

Networks : the organisational form for the 21st century

Alvin Toffler : The Third Wave

Toffler's thesis in *The Third Wave* is that there have been three great social transformations in human history (enumerated, perhaps unsurprisingly, as the First, Second and Third Waves). These waves mark breakpoints in history; key times of discontinuity that lead to the dawning of new eras.

Prior to the First Wave, human society was structured in its most primitive form. **Small groups** of hunter-gathers co-existed alongside one another. Overall, population numbers were small, groups were little bigger than family sized, and often they were migratory.

The First Wave is marked by the development of agriculture, which allowed the first human settlements to emerge. The first cities appeared in the Ancient Near East and the structure of human society changed. It could now be categorized by **hierarchy**, with a small aristocracy and priesthood ruling over a larger peasant population, although some pre-First Wave societies survived among nomadic and small tribal groups.

Toffler's Second Wave coincides with the Industrial Revolution in Europe in the eighteenth century. Enlightenment thinking encouraged the application of rational principles to human society in an attempt to order it more efficiently. **Bureaucracy** thus became the archetypal organizational principle of the post-Second Wave world.

Toffler argues that the Third Wave has been breaking upon us since the end of the Second World War. Characterized variously as the Information Age, a post-industrial era, or the era of disorganized capitalism, the Third Wave is taking us into a new period in human history. And the organizational form that is best suited to this diverse and complex situation is the **network**.

'Let's do Lunch' : The network as the organization of the future

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The network structure has underpinned a number of successful organizations recently. The International Campaign to Ban Landmines, which along with its co-ordinator Jody Williams was awarded the 1997 Nobel Peace Prize, and the Jubilee 2000 Coalition, which persuaded several governments to write off debts owed by Third World countries, are two such examples. Al-Qaeda is another. All three of these organizations have benefited from a network structure that allows passionate and committed individuals and groups to contribute to a wider purpose (whether for good or ill) with a minimum of co-ordination and administration. Widely seen as an effective antidote to bureaucracy (the corporate equivalent of arthritis), the network has arrived as the organizational structure for a globalizing postmodern world.

But what is so special about a network? Why should it be so appropriate for a complex and diverse time such as ours?

Networks are OK with diversity

The first great strength of networks is that they can cope with variety and complexity. Instead of requiring standard operating principles across an entire organization for the sake of consistency, networks are by nature diverse. In a postmodern context that is suspicious of all attempts to define a norm, this is both welcome and appropriate. Networks contain a variety of organizational forms: they don't do away with them, they just change the context they exist in.

The global anti-capitalist movement is a good example of the kind of network that embraces an array of participating groups and organizations, many of which might in other contexts be opposed to one another. During the protests at the World Trade Organization meetings in Seattle in 1999, environmental groups both small and large (like Greenpeace) combined with anti-capitalist anarchists and blue-collar American unions to effectively hijack the agenda of those meetings. The variety of organizations involved, diverse in size, focus and agenda, did not prevent their effective co-operation towards a mutual goal.

Networks are about connections

Networks can embrace a wide variety of stakeholders, and so they develop a second great strength. Because there is less need to focus attention on making sure that each member or 'node' of the network fits into a coherent predetermined pattern, more time and energy can be spent on the links between these nodes. What matters are the connections; what is connected is much less critical. The key to an effective network is the communication between its various parts, and interaction between groups that are different from each other is a prerequisite for the kind of knowledge creation that is required to thrive in an ever-changing and complex environment.

Paul Revere's midnight dash around the towns and villages of eighteenth-century Massachusetts and his cry 'The British are coming!' is as well known to every American as Churchill's 'We will fight them on the beaches' is to every Briton.¹ Having been alerted to plans by the British to march on the provincial towns of Lexington and Concord, in order to arrest the colonial leaders John Hancock and Samuel Adams and to seize the guns and ammunition stored by the colonial militia in those places, Revere rode through the night to forewarn the local communities. Within five hours, word had reached Andover, forty miles to the west of Boston. By the following day, the colonial militia had assembled at Concord and defeated the British army in a skirmish that marked the start of the American Revolution. What is less well known about these events is that Revere's friend William Dawes undertook a similar ride at the same time, heading in a different direction, and yet few men from the towns he rode through fought at Concord. In *The Tipping Point*, Malcolm Gladwell suggests there was a good reason why Revere succeeded where Dawes failed. Revere was what Gladwell calls a 'connector'. He was gregarious, sociable and active in local politics in Boston. He acted as a link between the various 'committees of correspondence' that sprung up in colonial New England in protest to the 1773 Tea Act (which led directly to the now-famous Boston Tea Party). During his night-time ride, Revere knew whose doors to knock on. Dawes didn't. The linkages and connections made the difference.

Time and again the value of thinking in terms of linkages and connections can be demonstrated (in knowledge creation, in systems thinking, even in the valuing of dot.com businesses). And a network is the best organizational form to ensure that such links are strong and effective.

¹ The fact that we know less about Revere in the UK is probably because most of us tend to focus on the wars that we won!

Networks are adaptable

As well as being able to include an assortment of stakeholders and provide the means for them to link with one another, networks have another advantage in a world of unpredictable change – they are flexible and adaptable. Taken as a whole, and especially if it contains a wide variety of different types of member, a network can adapt to almost any sort of change. It can be likened to a flotilla rather than a supertanker). If it is heading towards rocks in a storm, the supertanker is too cumbersome to turn and avoid the oncoming disaster. Some of the flotilla might also be lost in the same situation, but most will survive. The persistence of the Al-Qaeda network in the face of unrelenting pressure is a case in point.

“[It] is a blueprint of how Bin Laden currently operates, using a loosely tied network of local militant groups that operate with his blessing and support, but which cannot be easily traced directly back to him. It is also this loose structure that makes it so difficult for intelligence and police agencies to disrupt the network.

A former Egyptian militant described the structure of radical Islamic groups as having been modelled after 'a bunch of grapes'. 'Each group operates independently with its members not knowing who the other groups are. That way, if one member of the group is plucked off by police, the other groups remain unaffected,' he said.” (Richard Engel, Inside Al-Qaeda)

On this occasion, we would wish that the organization concerned had not learned to make use of the advantages that a network structure confers. But it serves to illustrate the lesson none the less.

The Internet provides another good example of the flexibility of a network. It was originally created to ensure that US government and military communications could continue in the event of a nuclear attack. Messages are broken down into ‘packets’ and distributed along the communications links that exist and then reconstituted into a single message at the receiver’s end. The efficacy of this system was demonstrated on 11 September 2001 in the aftermath of the terrorist outrages at the World Trade Center in New York. Telephone systems were unable to work (mainly because many of the lines and mobile telephony antennas had been destroyed along with the Twin Towers). But e-mail continued to work, as the communications systems simply worked around the parts of the network that no longer functioned.

So there are three main reasons why networks function so well in a globalizing postmodern world. They can include great variety, they allow a focus on linkages (with all that means for knowledge creation) and they are flexible, able to cope with uncertain and changing conditions. These are all vital features in a context of diverse stakeholders and continual change.

The challenges faced by networks

One weakness of networks is that they are not good at charting a single course. Returning to our earlier nautical analogy, networks are not like single supertankers, nor are they like a military fleet. They are like a flotilla that has agreed to go to a certain place, but not necessarily in the same type of boat, or by going the same route. Networks can include many competing interests, even among those committed to a common cause. One executive of the Swiss/Swedish engineering giant ABB, which has a federal/network structure, commented that “sometimes all you can do is watch the herd, and observe with relief that, in general, they seem to be heading in the right direction”. I was very aware during my time at Global Connections that we had very little power to change what its member organizations did, though we did have a degree of influence which often surprised me and which called for careful judgement.