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7

THE EVOLVING CRAFT OF INTELLIGENCE

Robert David Steele

There is little desire in the developed intelligence nations to see the craft of intelligence evolve in line with the revolutions in information technology and globalisation. Indeed, it can safely be said that most leaders with access to intelligence services do not value them – they are much more influenced by networks of influence and ideology that demands the status quo. Where intelligence is used at all it is generally to confirm pre-existing policy positions rather than what governing elites need to know (Davis 1986; Treverton 1986; Pillar 2011; Garland 2012). Ada Bozeman has written:

> [There is a need] to recognize that just as the essence of knowledge is not as split up into academic disciplines as it is in our academic universe, so can intelligence not be set apart from statecraft and society, or subdivided into elements . . . such as analysis and estimates, counterintelligence, clandestine collection, covert action, and so forth. Rather . . . intelligence is a scheme of things entire.
>
> *(Bozeman 1998: 177)*[1]

What can be observed within both the closed intelligence communities and open academic, civil society, commerce, government at all levels, law enforcement, media, military and non-governmental/non-profit (hereafter the 'eight communities') is a failure to comprehend the shift in the nature and reliability of their unwittingly shared sources and methods; the Earth (reality), and the mix of humanity, culture and technology.

Intelligence – the art of forecasting, warning, and holistic evaluation of cause and effect – has generally focused in the past on the identification and evaluation of grave threats and in supporting the judgement of executive agencies and political leaders with respect to those threats (Iraq and Afghanistan are two such recent incidents, and Iran is likely to become the next incident of its type).

Since 1988 I have sought to generate a paradigmatic shift in the understanding of intelligence to refocus it on holistic analytics and opportunities as well as the expansion of the craft of intelligence to embrace all human minds, all information in all languages, all the time. This approach – which approaches the social world as an ecology – is the only one capable to dealing with the complexity present in a fluid international system typified by revolutions in the production and dissemination of knowledge, and in the character and dynamics of social relations.

The intelligence community (and the accompanying political apparatus) as one of the eight information-processing communities is – as a result of the failure to understand and adapt to these changes – so isolated that on its own terms it has become an irrelevance. More worryingly, it has become an expensive and unethical irrelevance that is undermining the craft of intelligence as a whole. I wish to restore the relevance of what I term the secret world – in the US it now provides less than 4 per cent of what national-level leaders need – but only in the context of a renaissance of intelligence that creates a *Smart Nation* and a *World Brain* focused on creating a prosperous world at peace by eradicating corruption, fraud, waste and abuse.[2]

Intelligence should be an inherent responsibility of and benefit for all citizens, not just of leaders – 80 per cent of whom do not get intelligence support now.[3] We must migrate from secrets for the few to public intelligence for all.

Intelligence is decision support

What I present here represents the shift in my own scholarly focus from one that centred on a traditional perspective of nationally bounded intelligence activity to one in which the world's population is taken as one informational ecology. Thus the craft of intelligence presented here is not for the benefit of one set of government actors, but is one which seeks to bring coherence within, between, and among the 'eight communities'.

While it might be desirable to include several pages of definition here, I will simply point out a distinction between *data* (any raw single piece of information), *information* (integrated data with a narrative, generic in nature) and *intelligence* (both a process,[4] and a tailored answer to a given question – *decision support*). *Intelligence is defined by the outputs, not the inputs.*

In other words, data need to be separated from noise and collated to create information, from which intelligence directly responsive to a need can be created. *Information is the input, intelligence is the output.*

The process of intelligence is a good one that should be understood, valued and practised by every citizen and demanded of every 'leader'. Secret collection that is not processed is a symptom of failure, as is the neglect of open sources in 183 languages we do not speak (Olcott 2012). The cost to us – in tolerating local to global decision-making and investment that is at best incompetent and at worst a betrayal of the public trust – is now potentially catastrophic (Perrow 2011). What we do to ourselves every day out of ignorance is vastly more threatening than any possible combination of external threats being realised.

Past critiques of the secret world that remain valid today are represented in one paragraph from a senior serving officer that bears on this chapter:[5]

> The intelligence institutions have neglected support of judgment. This is partly due to being disinvited to help shape the sovereign's judgment, but also partly due to mistaking who the sovereign has become. The people's judgment is now being poisoned by ideologues who have filled the void. The situation is not honestly and soberly appreciated. Societal sense-making suffers due to the failure of the intelligence function and the craft to support it.

Three eras of intelligence

The craft of intelligence has gone through two eras and is now entering a third new era. The first era, running from the first days of recorded history and still to date, is the era of secret war, surreptitious entry and theft, and bribery to achieve ends inconsistent with those of the host country

or target organisation. In this tradition, intelligence is generally the province of governments, mixing dark side diplomacy and military spies, augmented by a separate track of agricultural and industrial espionage and bribery among multinational banks and corporations for whom practices that verge on the sharp and questionably ethical are a means towards illicit profit.[6] This remains – and wrongly so – the public perception of what 'intelligence' is and should be.

The second era of intelligence, at least among the prominent Western nations and the US in particular, was defined by Sherman Kent with his emphasis on strategic analytics (Kent 1949) but was immediately diminished by the unchecked expansion of clandestine and covert action operations, something never intended by President Harry Truman when he first authorised the Central Intelligence Agency (CIA) (Truman 1963).

The second era of intelligence also saw the emergence of very large commercial educational research programmes as well as government and commercial research programmes; and also business intelligence (data-mining dashboards), competitive intelligence (narrow), and commercial intelligence (e.g. 360°). All of these failed to share data or evolve together. A modest literature on how the academy has failed to maintain its position as providing critical thinking skills to generations of students and in diminishing its place in providing original thought to the narrow and short-term ends of commercial and government contracts exists, as does a varied literature on bespoke research for the marketplace.

The second era also ushered in the use of technology, with collection displacing analysis. Coupled with the lack of outreach and the narrowness of external research efforts, the second era has failed to understand the world, including cause and effect. Ignorance has been the result.

The third era: collective intelligence

The third era is the era of the Smart Nation leading towards the World Brain and Global Game (the first is the content, the second the method), focusing on uniting the 'eight communities' of intelligence, creating a Multinational, Multiagency, Multidisciplinary, Multidomain Information-Sharing and Sense-Making (M4IS2) network with call centre nodes in each region, and ideally underpinning that with either an Open Source Agency under diplomatic auspices in the US, or a privately funded venture that upholds stated principles of integrity such as my mooted 'Virgin Truth'.[7]

Collective intelligence is in its infancy. The craft of intelligence must – will – eventually turn every citizen into a collector, producer and consumer of intelligence (decision-support) in a pervasive manner not yet accepted by governments or corporations. Intelligence – decision-support – is an inherent responsibility of every citizen who wishes to foster democratic government, just society and moral commerce.

The changing dynamics between the first two eras and the third are illustrated in Figure 7.1.

Context for old versus indigenous/new intelligence

Corruption, market distortions and crime – especially financial crime – are 'sand in the gears' of any economy or society. Intelligence – when properly led – is the lubricant of progress and of empowering the majority in society to drive individual and then economic growth. A reworked understanding of intelligence can use 'truth' as a lever and 'trust' as a source of intangible wealth. This is the diametric opposite of the prevailing culture of intelligence, which permits the hijacking of national and business power by selfish individuals. But to bolster this aspirational larger end, of a global open source intelligence, the secret intelligence capacity of all nations should be

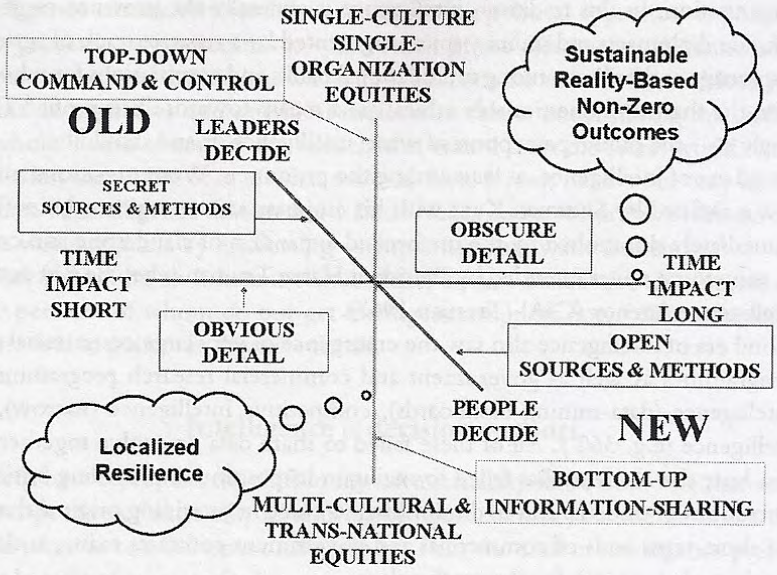


Figure 7.1 Changing dynamics

deployed as counterintelligence to protect the whole from internal corruption. With the one exception of counterintelligence, the third era is the era of 'Open Everything', emphasising transparency and truth so as to provide decision-support to everyone from the citizen to the executive, building trust along the way. Vital to all of this is holistic analytics.

Figure 7.2 provides a visualisation of where we have been and where we might go if we wish to respect reality – the top ten high-level threats to humanity – while also rapidly evolving our sources and methods to the fullest possible extent so as to serve all of humanity.

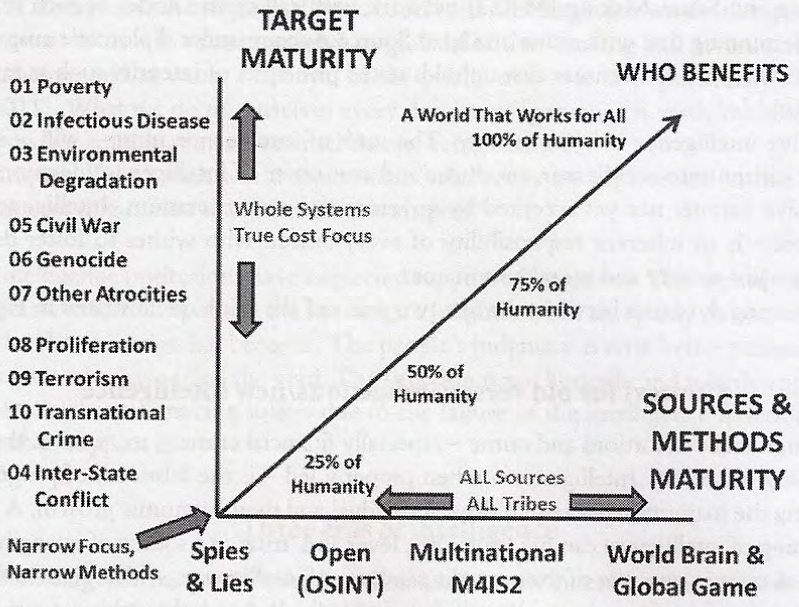


Figure 7.2 The craft of intelligence, from infancy to maturity

The ten high-level threats to humanity as depicted in Figure 7.2 are as identified and prioritised by Lt Gen Dr Brent Scowcroft, USAF (Ret.) and other members of the United Nations High Level Panel on Threats, Challenge, and Change (United Nations 2004).[8]

Poverty appears to do more damage to local, national and global security in terms of survival and sustainability than all of the corporations put together – or the proliferating nations. The conventionally ignored five billion poor are also an infinite resource for changing how we do things, for creating infinite wealth with their most precious resource: their brains, knowledge and skill-sets human brain (Prahalad 2009).

Infectious disease and environmental degradation (including climate change), threats two and three respectively, are absolutes. Today's elite appear to have forgotten the lesson learned by the elite in New York City in the 1920s, when public health for the poor was established precisely because infectious disease takes the rich as easily as it does the poor.

There are (at least) 12 core policy areas where the information must be shared and made sense of across all boundaries. These are:

1. agriculture
2. diplomacy
3. economy
4. education
5. energy
6. family
7. health
8. immigration
9. justice
10. security
11. society
12. water.

Combining these with the ten high-level threats results in a Strategic Analytic Model (EIN 2006) that frames the ten high-level threats across the vertical axis, and the twelve core policies across the horizontal axis, deepening the model by focusing particularly on the eight demographic challengers that are defining the future of Earth: Brazil, China, India, Indonesia, Iran, Russia, Venezuela, and 'wild cards' such as Congo, Nigeria and Turkey.

The two dots in the figure, red when depicted in colour, show where the secret world continues to focus: interstate conflict and terrorism. All others (across the 'eight communities') tend to focus on one issue area in isolation or provide piecemeal linkages between issues. Except for myself, no one I know of is devising a comprehensive architecture for doing holistic reflexive analytics or focusing on doing the right thing instead of the wrong thing righter (Fuller 1969; Ackoff 2004; Myers 2010).

This is a sense-making model for local to global multinational information-sharing and sense-making. This is a model that seeks to unify the 'eight communities' and what should be, but is not – a robust national, regional and global information commons. Only a global network – a near-real-time global network, will do. As David Weinberger puts it, in a room full of experts the only true expert is the room itself (Weinberger 2012). It is the network, the World Brain and Global Game connecting all minds to all relevant information – the 'whole' – that is smart, not the nodes.

In reflecting on 'whither [conventional] intelligence', it is helpful to contemplate the purpose of government and the role that intelligence could or should play in achieving that role.

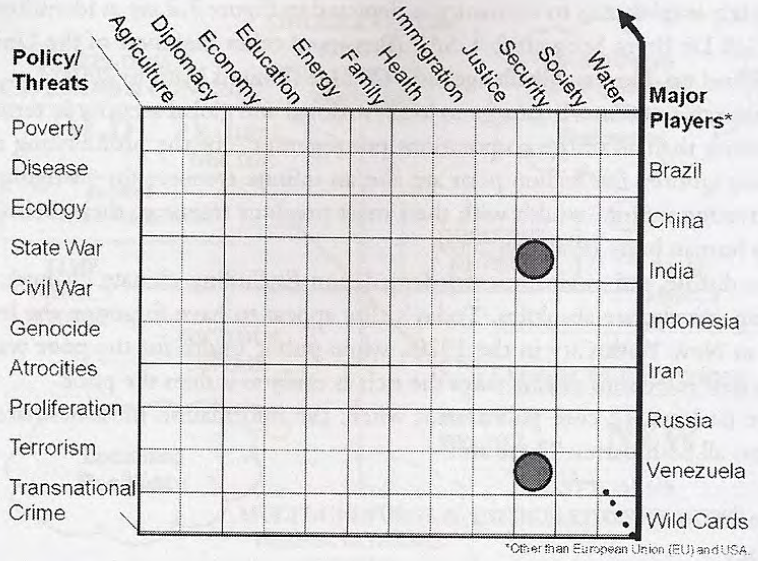


Figure 7.3 Strategic analytic model

The Preamble of the US Constitution is a generic model:

> We the People of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.

Two of these four goals (establish justice, secure the blessing of liberty) should be considered to be counterintelligence challenges. Corruption in all its forms is a major target for the new global form of intelligence outlined here. The other two (domestic tranquillity, promote the general welfare) are intelligence/decision-support challenges that are best served by open sources and methods. In all four areas, *domestic* enemies are central actors (North 2012; Taibbi 2010).

Most governments, less Iceland specifically and the Nordics generally, are not actually working in the best interests of the 99 per cent – their larger publics. Western governments have been captured by banks and corporations (Taibbi 2010).

Information costs money, intelligence *makes* money

I first recognised the market distortions inherent in the information industry in the 1990s, when I understood that the emphasis was misplaced – on selling and buying massive amounts of information without being able to make sense of it, never offering a precise answer for a precise price.

At the same time, I began to recognise the fragmentation of knowledge and the fragmentation of the marketplace of knowledge. Below, in Figure 7.4, is my first attempt to get a grip on the generic structure of knowledge that must be integrated.

In Figure 7.5 is another depiction of the information topography; various communities continue to resist maturation towards holistic information ingestion and exploitation culminating in organisational intelligence.

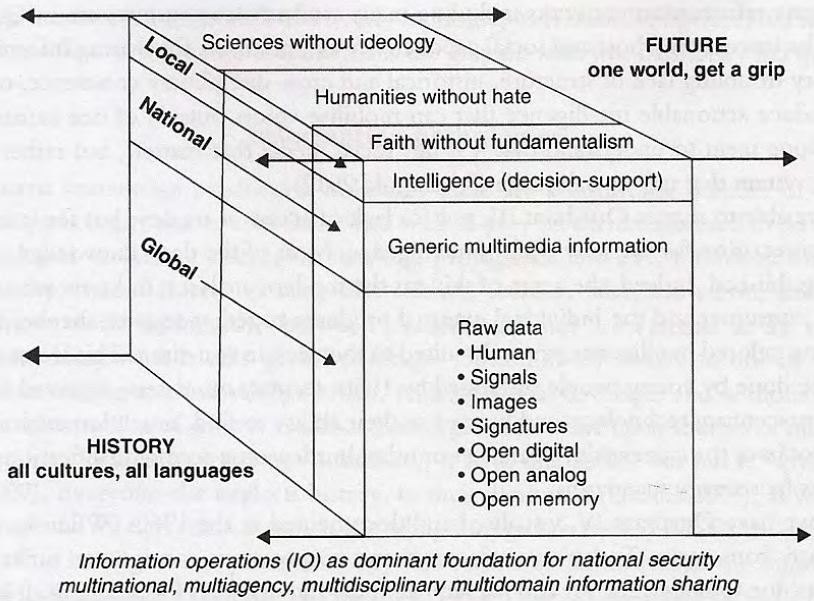


Figure 7.4 Information cube

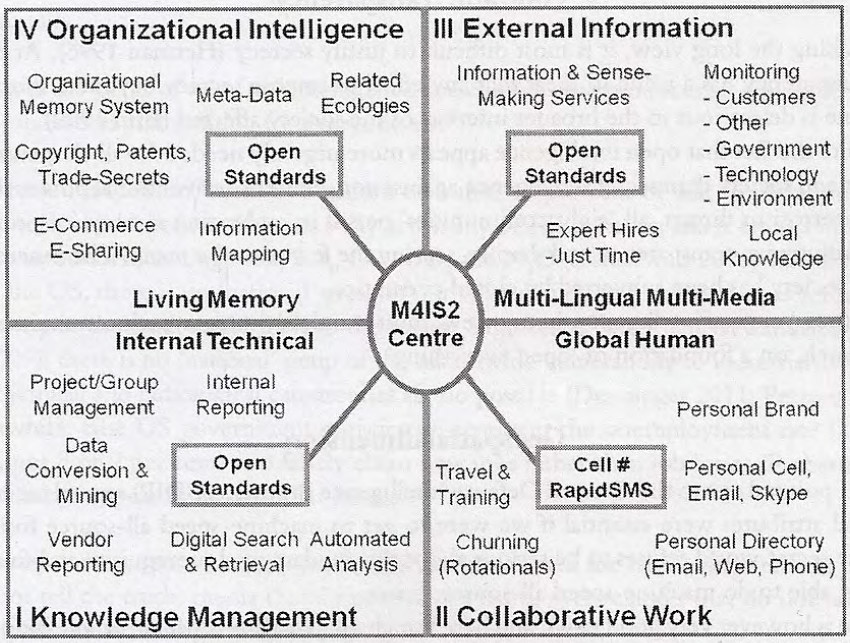


Figure 7.5 Four quadrants of information to intelligence

Most of the world, including most of the major governments and corporations, are in Quadrant I, leveraging current internal knowledge (but forgetting much of what they know from year to year). A major impediment to maturing on the information side is the continued retardation of the inherently closed, selfish, and often dangerously insecure and misleading information technology (IT) marketplace.

Emerging information networks including many civil advocacy groups are in Quadrant II, utilising the internet as a host and social productivity as a mind-set for sharing information, but with a very troubling lack of structure, historical and cross-disciplinary coherence, or the ability to produce actionable intelligence that can mobilise voices outside of one isolated issue at a time. None seem to understand that it is not social media that matters, but rather the social operating system that uses social media (Rheingold 2012).

Few are able to master Quadrant III, not for lack of access or money, but for lack of mind-set and appreciation for the new craft of intelligence. Most of the deep knowledge needed has not been published. Indeed, the acme of skill for the modern analyst is to know who knows, to bring the consumer and the individual external producer together so as to shepherd the creation of new tailored intelligence precisely suited to the need in real-time. This is not something that can be done by young people oppressed by 1950s security mind-sets, deprived of access to twenty-first-century technology and limited in their ability to find, much less exploit, humans who do not have the citizenship, clearances or other burdensome access 'qualifications' imposed on analysts by security mandarins.

Then we have Quadrant IV, visualised and documented in the 1960s (Wilensky 1967) and never heard from again. Today's governments and corporations continue to suffer from lost knowledge due to high turnover and inadequate tools and practices for retaining all knowledge once acquired.

Time and transparency

When taking the long view, it is most difficult to justify secrecy (Herman 1996). At the same time transparency has a value so great that any effort to impose secrecy beyond a short tactical timeframe is deleterious to the broader interests of the society affected (Brin 1999).

Despite the fact that open intelligence appears more urgently needed for all elements of government and society than secret intelligence against non-existent conventional power threats or dubious terrorism threats, all 'eight communities' persist in embracing secrecy (or proprietary) and hoarding over transparency and sharing, serving the few over the many. The inherent good in open society has been subverted by closed corruption.

The (new) craft of intelligence, in my view, must seamlessly integrate education, intelligence and research, on a foundation of 'open everything'.

Geospatial dimension

In 1988 I pointed out to the General Defense Intelligence Program (GDIP) annual meeting that geospatial attributes were essential if we were to get to machine-speed all-source fusion. Still today the secret world refuses to be serious about this fundamental prerequisite and foundation for being able to do machine-speed all-source fusion.

There is however very good news, and here I single out Dr Patrick Meier, whose blog *iRevolution* provides regular updates about the intersection of geospatial information, open source software and crowdsourcing: where diasporas not only plot events and observations on a digital map, but also translate short message service (SMS) texts from 183 languages into English.

Human dimension

Human intelligence is central to the craft of intelligence – technology is not a substitute for thinking – to which I would add James Bamford's point that no one has yet built a computer

equal to the human brain (Bamford 2001). My monograph, *Human Intelligence: All Humans, All Minds, All the Time*, is easily found online, as is the graphic with Jim Bamford's full quote.[9]

Information pathologies

Across current knowledge production industries there are a disturbing number of persistent information pathologies that enable those who wish to prey on the uninformed to do so at will. Such pathologies include: a culture of cheating, propaganda and PR, forbidden knowledge, missing history, manufactured consent, false science, secrecy, false instruction, and outright lies. The secret world distinguishes between 'denied areas' and 'hard targets' at the same time that it rejects doing what it calls 'global coverage' (Sutton 2006). What no one in the secret world appears willing to acknowledge is that, without global coverage, and without a full and complete understanding of what is available from legal and ethical open sources of information (including direct local knowledge not published), it is, as one author has put it, 'spying blind' (Zegart 2007). Everyone else neglects history, to their detriment (Gaddis 2004), as well as foreign language and foreign cultural studies including foreign literature (Hill 2011; Olcott 2012).

The craft of intelligence as practised today also refuses to acknowledge the importance of steady-state and 'true cost' economics (Daly 1991, 1993, 1994, 2010), called by some the triple-bottom line (ecological and social as well as financial costs). As the world begins to recognise that, beyond peak oil we face peak water, that chlorine and other toxins are externalised costs that cause current illness while imposing future social and ecological costs on future generations, one has to ask:

> What is the point of a 'secret' intelligence community that produces so very little for the top leaders and nothing for everyone else?

A single cotton undershirt 'costs' 570 gallons of water, 45 per cent of that in irrigation; 11–29 gallons of fuel; child labour at 50 cents a day across any of 17 countries; and it emits a number of volatile compounds including Nox, SO_2, CO, CO_2 and N_2O (Liszkiewicz 2010). Within a single country, the US, there is no 'national' grasp of our vulnerability to breaking levees across nearly every county in the land, many built to the lowest engineering and financial standards possible (Boyd 2009); there is no 'national' grasp of the nationwide vulnerability to industrial-based biological, chemical and radiological catastrophes all too possible (Denninger 2011; Perrow 2011).

Meanwhile, false US government statistics misrepresent the unemployment rate (it is 22.4 per cent, not 8 or 9 per cent) and falsely claim new jobs rather than job losses (Roberts 2012). Other countries appear to have similar issues:

> How is one to cope with a government that does not tell the truth, corporations that do not tell the truth, media that do not tell the truth, even schools that do not teach the truth nor how to grasp the truth?

This is the challenge of our times, and this is the challenge towards which I seek to direct the craft of intelligence in the twenty-first century.

What is to be done?

With that exception of robust counterintelligence against domestic threats, I champion 'Open Source Everything'. Figure 7.6 illustrates both our challenge and our objective.

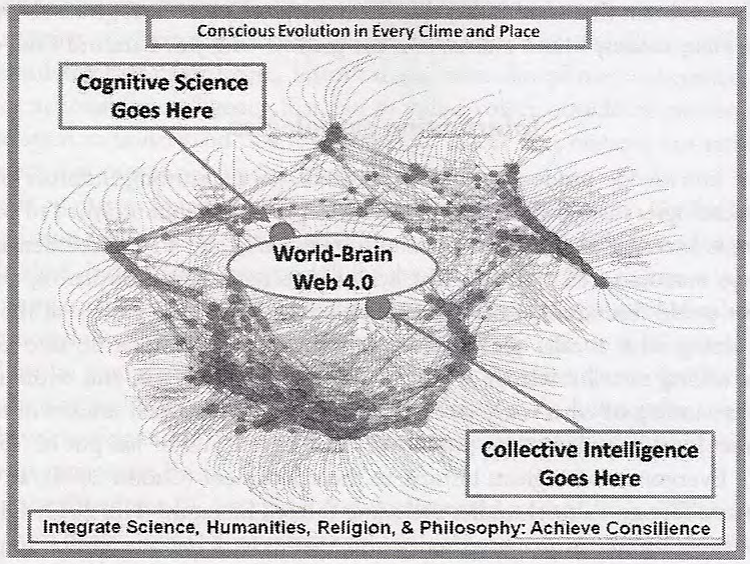


Figure 7.6 Towards the unity of knowledge

Figure 7.6 depicts the fragmentation of academic disciplines and sub-disciplines.[10] Similar divisions also characterise the other seven communities of information and intelligence. The developed world has achieved a modern variant of the proverbial Tower of Babel, creating a system that seems incapable of holistic coherent sustainable analytics!

If we cannot create a craft of public intelligence that achieves both intercommunity and multinational information-sharing and sense-making, then the ethical and environmental challenges we face as a species may well overwhelm us. There must be a 'priority of effort' towards first creating an 'autonomous internet' (one that cannot be shut down by any government or corporation) that delivers the 'six bubbles' shown in Figure 7.7 to the affluent one billion; and then is rapidly expanded towards embracing and empowering the five billion poor with free cellphones and cellphone service for at least three years, along with access to multilingual call centres that educate each poor person – many illiterate but not stupid – 'one cell call at a time'.[11]

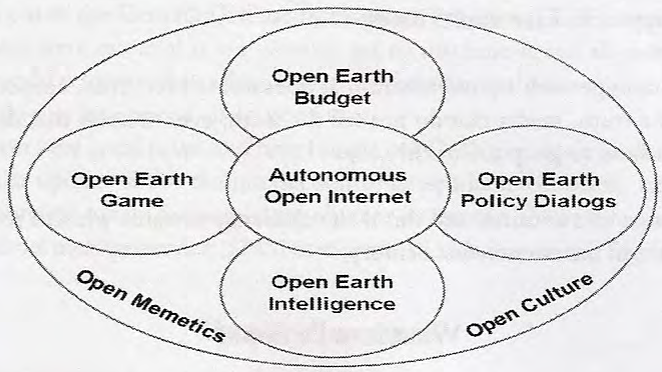


Figure 7.7 Autonomous internet

Figure 7.8 shows my comprehensive architecture for connecting all humans to all information in a manner that produces pervasive intelligence for all.

It is not possible here to address the emerging disciplines of cognitive science and collective intelligence; both are severely constrained by the generally isolated and insular nature of each of the 'eight communities', but some intellectual progress is being made (Atlee 2002, 2009, 2012; Tovey 2008).

The two preceding objectives cannot be accomplished without a radical change in how we conceptualise and implement security within networks.[12] To be scalable at an affordable price, and to avoid the pathologies associated with proprietary software and hardware, the craft of intelligence must demand and embrace an 'open source everything' approach as illustrated in Figure 7.9. Robert Garigue's lasting contribution to this field is this: security is about creating and maintaining trust among individuals.[13]

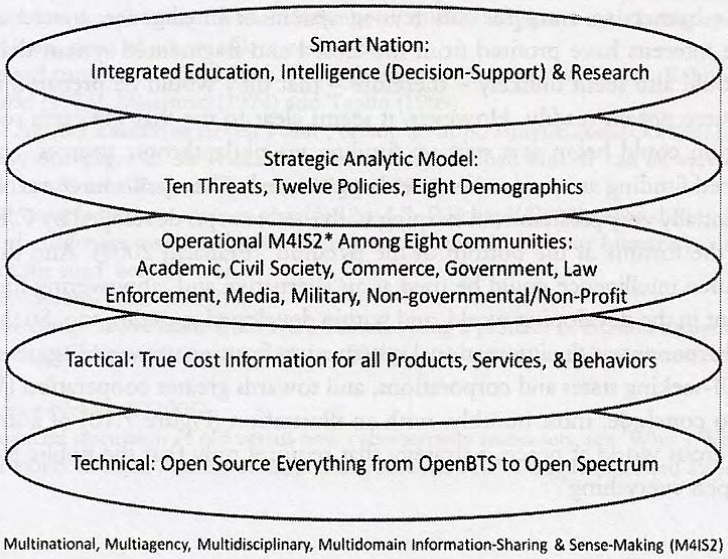


Figure 7.8 Comprehensive architecture for global intelligence

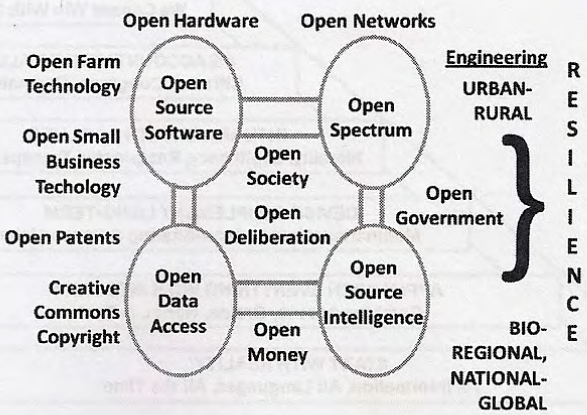


Figure 7.9 Open source everything and the autonomous internet

We all need to discuss the open source everything approach, and the transparency, truth and trust that it seeks to foster worldwide, at every level from neighbourhood to regional water authorities and more, elsewhere – this is particularly so with respect to shared information and the shared burden of sense-making from local to global (Olcott 2012). No other approach is affordable and therefore scalable. No other approach yields a good outcome.

There is so much more to be integrated into the craft of intelligence as we go forward together, but it is important to bring this chapter to a close and do so with one word and one final graphic.

The word is INTEGRITY. We have lost our integrity across all 'eight communities', and become cheating cultures with little accountability within governments, banks, corporations, even universities, trades unions and religions. If we can share one word as an operational principle going forward, that word is INTEGRITY.

A reworked understanding of intelligence that is based on open everything, an open source principle that is premised on transparency, integrity and global commons. There are clearly considerable barriers to entry for this revised system of intelligence: vested commercial and intelligence interests have profited from the closed and fragmented system that is currently in place. It would also seem unlikely – therefore – that they would be prepared to step aside for an open source system readily. However, it seems clear to me that the open source everything transformation could begin as a start-up funding via philanthropic sources, and then take on crowdsourced funding as its value became demonstrated. The open source revolution described here is potentially very profitable, in keeping with the concepts developed by C.K. Prahalad with respect to 'the fortune at the bottom of the pyramid' (Prahalad 2009). And thus the principle of open source intelligence could be used as an alternative and empowering form of economic development in the developing world, and within developed societies, too. Such a system would also radically reorientate the international system away from a narrow and aggressive competition between self-seeking states and corporations, and towards greater cooperation (Wright 2001).

I wish to conclude, most humbly, with an illustration (Figure 7.10) of a strategy for creating a prosperous world at peace, a strategy that requires only that the public pay attention and demand 'open everything'.

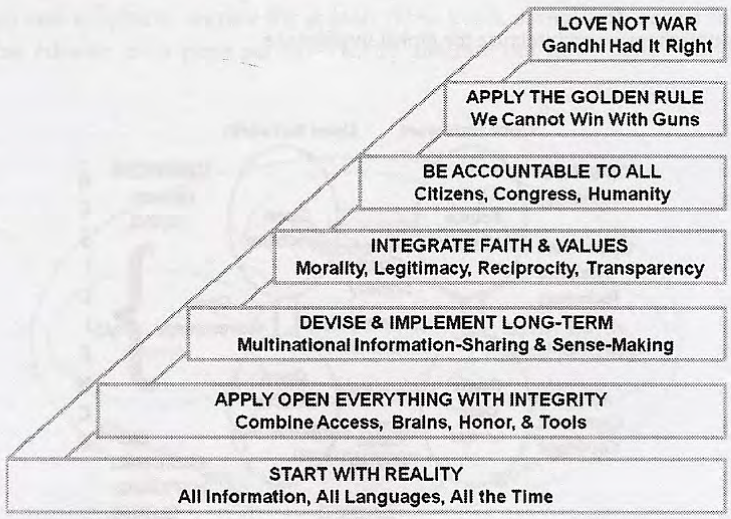
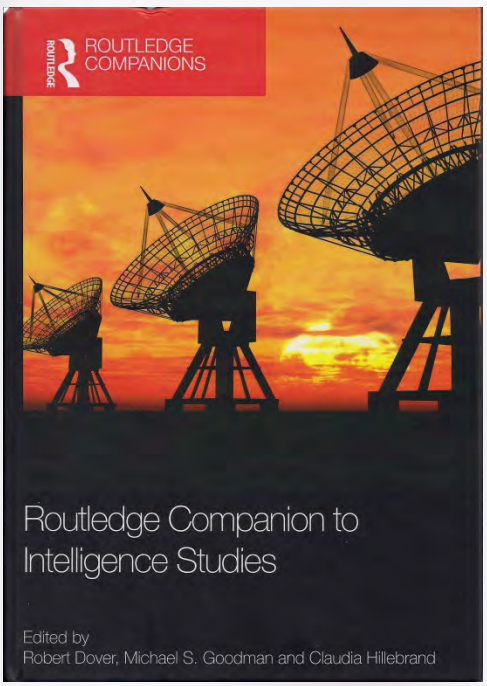


Figure 7.10 Strategy for creating a prosperous world at peace

Notes

1 See also Wilson (1999) and Weinberger (2012).
2 General Tony Zinni is cited with respect to 4 per cent, in my chapter on 'Open Source Intelligence' in Loch Johnson (ed.) *Strategic Intelligence* (Vol. 2, Ch. 6), Santa Barbara, CA: Praeger: 95–122
3 The secret world is focused on 'hard targets' (a very few) instead of 'global coverage' (everything always), and also focused on impressing the top political leader(s) rather than providing balanced support to all elements of the government or to society at larger. Cf. 'Intelligence for the President – and Everyone Else', *Counterpunch*, Weekend Edition, 29 February–2 March 2009.
4 Requirements definition, collection management, source discovery and validation, multisource fusion with machine and human processing, machine and human analytics, and timely actionable presentation to a decision-maker in a form that is useful and portable.
5 Anonymous. A still valid statement from the 1990s, by Ellen Seidman, then Special Assistant to the President on the National Economic Council (Steele 2002: 124): *CIA reports only focus on foreign economic conditions. They don't do domestic economic conditions and so I cannot get a strategic analysis that compares and contrasts strengths and weaknesses of the industries I am responsible for. On the other hand, Treasury, Commerce, and the Fed are terrible at the business of intelligence – they don't know how to produce intelligence.*
Ralph Peters has described to me the challenge of 10,000 elephants each being examined by a 100,000 blind men, none of whom talk to each other.
6 See http://tinyurl.com/Steele-Craft-Refs. Relevant here are Esiemokhai (2011), Kahn (2001), Marchetti and Marks (1974), Mitelman (1974) and Taplin (1989).
7 'Open Source Agency Executive Access Point', online at: http://tinyurl.com/OSA2011 (accessed 19 June 2013). My one-pager to Sir Richard Branson never reached him. It can be viewed online at: http://tinyurl.com/Steele4Branson (accessed 19 June 2013).
8 An earlier and complementary view is provided by J.F. Rischard (2003), who distinguishes among three groups of challenges associated with sharing our planet, sharing our humanity, and devising a shared 'rules of the road' helpful to all.
9 See http://tinyurl.com/NSA-BRAIN.
10 The foundation image above came from Dick Klavans, long a pioneer of citation analytics, and more recently a founder of Maps of Science (cf. Maps of Science at http:mapsofscience.com; see also Wilson (1999).
11 Earth Intelligence Network (2006).
12 For a more nuanced discussion of old versus new cybersecurity mind-sets, see 'Who's Who in Cyber-Intelligence: Robert Garigue', online at: http://tinyurl.com/RIP-Garigue (accessed 19 June 2013).
13 Ibid.



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