

## Al Qaeda – a model for the modern organisation?

In this essay I want to examine how the emergence of a global network culture has affected traditional organisational models and presented radical alternatives. I also want to explore the concept that decentralised, distributed networking has become the new arena for real and ideological conflicts.

### How traditional organisations work

Practically all traditional organisations are organised in a top-down, centrally controlled hierarchic structure. Hierarchies are arguably a natural state of affairs. Most primate groups seem to organise themselves within hierarchies. The dominant order within human society is similarly hierarchic. Certainly, wherever one looks, at all levels of human society, one will find examples of hierarchical structures in place, from national governments to the school playground.

Hierarchies can be seen as the manifestation and embodiment of the views of the individual or individuals at the top of the organisation, theoretically at least. The head of the organisation makes general proclamations of intent (e.g. “let’s move forward”). As this proclamation works its way down the chain of command, it becomes more and more specific until eventually the original strategy gets carried out as a task or a number of tasks (e.g. “drive”, “walk”, “carry”). For hierarchies to work effectively the unquestioned authority of one’s immediate superior is essential. This is why organisations like the military and Catholic Church place such emphasis on obedience and the infallibility of the Head.

There are a number of advantages and disadvantages to such centrally controlled top-down systems. A clear-cut visible authority makes the decision-making process decisive and unambiguous but places a great deal of importance on the decisions made being “correct”. In this context we can take “correct” to mean decisions that ensure the survival of the system. Hierarchical systems are inherently ordered systems, where everybody and everything has their designated place and function. This invariably means that adapting to change brings about a disruption of this order. It also means that failure in any part of the system is potentially catastrophic. Consequently such systems are change-adverse and naturally conservative. One of the most serious draw-backs of hierarchies is that they become progressively less efficient the larger they grow. The larger an organisation becomes the further the decision making becomes from the essential day-to-day activities (think here of WWI generals sending the soldiers “over-the-top” to capture worthless bits of land). Long chains of command make the system less responsive to external changes. Feedback about the external change must be passed up the chain for decisions to be made which are then sent back down for action.

Nonetheless, despite some fairly major disadvantages, hierarchies are all pervasive. It is tempting to think that this is the only way to organise society. For most people the idea of a society with no leaders and no hierarchies is unthinkable. The term anarchy conjures up notions of disorder and chaos. However, as society has grown and with the advent of the information age making national boundaries less clear this viewpoint is now being questioned. Recent studies of complex dynamic systems have pointed towards new and viable alternatives to traditional hegemonies.

*“The concept of self-organisation is commonly used in physics and molecular biology for the phenomenon of parts joining to form a larger whole with no identifiable blueprint or regulating mechanism. In societal terms, the issue of self-organisation is linked to the fundamental question of forms of government. Since the 1960s, and even before, the current form of government, representative democracy, has been challenged by calls for more grass-roots self-determination.”*

(Medosch, 2004)

*“Nowhere are the progressive possibilities of emergence more readily apparent than in the anti-WTO protest movements, which have explicitly modeled themselves after the distributed, cellular structures of self-organizing systems.”*

*“What we see again and again with the new wave are images of disparate groups: satirical puppets, black-clad anarchists, sit-ins and performance art – but no leaders. To old-school progressives, the Seattle protesters appeared to be headless, out of control, a swarm of small causes with no organizing principle – and to a certain extent they’re right in their assessment. What they fail to recognize is that there can be power and intelligence in a swarm, and if you’re trying to do battle against a distributed network like global capitalism, you’re better off becoming a distributed network yourself”.*

(Johnson, 2001, p.225)

Though these views are most commonly voiced by advocates of counter-culture notably the anti-globalisation movement, it is somewhat surprising to discover the US military exploring alternatives to the rigid command-and-control, top-down structure traditionally employed.

*“The Marines are calling their new approach “networkcentric warfare,” and it involves rethinking the fundamental ways in which they have worked for over 200 years. Network-centric warfare refers not only to an electronic network new communication technologies are connecting Marines through satellites and LAN systems – but also refers to how Marines define the way they organize on the battlefield. Through exercises like “Urban Warrior,” the Marines want to find out if they can transform themselves into a human network – a structure that many believe to be more adaptive and flexible than a traditional hierarchy.”*

(Parks, n.d.)

### **Emergent Network Culture**

So what has brought about this shift from the traditional social hierarchy to what we might call the network culture – what Mark C. Taylor refers to as the move “from grid to network”?

*“At pivotal moments throughout history, technological innovation triggers massive social and cultural transformation. Apparently unrelated developments, which had been gradually unfolding for years, suddenly converge to create changes that are as disruptive as they are creative. We are currently living in a moment of extraordinary complexity when systems and*

*structures that have long organized life are changing at an unprecedented rate. Such rapid and pervasive change creates the need to develop new ways of understanding the world and of interpreting our experience.”*

(Taylor, 2003)

Taylor describes how there has been a paradigm shift from polarised Cold War certainties to an age of ever increasing change and uncertainty, from the rigid modernist architecture to the free flowing forms of post-modernism. Certainly, technology has played an important role – the Internet is the quintessential network – but it also seems clear that changes were in place long before the technology had emerged into mainstream culture.

Pinpointing exactly what factors bring about change, especially with something as recent and inherently complex as the network culture, is almost impossible. So, rather than trying to be scientific about it I have listed some of the factors that may have played a part, from a personal perspective, as a form of bottom-up history.

1. 9th November 1989. The fall of the Berlin Wall. When this happened I was really stunned. The Berlin Wall was put up in August, 1961 almost exactly 2 years before I was born. Consequently for me the presence of the Berlin Wall was a physical and permanent embodiment of the Cold War. The division between the East and West seemed so entrenched that short of a nuclear holocaust nothing would change this state of affairs. For most of us living through that time the thought of impending global doom was never far away.
2. 22nd November 1990. The resignation of Margaret Thatcher. Though I never believed that Margaret Thatcher would go on forever, her forced departure at the hands of her own party was a major surprise. Not only did this mark the end of her career, it signified a shift in emphasis away from a market driven economy.
3. January 1991. Having my first home computer. Although at the time I already used computers at work, I think in many ways it was really the home computer that brought about the most significant changes in the technological revolution. In the workplace a computer was primarily seen as a tool to help with your work, an extension of earlier business machines. In the home, however, it became something wholly different. An entirely new way to engage the world. I remember being ecstatically excited about CD-ROMs and the possibilities they held. It was largely this experience that led me to a career in multimedia. It was also about this time that I started to become aware of the World Wide Web, although I have to admit it seemed too expensive and esoteric to indulge in at that time.
4. Mid 1990s. A growing realisation that democracy was anything but representative. This was further reinforced as the political parties in the UK started moving to gain the central ground and choice started looking more and more like Henry Ford's Model "T".

5. 1998. Making my first purchase on the web – I bought a CD from the US. At the time there were effectively no import duties payable on items ordered on the Internet mainly because the various authorities had not really come to terms with the technology. Consequently buying items from the States often worked out a lot cheaper than buying in the UK. In fact, once postage had been taken into account the savings were not that great. Nonetheless I remember feeling that this heralded the end of national economic boundaries (ok this notion was a little extravagant).
6. 1999. Chatting to someone in China on the Internet. This was only 10 years after the Tiananmen Square protests, so the thought of chatting to someone living in the People's Republic of China (which had seemed like one of the most closed societies in the world) was mind blowing. Once again I thought here is a technology that blurs national boundaries if not completely erodes them. In hindsight it does not seem like that big a deal.

So to summarise seemingly seismic changes in the political landscape at the end of the 1980s were only really the manifestation of a move towards the moderate, homogenised politics of the centre. A gravitational pull towards the centre is, of course, an inevitable and an emergent consequence of consensual politics. The centre is like a magnet to which all political persuasions are drawn; it is where, by definition, the majority of the voters are. Politicians tailor their policies to appeal to this majority until eventually all politicians and policies are identical. This makes for a very stable system but of course in nature stability is synonymous with death.

While conventional politics have become increasingly stable (and possibly less relevant), technology has been moving in the opposite direction. The speed at which developments have been taking place is truly staggering. To predict what will be possible in the next 10 years let alone the next 100 years is now impossible.

It could be said that governments exist to define boundaries: legally – what is permissible, what is not; morally – what is right, what is wrong; educationally – what should be taught, what shouldn't; geographically – what is them, what is us. The open, decentralised nature of the Internet and related technologies seems counter to everything that governments stand for.

While governments will overtly welcome new technology, this often presents them with challenges they are clearly unable to address. Being a global phenomenon the Internet often falls outside of the jurisdiction of any single national government. The boundaries that governments try and impose on the web invariably fail because of this. The wish of Governments to be seen as champions of new technology is often tempered with an equally overwhelming desire to contain it, to make it operate within boundaries that they can control.

Against this backdrop a new form of political activism has emerged, which not only embraces new technology but could not exist without it.

*“The Internet extends these possibilities for fast co-operation between distributed cells of a movement. Its advent particularly serves the anti-globalisation movement's purposes. It*

*creates the backbone for associations that can shadow the transnational activities of capital, render its globalist designs intelligible and enable local groups to organise resistance to its arrogation of local legal and political powers. This type of associational activity warrants some kind of linguistic distinction from globalisation.”*

*“The fact that it is a decentralised, distributed network currently makes it hard for any elite to control online activities. It allows fast one-to-one, one-to-many and even many-to-many communication in web and conferencing forums. Together, the technological and economic aspects of the Net allow for cheap self-publication without mediation by corporate publishing.”*

(Redden, 2001)

The Internet has allowed individuals and organisations to forge alliances with others who share common goals and coordinate their activities internationally. In this sense the anti-globalisation movement has not been founded but has emerged as a consequence of the political will to change and the means to mobilise that will. Because of this the anti-globalisation movement has no real leaders. This reflects both the self-organising ability of natural organisms and the decentralised structure of the Internet itself. The Internet was originally created by the military at the height of the cold war to allow continuous information flow even in the event of a nuclear strike taking out key strategic communication facilities. This was achieved by the creation of a decentralised, distributed network – the Arpanet, the forerunner to the Internet<sup>1</sup>.

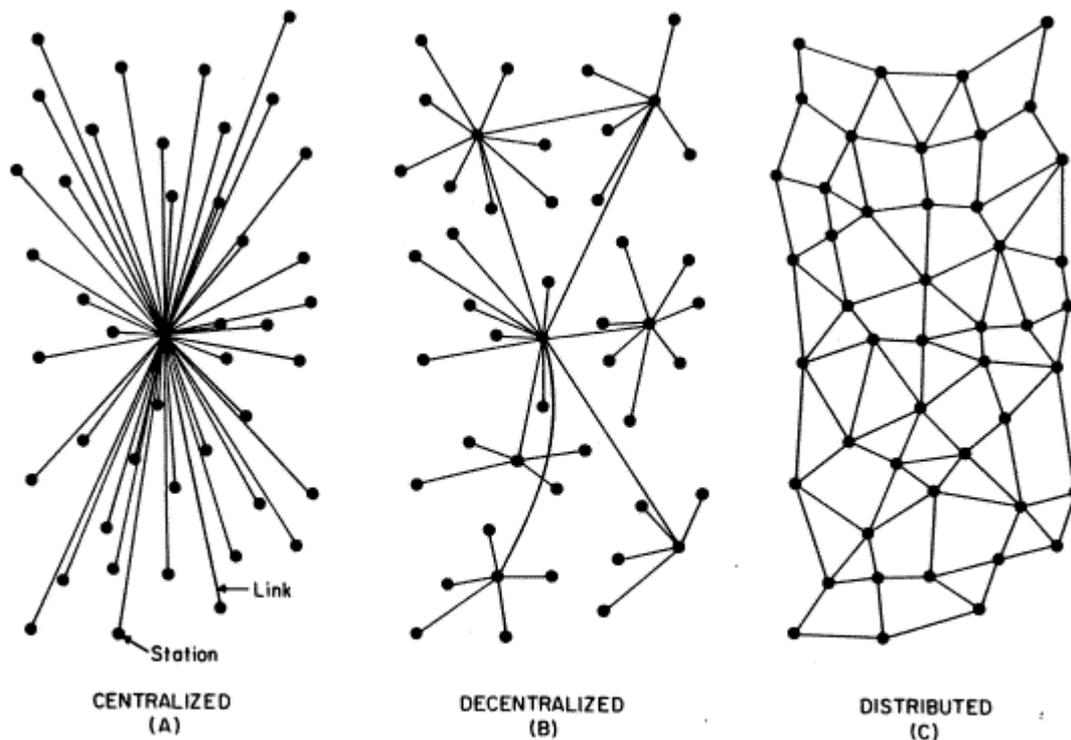


FIG. 1 – Centralized, Decentralized and Distributed Networks

*The different network topologies described in Paul Baran’s RAND Memorandum to demonstrate the superior survivability of a distributed network.*

The ability to operate without any obvious leadership is one of the major advantages that the anti-globalisation movement has, as there are no obvious ring leaders who can be targeted to disrupt the movement's activities. It is also philosophically in keeping with the anarchic roots of the movement. The major disadvantage of this "ad hoc" structure is that without focal points like the G8 conference the movement can be fragmentary and disjointed.

While supporting the view that social progress really can result from dealing with communication technologies, Medosch sounds a salutary note of caution about Techno-utopianism in his essay on self-organised society.

*"However, possibilities for control also exist on the Internet, whose structures are less decentralised and its hierarchies less flat than originally suggested in the days of Internet euphoria. This is reason enough for me not to hail the Internet as a panacea. The step from the off button on the TV remote control to the mouse button for the Internet is not about to wipe out seven decades of conditioning by broadcast media and other sources of social signification. I am not claiming that communication on the Internet will lead automatically to a renewal of democracy by making everyone discover virtual communities and, through them, to found participatory grass-roots democratic movements, leading directly and inevitably to a renewal of democracy in the west."*

(Medosch, 2004)

### **Al Qaeda and the web**

Another significant development coming out of the current politico-economic and technological climate is the emergence of a new type of terrorism on a global scale, what Andrew Tan describes as postmodern terrorism.

*The new postmodern terrorist groups differ in some crucial respects to traditional terrorist groups: they have less comprehensible nationalistic or ideological motivations, embrace more amorphous religious and millenarian aims, are less cohesive in their organisation (usually with a more diffuse structure and membership), and are potentially far more lethal than traditional terrorist groups given their attempts at mass casualty terrorist acts using both conventional means or weapons of mass destruction (WMD). They do not bother to justify their attacks, as they see violence as an end in itself. Due to globalization, such groups have been able to operate across borders, making them difficult to track. They have also been able to exploit the new information economy and the Internet to reach out to a much wider base of support. They are also much less dependent on the support of states since they have become much more mobile and do not need fixed base areas to operate from.*

(Tan, n.d.)

Al Qaeda the most notorious of such groups is perhaps the best example of a truly emergent movement. Similar to the anti-globalisation protestors al Qaeda is not an organisation in any conventional sense of the term. Nor is Bin Laden, contrary to popular opinion and media portrayal (which has difficulties comprehending faceless organisations), directing proceedings from some cave in Afghanistan. It is probably more accurate to see al Qaeda as a loose coalition of groups and individuals united by disenchantment with Western secular values and specifically the US administration. Whether or not these individuals and groups see themselves as belonging to a broader al Qaeda movement is not often clear. The name "al Qaeda" (which

means “the base”) was actually coined by US intelligence, who needing a useful label to describe the growing spate of terrorist attacks originating from the Middle East, used a heading found on some captured documentation. The name al Qaeda only started to be used by the terrorists to describe themselves after it had gained popular usage through the media. Through the decentralised, distributed networks of the Internet the groups and individuals that comprise what we refer to as al Qaeda have been able to coordinate, plan and carry out what are undeniably very sophisticated attacks. What distinguishes al Qaeda from previous terror groups is its truly global nature and lack of hierarchic structure. This has made al Qaeda incredibly difficult to pinpoint and defeat. Traditional anti-terrorist countermeasures of containment simply will not work<sup>2</sup>.

In some ways 9/11 was shocking not just because it was an attack upon the heartland of America but also because al Qaeda was able to turn the tools of the globalised economy upon itself. The attack has effectively forced the West to re-examine what it had probably erroneously believed it controlled. The Internet may be the lifeblood of the global economy but being an open system, it is a bloodstream shared by those who would seek to destroy it.

*“As globalization’s ironic revenge, distributed terror maps the interstitial flows that exploit the inability of centralized authority to coordinate emergent, enactive forms of network agency.”*

*“In a world in which networks of flows shape both state structures of power and the attempts to destroy those same structures, the lines have been drawn — and modulated. Through systems of distributed control, enactive networks now increasingly speak to a social space in which agency itself maps an emergent network.”*

(Nunes, 2005)

## Summary

*“We can say with some certainty, al Qaeda loves the Internet. When the latter first appeared, it was hailed as an integrator of cultures and a medium for businesses, consumers, and governments to communicate with one another. It appeared to offer unparalleled opportunities for the creation of a “global village.” Today the Internet still offers that promise, but it also has proven in some respects to be a digital menace.”*

(Thomas, 2003)

The Arpanet the prototype for decentralised, distributed networking was originally created in response to a very tangible external threat to the US from the Soviet Union. Since then it has evolved into the global network we know today, far removed from its origins: a tool for commerce; a medium for entertainment; an environment for virtual communities; a means to self-organise. Ironically the distributed network is both the model for and the enabler of America’s newest threat – global terror. What was once a clear and present threat is now amorphous and dispersed. The field of conflict has moved from the external to the internal and the rules of engagement are, as yet, undefined.

Many of the arguments and ideas that I have put forward in this essay require further in-depth research, which I hope to undertake in the near future.

---

<sup>1</sup> For a more detailed history of the Arpanet see “Behind the Net – The untold history of the ARPANET” by Michael Hauben <http://www.dei.isep.ipp.pt/docs/arpa.html>

<sup>2</sup> “Observing al Qaeda Through the Lens of Complexity Theory: Recommendations for the National Strategy to Defeat Terrorism” by Lieutenant Col. Michael F. Beech, United States Army is a fascinating paper about the military implications of dealing with an emergent, self-organised al Qaeda movement. The paper highlights the problems with the current US policy in the Middle East.

## Bibliography

- Baran, P. (1964). *On Distributed Communications:I. Introduction to Distributed Communications Network*. [Internet]. Santa Monica, USA: The Rand Corporation.  
Available from: <http://www.rand.org/publications/RM/RM3420/> [Accessed 3 June 2005]
- Baran, P. (1964). *Sketch showing three different network topologies described in P. Baran's RAND Memorandum* [Online image]. Available from: <http://www.rand.org/publications/RM/RM3420/fig1.GIF> [Accessed 3 June 2005]
- Beech, Lieut.Col. M.F. (2004). *Observing Al Qaeda through the Lens of Complexity Theory: Recommendations for the National Strategy to Defeat Terrorism*. Research Paper [Internet]. Pennsylvania: US Army War College. Available from: <http://www.carlisle.army.mil/usacsl/Publications/S04-01.pdf> [Accessed 28 May 2005]
- Hauben, M. (n.d.). *Behind the Net – The untold history of the ARPANET*. [Internet]. Columbia, USA.  
Available from: <http://www.dei.isep.ipp.pt/docs/arpa.html> [Accessed 1 June 2005]
- Johnson, S. (2002). *Emergence*. London: Penguin Books
- Medosch, A. (2004). *Society in ad-hoc mode: Decentralised, self-organising, mobile*. [Internet]. Germany: Friefunk.net.  
Available from: <http://www.freifunk.net/wiki/SocietyInAdHocMode> [Accessed 30 May 2005]
- Nunes, M. (2005). *Distributed Terror and the Ordering of Networked Social Space*. [Internet]. Australia: M/C Journal Vol. 7 Iss. 6. Available from: <http://journal.media-culture.org.au/0501/01-nunes.php> [Accessed 28 May 2005]
- Park, J. (n.d.). *Evolving Adaptive Organizations*. [Internet]. UK: LeaderValues website.  
Available from: <http://www.leader-values.com/Content/detail.asp?ContentDetailID=94> [Accessed 28 May 2005]
- Redden, G. (2001). *Networking dissent: the Internet and the anti-globalisation movement*. [Internet]. Queensland Australia: Mots Pluriels No 18 (The University of Western Australia).  
Available from: <http://www.arts.uwa.edu.au/MotsPluriels/MP1801gr.html> [Accessed 30 May 2005]
- Tan, A. (n.d.). *The Emergence of Postmodern Terrorism and Its Implications for Southeast Asia*. Singapore: Institute of Defence and Strategic Studies, Nanyang Technological University. [Internet].  
Available from: [http://www.ntu.edu.sg/idss/Perspective/research\\_050107.htm](http://www.ntu.edu.sg/idss/Perspective/research_050107.htm) [Accessed 30 May 2005]
- Thomas, T. (2003) *Al Qaeda and the Internet: The Danger of "Cyberplanning"*. [Internet]. Pennsylvania: "Parameters" US Army War College Quarterly, Spring 2003.  
Available from: <http://carlisle-www.army.mil/usawc/Parameters/03spring/thomas.htm> [Accessed 1 June 2005]

## Further reading

These are some of the sources that have proved invaluable background reading when researching this essay. Although I have not consciously quoted, paraphrased or summarised any of the texts, they have undoubtedly shaped and informed my understanding of complexity theory which underpins this essay.

- Axelrod, R. and Cohen M.D. (1999). *Harnessing Complexity – Organisational Implications of a Scientific Frontier*. New York: Free Press.
- Cilliers, P. (2001). *Complexity and Postmodernism*. London, Routledge.
- Cohen, J. & Stewart, I (2000). *The Collapse of Chaos*. London, Penguin Books.
- Lewin, R. (2001). *Complexity –Life at the edge of Chaos*. Chicago: Chicago Press.
- Taylor, Mark C. (2003) *The Moment of Complexity – Emerging Network Culture*. Chicago: Chicago Press.