

FOURTH GENERATION
WARFARE
&
STANDING ORDERS FOR
OPEN SOURCE
INSURGENCIES



globalguerrillas.typepad.com

advance and innovate, over the long term, solely through internal efforts. They must rely on other groups to advance the ball for them.

To continue to improve, the group must be quick to copy improvements that appear to work, regardless of the source. Further, since the success of a single group increases with the success of the whole open source insurgency, every innovation must be shared the moment it is put into use.

STANDING ORDER 10: Release Early and Often

Innovations, from tactics to weapons, should be released as soon and as often as practicable. Perfectionism, sclerotic planning processes, excessive secrecy, risk aversion, and other plagues found in hierarchical organizations are the enemy of success.

Make the attack to demonstrate the innovation and generate the coverage (media). Let the other members of the open source insurgency advance the ball. Remember, with many minds looking at the problem, no bug/deficiency/defect is too difficult to overcome.

STANDING ORDER 11: Co-opt, Don't Own, Basic Services

Open source insurgencies typically don't supply basic services (within the nation-state context, political goods) or assume any responsibility for their delivery, to controlled autonomous zones and their resident populations. Instead, they parasitically ride on a degraded form of the global/national economy's corporate and public services — from electricity to water to food. Co-option of basic services enables a steady stream of income from taxation (i.e. theft). The ongoing flow of these services enables a relatively normal functioning of the underlying social construct.

It also enables global guerrillas the flexibility to focus exclusively on member/group enrichment and its ongoing war to hollow out the nation-state. In the event that broader disruption has forced the creation of black market services (as in an alternative power grid, as we saw in Baghdad), this alternative service is operated within the confines of a protection racket and is not owned directly.

Alternative services that are owned and operated by the insurgent group are typically not advisable unless no other alternative exists — as in, a completely hollow or deeply failed nation-states.

About the author

John Robb is a military affairs analyst specializing in open source warfare. Some of the world's top guerrilla groups (such as Nigeria's MEND and Al Qaeda) have formally adopted Robb's work on warfare as their own (Al Qaeda is now conducting what they call "open source jihad" and the leader of MEND is an avid reader of Robb's blog *Global Guerrillas*).

According to Robb, warfare is rapidly evolving. Torrential improvements in technology and globalization have combined to make it possible for small groups of violent individuals to go to war against nation-states and win. In fact, the wars in Iraq and Afghanistan are actually accelerating the process of development.

How effective are these new methods of warfare? Here's a narrow example. In the summer of 2007, a "defunct" guerrilla group attacked a critical part of a natural gas pipeline in Mexico. This caused a cascade of failure that shut down the just-in-time manufacturing system in the northern part of the country. Network effects turned a \$2,000 attack in \$2.5 billion in damages. It was so effective, the group did exactly the same thing a month later. Nobody was caught.

FOURTH GENERATION WARFARE

Fourth Generation Warfare (hereafter, 4GW) is the term used by military thinkers to describe conflict in the late 20th and early 21st centuries. In general, 4GW is an extremely effective method of warfare that the U.S. Government and its allies will find very difficult to defeat.

Let's outline the basics of 4GW to enhance your understanding of the term.

Definition

4GW can be defined as a method of warfare that uses the following to achieve a moral victory:

- Undermines enemy strengths (this may seem obvious, but most of modern warfare has involved direct attacks on enemy strengths -- find the enemy army and destroy it).
- Exploits enemy weaknesses.
- Uses asymmetric operations (weapons and techniques that differ substantially from opponents).

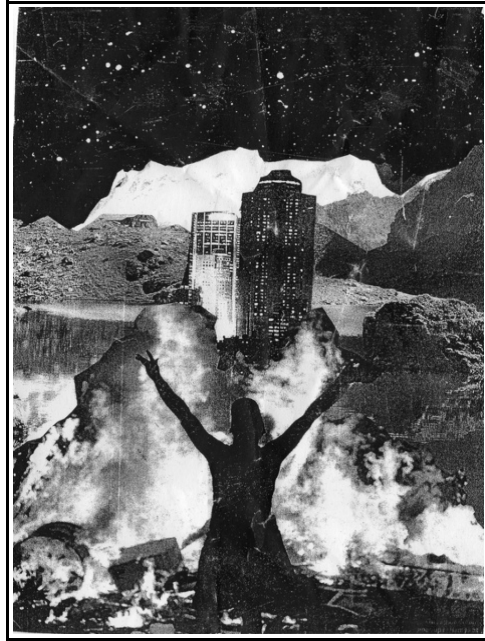
Drivers

The rise of 4GW is both a product and a driver of the following:

- The loss of the nation-state's monopoly on violence.
- The rise of cultural, ethnic, and religious conflict.
- Globalization (via technological integration).

Tactics

4GW is fought on the tactical level via:



STANDING ORDER 7: Minimalist Rule Sets Work Best

In many cases, modern insurgencies find themselves managing local autonomous zones (as in autonomy from nation-state governance due to inattention, weakness, mendacity, etc.). This management often requires the establishment of rule sets.

Global guerrilla insurgencies, by design, aren't a replacement for the nation-state. Maximal, heavy-handed, and corrupted rule sets of the nation-state should be replaced by minimalist rule sets that are fairly applied to encourage the rapid growth of black economies, reduce resistance (among local populations), and ensure order.

STANDING ORDER 8: Self-replicate

This is a hard point to grasp, but it provides a substantial amount of leverage for small groups. It's important to manufacture copies of yourself that can advance your goals whenever possible. This can take a direct physical form in the case of technological copies — this includes everything from software bots (which can reach millions of “hacked” computers) and genetically engineered contagion. These technological copies will only get smarter and more responsive as technology improves.



Another method is to create socially engineered copies of your organization through the use of social media. Basically, this means providing the motivation, knowledge, and focus necessary for an unknown person (external and totally unconnected to your group) to conduct operations that advance your group's specific goals (or the general goals of the open source insurgency). All forms of self-replication will rapidly improve with advances in technology and connectivity.

STANDING ORDER 9: Share or Copy Everything That Works

In open source warfare, there is no pride in exclusive ownership. Everything that can be shared, should be shared. Everything that can be used, should be used. Small insurgent groups don't have the capability to

attacks that cause massive disruption and then quickly dissipate as the targeted system returns to equilibrium. Simple, low cost, easy, and repeatable (in that nobody is caught) attacks are both sustainable and generate the greatest potential returns.

This doesn't mean that these attacks don't have a significant impact. Network3 effects from disruption almost always guarantee and outsized return — the great is the enemy of the good enough.

STANDING ORDER 5: Coopetition not Competition

All insurgent groups, regardless of their motivation, are allies by default. Every group that joins the insurgency, makes it stronger, even if it is ideologically antagonistic. Coopetition is a term that encompasses how rivals can compete for market share but cooperate to grow the market and speed up combined growth.

In commercial coopetition, this is done by rivals sharing common platforms (a very important concept) that enable them to reduce costs (as in firms that share suppliers), widen variety, increase flexibility, etc. For example, coopetition is the basis for Internet standards and the Web. Vertical integration is an anathema to successful coopetition.

STANDING ORDER 6: Don't Fork the Insurgency

There is a tendency among subgroups in an open source insurgency to increase local cohesion at the expense of whole. Usually this is done by disrupting social networks to create antagonism between member groups.

Social network disruption is nearly as easy as disrupting physical networks, but it can be very dangerous. Social network disruption should only be used if it cleaves the nation-state into non-cooperative centers of gravity without sacrificing open source cohesiveness. In contrast, social network amplification is almost always good.

NOTE: This is grand strategic mistake of al Qaeda in Iraq (unlikely to be repeated). As I mentioned in my 2005 NYTimes OP-ED entitled The Open-Source War: "there are few visible fault lines in the insurgency that can be exploited." That was true until attacks on Shiite civilians and ultimately the Golden Mosque attack forked the insurgency.

- Rear area operations – 4GW warriors do not confront a nation-state's military but rather its society.
- Psychological operations.
- *Ad hoc* innovation – use of the enemy's strengths against itself.

Generations of Warfare

The generational development of warfare can be outlined as:

- First generation -- wars of Napoleon, conscription and firearms (the decline of mercenaries).
- Second generation – the US civil war and WW1, firepower and nation-state alignment of resources to warfare.
- Third generation – WW2, maneuver and armored warfare.
- Fourth generation – *ad hoc* warriors and moral conflict.

Differences

Many of the methods used in 4GW aren't new and have robust historical precedents. However, there are important differences in how 4GW is applied today. These include:

- Global – modern technologies and economic integration enable global operations.
- Pervasive – the decline of nation-state warfare has forced all open conflict into the 4GW mold.
- Granularity – extremely small viable groups and a variety of reasons for conflict.
- Vulnerability – open societies and economies.
- Technology – new technologies have dramatically increased the productivity of small groups of 4GW warriors.
- Media – global media saturation makes possible an incredible level of manipulation.
- Networked – new organizational types made possible by improvements in technology are much better at learning, surviving, and acting.

Winning a 4GW Conflict

Victory in 4GW warfare is won in the moral sphere. The aim of 4GW is to destroy the moral bonds that allows the organic whole to exist -- cohesion. This is done by reinforcing the following:

- Menace. – attacks that undermine or threaten basic human survival instincts.
- Mistrust – increases divisions between groups (ie. conservatives and liberals in the US).
- Uncertainty – undermine economic activity by decreasing confidence in the future.

This understanding comes from the thinking of Col. John Boyd, considered one of America's best military thinkers. Boyd's thinking also serves as a good basis for a deeper understanding of 4GW.

Grand strategy, according to Boyd, is a quest to isolate your enemy's thinking processes from connections to the external/reference environment. This process of isolation is essentially the imposition of insanity on a group. To wit: any organism that operates without reference to external stimuli (the real world), falls into a destructive cycle of false internal dialogues. These corrupt internal dialogues eventually cause dissolution and defeat.

The dynamic of Boyd's grand strategy is to isolate your enemy across three essential vectors (physical, mental, and moral), while at the same time improving your connectivity across those same vectors. Here's more detail:

- **Physical isolation** is accomplished by severing communications both to the outside world (i.e. allies) and internal audiences (i.e. between branches of command and between the command organization and its supporters).
- **Mental isolation** is done through the introduction of ambiguous information, novel situations, and by operating at a tempo an enemy cannot keep up with. A lack of solid information impedes decision making.
- **Moral isolation** is achieved when an enemy improves its well being at the expense of others (allies) or violates rules of behavior they profess to uphold (standards of conduct). Moral rules are a very important reference point in times of uncertainty. When these are violated, it is very hard to recover.

- It creates FUD (fear, uncertainty, and doubt – psychological collapse)

STANDING ORDER 2: Grow Black Economies

The second standing order of modern insurgencies is to generate economic connectivity in order to manufacture allies and increase the ability of the insurgency to fund itself. This requires cooperation with existing criminal organizations within “illegal” economies. (Editor's note: see www.agorism.info for more on growing black economies.)

This requires a variant on how the nation-state grew via becoming a protection racket – protection at a rate worth the value provided and the willingness to expand the business potential of those being protected. Induced shortages, through network disruption, expand business opportunity. Further, broken “legal” economies generate a plethora of free lancers that populate a self-reinforcing bazaar of violence.

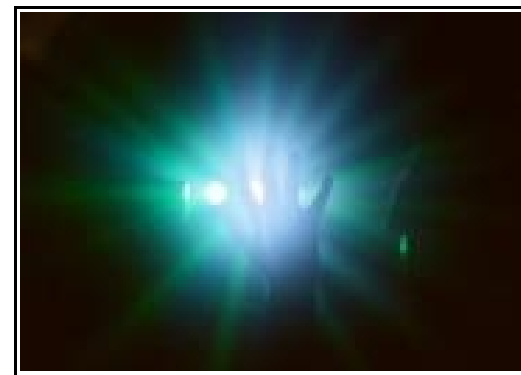
STANDING ORDER 3: Virtualize Your Organization

Modern insurgent groups don't require cohesive groups of “soldiers.” They can and often virtualize through the use of contractors or freelancers.

Optimally, the bulk of an insurgent group's attacks are virtual. This means that the organization that is assembled for an attack is hired specifically for that job. They do the job and go away. This works best with non-kinetic operations (which should be the vast bulk of any group's attacks). This is self-reinforcing with network disruption — the more systems disruption occurs, the greater the number of freelancers available. In a short period of time, specialization of skill sets emerge within the bazaar of violence, as participant freelancer work to enhance their marketability/rates (this in turn enables high levels of productivity).

STANDING ORDER 4: Repetition is More Important Than Scale

The ability to repeat disruptions targeted on specific groups generates changes in behavior (economic, social, and psychological) akin to an excessive tax. This is in contrast to large, one-off,



STANDING ORDERS FOR OPEN SOURCE INSURGENCIES

Standing Orders Index

- 1: Break Networks
- 2: Grow Black Economies
- 3: Virtualize Your Organization
- 4: Repetition is More Important Than Scale
- 5: Coopetition not Competition
- 6: Don't Fork the Insurgency
- 7: Minimalist Rule Sets Work Best
- 8: Self-replicate
- 9: Share or Copy Everything That Works
- 10: Release Early and Often
- 11: Co-opt, Don't Own, Basic Services



STANDING ORDER 1: Break Networks

The first and most general standing order of any modern insurgency is simple: break networks. (The only caveat being: avoid breaking communications networks.) These networks are small group enablers/catalysts, and enable the spread of social contagion virally.

Public communications networks, as they are currently used, are asymmetric in that they aren't accessible (increasingly less as governments restrict access) by modern nation-states. Within John Boyd's framework of grand strategic victory, this achieves the following:

- It disconnects the enemy from itself and its allies (attrition and physical collapse);
- It forms non-cooperative centers of gravity within the enemy camp (moral collapse);

TWO KEY CONCEPTS OF 4GW: THE OODA LOOP AND THE BAZAAR OF VIOLENCE

The OODA Loop

The OODA loop (for observe, orient, decide, and act) is a concept developed by Col. John Boyd, originally applied to the combat operations process, often at the strategic level in military operations. It is now also often applied to understand commercial operations and learning processes. According to Boyd, decision-making occurs in a recurring cycle of observe-orient-decide-act.

An entity (whether an individual or an organization) that can process this cycle quickly, observing and reacting to unfolding events more rapidly than an opponent, can thereby "get inside" the opponent's decision cycle and gain the advantage.

The Bazaar of Violence

The decentralized, and seemingly chaotic guerrilla war in Iraq demonstrated a pattern that will likely serve as a model for next generation insurgents.

This pattern shows a level of learning, activity, and success similar to what we see in the open source software community. We can call this pattern the bazaar of violence. The bazaar solves the problem: how do small, potentially antagonistic networks combine to conduct war?

Lessons from Eric Raymond's "The Cathedral and the Bazaar" provides a starting point for further analysis. Here are the factors that apply (from the perspective of the guerrillas):

- Release early and often.
- Try new forms of attacks against different types of targets early and often.
- Don't wait for a perfect plan.

Given a large enough pool of co-developers, any difficult problem will be seen as obvious by someone, and solved. Eventually some participant of the bazaar will find a way to disrupt a particularly difficult target. All you need to do is copy the process they used. Your co-developers (beta-testers) are your most valuable resource.

The other guerrilla networks in the bazaar are your most valuable allies. They will innovate on your plans, swarm on weaknesses you identify, and protect you by creating system noise.

Recognize good ideas from your co-developers. Simple attacks that have immediate and far-reaching impact should be adopted. Perfection is achieved when there is nothing left to take away (simplicity). The easier the attack is, the more easily it will be adopted. Complexity prevents swarming that both amplifies and protects. Tools are often used in unexpected ways. An attack method can often find reuse in unexpected ways.