakespeare “such stuff as (bad) dreams are made on.”

If you want a vision of the future, imagine a boot stamping on a human face—forever.

—George Orwell

ABOUT AL-QAIDA

As soon as men decide that all means are permitted to fight an evil, then their good becomes indistinguishable from the evil that they set out to destroy.

—Christopher Dawson, *The Judgment of Nations*, 1942

Al-Qaida is a hybrid organization, preparing its membership to be part guerrilla and part covert operative. It does adequately on both, but poorly on each in particular. Because of this, there are flaws and weaknesses in how Al-Qaida operates that can be exploited against the organization.

Overall, Al-Qaida can be described as:

- Well motivated
- Sophisticated, intelligent
- Having a purposeful structure—it's a designed organization
- Undertaking targeted missions for psycho-social affect
- Being what they need to be to accomplish their goals: “By any means necessary”
- Operating with a larger goal in mind, a ‘grand design’
- Purposeful in the initiation of hostilities—for the U.S. Whatever Al-Qaida’s goal, it can’t be accomplished without U.S. engagement
- Not as isolated as it appears, and it will increase its support base in scale and scope unless destroyed, in its entirety, simultaneously
- In control of the engagement, setting the rules. These rules of engagement are intended to be a double-bind for the U.S.—lose-lose, when viewed on the correct timescale

The ‘war’ against Al-Qaida won’t be won by a limited, conservative approach, amateurs, or boy scouts.

INTRODUCTION—AL-QAIDA THREAT MODEL

A threat is: vulnerability + opportunity + operator/actor + capability + intention

- A vulnerability is a weakness, a failure, or a potential penetration. Al-Qaida focuses on the systemic vulnerability of the U.S. and Western culture—open societies, trust in the social contract, etc. It remains to be seen which side is a better student of history, and remembers the ‘Revolt in the Desert’—while any particular point can be made resistant to attack, can **every** point be made that resistant?

- Opportunities can be persistent (continual) or 'spot' (discrete) in nature. Planning and preparation in Al-Qaida take advantage of both—airport security is a persistent vulnerability overall, with some airports worse than others (the 'spot' opportunity). Use of 'convenience' technology affordances (computer and Internet-enabled air schedule searching) made identification of trans-continental (and thus fully-fueled) aircraft significantly easier (a 'spot' mechanism to identify the specifics of a persistent opportunity). As of the time of writing this document, an understanding of the timing of the attacks is incomplete—planned well in advance, the attacks were in a long pattern of holding, so what prompted 11September2001 to be the selected date? Terrorist attacks have been used in the past as a distraction, to control timing, and to collapse Middle East peace efforts. Reports of a potential speech by Secretary of State Powell regarding Administration policy favoring a Palestinian State may be related to the timing of the attack. Numerous parties in the Middle East, including sponsors of terrorism in the past (particularly Iraq), gain much by on-going hostilities, and would lose much if peace 'broke out'. Worth considering is the anomaly of one aircraft being 'short' by one operator—this may be an indication that cell structures require such trust that a replacement couldn't be added, that the organizational structure is such that a replacement wasn't possible (no positive control, or perhaps an elongated decision cycle regarding personnel issues), or that there was no time for a replacement due to activation (again, decision cycle tempo, or perhaps for security reasons)
- An operator/actor can be an individual, a cell, an organization, or a mechanism (explosive device, computer virus/worm) tasked for attack. Given the 'delay' between deployment and attack, it is probable that the operators of the attacking cells were self-selecting—the commitment and discipline necessary make this a particularly essential point in the absence of positive control. This must be considered regarding the entire cell—either the entire cell was prepared for the suicide mission, or only the most highly-trained individuals. The profile of operators will be discussed in detail later in this document, but it is worth noting here that this is a significant development—either the entire cell was committed, highly unusual even with continual reinforcement (internal relationships in the cell, isolation from the outside world), or only the leader, who would need to maintain a façade in close quarters over a long duration. If videotaped comments by Osama bin Laden released by the U.S. Department of Defense are authentic and accurate, Al-Qaida commanders believe that cell members were all aware of 11September2001 being 'martyrdom' operations, even if the specific timing of the attacks remained unknown
- Capabilities are the range or spectrum of possible operations. This most recent set of attacks **must** be used to reassess the assumptions used to construct threat models and vulnerability assessments as part of any security system—the model 'tolerances' used for operator intelligence, sophistication, discipline, scale of operation, and willingness to sacrifice (self and others) need to be reexamined and expanded. Know-how and competencies are critical to capabilities—if they fall short of what's necessary for operations, they need to be acquired. There are very few skills that can't be learned in the free market, and the operators had adequate resources to acquire education and training. This shows another marked difference from common conceptions of opposition forces—"what they've done is what they'll always do" (a conservative, Bayesian view) is **not** valid. Al-Qaida is goal-directed, and will "improvise, adapt, and overcome" in order to be effective (the "by any means necessary" approach, and the WMD implications **must** be considered). Besides the necessary know-how, information/intelligence, materials, and access (identification of the vulnerability and opportunity, sometimes physical, but also conceptual, cognitive, systemic, emotional (PSYOP), etc.) were also required, but the 'hurdle' here was lower. Which brings up the fact that capabilities have associated costs—entry/acquisition (price of flight training), operational (risk; given the desire for certainty, was that why the selection of box-cutters (a weapon that could be brought on board, or were there ground support teams that had penetrated airport security?)), execution (suicide), consequences (reprisal, escalation, etc.), and so on

- Intentions or motivations are still uncertain as to the specific operation; the overall intentions of Al-Qaida are explained below, as well as the elements of individual and group motivation. What matters here is the will, particularly the foreknowledge of the necessity for suicidal action, long in advance of the operations themselves. Historical parallels to the Japanese kamikaze warriors of World War II are, I believe, inaccurate; more valuable and relevant are the radical Islamic sect (the Ismailis) known to history as the Assassins. This group, under 'control' of their leader ("The Old Man of the Mountains") would become 'sleeper' agents, living as one among their enemies, getting into a position to strike, until given the 'trigger' for action. Many aspects of Al-Qaida have historical parallels to the Ismaili sects; the financial network (particularly the 'hawala' network) even bears a striking resemblance to Crusade-era Knights Templar international banking

MOTIVATIONS, INTENTIONS, MISSIONS

Motivations and intentions are critical to understand, as they set operations in motion. Al-Qaida has a complex of interacting motivational elements, simultaneously goal-seeking, exploratory, and evolutionary:

GOAL-SEEKING/CONVERGENT

- Promote the pan-Islamic struggle, restoring Islamic 'purity' (as Al-Qaida interprets Islam)
- Overthrow 'corrupt' regimes of Islam, replacing them with strict Shari'ah
- Reduce U.S. power in absolute and relative terms
- Induce the U.S. to leave the region, particularly Saudi Arabia

EXPLORATORY/DIVERGENT

- Promote the Al-Qaida organization as an 'alternative' social contract
- Increase support base
- Continual improvement of strategy and tactics, means and methods through aggregation, acquisition, and alliance
- Improve tradecraft

EVOLUTIONARY/EMERGENT

- Improve capabilities by addition of relationships (organizational, membership)
- Expand scale and scope of support base

Al-Qaida missions are directed at confrontation, attack, and conflict; this 'specialization' serves it well as an opposition force, but scales poorly as a mechanism of governance. Attack profiles have taken on two characters:

- Direct attacks in the region (inside Saudi Arabia with the bombing of the barracks at Dhahran, the attack on the USS Cole)
- Collateral attacks not directly focusing on U.S. military forces, force projection, or operations
 - High-profile targets (U.S. Embassies)

- Opportunistic (guerrilla warfare—attack where attention is lacking)
- Creative (no stable attack ‘signature’—willing to change process to be effective)
- ‘Ontological judo’ (using the openness, technology, financial network, media, etc. of the West against itself)
- Threaten allies that are critical dependencies (economic, force projection)
- Leveraged (economic consequences of terrorist attacks)
- ‘Lure’ attacks, to trap the U.S. and allies into behavior or actions that further polarize the regional and global situations

The main purpose of Al-Qaida—operations to impose their interpretation of Islam on other Islamic countries through overthrow or coup—has not manifested, yet. There are indications that the events of 11September2001 were the ‘opening round’ of the primary conflict, but as of the writing of this document, the timing must not be right, or the way is inadequately prepared. Rising instability and various provocations do, however, reinforce that a ‘grand design’ is motivating Al-Qaida leadership.

Al-Qaida, in statements of leaders, including bin Laden, plans strategic attacks, with ‘valid’ targets being U.S. leadership, force projection capacity, and the economy:

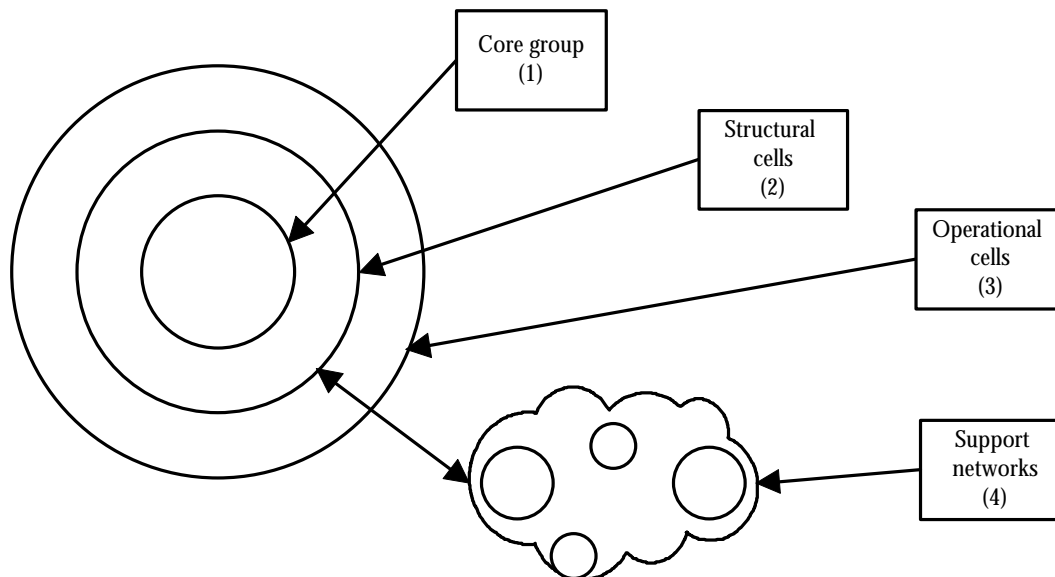
- Guerrilla warfare and terrorism attack using surprise and the unexpected, looking for the vulnerabilities and opportunities made possible by less-than-perfect consideration of safety and security issues. The definition of ‘valid’ targets distinguishes the ‘freedom fighter’ from the ‘terrorist’—the Western perception of valid well-defines guerrilla and unconventional warfare, limiting targets to ‘military’ (operational) elements and command (leadership targeting). Civilian and non-combatant targets are considered to be terroristic. Semantics and perceptions (in the region) matter—utilization of U.S. supplied weapons systems by Israel against Palestinian populations is considered to be terrorism-by-proxy; Coalition sanctions against Iraq are considered to be terroristic because of the impact on the Iraqi people. This is why bin Laden brings these points up in his media releases—a blurring of the distinction, even if it only ‘plays’ in the region
- High-profile targets are intended to have a psychological affect—‘wirkung im ziel’ or ‘affect in target’—on the target population en mass, and thus the decision-maker, affecting the decision and actions taken. Analysis of the desired ‘affect in target’ is critical—was bin Laden expecting yet another cruise-missile reprisal, or exactly what he’s getting (military build-up and action in the region, which may be covertly strengthening his position—financially, recruitment, destabilization of powers in the region, etc.)?

Attacks of the complexity undertaken by Al-Qaida require intelligence (of both the cognitive and gathered sort) and a certain amount of subtlety—effects of attacks cascade through the decision-makers, public, and economy, predictable in some ways and completely chaotic in other respects. The profile of Al-Qaida and bin Laden appear to be directed at ‘certainty’—which is why the utilization of redundancy, ‘mass’ or spot-force (truck bombs, aircraft), the level of effort in planning, etc. This is the most dramatic support for the possibility of future and escalated attacks—they will be ‘calibration’ and ‘steering,’ attempts to direct the decision-makers down certain courses of action (COAs) at key decision points (DPs).

What we anticipate seldom occurs; what we least expected generally happens.

—Disraeli

STRUCTURAL TOPOLOGY



High-level Al-Qaida organizational diagram—conceptual

While knowing the specific nodes in the Al-Qaida organization is critical (and will be discussed later in this document), it is important to understand the conceptual approach—particularly because the organization gains much from its structure, and attacking it incorrectly could exacerbate the problem it presents.

CORE GROUP

First, it's important to recognize that, unlike in the West, Islamic organizations are better thought of as building from an internal core outward (there are cognitive psychology reasons for this, which are connected to the linguistic and mental modeling functions). This core group of Al-Qaida includes bin Laden, organizational commanders, trusted associates, etc.—it's built on close personal relationships. This group is, of necessity, socially embedded (tightly coupled to the point of lost flexibility), as well as location and context embedded (at war with much of the world figuratively and literally). The mindset of the core group is embedded when it comes to its worldview, but they are not committed to a 'process,' and retain that flexibility. Members of the core group are under what could be termed 'positive control'—long relationships and similar mindsets make 'control' not so much of an issue, but there are distinct roles, and position (structural, financial, spiritual in the sense of having the 'correct' interpretation of Islam) determines authority, thus making the core group a hierarchy topologically.

Al-Qaida's minimal core group, only accounting for the leadership, can also be viewed topologically as a ring or chain network, with each leader/node heading their own particular hierarchy. Such networks function by having their sub-networks provide information and other forms of support (the 'many-to-one' model), while the core group supplies 'truth' (of interpretation of Islam in this case—spiritual and political) and decisions/directions (the 'one-to-many' model).

Trust and personal relationships are an essential part of the Al-Qaida network (a limiting factor, even while it provides enhanced security). Even while cell members are trained as 'replaceable' units, 'vetting' of members occurs during the invited training period under the observation of the core group.

STRUCTURAL CELLS

Structural cells provide necessary but ‘specialized’ functions for the organization—military operations, terrorist operations, fundraising, financial management, technology support, intelligence, political and PSYOP support, etc. The contextual requirements for a number of these functions necessarily position them in more urbanized and ‘globalized’ environments (it is difficult, but not impossible, to manage complex financial transactions from a cave). This requires trusted individuals to act as couriers and cut-outs between the core group and the structural cells—ease of travel and ease of communication are critical, to carry videotaped, recorded, computerized, or memorized messages and transactions. These cells are socially embedded (less so than the core group, however), structurally embedded, functionally embedded (they are specialized into a domain), and knowledgebase-specific (there does not seem to be a great deal of cross-training, or lateral mobility in the organization). Such cells are probably subjected to a mixture of positive and negative control (“do this, do these sorts of things, don’t do that”).

The relationship between the core group and structural cells appears to be of the core group acting like a token-ring network topology (internally a ring, with links out from this hub to nodes and specific hierarchical sub-networks).

OPERATIONAL CELLS

Operational cells are not created, but instead ‘seeded’ utilizing individuals spotted or that request assistance (both groups are ‘vetted’ by being trained under the observation of the core group, which dramatically restricts the opportunity for passing off walk-ins under false flag). Categorization of operational cells appears to be by capabilities, region, and then task/operation. Operational cells are composed of members whose worldview has been firmly tested—necessary to front-load, because such cells are dispersed back to their own local control (or negative control—proscribed behavior—with positive control only coming in the form of contact for synchronization or support).

Is the assumption of “minimal positive control” valid, and why is it important? If positive control is inherent in Al-Qaida’s network, then it will not be able to survive the consequences of the 11September2001 operations, and worldwide military, intelligence, and law enforcement activities. Persistent positive control is a significant vulnerability—important in tracking down Al-Qaida members if present, important to recognize if absent as an indication that the structural approach of the network was intended to survive significant pressure and remain viable.

Operational cells are managed based on roles—internal to cells there is a commander, who has contact through individuals tasked with communication (such individuals may be members of the core group, cell-less for their own security, or part of structural support cells). Operational cells are internally ‘comcon’—completely and continually connected. These cells also have minimal external contacts, which makes sense in terms of the membership profile, motivational patterns, and recruitment/enrollment/discipline structures.

Benefits to this sort of structure and “hands off” approach are also worth considering:

- Cells are redundant and distributed, making them difficult to ‘roll up’
- Cells are coordinated, not under “command & control”—this autonomy and local control makes them flexible, and enhances security
- Trust and comcon internally to the cell provide redundancy of potential command (a failure of Palestinian operations in the past), and well as a shared knowledgebase (which may mean, over time, that ‘cross training’ emerges inside a cell, providing redundancy of most critical skills and knowledge)

If the training manual for Al-Qaida that was captured as part of the enforcement efforts against the organization is authentic, only the first point may be accurate. Al-Qaida cells are redundant, distributed, and

compartmentalized, but there does appear to be a 'command hierarchy' that does not share critical details internal to the cell (thus leaving a cell as vulnerable as its commander).

SUPPORT NETWORKS

While Al-Qaida has elements of the organization designed to support the structure, but such elements are insufficient in meeting the needs of such an organization, and for security reasons there would be redundant and secondary-/tertiary-networks that are unaware of their connection to Al-Qaida. These networks, primarily related to fundraising and financial activities, as well as technology providers, are in a 'use' relationship with Al-Qaida—managed through cut-outs or individuals that do not inform them of the nature of activities, and that may have a cover pretext sufficient to deflect questions or inquiry.

DECISION CYCLE

Al-Qaida has a well-structured, albeit massively distributed, observe-orient-decide-act process, characterized by deliberate patience; in brief Al-Qaida relies upon:

- Positive control (direct command) for the 'core' of the organization and specialized 'cells' of the organization
- Negative control (coordination) for operational cells that have been 'seeded' globally

Al-Qaida as an organization is far-sighted and is playing for long-range goals. Targets are chosen well in advance and selected for perceptual value, showing a sophistication in psychological operations; for example, the World Trade Center attacks, if they hadn't collapsed the buildings (which may not have been part of the operational intentions—note that the second craft struck the undamaged tower, thus leaving collapse 'up to chance'; this also appears to be confirmed in bin Laden's own comments on the well-known tape release by the U.S. Department of Defense, if its authenticity and accuracy are to be believed), would have left a persistent reminder dramatically visible, particularly because the WTC is a media-hot 'establishing shot' for the New York City skyline.

The leverage afforded by the attacks; e.g. the economic consequences, particularly if the trading front-running the attacks was used to improve the financial position of the organization, members, and support base.

Al-Qaida is very cognizant of its dependencies, requirements for sustainment, assurance, synchronization, and the 'competitive' nature of unconventional warfare:

- The U.S. and the West (in general) are 'open societies' that provide access to information (intelligence) and have less political control (freedom of movement, freedom of religion (financial support), freedom of speech, innocence until proven guilty, etc.), taking a great deal of pressure off the organization. Reduction in such freedoms, while hampering such an adversary, would have the potential for internal destabilization (note that the use of such 'double-bind' approaches shows considerable sophistication). Capitalism provides a global financial network that can be utilized and manipulated in a great number of ways; the sizeable 'black' market has also created well-worn pathways to the secondary, underground economy. Countries such as the U.S. are open in discussions about systemic and specific weaknesses and vulnerabilities. Commercial-off-the-shelf (COTS) technology, communications, and tradecraft are, even admitted by the National Security Agency, making intelligence (TECHINT, SIGINT) difficult if not impossible
- Sustainment, meeting the energy/material needs of Al-Qaida is facilitated by the U.S. (note the continual use of an 'ontological judo' approach—use of the enemy's strength, momentum, and direction against itself)—Western consumption of petroleum has made wealthy donors (including bin Laden's original personal wealth, and support during the Afghan conflict), non-Governmental 'aid' organizations provide an on-going wealth-transfer

system, and U.S. policy in the Middle East (support of Israel being the most notable, but pending and future military action in the region) aids in recruitment (comparisons to Vietnam are not inappropriate). Additionally, an endemic 'conspiracy tolerance' in the Middle East (everything is a conspiracy, nothing is an accident or 'just happens') makes it persistently easier to portray forces in opposition to the U.S. as the 'underdog', with the U.S. as a puppet of other forces (any number of 'masters,' but usually some variation of a Jewish/Zionist element)

- Assurance, organizational security, is very tight, primarily because of the inherent nature and structural approaches utilized by Al-Qaida
- Synchronization is one of the few aspects of 'positive control' exercised over operational cells, albeit limited. Once 'seeded,' operational cells risk discovery, so positive control reverts to negative control, except for the 'triggers' necessary to coordinate distributed cells toward synchronized action. Limiting contact to this level means front-loading a great deal upon the operational cells, but dramatically lowers the security risks

Decision-cycle competitive conflict is inherent in network-centric warfare. Al-Qaida appears confident of its security, particularly its 'sanctuary' requirements, and so plays a patient, long-term game. This approach allows Al-Qaida to set the rules of the conflict, the agenda, and the timetable.

WHAT TO DO ABOUT AL-QAIDA?

Al-Qaida is a determined organization engineered to resist attack and reconstitute itself as a viable structure, similar to the mechanism of drug distribution networks. As with drug networks, attacking the leadership merely creates a 'power vacuum' into which someone else can step, assuming command, but not reducing the threat. Attacking the 'street' level, what would be operational cells of Al-Qaida, or support functions, has little effect on the constitution of the organization in the longer term because cells are replaceable. Simultaneous attacks against leadership, operational cells, support cells, and undermining the support base are necessary to have any hope of destroying Al-Qaida. This is why understanding Al-Qaida, as an organization but also to the point of individual membership, is essential in removing the threat it poses.

To survive it is often necessary to fight and to fight you have to dirty yourself.

—George Orwell

HUNTING THE SLEEPERS

Please reference the extensive material in **An Analysis of Al-Qaida Tradecraft**; the discussion presented here is supplemental.

' Sleeper ' are covert operatives, individuals or ' cells ' (small, compartmentalized groups) infiltrated into a target country and community, waiting for a time or the signal to strike. Sleepers represent a key weakness in Western society, but something that also provides strength—individuals are generally trusted until a reason is demonstrated that such an assessment is flawed. More rigid trust environments, such as those in drug distribution networks, have no such illusions—people are not trusted, the organization is structured around a lack of trust, and yet it functions. Trust is managed differently—by individual, by instance, by degree. U.S. intelligence, as an example, has stringent standards necessary for ' security clearance '—background investigations, polygraph examinations, period review, compartmentalization, etc. Yet the U.S. has been penetrated numerous times in the past—trust has an ' opportunity cost, ' and those that ' turn ' on their organization finally meet someone willing to pay their price, or circumstances drive that price down. Those that can be cleared may not have what it takes to fight this sort of war—only time will tell.

Sleepers take advantage of Western openness—following the rules until suddenly, catastrophically, they become human engines of destruction. One of sad consequences of the ' war on terror ' is the need to shift how trust works—sleepers get by on pretext, plausibility. Knowledge of how sleepers operate changes the rules of plausibility—they primary reason why **An Analysis of Al-Qaida Tradecraft** as well as this document have been made available. In tens, hundreds, or thousands, the interactions of sleepers with ' ordinary citizens ' are necessary for their existence—all it will take is a small percentage of individuals in the West to be slightly less gullible, slightly less open to pretexts and plausibility, and sleepers can be stopped. Don't fall prey to the mentality of the ' Red Scare '—finding a Communist, or in this case, an Al-Qaida sleeper in everyone around you. Just ' raise the bar, ' make it more difficult for them to operate, and if multiple impressions ' go click '—seeming to fit the modus operandi of a sleeper—do something about it. Call in the professionals.

MEANS, METHODS, TRADecraft, TOOLS

Much of the tradecraft discussion takes place in **An Analysis of Al-Qaida Tradecraft**, but some observations may be of use:

- There are numerous flaws in the tradecraft of Al-Qaida, as mentioned in the **Analysis**, but the key points regarding sleepers (other than the ones discussed in detail below) were such things as cover identity flaws (gaps in time, poor pretexting because of a lack of local knowledge), the compartmentalization factor means that knocking out the operational command hierarchy leaves sleeper cells isolated and without resources, and poor preparation for captured sleepers (sleepers and cells, since trained and prepared far in advance, and produced in such numbers, leave the tradecraft embedded—sleepers may not be able to provide good details on other cells, but they can probably supply a great deal of detail on communication procedures, ciphers and codes, etc., which can't be changed simply or easily by Al-Qaida)
- The operational cells used the affordances of modern technology to their advantage—open source intelligence, communication tools, etc. For truly critical functions, however, it is clear that Al-Qaida recognizes the dangers inherent in using technology—it is susceptible to Western intelligence and law enforcement. What technology they do use is ' commercial-off-the-shelf ' (COTS)—just like many Western intelligence and law enforcement agencies are

themselves adopting. Technology turnover in the private sector is 12-18 months—better, faster, cheaper, easier—compared to 36-48 months (best case) for government systems. The threat is a ‘moving target’ able to take advantage of anything new 3-4 times the rate that government can respond

- Organizational improvement by Al-Qaida appears to be through the mechanisms of aggregation, acquisition, and alliance. This means that new knowledge is acquired to augment the capabilities of cells in the network; new members are recruited for the knowledgebase or skillset they bring to the organization; and the ‘market’ or ‘trading’ that occurs between underground and opposition forces is used to expand the operational scope of the organizations. This presents a clear organizational vulnerability—personnel ‘churns’ in order to keep pace with change
- The core group of Al-Qaida appears governed by seeking effectiveness—not locked into an operational profile or *modus operandi*. Most individuals and groups will be governed by ‘anticipation’—what worked before will work again, so why take a ‘risk’ and try something new until necessary. Al-Qaida has, so far, maintained ‘novelty’ in its operations—increasing the likelihood of moral and material surprise, and taking full advantage of the scope of vulnerabilities and opportunities available in their selected target

The secret of success is constancy to purpose.

—Disraeli

‘SLEEPER’ MOTIVATION & PROFILES

The motivation of the individual is the ‘sweet spot’ of Al-Qaida sleeper cells, the thing that the ‘ordinary’ citizen is most likely able to rely upon to detect. Understanding the individual motivation also helps in understanding the organizational motivation. Key points and unresolved issues:

- Trust inside Al-Qaida is role based—who, the domain, the degree. This will prevent easy penetration of the network. Turning members will require detailed understanding of their original motives for membership, with considerable psychological effort taken to ‘convert’ an individual. Walk-ins are particularly unlikely out of the core group; pressure may force structural support cells out of the network or into cooperation, but with limited benefits; operational cells will be compartmentalized but will give glimpses into capabilities and some organizational elements
- What benefits or incentives does enrollment and membership in Al-Qaida provide? Given the sophistication of individuals in the 11September2001 attacks, personal motives and benefits are critical to quantify. Were there collateral benefits—financial or other rewards for family members? The nature of the network, outside the core group in particular, requires secrecy, so any self-image or cultural benefits are proscribed or limited. Collateral support cells may be incentivized by what they can skim or otherwise derive, and they are unlikely to be called upon for suicide operations
- Discipline, particularly the insular nature of such a dispersed network (direct and collateral), is impressive. Operational cells, by nature of their isolation, have local reinforcement (membership, ‘brotherhood’), and continual enrollment (a positive feedback loop in the cybernetic sense). Novelty is near or at zero for operational cells (minimized contact with others). The risk profile is mixed seeking and sharing—risk seeking by trying new sorts of operations, risk sharing with other cell members. There is some risk aversion, as evidenced

by the minimized contact—operational security demands caution, again indicating discipline given the nature of some of the operators in the 11September2001 attacks

An analysis of Al-Qaida propaganda, media releases, interviews, etc., combined with a knowledge of the region and the cultures, identify the following motivational elements:

- Survival. Many individuals in the region feel threatened by U.S. dominance—force projection, financial, cultural, technical, etc. Responding with a ‘fight-or-flight’ mechanism, there are few places to run in the modern globalized civilization, so ‘fight’ remains essential (from their view) for survival
- Target the social contract. The freedoms and culture of the U.S. are abhorrent to Al-Qaida—spiritually ‘bankrupt’
- Opportunistic. The vulnerabilities are there, as are the opportunities. Any chance to attack can be seized upon
- ‘Shared suffering.’ Social ties in the region, refugee camps, failed economies, and various conflicts draw the individuals together. You fight because you need to, it’s expected of you, and your ‘brothers’ depend on you. Tightly coupled cells also undergo ‘continual enrollment’—reinforcement of membership and obligation. While initially brought together through ‘voluntary association,’ once engaged in a cell they are trapped and it would be shameful to disengage
- Spiritual interpretation, ‘purity’ of purpose. Religious belief or necessity dictates that such activities and operations, up to and including death of self and others, is an obligation and will be rewarded
- Revenge. Only one or two degrees of separation are between any individual (living) and one of the victims of the regional chaos that has been progressing for decades. Terry Anderson’s (former hostage) “train of history” is a good metaphor—you’re in a train car because of what was done to you by the occupants of the previous car, and your actions will populate the next car, and so on. The vast majority of people in the region have ample reason to seek revenge—the miracle is that most don’t
- Ego, symbolism. Striking out at perceived authority is ego-reinforcing. Highly visible or high-profile targets provide the ‘greatest return’ in attention
- Being taken seriously. Threats without action are ignored—violence wins a seat at the table. This is why force projection is essential for opposition groups. Escalation of Al-Qaida terrorist actions may be linked to a lack of negotiation or being afforded a ‘voice’ in political matters. Declaration of ‘war’ on Al-Qaida and bin Laden accomplish establishment of parity—they’re now an equivalent of a State power, the primary priority of the top nations
- Demonstration of power. Proof of capabilities, but more importantly, the shift in ‘will’ of the opposition force. For an individual, suicide in such an operation provides control—selection of the time, place, and situation of one’s death
- Appease existing and attract new support. Political support, financial support, new recruiting, etc. increase after an operation (more so when it’s successful)
- Action is the message. ‘Brand’ bin Laden. As per the initial discussion regarding organizational motivation, Al-Qaida wants the U.S. out of the region, and hates the symbols and substance it represents

- Face. Authority needs to be exercised. This may not be internally relevant in Al-Qaida, but it positions bin Laden and associates more significantly in regional affairs
- Destiny, calling. Pronouncements, fatwa, declarations of jihad, etc. appeal to those wishing simple answers to return to a simpler world
- Shift relative strength. The U.S. is perceived as weaker post 11Sept2001—the air of ‘invulnerability’ has been stripped away, regardless of military force projection
- Lure. Trapping the U.S. into a response improves Al-Qaida’s position, including the potential destabilization of regimes to their benefit (a nuclear-equipped Pakistan, religious sites in troubled Saudi Arabia, financially teetering Lebanon, etc.)

Analysis of the leadership as well as what is known of the 11September2001 cells indicates two types of profiles of great interest—one is the old ‘double agent’ profile developed in the intelligence community (intelligence officers that are ‘moles’ or turn on their own organization), the other is an emerging profile that fits a disturbing and expanding demographic (in the U.S. and in most cultures analyzed).

The old intelligence ‘double’ profile:

- Easily despairing over their situation (“I should have better than this”)
- Short attention span (“I’m bored”)
- Polarized relationships/responses (“If you’re not with me, you’re against me”)
- Poor relationships (“I’m alone/lonely”)
- Lack of maturity, poor impulse control (“I want it now”)
- Sociopathic tendencies (“Who cares about you?”)
- Conceited, self-absorbed (“Me, me, me”)

The ‘emerging’ profile:

- Patterned behavior. Obsessive, compulsive. Monomania, attention to detail
- Addictive tendencies. Ability to addict to physiological response to ‘peak’ experience
- Ego, identity issues. ‘Act out,’ demonstrate against authority
- Isolation/intentional community. Insular language, mindset, social contacts
- Role playing. Blend in, social engineering. Play and shift roles. Blurs role and life
- Sentinel event. Trigger event causes ‘explosion’—blame others, not self

Intelligence and sophistication of such individuals is not precluded, and in fact may be a common or essential element. Note the similarity in both profiles that would lead to danger for others, but by different routes. Both profiles can easily ‘blend in’ to communities, but the emerging profile seems far more in line with what Al-Qaida selects for, and could convince to undertake ‘martyrdom’ operations (the Al-Qaida selection profile: Islamic, ideologically committed, mature, willing to sacrifice, disciplined, comfortable with secrecy, healthy, patient, able to handle stress and complexity, intelligence, cautious, truthful (to the organization), observant, chameleon-like). The ‘significant’ shift is that the sleepers were chosen, trained,

prepared, and infiltrated months and months before the operation—plenty of time to change their minds, ‘go missing,’ expose the cell, etc. The commitment was adhered to because it was voluntary—perhaps the most striking element of sleeper psychology, and one that will continue to haunt the West for years to come.

Everything comes if a man will only wait.

—Disraeli

SANCTUARY—SAFETY, SECURITY, SECRECY

A great deal of Al-Qaida’s tradecraft manual orients at ‘operations security’—measures to protect the identity of sleepers and prevent exposure and apprehension. Sanctuary is more than a ‘physical location,’ although Al-Qaida has taken great advantage of the physical protection of ungovernable, ungoverned, or friendly countries. Sanctuary is also a process—blending in, using cover identities, plausible pretexts to explain or rationalize operational activity. Cells rely upon anonymity as well as the constraints of the resident countries’ political systems to afford them protection from discovery—Western systems can’t generally act until after an event.

Cover identity is clearly critical. It appears as if some of the operation cells members were using fraudulent papers obtained through identity theft. This should be trackable through the financial system. Conventional identity theft takes a ‘clean’ identity and ‘burns’ it by acquiring cash and goods, while leaving the original individual with the obligation or legal chaos. These individuals did not follow the pattern—behaving well, but in two places, which the software in the financial system should detect as an anomaly, but one that should be pursued with more than a photo ID check. Other operators connected to Al-Qaida acquired identities after catastrophic events (e.g. Kuwaiti identity papers after the invasion of Kuwait by Iraq), another detectable indicator (radical behavior shift after dormancy). Most of the cell members used legitimate identity documentation obtained legally or through fraud. The identity documents themselves are not a good way to detect Al-Qaida sleepers, contrary to the approach adopted for airport security as an example. The key to penetrating cover identities is to examine the pretext—what used to be plausible should no longer be considered acceptable.

COMMUNICATIONS

A great deal of the **Analysis** reviews the tradecraft for indications of whether Al-Qaida is a positive- or negative-control organization. Positive control organizations issue orders—the frequency of the communication indicates membership. Negative control organizations coordinate or ‘stop’ activity (like the ‘alarm’ communication discussed in the Al-Qaida manual), thus leaving cells harder to locate but also more autonomous. The section below, on attacking Al-Qaida, discusses using network analysis to make sense of the Al-Qaida structure and what ‘nodes’ to target. A supplemental paper to **Hunting the Sleepers** is being made available to discuss, in detail, the requirements and process of communication security for such organizations—please see **Secure Communications Operational Tradecraft**. Another paper, **Battlefield Operating System: Information Operations Coded Communication System**, is also being made available to demonstrate that a coding mechanism could direct sleepers or cells fairly well in a trivial amount of data (as with all coding mechanisms, it maps to ‘meaning’ rather than obscuring the symbols).

Penetration of Al-Qaida’s communication structure (a possibility discussed in the **Secure Communications Operational Tradecraft** paper) may make it possible through technical means to identify and ‘roll up’ cells, or at least prevent attacks. Disruption is a more dangerous possibility—what will sleeper cells do if contact with the command hierarchy or core leadership is impossible? Will they use every capability

available to them to cause catastrophe? Or will they close down and wait out the storm? Perhaps the answer is best discovered by asking what they will do if communication remains undisrupted.

Information networks straddle the world. Nothing remains concealed. But the sheer volume of information dissolves the information. We are unable to take it all in.

—Günther Grass

Information is the oxygen of the modern age. It seeps through the walls topped by barbed wire, it wafts across the electrified borders.

—Ronald Reagan

ATTACKING AL-QAIDA

Considering an organization such as Al-Qaida, a conservative approach is ineffective and counterproductive—“fighting the last war” or thinking that tomorrow will be much like yesterday is the mentality that left the U.S. vulnerable. Moral and material surprise, such as achieved on 11 September 2001, can be accomplished by being absolutely more capable (e.g., in OPSEC terms), or relatively more capable (taking advantage of weakness and assumptions that are no longer valid, and so doing the ‘impossible,’ or at least the unexpected).

The U.S. and allies must get ‘out of the box’ in order to compete and succeed against an opponent such as Al-Qaida. In particular, at the early and vulnerable stages of the conflict, analytical functions (see **Toward an Ontology of Integrated Intelligence & Conflict**, clustered to the right and lower half of the decision-cycle diagram—strategy, scenarios, branches & sequels, decision points, courses of action) have to be free and far-ranging. Two approaches should be emphasized:

- Capability-based analysis. Flaws in threat models that are now ‘legacy’ (inappropriate to the new threat environment), emerging from an inaccurate set of assumptions about the threat. A period of concentration on “what’s possible”—capability-based analysis—rather than concentration on “this is the threat” will help break some of the constraints analysts are laboring under. When things are uncertain, assume the worst and prepare for it
- Leading indicator extrapolation. The U.S. has had a number of leading indicators—suicide attacks, large-scale attacks, intelligence regarding pilot training, etc. Any indicators turned up in the future should be extrapolated to their maximum possible negative consequence. Al-Qaida is clearly taking advantage of a lack of imagination on the part of the U.S.

Success is the child of audacity.

—Benjamin Disraeli

FRAMING THE CONFLICT

Don’t underestimate the opponent; behavior and actions so far demonstrate a fairly sophisticated view of the world, and in particular how to attack the U.S.’s position in the geopolitical structure.

In particular, the effect that appears to be desired from attacks is a ‘double-bind’—no matter what selection is made in response, the costs outweigh the benefits, and the risk of dramatically adverse consequences is extreme. If the U.S. doesn’t respond to the attacks it looks weak, inviting more attacks, a loss of political-military face, and economic consequences; if the U.S. responds to the attacks it ‘confirms the worst fears’ of the man-in-the-street in the Middle East and Asia, invites more attacks, potentially destabilizes many political economies, and again suffers the economic consequences. Damned if you do, damned if you don’t.

Any direction things go, instability and uncertainty are now bleeding into the global political economies—the effects seen in the financial markets are only a small sign (instability and uncertainty—volatility—are ‘bad’

because they destroy the assumptions of financial models, leading to pricing uncertainty; self-enforcing transactions; flight capital; etc.).

Cultures experience a parallel to Gresham's Law from economics, stated "bad money drives out good" in short. In the case of social structures, the belief system that provides certainty, no matter how irrational or unpleasant, drives out the uncertain-but-rational belief systems. The "war on terrorism" is not a war on individuals, but on intangibles. Initially, it seems as if conventional military force can be efficacious—attacking the physical manifestations and products of the irrational belief system. This is fighting fires without addressing the cause of fires, and building fire-fighting equipment—and in the long run, it would be just as successful (that is to say, a failure). Fighting the 'content,' as the current approach is doing, is necessary, but will only create a vacuum into which others will step—just as with the "war on drugs," being at the top may be short-lived, but everyone still wants to be there. The context that is the genesis for such individuals—men of will, even if lacking in other ways—is what needs to be changed.

Wars cannot be won by controlling the ground physically, even by killing the enemy—wars are won by controlling the social contract. This was the point of 'total war' in World War II, the 'loss' in Vietnam (the conventional war was winnable, but the social contract was lost in the process), and the missing element in the current conflict.

The stability of a social contract enables a political economy by providing for two sorts of agreements:

- Iterative transactions. Reliable providers, reliable markets
- Long-term transactions. Reliance on promises to exchange mutual benefit but that require investment to meet both sides of the transaction (working and saving to have adequate money; investment in research, physical plant; etc.). Enforceable transactions and property rights (contracts; courts; low investment necessary to prevent theft)

Instability in the social contract leads to political economic disaster:

- Self-enforcing transactions. Immediate satisfaction in transactions—both sides exchange 'hard' goods. These sorts of transactions are 'spot' transactions—immediate verification and confirmation of the exchange, with no 'trust' of the parties involved
- Short-term personal 'investment.' Lack of enforcement and property rights means that long-term investments of labor—directly, such as artisan production or agricultural labor, or indirectly, through education and training into more 'value add' production—are discouraged—no contracts or courts; high investment necessary to prevent theft, leading to individual-oriented production (e.g., growing only what you can personally eat).

U.S. intervention in post-WWII Japan and Germany were essential in imposing and protecting the post-war social contract, leading to the 'economic miracle' (see Mancur Olson's excellent work in this field before his death). This failure of establishing a social contract was the genesis of the catastrophe in post-Cold War Russia. More to the point, the current problems in the Middle East have left the region in a shamble—Lebanon, Jordan, Syria, and Egypt are incredibly unstable because of their internal problems (radical political Islam) and external problems (Israel); the example of Lebanon is particularly relevant in such an analysis, having gone from the "Paris of the Middle East" to an economic basket-case from being caught in the middle of proxy-wars.

Winning the war without winning the social contract is only 'buying time' before the context is the genesis for another emerging threat, just as Al-Qaida emerged—from the PLO, to the PFLP (and the Carlos mythology), to Abu Nidal, to Al-Qaida, and so on. Think of this as waging the war in a different way—attacking the organization by minimizing the support base, available resources, potential recruits, etc.

USING AL-QAIDA'S STRUCTURE TO MODEL ORGANIZATIONAL FUNCTIONS FOR TARGETING

Analysis of the network topology, lines of authority and responsibility, traffic analysis, contact patterns, etc. can be used to construct a model that would identify, using data on nodes and links, the roles in the organization. Identification of key roles and network elements can then allow them to be developed as targets, eventually degrading, disrupting, and potentially destroying Al-Qaida.

NODES

- **Links.** Authority in the network is a function of frequency of links outside the local cell. Nodes with the majority of the throughput (input and output) are commanders
- **Diversity.** Diversity of function means more degrees of freedom (either the very top of the hierarchy, or out at the fringes). Diversity of contacts indicates a key role in the network
- **Locality.** The core group is tightly coupled and has a high degree of internal trust; contact with the 'outside' is minimal and 'spot.' Cells are also tightly coupled internally, also with minimal external contacts. Key roles will be identifiable by their freedom of connection non-locally
- **Centrality.** Nexus points—providing special or specialized functionality. Structural support cells that need to be quantified by their domain of expertise
- **Trust.** The core group has total internal trust with positive control (if necessary). Cells are seeded and distributed, with negative control; testing of cell members is front-loaded or unnecessary

ROLES

Roles are the function provided to the network, like a niche in an environment; fitness is demonstrated by persistence in the role.

- **Star.** A central node that other nodes connect to as the 'hub.' In cells, the star node is the commander, with local and immediate linkages predominately. In structural cells, star nodes with 'global' (cross-network) links have strategic significance or an essential special function to the network
- **Liaison.** Mobile or non-persistent connections. Acts as a mediator, broker, gatekeeper for networks. Also a way to identify cut-outs—couriers or those entrusted with communication relay duties
- **Bridge.** A common member of different cells. A hierarchical 'connector' providing structural links between layers of pyramidal organization structures—replaceable
- **End/edge.** Endpoints in a hierarchy or network, with few links. Compartmentalized. Directed or specialized. May be operational cells—replaceable and redundant

LINKS

'Connection' between nodes—persistent or 'spot.'

- **Frequency.** Frequency of links identifies critical roles—commander, communications, liaison

- Type. Distance to the core group relates to social position, trust, and embeddedness (proximity indicates tight coupling). Priority of connectivity denotes urgency (but not the reason for urgency)
- Stability. Stable and persistent links are present in the core group and where positive control is essential
- Strength. Testing of individuals is front-loaded, during the training/observation period; this may also be used to create periods of intensity, for bonding of operational cells through 'peak experience' or 'shared suffering'
- Direction. Flow and reciprocity internally indicates a cell, while key nodes will have significant throughput
- Separation. Linkages predominantly to different nodes and cells indicates a liaison or communication node
- Commonality. High redundancy indicates a 'fall-back' communication node or key structural support node/cell

ANALYTICAL ISOMORPHS

Something is isomorphic when it can be used conveniently to replace another concept or quantity; using isomorphs can be of assistance by drawing an analogy or comparison, where the tools for analysis of the isomorphic substitute can be applied to the original.

Consideration of organizational structures can apply physical states of matter for analysis—solids, liquids, and gases can apply to a variety of organizations, but Al-Qaida utilizes all three 'states,' which makes the isomorphic comparison particularly valuable.

Most organizations are homogeneous in approach and conceptualization—until very recently, a hierarchy would remain hierarchical throughout the entire organization. Information infrastructures have had a great deal to do with the move to heterarchical organizational composition—the application of Coase's Theorem from economics, which can be used to evaluate the efficiency of hierarchical flow (transaction costs external to an organization may become less when an organization reaches a diseconomy of scale, and the cost to negotiate is now approaching a negligible amount—this is the basis of the business-to-business bid/ask markets). Given bin Laden's educational background, novel application of management techniques would not be out of the question.

- Solid. The core group responds much like a physical solid. It is closed at the boundary and rigid in structure (what could be referred to as 'shape embedded'). If looked at with a network diagram converted to a molecular model, the parallel between the structure and a solid is evident because of the embedded nature of the relationships. This allows scaling (which is why military structures look like this as well), and the 'density' of the organization provides structural strength. Like a solid, however, this means the structure is susceptible to fracture—organizational schism. Attacks, such as leadership-based targeting, would serve to shatter the larger organization (providing temporary denial, and seeming destruction), but would create a number of stable, smaller ones. Given the ability to scale back up, even if slowly and with some shifts, this has the potential to multiply the threat
- Liquid. Outside the core group, such as with the structural support cells, things are more open and flexible—of necessity and by design. These cells provide services and functions that cannot be managed or led within the confines of the core group, but still requires the direction provided by the core group. Being fluid, such organizations are context and constraint dependent—water can fill any volume and retain its nature, but it needs

containment. Liquid is pressure sensitive—increasing the pressure increases the heat (the internal activity), decreasing the pressure decreases the heat. Positive control provides the ‘motion’ necessary to maintain this state of matter—not so ‘cold’ that it becomes static, not so ‘hot’ that it changes state to a gas and dissipates. Al-Qaida has been able to control the activity level and maintain this organizational state, but that can be attacked by increasing the ‘heat,’ or targeting the constraints that provide the containing structure

- Gas. Operational cells are very similar to gases—volatile, miscible, where constraints (internal positive control) are essential to prevent dispersion. In this case, dispersion geographically already occurs. Cells are, however, like molecular clusters spread through a large volume of other gases (the societies the cells are dispersed among)—like most dangerous molecules, only a few parts per million are necessary to have grave consequences. The approach to dealing with toxic gases is similarly applicable—detection, identification, and containment

ATTACKING AL-QAIDA’S DECISION CYCLE

Power-worship blurs political judgment because it leads, almost unavoidably, to the belief that present trends will continue. Whoever is winning at the moment will always seem to be invincible.

—George Orwell

Conventional military operations, and even special operations, will have diminishing marginal utility, encountering a steep drop-off after the initial derived benefit. As has been demonstrated with the Afghanistan operations, the ‘low-hanging fruit’ were taken, and as Secretary of Defense Rumsfeld commented during the course of the air campaign in Afghanistan, the U.S. Air Force isn’t running out of targets, Afghanistan is. The attacks have little effect on the actual dependencies of an organization such as Al-Qaida, and it may take some time for this to be recognized (see the example of WWII, when rolling stock and oil/fuel production were finally targeted). More to the point, attacks such as the U.S. is undertaking will have two unintended consequences for the U.S. in the long run, and bin Laden is counting on them:

- Counter-productive. Strikes may be effective to a point, but while the ‘conventional war’ is won, the social contract is lost. Popular reaction in the region was in favor of bin Laden—not so much as a person, but as a force equivalent to the U.S. (by the U.S.’s own reaction) that had taught the U.S. a lesson. As in Vietnam, where the conventional war recruited for the North Vietnamese Army (NVA) and the Viet Cong (VC), this war is and will recruit for Al-Qaida and expand its support base. While the military operations in Afghanistan appear ‘successful’ (although, as of the writing of this document, the key objectives of the war remain unfulfilled—the action in Afghanistan simply removed one geographic sanctuary for the organization)
- Evolutionary pressure. The U.S.’s reaction was predictable, both in military and political terms. Any element of Al-Qaida that is exposed at the moment will be lost—which is how we got here in the first place. Both the U.S. and the Israelis, through their actions, have managed to “breed a better enemy.” Evolution, survival of the fittest, is persistence in a hostile environment; if capabilities and behavior are inappropriate, they’re killed out of the environment (in this hostile an environment; Darwinian pressure normally means that successful traits will persist in the gene pool, but this is not a ‘random’ environment). Al-Qaida is not a ‘random-walk’ evolution—it didn’t happen by accident, but by design—and it learns from history and its own operations. Successes against Al-Qaida may, at times, appear dramatic, but if history is any guide, this only means that the next generation will be worse

Clearly, going after the physical aspects of the Al-Qaida organization needs to be part of the operations, but complimentary (a 'combined-arms' approach) to attacking the decision cycle. Just one example is worth mentioning prior to the detailed discussion, that of Al-Qaida's intelligence. This is a crucial area to explore. Intelligence models suffer from three considerable problems—freezing (intelligence is perishable, things change, and models tend to be static), forgetting (large amounts of detail are lost or dropped from a model), and flattening (models a distorted or skewed, since 'perfect' understanding of a system is difficult and temporary at best). Somehow, years in advance, Al-Qaida managed to update and identify specifics, test for accuracy, develop all of the necessary competencies, and accomplish delivery of the operators—no small feat. Two high level approaches show the difficulty, ORORD and METT-T formats:

- Operational orders detail situation, mission, execution, support/supply, and command & control (ORORD). The mission was established by the core group in the planning, with the capabilities necessary for execution then acquired. The situation encompassed persistent vulnerabilities in the U.S. transportation system, with specifics worked out later, probably by the operational teams. Support and supply was more than adequately provided for—ample cash to handle most contingencies. Command & control left locally, but evidently with some positive control to coordinate operational cells
- Mission, enemy, terrain, troops, time available (METT-T). For the 'enemy,' how was the target selected? What was the battle damage assessment (BDA) mechanism, both for the physical damage and the 'wirkung im ziel' (affect in target, the psychological impact)? CNN? A call on a cell phone? Personal messenger? An Internet-accessible webcam aimed at the World Trade Center? Terrain is complex—how well did the core group know the context, not just the battlesphere but the infosphere? This is critical in understand how they understand the conflict and what they may do next

What is also striking is Al-Qaida's counter-intelligence—its operational security isn't foolproof, but Al-Qaida is only vulnerable in limited ways to the technology of intelligence (signals, image, technical, etc.), and apparently not vulnerable at all to human penetration, not only because of the nature of the organization, but because of Western intelligence communities failing to create, cultivate, or obtain essential human resources.

TECHNOLOGY AND DECISION CYCLE COSTS

Progress may feel more like loss than gain.

—Mason Cooley

Technology, most of it 'commercial off the shelf' (COTS), has had a few notable primary effects:

- Dramatic cost reduction
- Devolution of capabilities 'down,' making individuals and organizations able to achieve parity and compete with Nation-States
- Creation of new capabilities

Whether chaos theory or a satellite telephone, the relative benefits have been in favor of the individual and network, who can be more flexible, than for the hierarchy, which can't keep pace with some technologies that turn over generations in 6-12 months.

Shifting cost points have consequentially lowered the "barriers to entry"—this is what drives successful COTS products, shifting the economics to the user's benefit, and the domestic boom market is tightly

coupled to this philosophy as the core of the U.S.'s success (which is one of the reasons “using the strength of the West against itself” is part of Al-Qaida’s operational approach). Two critical points need to be made about cost/capability interaction:

- (Dis-)Economies of scale. Even with technological tools available, there are still diseconomies; in intelligence, information gathering achieves an economy of scale, but has recently tipped over into a diseconomy and information overload. Intelligence gathering and communications technology have greater ability to scale than information processing and analysis do. The price of attempting omniscience is far greater and achieves marginally utility faster than a constrained approach in a networked organization
- Explicit/implicit costs. Explicit costs are those things that must be acquired through transactions with others. Implicit costs are those absorbed by the individual or organization themselves. A key element in the struggle, as viewed by Al-Qaida, is the implicit costs of interaction with the West—Western goods, services, lifestyle, etc. cost more than the monies paid. Al-Qaida’s interpretation of Islam is a sociological oubliette—no progress, and no escape, leading to absolute certainty in life

WHY THINK IN TERMS OF COSTS?

[It will assist the reader greatly to read or review **Toward an Ontology of Integrated Intelligence & Conflict** before continuing **Hunting the Sleepers**.]

The intentions of IWAR/IO directed at the decision cycle are:

- ‘Them.’ Increase costs, increase friction, decrease efficiency, decrease the appropriateness of the tempo
- ‘Us.’ Decrease costs, decrease friction, increase efficiency, increase the appropriateness of the tempo

Each step of the decision cycle, as well as meta-tempo, have associated costs—some of which can be dramatically increased for Al-Qaida, and should be considered as elements of the operational set. Three examples that demonstrate how this approach is working for Al-Qaida may be instructive:

- Defense-in-Depth. T.E. Lawrence, during World War I’s “Revolt in the Desert” hit upon a strategy—while the Turks could secure any particular point against attack, they couldn’t adequately secure **every** point against attack. The necessities of a defense-in-depth—layers of reinforcing security measures, with ‘forcing factors’ that require confrontation with at least some of the layers—create a cost issue in both scale and scope. Expanded assumptions of the threat model, which are now necessary, require increased and improved coverage throughout the U.S. Increased scale and scope means increased costs, a decrease in relative power (limited resources will necessitate trade-offs to the detriment of some aspect of U.S. power), decreased tempo (freedom of movement, freedom of exchange, etc. are very high-tempo, as is the transparency previously known, all of which will now be impacted by safety and security measures), and subsequent economic impact (this is largely a historical trend—‘fallen angels’ and Nation-States rarely recover from this sort of thing, but they haven’t had the U.S. economic structure, which could turn around and change tax code to benefit hardening the economy against attack, even taking the ‘boom’ in new companies public). Al-Qaida relies upon diversification in scope (surprise), and certainty provided by scale (mass), to force this increase in costs
- Engagement. Russia has a colorful history of engaging an invader, who, emboldened by success, is drawn further and further into Russian territory. Soon interior lines turn to

exterior and extended lines, and then winter arrives. In Vietnam, U.S. ‘carpet bombing’ recruited for the NVA and VC by violent action—if villages and hamlets had been for the U.S. before, or neutral, it didn’t last. Support of the NVA and VC, supplying manpower, intelligence provision (or denial to the U.S.), shifted the “hearts & minds” away from the U.S., even if it wasn’t toward the opposition, which had its command structure safety away from U.S. force projection. Such use of ‘ontological judo’—using the momentum of an opponent in a leveraged way to your own benefit—is clearly a strategic element of Al-Qaida’s intentions

- ‘Franchise’ model. Al-Qaida has successfully used the franchise model for terrorism—let the locals set up an ‘office’ (cell) and run it in a prime location, providing benefit back to the ‘parent’ organization. Post-11Sept, the costs of penetrating the organization increased dramatically. HUMINT will need to commit an action against U.S. interests before admission to the network—reducing the probability of penetration, and increasing the damage to the U.S.

Looking at ways to increase the costs to Al-Qaida must be pursued, as well as ways to reduce the associated costs for the U.S. This, to say the least, is non-trivial.

ATTACKING CONTEXT - OBSERVE - DATA

The primary costs in this set of elements in the decision cycle are capability acquisition costs and data acquisition costs.

- Capability acquisition costs. This means establishment (and maintenance or ‘carrying’ costs) of channels, sensors, etc. For the U.S., with an emphasis on technical collection methods, putting a satellite into orbit, building listening stations, and other mechanisms for input, this has been very expensive. Some intelligence services concentrate on HUMINT—lower acquisitions costs but far less certain and having a certain cost in time. Al-Qaida has considerable benefit here—the ‘transparency’ of the West, and the U.S. in particular. Forced by a democratic form of government and capitalist political economy, transparency is a way to ‘level the playing field’ and approach ‘perfect’ information (where all parties in transactions have access to the information they need to make decisions)
- Data acquisition costs. In transparent societies, acquisition costs are nearly zero—newspapers, magazines, television, the Internet, etc. all have trivial costs. A limiting factor for the U.S., where acquisition costs are considerable, is the opportunity cost—making a selection means foregoing other options. Transparent societies don’t ‘impose’ opportunity costs because the channel costs are trivial, you can “have your cake and eat it too.”

Capability and data acquisition costs, particularly in Westernized societies, have led to ‘open source intelligence’ (OSINT) being an incredibly powerful tool. In the past, for example, we have been able to pull up a list of U.S. military missions OCONUS, reference their coordinates, and then pull up detailed satellite images from civilian sources. Such images can be difficult to interpret, but the Internet again comes to the rescue with the Army Training and Doctrine Digital Library and the many helpful field manuals regarding such things as petroleum supply, pipelines, water supply, etc. Image interpretation then becomes a matter of referencing the satellite image against the graphics presented in the various PDF and HTML documents. Small unit tactics may be ‘restricted access,’ but everything one could want to know about U.S. military supply, support, and logistics is available. What are the costs to the U.S. to acquire similar infrastructure knowledge on adversaries?

HUMINT is another major failing of the U.S. intelligence effort, but examining the ‘cost’ approach leads to a possible solution. Collateral information acquisition is where the cost decreases for collateral acquisition as part of related activities. Technical systems are a primary example of how this works—when examining or

repairing one aspect of a system (e.g., a car), the technician has the competence as well as the opportunity to examine or repair others (e.g., when examining the engine, the marginal additional cost to check the battery and oil is minimal). State Department and other OCONUS postings were originally a way to attempt this sort of collateral intelligence function, except that such postings are now assumed to be intelligence officers, such officers are now directed more at 'current reporting' as opposed to building networks of human sources, and the splits in the intelligence community make even the minimal gathered materials inaccessible to those in need of them. Interaction of any sort—business in various regions, students from various regions, etc.—should be exploited because of the dramatically lower costs to get over the 'barriers to entry.'

ATTACKING CONTENT - ORIENT - INFORMATION

This stage in the decision cycle, in many ways the most crucial one, has one primary cost—attention, or information acquisition. The nature of information is "any difference that makes a difference" (Gregory Bateson), but in large-scale intelligence gathering, data overload is a significant problem. Knowing what matters—what makes a difference—is what is necessary to take huge, overwhelming bodies of data and filter them into helpful, useful information.

Intelligence commonly relies on two things to assist in filtering data into information:

- Relevance. Some event that cast new light or focuses attention (e.g., 11September2001); this is a responsive approach, which is why a general impression of intelligence being 'at fault' is a common misunderstanding
- Complimentary information. Relevance may be additive or synergetic—consideration of data as individual units limits their value, which is derived when they are considered as a body, in a connectionist fashion, or when "the final piece of the jigsaw" falls into place

Surprise and pre-texting are the two biggest failings of the U.S. in this stage:

- Surprise. It is a horrible and costly thing to be 'on guard' or 'paranoid' all the time. Such is the double-bind—the costs of being calculating and mistrustful, or the costs of a "failure of imagination" leading to a catastrophic event
- Pretexting. A plausible explanation, a reasonable cover—tools of the professional criminal, intelligence operator, and the terrorist. Even in a context with minimal trust, let alone a free and open society, pretexting provides a way to enter, blend in, spot and plan, then strike when the opportunity presents itself. Again, a double-bind—the costs of confirming pretexts, even when completely plausible, throughout the political economy, or the costs of freedom of movement, assembly, expression, etc.

A factor of 11Sept is the members of Al-Qaida being 'sleepers'—operators moonlighting as regular people, or regular people moonlighting as operators, which is still unknown. The Provisional Irish Republican Army and other 'urban' resistance groups have long adopted this tradecraft—hide in plain sight, except for those few moments when actually participating in an operation.

The fact that some, perhaps all, of the operators knew the mission was suicidal is a new element, however. Groups such as the Provos are well aware of the human costs, particularly the investment in human capital. 'Capability costs' (education, training) and 'replacement costs' figure dramatically in operational assessment—infantry is less 'costly' than trained and experienced pilots or special operations teams. Some contexts must be viewed as having a more advantageous 'rent' for production of such operators; Ricardo's theory of rents comes into play with farmland or petroleum production: some land is more fertile, some oil is easier to refine, and so such lands enjoy an advantage in 'rent,' they're able to charge the same price in the market, but the profit is greater (other competing lands, even with the most advanced production techniques, don't enjoy the natural advantage). The instability and endemic 'victimization' in the Middle East in particular

are a breeding ground for individuals willing or that can be made willing to engage in suicide/mass-homicide. Investment in human capital is dramatically reduced by 'joint costs'—common production, through the refugee and later the training camps, of a variety of operators. Poorly educated, 'one-off' suicide bombers and commandos on one side (with enough training to accomplish a mission, but little more, such as the necessary understanding for infiltration), leading to more educated but equally resolute operators on the other.

ATTACKING CONSTRAINTS - DECIDE - KNOWLEDGE

These elements of the decision cycle have three primary costs—capability acquisition costs, transactions costs, and operation costs.

- Capability acquisition costs. Education, training, gaining experience. Al-Qaida felt no particular restrictions here—using the Western systems again to their advantage, acquiring the necessary training and experience through U.S. facilities. There are very few capabilities prized by the military and intelligence communities that cannot, in fact, be acquired in the free market. The coupling, however, of human costs with investment in human capital (knowledge) are a Western limitation—soldiers are not only people that can't be thrown away for an objective casualty, and the training costs necessary in a technologically-sophisticated force would make that prohibitive regardless. Martyrdom is seen as the price paid for guaranteed entry to Heaven, and training costs are seen as a means to an end (which, by cost-benefit analysis, was considerable—\$500,000 and the human lives of the operators against over \$105B and the thousands dead achieved)
- Transaction costs. Costs for command and control, or in this case, coordination and synchronization. Apparently minimal for the Al-Qaida cells, enabled by the communication infrastructure put in place by the West
- Operation costs. Cost-benefit. As discussed above, the cost-benefit ratio was considerably to the benefit of Al-Qaida because of the 'ontological judo' they gain—use the strengths of the West and U.S. against themselves, reducing costs and leveraging the damage caused

Some additional points regarding this stage of the decision cycle are worth discussing:

- Tempo. Experience helps in processing the information available, based on 'congruent' or analogous situations. This is uncharted territory for both sides. The available courses of action (COAs) at various decision points (DPs) are going to depend on the creativity, imagination, and 'degrees of freedom' available to leaders, commanders, and the support staff that develop simulations to generate scenarios, and the attendant sequels (what to do next if successful) and branches (what to do next if failure has occurred). Acquisition costs for Al-Qaida here need to be made extremely high—the U.S. must get its information flow under control. In addition, some aspect of Al-Qaida must have 'deep' knowledge of American culture, and is taking in battle damage assessment (BDA) information, and producing an analysis for some other aspect of the network (command, or the 'core cell'; operational cells) for their own selection of sequels
- Inertia. Having made a commitment, and probably without 'positive control,' the common result is 'coasting'—doing what was already planned and decided. The U.S. has undergone a radical 'context shift'—it should be a different place than it was before 11Sept. While there isn't much evidence of such (don't mistake activity with progress), inertia could be made to work against existing Al-Qaida cells. For example, the support and redundant cells for the 11Sept may well remain—doing what they know how to do, have committed to do, and for which there is still an opportunity to do, presents a current and present danger. Shifting the context, or transforming content (hardening vulnerable points), would cause the cells to 'fall out of step'—what they know, or think they know, is now different from the reality

- Authority. Still unknown about the Al-Qaida network is the process of authority. As a general function, there is personal authority (command; in Islamic culture and Afghan culture, this is earned by the individual, as opposed to 'granted'), and impersonal authority (structural; bounded by organization and belief structure). The U.S. has created a new dimension for bin Laden's authority by its rhetoric and actions against him, which will be increasingly problematic over time. The impersonal authority comes from what is 'grassroots' Islam—thus the language of jihad, and the statements for the umma (Islamic community) regarding the 'evil' of the West and U.S. in particular. This impersonal authority does, in a significant percentage (not much is necessary given the cost-benefit ratio), work to Al-Qaida's benefit. Particularly dangerous is the interaction of personal and impersonal authority—martyrdom of bin Laden (loss of the personal authority) will create a tidalwave of emotion throughout the umma responding to the impersonal authority. This is being both an icon and an avatar—what the people aspire to be, as well as a representative of the community member. What is done to an icon and an avatar is done to every member of the community, and is a galvanizing force (the last historical example was Gandhi—millions freed at minimal cost through non-violent, but confrontational non-cooperation; bin Laden will **not** be so accommodating). Tangible and intangible elements of authority, the internal and external enforcement, must be discerned and understood, as soon as possible. These impact on the strategies, the conditionals, the constraints, that will shape the decisions of Al-Qaida, and thus frame the emergent direction of the conflict
- 'Span of control.' A concept in management and decision theory, a span of control is the limit to acquiring and using information, with the problem of diminishing returns. Decision-makers can be active ('cycle-driven'—aware, taking action, seeing the result, doing so again; continual iteration of the decision cycle), monitored ('event-driven'—sampling, examining the input, then either sampling again or perhaps making a decision; this focuses on the first two stages of the decision cycle in an iterative loop), and passive (null—a cycle needs to be initiated; this is 'playing catch-up'). In manufacturing, these equate to the 'zero-defect' or six-sigma, quality monitoring, and finally assumed quality (or to compare culturally: Japanese/U.S. military, U.S. manufacturing, Soviet manufacturing). Each of these approaches has associated costs—testing every item in a set, sampling (testing a percentage of items in a set), or not checking at all. The information acquisition costs impact on the decision—the payoff is the benefit, the risks involved are the consequences of acquisition and the consequences of not acquiring data. The decision function of information is critical—no new information leads to no new decision; no information leads to no decision at all. Al-Qaida leadership as well as operational cells need to be examined carefully for their approach to a span of control. What direction is taken without positive control or negative control?

Myths which are believed in tend to become true.

—George Orwell

ATTACKING CONSEQUENCES - ACT - WISDOM

The final elements of the decision cycle have two primary sets of costs, opportunity cost and consequence cost:

- Opportunity costs. Selection of one available option commonly means that alternatives are forgone. 'Analog' reality is 'zero sum'—resources are limited, and choosing among alternatives means a 'sunk cost' in being committed to the selection. This is a primary

motivation for collective action—gaining an economy of scale lowers costs, which are then enjoyed by all the members of the collective, who can make more selections. Opportunity costs confronted by Al-Qaida are minimal in some ways (a ‘target-rich environment’) but still hold in others (a limited number of cells). The U.S. can absorb a great deal of costs, and has many individuals and teams that can be deployed; the U.S. faces limits of time—acting before another catastrophe occurs

- Consequence costs. Replacement costs, reprisal costs, social costs—both Al-Qaida and the U.S. are facing significant consequence costs. Al-Qaida appears to be risking that its marginal incurred costs will be relatively less in impact than the costs to the U.S. The ‘utility’ of the “wirkung im ziel” (effect in target) is worth considering—not a ‘material’ cost assessment, but non-material (the ‘benefit of use’ or in the case of a decision cycle, how the action relates to achieving the intentions). Two aspects in particular—what is the mechanism for evaluation (battle damage assessment, the impact on the American psyche; how is that acquired and at what cost); and how is it integrated back into the Al-Qaida decision cycle (courses of action at decision points). Quantification of this would be useful in understanding the utility (for the U.S. this time) of radical shifts, generating ‘novelty’ that would be difficult for Al-Qaida to assess and integrate, because it was so far ‘off the path’ of their own sequels and branches

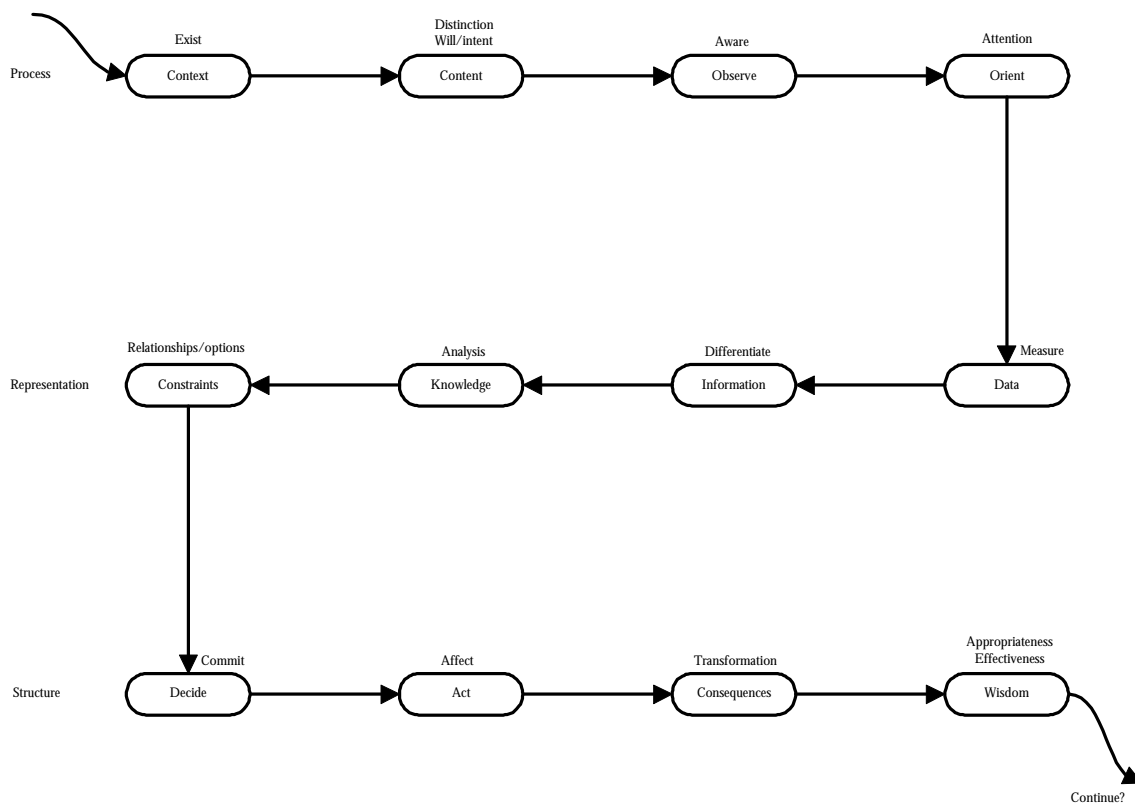
Wisdom is dead. Long live information.

—Mason Cooley

ATTACKING META-TEMPO

Meta-tempo is the “tempo of tempo,” the decisions regarding the decision cycle itself. The decision cycle is rarely a ‘one-off’—successful on a single iteration—but is instead an iterative cycle, where some internal ‘recursion’ may in fact take place.

I’ve stated previously that the core of the decision cycle is composed of three ‘isomorphic’ (substitutable) cycles; this is not completely accurate. Isomorphism is a useful tool for analysis—identification of isomorphs can mean that a set of analytical methods for one item can be applied to its isomorph with great potential benefit. The core elements of the decision cycle are imperfectly isomorphic—they actually ‘flow’ in series if one is careful about consideration of the elements:



Threaded Model of Decision Cycle: Process/Dataflow

From a ‘cost’ attack perspective, however, this is useful. An attack early in the ‘flow’ of the cycle is well-leveraged; cost-factoring increases the subsequent costs past the targeted element (e.g., raising the costs associated with personal safety, a stated goal of the air campaign in Afghanistan, is an attempt to use the ‘opportunity cost’ approach against the rest of the cycle—time and resources to remain alive aren’t dedicated to operations against U.S. interests. This may not in fact be accurate—in a hierarchical structure, where ‘command’ is a functional dependency, such targeting may be effective, but Al-Qaida does not appear to use positive control of operational cells, thus the trade-off for the leadership does not necessarily cascade to an effect in the operational cells).

Consideration of the ‘flow’ model of the decision cycle does, however, make clear the ‘meta-tempo’ costs—those costs that are present throughout the flow, or that cascade through the cycle. These costs are actually best discussed in terms of the four primary aspects of meta-tempo:

- Assurance. Costs here are those associated with safety and security—what is the price for a sanctuary, and what are the costs of operational security (OPSEC)? Safety and security measures impact on tempo (due care, vigilance, etc. slow down responsiveness; calculation of consequences impacts on decision-making; etc.). Coding, ciphering, and tradecraft impose costs, even with technological support, on command & control, coordination, and any communication—technology may make the actual costs marginal, but the time costs (particularly for the need of in-/mis-direction, such as asynchronous dead-drops, to negate tracking and traffic analysis) remain significant. Replacement costs will mount as operations against Al-Qaida take out critical staff—not in training so much as ‘trust’ costs. An untested factor here is the elasticity, the flexibility in response to change and in the face of novelty—this is new territory for all parties, and Al-Qaida’s assumptions regarding their role in the defeat of the Soviets already have an impact on the accuracy of their perceptions of the world. The cost impact of uncertainty will be a competitive aspect between Al-Qaida and the U.S.—how do the organizations cope? Both groups will be striving for ‘perfect information’—having all the information necessary to make a decision. Such certainty is approached in three primary ways: hedging (actions taken to minimize the negative

consequences; risk sharing and risk shifting), creating certainty (redundancy, scale, and scope—these are signatures of Al-Qaida operations, and so indicative of their approach), and acquiring certainty (intelligence—open source (where there's transparency, such as the media, reports, etc.) and espionage). The U.S.'s approach uses both hedging and acquired certainty; Al-Qaida's approach uses the creation of certainty and acquired certainty (taking advantage of transparency for OSINT, but also, if the operations were used to 'play the market,' such things as corporate reports (SEC filings), insurance company reports, etc.)

- **Sustainment/Dependencies.** Administrative costs, operational costs, and interior/exterior lines costs are the key here. It's a matter of record that the operators in the first attack in the World Trade Center bombing felt that inadequate resources were a source of the 'failure' of the attack. Given Al-Qaida's approach (a network of networks, creating a 'market'-like mechanism for operations), an economic analysis is worth applying. The U.S. enjoys a dramatic 'absolute' advantage in conventional force projection (warfare by 'mass production'), while Al-Qaida enjoys a 'comparative' advantage through an odd specialization—a level of commitment that turns into a weapon (from the old 'no retreat' and 'no contact' terrorist scenarios to a 'no survivor' scenario; they don't have to develop their own strengths when they can use the West's against itself). Capitalist market transactions are not directed, but governed by pricing; these market transactions appear to have some small direction, but are also guided by pricing (individuals and groups wish to 'enter the market' by undertaking actions against the U.S.; the 'effect' of operations is used to 'make' and drive the market). Looking at Al-Qaida as a network of networks or 'collective action' market, and their use of effect in a cost/benefit pricing mechanism, the friction in the marketplace must drive the individual and transaction costs up in comparison to the derived benefits. 'Liquidity' in the market, the ability to meet costs, also needs to be dried up; this is part of the set of attacks on the funding for Al-Qaida. It's important to note, however, that Al-Qaida appears to concentrate its funds in M1 (narrow transaction money—currency, anonymous financial instruments), M2 (medium-range money—derivatives, overnight Eurodollars, etc.), and L (liquid and near-liquid ('near' money, easily convertible assets) instruments), using the conventional, the 'hawala,' and the black-economy international financial networks. The money laundering network is a critical structural support cell system. In particular, the use of the hawala 'personal' network for placement (moving cash into the system) and layering (movement of the money to 'clean' the trail and create a provenance) may be secure, but the integration (use or control of the 'clean' funds) may provide an opportunity. Lacking positive control, such funds may well disappear from Al-Qaida's control. Technological means similar to the hawala network (using havens and cryptography to move **control** of money rather than the money itself, which is traceable) may well be one of Al-Qaida's back-up financial networks. Note that a potential unintended consequence of pressure on havens could drive such countries further into the hands of drug networks—terror networks can't absorb the 'cost of capital' necessary for thorough money laundering, but the drug networks can easily assume such a burden, making the havens even more beholden to such organizations
- **Coordination/Synchronization.** Administrative, operating, and maintenance costs for the organization and channels; the tempo costs that come from assurance of such. Both Al-Qaida and the U.S. are mixed organizations, part U-Form (unitary; management is centrally located, with potentially insufficient control of subsidiary elements) and part M-Form (multidivisional; decentralized, with autonomous divisions, and management by performance monitoring and allocation of support). Al-Qaida is more M-Form than U-Form, while the U.S. is more U-Form than M-Form. The 'behavior theory of the organization' is important, as both organizations are purpose-directed and largely voluntarist; the difference comes in goal-setting, where the U.S.'s approach is more satisficing (subject to internal negotiation, where the 'final' goal is in fact a compromise), while Al-Qaida's is more absolute. Such differences are evident when considering the internal channel costs—the transfer price (cost per internal exchange or transaction) and transaction velocity (communication tempo costs).

U-Form organizations suffer much more from information overload, and so uses the hierarchical structure to selectively filter or transmit (this doesn't reduce costs, only shifts them—information now becomes a mechanism for control and positional authority, and the issues of relevance and 'collateral' information contribute to 'drop' of signal through the organization (the 'decision-maker/analyst split')). M-Form organizations can operate more flexibly; explicit utilization of messages is one approach, but so are 'trigger points' (contextual communication—two individuals at opposite ends of a city can look out a window (the information environment), see that raid is a possibility, and both take an umbrella with them, and no communication between them is necessary). A danger of implicit communication is coping with ambiguity—the 'conditional' behavior is pre-established, but the threshold necessary for action may not be explicit and subjectively interpretable (what's the necessary likelihood of rain required to take an umbrella? Or in Al-Qaida's case, what constitutes a 'threshold' that triggers an operation?). Another complicating factor is the potential for escalation in the absence of positive control—what is the pre-arranged or freedom of behavior of operational cells? In such a case, a capability-based analysis of potential consequences makes the most sense (e.g., support or redundant cells with pilot training probably remain post 11Sept; whether triggered or through positive control, their range of operations is likely to be congruent to that of 11Sept). A number of other issues are relevant in this aspect of meta-tempo as well. Limits imposed by language and coding are hampering U.S. efforts to deal with Al-Qaida; decision-makers and analysts may need to 'turn over,' since their mindset or paradigm (in Kuhn's sense—a limiting view of the world) is largely static or mildly additive ('new' behavior is aggregated with old—Bayesian, conservative). Al-Qaida is a massively-distributed massively-parallel organization; concentration is unnecessary (there is no 'center'), capabilities are 'defined down' (each cells has immense destructive potential), and 'mobility' is a distinct operational approach (not just geographic arbitrage, shifting location to take advantage of the context, but also in finance and operations). Parallel or simultaneous operations are undertaken to overwhelm the decision-cycle of the U.S.—look for future attempts to achieve economy of scale by taking advantage of some weakness that results in massive casualties (or massively distributed casualties—e.g. subversion of HVAC systems with anthrax in hotels, travel complexes, or some central location, from which individuals disperse throughout the U.S. before becoming ill)

- Appropriateness. Decision-cycles are not purely a "faster is better" mechanism. Just as with driving a car, you can be going too slow, or too fast for conditions. Contextual or environmental factors (such as trust in an environment, or force multipliers/divisors of terrain) have a necessary impact on decisions regarding tempo. The infosphere and intelligence are also critical factors in meta-tempo; certainty ('perfect' information) battles with the 'fog of war,' so that one doesn't 'overrun' the information available, and the 'value' of a channel or information is commonly not immediately discernable, and requires at least one and generally many cycles to assess (impacting on the observe-orient elements—data coming in, or information filtered out can't be assessed except by 'utility' over time, the impact it has on converging or diverging from the intentions of the decision cycle)

The quickest way of ending a war is to lose it.

—George Orwell

SUGGESTIONS & CONCLUSIONS

- Become creative, get ahead of Al-Qaida, think 'out of the box,' and get external/beta teams to augment U.S. thinking
- Examine potential capabilities and extrapolate out indicators—assume the worst is possible with Al-Qaida
- Al-Qaida likes 'double-binds'—damned if you do, damned if you don't, with the risks and consequences considerable either way
- Attack dependency infrastructure of Al-Qaida, little of which is 'conventional'
 - Analyze and map/model the Al-Qaida organization; identify and target critical nodes
 - Break off Al-Qaida structural support elements—financial, intelligence, technical
- Stability in the Middle East and Islamic regions is essential in limiting the 'genesis' context from which threats are emerging (including in support and sustainment of Al-Qaida currently)
 - Settle regional issues: a Palestinian State, stabilize Lebanon's and Jordan's economies, encourage Syria and Iran out of isolation, change the approach against Iraq
- Don't recruit for bin Laden—be aware of potential consequences of operations
- Authority is a key issue to be modeled vis-à-vis Al-Qaida; bin Laden is being transformed into both icon and avatar, which creates a dangerous potential tidalwave
- Advance defense-in-depth for the private and governmental sectors
 - Use incentives to encourage investment and infrastructure defense
- Driving up costs to the U.S. is consistent with the lessons-learned from Afghanistan, and thus likely a part of Al-Qaida's intentions
- Costs are well worth considering as mechanisms for increasing the friction and decreasing the efficiency of Al-Qaida
- Close U.S. 'open source intelligence' provision of use to the adversary. The U.S. free market and transparency dramatically reduces Al-Qaida decision cycle costs—capability acquisition (channel, training), data-information acquisition, transaction costs, operational costs, etc.