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THE FISSION OF POWER

FLEX AND FLUX IN AN AGE OF FRAGMENTATION

THE HAGUE CENTRE FOR STRATEGIC STUDIES AND TNO





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TNO and The Hague Centre for Strategic Studies (HCSS) program Strategy & Change analyzes global trends in a dynamic world affecting the foundations of our security, welfare, and well-being.

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INTRODUCTION

Something's afoot with power. Various practitioners and scholars in different walks of life and disciplines are describing what they see as profound changes in the most fundamental aspects of power: who has it, how it is wielded and what is the outcome of the interactions between different actors exercising power in different ways? Their narratives differ. But all of them describe a power shift from one set of actors or one type of power to another. But is that really what is going on? And how can today's institutions, enterprises, and organizations adapt to this new power environment?

The main insight of this paper is that power is becoming more widely distributed, more accessible, and more evanescent — but without losing amplitude. At first glance, this is merely a matter of fragmentation — that is, institutions, whether they are bureaucracies, established networks or in other shapes, are fraying at the seams or even falling apart, and sometimes are reassembled in different forms giving rise to new power configurations.

As a result, actors of all kinds must be more 'flexible under flux': they must take on a more agile and networked approach to implementing their decisions, prepare for change, and engage in more iterative and experimentalist forms of decision-making. All of this begs the question: when and how can it be harnessed to one's advantage, and what are some of the preferred strategies? These and other issues are explored in this paper focusing on a number of substantive areas: Politics; Defense and Security; Development; Energy; and IT and Communication.

PIECING TOGETHER FRAGMENTED OBSERVATIONS

A number of seemingly disconnected observers across a range of disciplines all notice changes in the nature of power. Some analysts of domestic politics across the globe point to fundamental challenges to the

entrenched institutions of the nation state in many leading democracies.¹ Others see a power shift away from established political parties to civil society, ad hoc forums, and social media.² They note the rise in identity politics, with people defining their allegiances along multiple associations. Some international relations specialists point to a seemingly unavoidable redistribution of power away from the leading powers in the North and West to new contenders in the South and the East.³ They anticipate a new ‘dog eat dog’ world, in which the dogs have changed but the eating game has not. Among defense and security specialists, there has been continuous acknowledgement of fragmentation, except that solutions are hard to be found, let alone implemented.⁴ Domestically, different security services struggle to cooperate when it comes to dealing with new threats such as home-grown jihadism, while internationally, the EU is not getting its act together or defense industries remain doggedly national in their outlooks. Some economists highlight the changing nature of international development. Previously characterized by one-way donations by rich states for ideological or moral reasons, development aid has evolved into a complex network of exchanges between states at all levels of development and a variety of non-state actors too. Other economists focus on ever more powerful disruptive forces in many key sectors of the economy such as ICT or energy that are transforming market dynamics. Within ICT, concerns abound about how disruptive technologies can undermine a single internet governance structure, while the impact of cyber technologies on the cohesiveness of societies is a decidedly mixed bag.

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- 1 See for instance, Francis Fukuyama's *Political Order and Political Decay* (New York: Farrar, Strauss and Giroux, 2014); and David Runciman, *The Confidence Trap: A History of Democracy in Crisis from World War I to the Present* (Princeton: Princeton University Press, 2014)
 - 2 See e.g. Manuel Castells, *The Power of Identity: The Information Age: Economy, Society, and Culture Volume II* (London, Wiley-Blackwell, 2009); Clay Shirky “The Political Power of Social Media: Technology, the Public Sphere, and Political Change”, *Foreign Affairs* (January-February 2011)
 - 3 See e.g. Kishore Mabubani, *The New Asian Hemisphere: The irresistible Shift of Global Power to the East* (New York: Public Affairs, 2009); Fareed Zakaria, *The Post-American World: Release 2.0* (New York: W.W. Norton 2012). See also Ian Morris' suggestive book title, *Why the West Rules...for Now*. (New York: Picador, 2011)
 - 4 See e.g. “The Future of European Defence: Tackling the Productivity Challenge”, McKinsey &Co, 2013; “European Defense Trends 2012 budgets, regulatory frameworks, and the industrial base” CSIS, Washington DC, 2012

All of these different — and often contradictory — narratives exhibit some observable trends in the world around us can be translated into convenient storylines that can be interpreted in myriad ways. What we want to do in this paper is to explore whether there may be a common thread that runs through many of these narratives. We seek a ‘higher’ metanarrative that can bring some of these different strands of thinking together that may come closer to capturing the realities of the complex world that we live in.

THE FISSION OF POWER

We see three shared trends across many of the apparently divergent narratives in these fields. These trends suggest that what is going on is more than just a shift or realignment of power, but constitutes a fundamental change in the very nature of agency and of power.

The first trend is a proliferation of the number of relevant actors. World politics used to be dominated by a small number of great powers or ‘poles’, all of them state actors. Today, not only do we have more states that are playing their part in global affairs, but we also have an increasing number of non-state actors that have come to influence discourse and action in the international arena.⁵ As it is, even the distinction between state and non-state actors is becoming blurred. An organization like ISIS is attempting to transform itself into a state actor, and in some ways already exercises typical state functions such as policing the streets and paying wages to administrative staff.⁶ More importantly, the way in which such new agents exercise power and the way that they can exert have also helped to change our world. The result is that we live in something one could characterize as a post-polar world. This world still has clusters of traditional agents whose interest may at certain times align on certain issues but their structural role in the system is decidedly diminished due to the presence of many new and rapidly emerging actors and because of quickly shifting international allegiances.

5 For an analysis of non-state actors and their impact, see the chapter “State and Non-State Actors: Beyond the Dichotomy” in *HCSS Strategic Monitor 2014: Four Strategic Challenges* (The Hague, 2014), pp. 139-62

6 Sarah Birke, “How ISIS Rules” *The New York Review of Books*, February 5, 2015, at <http://www.nybooks.com/articles/archives/2015/feb/05/how-isis-rules/?insrc=whc>

The second trend is that the distribution and channels of power are changing. Until recently, there were more-or-less fixed channels through which power was exercised and distributed. This could be through diplomacy (speech), trade (services and commodities) or formal commitments (treaties). Today, power is exercised in many additional ways, be it through civil society interaction, international courts or, of course, the internet.⁷ On all of these channels, state agents can exercise more or less control — but in any event they have less control than they have over the more ‘traditional’ channels. The result is that the structures in which power is exercised also undergo change: from hierarchical orders towards networked, multi-level orders.

Finally, power as such is also changing. In essence, power is the ability to influence actors and outcomes by way of means that are at one’s disposal. For instance, military power (i.e. hardware such as guns and tanks) can be used for coercive or deterrence purposes. Economic power (sanctions, blockades, currency devaluations) can be used to similar purposes. Today, however, there are other forms of power around that have gained serious traction, for instance that of legal or moral persuasion (soft power), or the power to access, control, or simply block information in cyberspace. What is more, power is ‘fungible’, i.e. it can be transformed into different forms similar to currencies.⁸ For instance, the exercise of military power does not necessarily need to be answered by military power, enabling ‘hybrid warfare’. Another would be that one actor could enable another by providing access to critical information that can subsequently be converted into a form of hard power, say when military technology is being transferred.

The result of this all is that more actors have more means of power available to them, and more channels through which to exercise this power. This is partly due to the fact that the old Westphalian order has been defective on several counts and in several places, witness the post-Cold War conflicts in Europe and Africa, and currently in the Middle East. But the causality also runs in the opposite direction in that new means in new hands provide new

7 See e.g. Anne-Marie Slaughter, *The New World Order* (Princeton: Princeton University Press, 2004)

8 Robert O. Keohane and Joseph S. Nye, *Power and Interdependence* (New York: Little, Brown, 1977)

actors with opportunities to challenge existing institutional power structures, and — importantly — to create new complementing or superseding structures.

THE SHIFT TO FLUX

'Flux' is the idea that captures all of these different storylines, triggering a highly dynamic and profoundly disorienting reconfiguration of all of the basic aspects of power. This reconfiguration does not necessarily lend itself to the still quite two-dimensional vocabulary that social scientists have borrowed from 19th century physics with concepts like 'poles' and 'pivots' or linear power shifts ("power moves from a to b"). Instead, we might be better served by thinking about today's international world in the vocabulary of 21st century network or complexity science with terms such as nudging, attracting and persuading.

Flux marks a change in the nature of power from brawn to brains, from atoms to bits, from human to robots — and generally speaking to more distributed, networked forms of agency. This poses some fundamental challenges to everything we do as public or private purposive actors. This short study will survey some of the fundamental changes that are occurring in different walks of life; will tease out some of the implications and will conclude with some recommendations. The main argument will be that if organizations want to flex their muscles under flux, they will have to be willing to become much more flexible agents.

1 FRAGMENTED POLITICS

The idea that the fall of the Berlin Wall meant the end of history and the rapid emergence of a world that was uniformly converging towards liberal democracy has proved to be tragically mistaken. A worldwide economic boom in the 1990s could not prevent fissures from emerging, and burst into full view on September 11, 2001. In the global political arena, the events of 9/11 unmistakably defined the decade thereafter and its effects reverberate until the present day. As the FT columnist Philip Stephens wrote, “[t]he founding assumption of the post cold war settlement was that global economic integration would drive closer political cohesion. In today’s post, post cold war order, economic and political nationalism are marching together in the opposite direction.”⁹

Despite the emergence of a ‘multipolar’ world order seen by several international relations theorists as an inherently less stable system¹⁰, the theorized consequences of a ‘shift in power to more states’ have not occurred. The reason is because what has happened is not shift but flux: power has not been transferred; it has been transformed.

DISSONANT DEMOI AND ALTERNATIVE AGENTS

The globalization of culture has several vivid examples, from the universal recognition of the golden arches of McDonald’s to the mass appeal of the Korean music video Gangnam Style, which has been viewed over two billion times. Yet equally vivid examples of cultural and ideological fragmentation are also present. People’s preferences are diverging.

9 Philip Stephens, “Fragmentation’ and ‘Identity’ are Reshaping the World” *Financial Times*, December 18, 2014

10 Kenneth N. Waltz, *Theory of International Politics* (New York: McGraw Hill, 1979) and John Mearsheimer, *The Tragedy of Great Power Politics* (New York, W.W. Norton, 2001)

Attempts at ‘nation building’, crafting or consolidating ‘national identity’ are proving increasingly difficult. The result is that politics and policies which make use of broad, one-size-fits-all generalizations and narratives are no longer helpful. Instead, social and political analysis must take into account diversity and tribalism. Democratic systems which used to gain their legitimacy from the cohesion and solidarity of a ‘demos’ must now govern more flexibly and devolve more power. Three main waves of social and political fragmentation have contributed to this situation. This section discusses each briefly.

NEW SOCIAL MOVEMENTS

Following the Second World War, which was marked by national unity and the ‘Blitz Spirit’, the Baby Boom and a long period of post-war economic expansion led to a generation of prosperous young people. Their unprecedented security and prosperity left them free to pursue higher levels of fulfillment. The result was the emergence of new social movements (NSMs). These movements “were seen as “new” in contrast to the “old” working-class movement identified by Marxist theory as the major challenger to capitalist society. By contrast, NSMs [...] organized around gender, race, ethnicity, youth, sexuality, spirituality, countercultures, environmentalism, animal rights, pacifism, human rights, and the like.”¹¹ NSMs represent a fragmentation in people’s political preferences and causes for coming together. The best example is the events of May 1968 in France, which were heavily influenced by the trade union movement, but actually originated with the students of the University of Paris-Nanterre, who demanded greater liberty in their personal social lives. Another is the movement against the Vietnam War in the United States, which led to deep fissures in American society. Most striking of all is the abundance of rights movements that emerged after the 1960s, with people of different identities relating to race, gender, sexuality, and many others demanding recognition of their differences.¹²

11 Steven Bluecher, “New Social Movements and New Social Movement Theory”, in *The Wiley-Blackwell Encyclopedia of Social and Political Movements* (London, Wiley-Blackwell, 2013)

12 See e.g. Ruti Teitel, *Humanity’s Law* (New York: Oxford University Press, 2011) and Akira Iriye, et.al., *The Human Rights Revolution: An International History* (New York: Oxford University Press, 2012)

Power is now in the hands of an increasing number of actors, and an increasing variety of different actors. Individuals also choose to pool their power in increasingly various ways — one of which is the rise of identity politics. These trends are examples of pluralism. An increasing number of states, political parties, coalitions, and lobbying groups is one example. Meanwhile a surge in the number of different forms and activities of political actors is shown by the rising importance of civil society organizations such as NGOs, and the use of social media as a catalyst for political movements of all kinds. Individuals now increasingly identify themselves in fragmented ways. People now rarely belong to just one nationality, one religion, one ethnic group, and one political party.

THE END OF THE END OF HISTORY

The second wave of ideological fragmentation discussed here is the fragmentation of international political economy in the 1990s. The Cold War sustained a narrative in diplomacy¹³, political discourse, history¹⁴, and international relations theory¹⁵ that the global order was based on a dichotomy of perspectives, institutions, ideologies, and balancing of power between the United States, the Soviet Union, and their respective spheres of influence. When the Berlin Wall fell and the Soviet Union collapsed, influential analysts suggested that the events marked an ideological victory, “the end point of mankind’s ideological evolution and the universalization of Western liberal democracy as the final form of human government.”¹⁶ Yet a universal global order is more distant than ever. Following the period of Washington-led neoliberal capitalism in the 1990s, a number of changes have shattered what may have been a global economic consensus into a more fragmented picture.

13 See e.g. George Kennan, *Memoirs* (New York: Pantheon, 1983)

14 A.W. Deporte, *Europe between the Superpowers: The Enduring Balance* (New Haven: Yale University Press, 1987); Paul Kennedy, *Rise and Fall of the Great Powers* (London: Vintage Books, 1987)

15 Waltz, op.cit.

16 Francis Fukuyama, “The End of History?”, *The National Interest* (Summer, 1989) and Michael Mandelbaum, *The Ideas that Conquered the World* (New York: Public Affairs, 2002)

One consensus-shattering change is the rise of emerging economies such as China, Brazil, India, and Russia — the BRIC countries — which do not subscribe to the dominant form of neoliberal political economy that saw its heyday in the 1990s.¹⁷ The economic rejuvenation of these countries has led to increased attention to the success they have achieved without strict adherence to the Washington Consensus model. Another change results from the financial crisis that hit Western economies in 2008. Dubbed a ‘crisis of capitalism’, and harbinger of the decline of the West, the financial crisis has undermined faith in the way Western economies are governed.¹⁸ As a result of these changes, it is no longer a reflection of reality to speak of global political economy in terms of a small number of discrete ideologies, but rather a vast fragmented array of approaches pursued by different regimes in their own way. Instead of choosing from the ‘set menus’ of policies associated either with capitalism or with communism, political economies are governed increasingly ‘à la carte’.

TRIBALISM AND ASSOCIATIONALISM

The most recent wave of political fragmentation relates to diversity between individuals. Mass migration has made our societies increasingly ethnically and culturally diverse. Access to the internet has exposed people to ideas and perspectives they may not otherwise have encountered. Social media have made it much easier for people to rally around niche causes, even if they are physically far apart. As a result, people are relatively less defined by their national identities, and more so by a vast array of other ‘tribal’ identities they have chosen for themselves.¹⁹ This has an effect on their political preferences, which become more diverse and fragmented: policies which meet the interests of one group are less likely to apply to another. The advent of tribalism is illustrated by what appears to be a rise

17 See e.g. Jagdish Bhagwati, *In Defense of Globalization* (London: Oxford University Press, 2007), and Martin Wolf, *Why Globalization Works* (New Haven: Yale University Press, 2005)

18 See e.g. Joseph Stiglitz, *Globalization and its Discontents* (New York: Norton 2003), and Paul Krugman, *The Return of Depression Economics and the Crisis of 2008* (New York: Norton 2009)

19 Robert Reich, “The New Tribalism and the Decline of the Nation State”, *Huffington Post*, May 26, 2014, accessed November 28, 2014, http://www.huffingtonpost.com/robert-reich/the-new-tribalism-and-the_b_5020469.html, See also Mark Weiner, *The Rule of the Clan* (New York: Picador, 2014)

in ‘identity politics’, where individuals increasingly express their political preferences with reference to an identity they have. The triumph of nationalist parties at the 2014 European Parliamentary elections could be seen as part of this trend. Worth noting is that identity has not necessarily become more important to individuals, but rather that the increasing diversity and fragmentation of identities has made them a more politically salient issue.

Reflecting the fragmentation of association, many new countries have been created in recent decades, quadrupling in number since the 1940s. The overwhelming majority of this growth has been in the number of democracies, which bring with them an increased number of political parties worldwide.

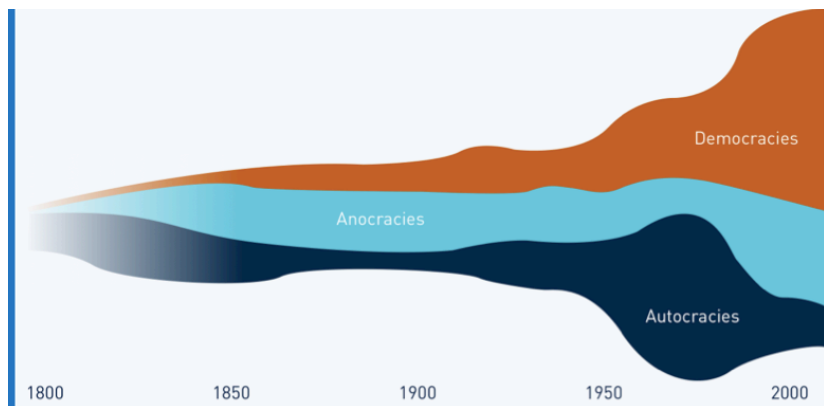


FIGURE 1: THE EVOLUTION OF DEMOCRACIES, ANOCRACIES AND AUTOCRACIES.²⁰

People are turning to new, more fragmented ways of expressing their preferences and pooling their power.²¹ First, traditional political processes are changing. Within traditional democracies, a number of formal processes aggregate political preferences: political parties, elections, parliaments, and lobbying. All of these are showing signs of fragmentation. The number

²⁰ The Hague Centre for Strategic Studies (2012), *Peace and Conflict Across Time*.

²¹ See Vanessa May, “Self, Belonging and Social Change”, *Sociology* Vol. 45 (2011) no 3, p. 370

of political parties is increasing. At elections, the share of the vote gained by traditional large parties is decreasing, while the number of minority governments and 'grand coalitions' has increased,²² reflecting a fractionalization and polarization of voting patterns.²³ Second, interests are aggregated in increasingly varied ways: rather than only through political parties, people are turning increasingly to civil society and social media to express and realize their political persuasions. This idea of 'governance through association' is not new, having first been proposed in the early twentieth century, yet it seems to be resurgent.²⁴

DISTRIBUTION OF POWER: POLYARCHY

In contrast to traditional institutions, where power was hierarchically arranged, it is now more evenly distributed among various political actors. When exercised, power is decreasingly characterized by a principal-agent relationship ('command and control'),²⁵ and increasingly characterized by units of comparable rank, which must learn to reconcile their rising autonomy and their rising interdependence. This trend is referred to as polyarchy.²⁶ Three cases demonstrate its effects: the rise of autonomy and devolution, the paralysis of international organizations, and a multipolar

22 See "The Shrinking Big Tents", *The Economist*, April 28, 2011, accessed November 28, 2014, <http://www.economist.com/node/18621743>; in the Netherlands, see results from *Rijksbrede Trendverkenningen*, pp. 23-25, <http://www.rijksoverheid.nl/documenten-en-publicaties/rapporten/2013/06/17/rijksbrede-trendverkenning.html>

23 "The total number of political parties that elected representatives to the 2014-2019 European Parliament was 186. This is 16 higher than after the 2009 elections. It should be noted that several of these parties are in fact electoral coalitions, so the actual number of parties with MEPs will probably be around 200." See Cas Mudde, "The European Parliament Elections show the increasingly fragmented nature of European party systems", *The London School of Economics and Political Sciences*, June 12, 2014, accessed December 2, 2014, <http://blogs.lse.ac.uk/europpblog/2014/06/12/the-european-parliament-elections-show-the-increasingly-fragmented-nature-of-european-party-systems/>

24 Paul Hirst, "Can Associationalism Come Back?", *Critical Journal of Social and Political Philosophy*, Volume 4 (2001) No. 1, published online September 27, 2007 <http://dx.doi.org/10.1080/13698230108403336>

25 Michael W. Bauer, "The Commission and the Poverty Programmes" *Journal of Common Market Studies*, Vol. 40, Issue 3, pp. 381-400, 2002

26 Robert Dahl, *Polyarchy: Participation and Opposition* (New Haven: Yale University Press, 1972).

world order. The most appropriate response to increasing polyarchy is a more flexible approach to governance which uses both rational and normative tools to achieve policy outcomes.

As nation-states have increased in number, their supremacy has also been challenged. Devolution and separatism are on the rise. Increased regional power afforded to Catalonia, Scotland, and Northern Ireland are a few examples. Separatist groups and ideas are resurgent under many guises in many parts of the world, including in Iraq, East Turkestan, and of course Ukraine.

The nation state is not only being challenged structurally but also institutionally. Its model of hierarchical power, monopoly on violence, and binding law, has not been emulated by international or supranational organizations. Arguably the closest institution to acquiring nation-state-like characteristics is the European Union. But even there, high complexity, irreducible diversity, the principle of subsidiarity, and eurosceptic tendencies reflect fragmentation in transnational cooperation at least as much as a centralizing tendency toward federalism. Other international institutions and summits fare even worse: the paralysis of the Doha Development Agenda, the vacillating between G-2, G-7, G-8 or G-20, and the weak outcomes of the 2009 and 2014 United Nations Climate Change Conferences are among the most vivid examples of failed attempts to impose ambitious international command-and-control on an increasingly fragmented international system.

As a response to the governance vacuum left by the decline of the nation state and the weakness of international institutions, a trend towards flexible (though not necessarily 'soft') forms of governance has emerged. There is inevitable complexity and diversity in governing a political union of 28 states, or a network of autonomous schools, or a multi-stakeholder business community. These examples are further elaborated below. Most notably in the EU, but also elsewhere, a range of policy domains exhibit signs of 'experimentalist governance'.²⁷ Experimentalist governance is an

²⁷ Charles Sabel and Jonathan Zeitlin, "Experimentalist Governance" in *Oxford Handbook of Governance* (Oxford: Oxford University Press, 2011)

iterative process in which a central body sets a broad framework goal, which individual units (Member States) are able to pursue in diverse ways, provided that they report on their progress — feedback which is used to revise the broad framework goals, after which the process repeats. Experimentalist governance is not necessarily a ‘soft’ form of governance, since the central authority can threaten to overrule individual units if they fail to fulfil their commitments.

FRACTIONS IN FLUX

Political discourse is changing faster than ever. It is easier to reach relevant audiences, and to interact with like-minded people. As a result, the length of time it takes for an idea to gain currency is greatly reduced.

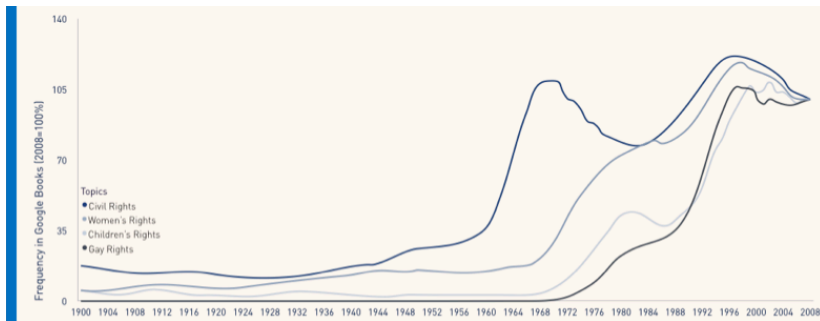


FIGURE 2: FREQUENCY OF MENTIONS OF RIGHTS ISSUES IN GOOGLE BOOKS.²⁸

As an example, we can compare different NSMs, in this case ‘rights’ movements, to see how quickly they reached their peak level of literary attention. Google Books tracks the frequency of terms used in literature over time, which gives an idea of the salience of those terms in discourse. The Civil Rights Movement began its ascent in the 1940s and reached a local peak 20 years later in the late 1960s, but only reached its overall peak in the late 1990s. Feminism’s second wave took place in the 1960s, and was already at its literary peak the late 1990s. A similar pattern applies to children’s rights. By far the fastest social and cultural shifts of our time has

28 Source: Google Books

been the LGBT rights movement, which took just 20 years to move from literary ignominy to widespread public attention.

As fast as actors gain power, they also lose it. The 'half-life' of knowledge and ideas (the time elapsed between their creation and their salience halving) is shrinking at a startling rate. Works of enduring ideological interest are fewer and far between. In contrast, one of the most popular ways of publishing ideas, the tweet, is infamously evanescent. Even for some of the web's most influential people (as indicated by 'Klout' score), the average half-life of a tweet (the time elapsed between publication and its audience halving) is merely a few hours.

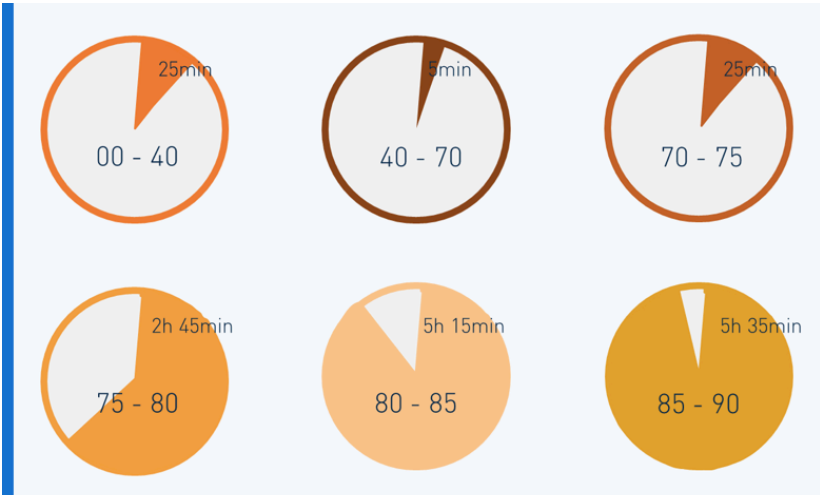


FIGURE 3: THE HALF-LIFE OF A TWEET BY KLOUT SCORE.²⁹

29 Source: Klout www.klout.com

CONCLUSIONS AND COMMONALITIES

As politics becomes more pluralistic, so will its agendas and politics. Indeed, nothing less than a transformation of the relationship between the state and its citizens has been underway in the past three decades—not just in Western Europe, but also elsewhere in the world. In short: people have become more critical, and demand more accountability from the powers that be. The result is less fidelity to established power structures and political parties, more emphasis on civil and political rights, and the need for more space to express one's identity.

This general trend has all kinds of consequences for modes of governance, and thence for other areas. For instance, where defense and security issues are concerned, states are seeing their supremacy undermined by a number of quickly realigning organizations, militias, and paramilitaries. Another key example is in foreign aid, where the role of the nation state, both as donor and recipient, has been supplemented by a vast array of different actors of other kinds. Politics and economics are inextricably linked, and the increasing contestability of politics is mirrored in increasingly contestable markets. This also has consequences for in the international energy sector, which has seen increasing decentralization, with major oil companies challenged by smaller energy providers.

2 DEFENSE AND SECURITY

The domain relating to the use of legitimate physical coercion — defense and security — appears at first glance to be hardly subject to fragmentation. After all, defense does not lend itself so easily to a division of powers and responsibilities, being the operational arm to sustain a state's monopoly on the use of legitimate violence. This 'monopoly' only really started to emerge around the 17th century. In this period some ambitious political princes ('stationary bandits' in the words of Mancur Olson³⁰) started maximizing their access to resources. Breakthroughs in military technology also enabled them to do so — albeit at an increasingly high cost. It is precisely these costs that triggered the geographical expansion of the scale of political agency: more money was needed to raise armies. Violence played a key double role in this process. It was required to disarm and keep down local lords on whose personal ties (would-be) kings previously depended to go to war. And it was also required to go out and conquer new territories that emerged in the wake of the break-up of medieval realms and empires. In the famous words of Charles Tilly, "war made states, and states made war."³¹

From a dynamic and variegated patchwork of different 'violent' agents³² who coalesced and/or fought with each other, by the seventeenth century the international system started morphing into a new, increasingly neatly delineated political map with potent 'sovereign', or national, political entities that arrogated to themselves a monopoly on the use of violence. This monopoly extended both internally — against their internal enemies —

30 Mancur Olson, *Power and Prosperity* (New York: Basic Books, 2000)

31 Charles Tilly, *The Formation of National States in Western Europe* (Princeton: PUP, 1975), p. 42; but see also Samuel Finer, *The History of Government: The Intermediate Ages* (New York: Oxford University Press, 1997), ch. 7

32 These included mercenaries, militias, 'privateers', etc.

and externally — in a constant quest for territorial aggrandizement (read: more resources) that was only tempered by similar efforts of other sovereign states. Two well-known examples are the Tudor demilitarization of the great lords in England, and Richelieu’s disarmament of great rebel lords — Protestant and Catholic alike — in France starting from the 1620s onwards. It is only then that the distinction between ‘legitimate’ and ‘illegitimate’ use of violence — which was very much in the eye of the beholder up until then — started gaining traction and even widespread acceptance. As Tilly writes: “Eventually, the personnel of states purveyed violence on a larger scale, more effectively, more efficiently, with wider assent from their subject populations, and with readier collaboration from neighboring authorities than did the personnel of other organizations.”³³

Many scholars³⁴ have argued that it was precisely this more potent and ‘upscaled’ form of agency consolidated in national sovereigns that — counterintuitively — allowed the current system to gradually become more rules-based and stable — and thence also less violent. Ian Morris, in very Hobbesian fashion, calls this ‘productive war’: geopolitical agents merged and grew into ever more sophisticated polities and societies that were capable of stamping out low-level violence, to bring peace and prosperity.³⁵

33 Charles Tilly, *Roads from Past to Future* (Lanham, MD: Rowman and Littlefield, 1997), p. 169

34 But far from all — for a refreshing alternative view, see Hoppe, de Molinari, Rothbard and others. As Bassani and Lottieri wrote: “Liberty, as well as law and order, was secured, and in some cases much better, at different stages of European history, when a monopoly of violence over a given territory was simply out of reach.” Luigi Bassani and Carlo Lottieri, “The Problem of Security: Historicity of the State and “European Realism””, in Hans-Herman Hoppe (ed.), *The Myth of National Defense: Essays on the Theory and History of Security Production* (Auburn, AL: Ludwig von Mises Institute, 2003) p. 34

35 It is intriguing that Hobbes himself (and the derived adjective ‘Hobbesian’) is typically associated with the one — admittedly catchy — passage about how the natural state of man is “solitary, poor, nasty, brutish, and short”. But Hobbes main thesis in ‘Leviathan’ was quite the opposite: that these ‘natural passions’ can only be subjugated through an approach in which the agents submit themselves to a more powerful ‘sovereign’. See Ian Morris, *War, What is It Good For?* (New York: Farrar Straus & Giroux, 2014).

This powerful historical change in the reality behind the agency of violence would then also increasingly be normatively codified in the nineteenth and twentieth centuries in widely accepted concepts like Weber's 'Gewaltmonopol des Staates', which equates the legitimate use of violence with the nation-state ("human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory"³⁶); or even the entire edifice of international law, which has tried to erect some barriers against the use of violence but remains firmly anchored in what political scientists call the (nation-state-based) Westphalian system.

In spite of the imperative towards monopolization and consolidation, the defense and security sector has also witnessed transformative developments pushing fragmentation and re-calibration. On the one hand, this is the result of increasing volatility and uncertainty about security risks in the broad sense of the word and on the other, the result of the very processes of bureaucratization and specialization.

EVER MORE SECURITY AGENTS

A first important change is that we are — once again — seeing far more agents engaging in the international use of violence. The fastest rising category of such 'new' security agents can be found in the private sector. The twentieth century descendants of those early nation states we saw emerge in the seventeenth century witnessed an unprecedented expansion in the post-World War II period. This expansion was no longer, as in the previous century, achieved through geographical or territorial 'widening'. Rather, the demise of colonial empires led to a raft of newly independent states, all with their own fledgling security sectors. It was even more so an expansion through functional 'deepening', in which the nation-state was increasingly thought to be the appropriate framework for providing other services such as social security³⁷, education, healthcare, etc. The incessant growth of the welfare state led to a backlash against 'big government' that led to a thrust towards 'new public management', which was to import some of the presumably more efficient practices of the private sector into the public sector.

³⁶ Max Weber, *Politics as a Vocation*

³⁷ Incidentally another form of genuine 'security', even if it not always acknowledged as such.

This new way of thinking about the state also had a major impact on the security sector. Various functions of the previous unassailable state monopoly of violence were now increasingly being questioned and some of them were being outsourced to the private sector. This trend was bolstered by the end of the Cold War, which led to significant budget cuts throughout the developed world, to smaller-sized professional armed forces, and to a shift in the focus of military operations away from collective territorial defense to peace support operations. All of these trends led to the fission of the previous state monopoly of violence into a wide range of new agents.

These agents that attracting most of the attention were the so-called 'private military companies', or PMCs, and especially those that exercised the use of force — which had previously been the exclusive preserve of the state. Companies like 'Executive Outcomes', a South African outfit founded by a former senior army lieutenant, became militarily involved by supporting guerrillas in Angola and Sierra Leone. Since then, PMCs have been active in various countries around the world and achieved notoriety in Iraq and Afghanistan. The 'fission' of the sovereigns' monopoly on the use of force is even more pronounced in the large number of 'security firms.' These companies, some of which operate on a global level, provide basic security services at the domestic level where local police are considered insufficient. Such firms operate both in Western and non-Western countries, and sometimes coexist in an uneasy relationship with local law enforcement.

However, it is not just the gradual retreat of the state -in particular in Western countries- that has given rise to the emergence of new security actors. For the 'new anarchy' that dominates in various parts of the world has also led to the rise of new actors that engage both in extortion whilst fighting law enforcement. Some obvious examples include pirates, groups such as al-Qaeda, Hizbullah, ISIS and FARC, as well as the rebel groups in eastern Ukraine. Some of these groups -and chiefly those that control identifiable bits of territory- also exercise a monopoly of sorts on the use of violence. But challenges to the government monopoly can also emanate from hackers and cybercriminals — which could come to police parts of cyberspace. At the end of the day, fragmentation in the defense and security sector could lead to very dangerous cocktails, where for instance a state with little legitimacy cooperates with non-state actors in order to detonate WMDs in our part of the world.

SCALING QUICKLY IN THE FACE OF FRAGMENTATION

Apart from the fact that there are more agents, they also become bigger and/or more influential, both in relative and in absolute terms. In relative terms, other actors become bigger because state actors, at least in Europe, have been shrinking — in terms of spending as a percentage of GDP, or services offered — for about two decades. In recent years, this trend seems to be slowing down, and possibly even going into reverse. However, these trends did not always affect police and other law enforcement forces. In absolute terms, non-state defense and security agents have grown largely as a result of increasing instability in various parts of the world, in particular in Africa and the Middle-East. Not only do these non-state groups increase and proliferate, but they also affect the cornerstones of our Westphalian order, redrawing the boundaries of nations. While ISIS is the best example of this, other groups have been effectively occupying swathes of land elsewhere in the world, from Colombia to Peru, to Mali, Libya, Egypt and Nigeria all the way to Aceh and Mindanao in the Philippines.

Fragmentation in defense and security also takes place along other dimensions apart from geography and the nature of organizations. In terms of coordination, fragmentation is occurring within defense structures in some Western countries, and amongst EU partners. In the US, according to a 2008 study by the Office of the Director of National Intelligence, private contractors make up 29% of the workforce in the intelligence community. Indeed, in Afghanistan and Iraq the US made such extensive use of such private contractors that “[m]any analysts and government officials believe that DoD would be unable to execute its mission without PSCs.”³⁸ Among defense companies, there has been an inverse trend seeing consolidation among, industries on both sides of the Atlantic, with two molochs

38 See Moshe Schwartz, “The Department of Defense’s Use of Private Security Contractors in Iraq and Afghanistan: Background, Analysis, and Options for Congress” *Congressional Research Service*, 7-5700, June 22, 2010. According to the *Christian Science Monitor*, this amounted to just over 50% of all DoD employees in Iraq. See Molly Dunigan “A lesson from Iraq war: How to outsource war to private contractors” *The Christian Science Monitor*, March 19th, 2013, accessed November 3, 2014, <http://www.csmonitor.com/Commentary/Opinion/2013/0319/A-lesson-from-Iraq-war-How-to-outsource-war-to-private-contractors>

dominating Western if not world markets, Boeing and EADS. Not far behind are companies such as Lockheed-Martin and United Technologies.³⁹

The European defense sector has been dogged by fragmentation for many years, both at the industrial and at the policy levels. Within the area of industrial relations, this was supposed to be partly solved by the creation of OCCAR, the European-wide Agency for joint materials cooperation meant for common procurement projects. However, true EU-wide cooperation in procurement has proved to be rather difficult, in particular because all countries fiercely protect their industrial interests, leading to either significant delays in procurement, or incompatibility of equipment when countries cooperate in military missions. This problem is in large measure mirrored at the political and policy levels. Here too, true EU-led cooperation and coordination is rarely achieved. Examples are the missions in Libya and Mali, which were initially led by individual members states rather than the EU as a whole.

In many ways, defense and security are subject to pressures emanating from increasing uncertainty in the international arena. In the face of such uncertainty, there is a tendency for parties to 'go at it alone', leading to further fragmentation. For instance, the common front that Western countries had created following 9/11 got seriously dented in the run-up to the war in Iraq due to issues of trust. Ultimately, a lack of common purpose can come about when enemy parties become less predictable, and that one may need to fend for themselves at very short notice. Hence the wish for countries to maintain their own defense, policing and intelligence-gathering capabilities.

QUICKLY REALIGNING PRIORITIES, AND CLOSING THE RANKS?

At many levels, defense and security organizations have sought to respond to new uncertainties by sometimes re-organizing themselves and by seeking new linkages with agents beyond their traditional field of operation.

39 "The SIPRI Top 100 Arms-producing and Military Services Companies, 2013" SIPRI Factsheet, December 2014, available at <http://www.sipri.org/research/armaments/production/recent-trends-in-arms-industry>

Organizationally-wise, one trend is for large defense organizations to spread themselves around the globe, and where possible, to station special operation forces (SOFs) near locations of turmoil. In this spirit, the US established Africom in 2007, creating a single command for operations on the African continent. European countries are also spreading their forces: the British will be building a new naval base in Bahrain for instance.⁴⁰ But other countries do not remain behind. India, for instance, now has military posts in Madagascar and Oman for instance, and also has the rights to station a squadron of fighter jets at an airfield in Tajikistan.

Industry-wise, given the huge vested interests that countries and partners across the Atlantic and elsewhere have, it is unlikely that fragmentation will come to a halt. In Europe, change is not expected to come from how the defense industry as such is expected to evolve: “Recent reform efforts have the potential to transform the European defense regulatory landscape. Decreasing fragmentation and the associated inefficiencies in the EU part of the European defense market is therefore unlikely to be driven by a change of defense acquisition strategy in the EU member states or by a structural evolution of the European defense industrial base. Instead, alterations in the regulatory environment are projected to enable and drive this defragmentation with the demand and supply side being forced to react to these changes.”⁴¹

At the operational level, military and other security forces are now seeking support from local non-state security actors, seeking to coalesce around joint strategies in absence of integration of forces. Such operations have already been on display in Afghanistan, Libya and Mali, and are now also sought in Syria and Iraq in the war against ISIS. In a way, this is a means of taking advantage of fragmentation by attracting existing forces to a joint cause, for instance to rid northern Iraq and Syria of ISIS forces and to help

40 Elizabeth Dickinson, “Bahrain naval base will give UK stronger Gulf presence”, *Financial Times*, December 4, 2014. See <http://www.ft.com/intl/cms/s/0/3e630b90-7d3c-11e4-b927-00144feabdc0.html#axzz3MiFih85p>

41 See Centre for Strategic and International Studies, *European Defence Trends 2012: Budgets, Regulatory Framework and Industrial Base*. (Washington DC, 2006) http://csis.org/files/publication/121212_Berteau_EuroDefenseTrends2012_Web.pdf, p. 8

rebuild governance structures. The partners sought here are former elements of the Iraqi army, Kurdish Perhmerga and assorted moderate opposition forces.

CONCLUSIONS AND COMMONALITIES

The forces of fragmentation remain dominant in the realm of defense and security. The security issues that are on the table today, whether internationally or at the domestic level, require flexibility and an ability to engage in new alliances where necessary. What is more, economic incentives also militate against defragmentation, if only because the sensitivity of the issue make countries very cautious when it comes to engaging in joint defense projects and wish to maintain their own industrial bases for the sake of maintaining an edge over competitors.

3 DEVELOPMENT

Development cooperation has seen a lot of evolution over the past two decades. For most of the period since World War II, the development enterprise was dominated by Western countries assisting what was called ‘the Third World’, partly for altruistic motives founded in feelings of contrite, partly for economic motives and partly for ideological motives. Much of the development cooperation undertaken at that time was state-to-state; NGOs and businesses played only relatively minor roles.

This picture has now radically altered. Both the number of donor countries as well as the number of agencies that are involved in development has greatly increased in the past 25 years. What is more, the areas of intervention have also been enlarged to encompass all sectors of a country’s economy and state institutions. Not just has the number of actors that are involved in this area grown exponentially, but their involvement has also become more complex due to the myriad ways in which agencies, businesses and donors cooperate, and because some recipient countries have become donors at the same time, examples being India and China.

Another change is that aid organizations seek new avenues to reach their targets at the local level. A good recent example is micro-financing of projects.⁴² The advantages of such initiatives are that they take place on a human scale, have a more direct impact, are easier to manage from the point of view of accountability by delivering monetary support straight in the hands of the people that will make use of it, rather than channeling it

42 See e.g. International Finance Corporation “Microfinance” Last modified 2015. http://www.gcgf.org/wps/wcm/connect/Industry_EXT_Content/IFC_External_Corporate_Site/Industries/Financial+Markets/MSME+Finance/Microfinance/

through intermediaries. In spite of the apparent advantages, whether microfinance is truly more effective is still subject of debate.⁴³

DEVELOPMENT COOPERATION IN THE 21ST CENTURY

Before speaking about how the actors and the nature of development activities as such have changed, a word should be expended on how development cooperation as such has changed in the larger context of international politics and foreign policy. First of all, the motives have changed in that development aid is no longer tied to ideological motives that prevailed in the Cold War. Today, development aid is rather motivated by economic motives — both in terms of integrating developing countries into the world economy, but also for richer countries to gain a foothold in locations that are economically advantageous. Another major incentive is to stabilize and rebuild places that have exhibited a lot of violence or suffered longstanding warfare — in particular if they happen to be potential terrorist breeding grounds.

As a result of these trends, development aid is now often seen as part of a larger package that also includes defense and diplomacy — i.e. political efforts whereas in the past, people in the development community often hardly spoke to their colleagues on the defense/political side.⁴⁴ At the

43 See David Phillips, *Development Without Aid: The Decline of Development Aid and the Rise of the Diaspora* (London: Anthem Press, 2013), p. 57, Farhad Hossain et.al. (eds.), *Microcredit and International Development: Contexts, Achievements and Challenges* (Abingdon, Routledge Press, 2012), and Liz Ford “Microfinance, development banks and the future of aid”, *The Guardian*, April 5, 2011, accessed December 4, 2014, <http://www.theguardian.com/global-development/2011/apr/05/poverty-matters-roundup-microfinance-development-banks> and Global Policy “The Microfinance Illusion: The Post-2015 Development Agenda Should Rethink its Development Approach for Local Financing”, Last modified February 14, 2013, available at <https://www.globalpolicy.org/social-and-economic-policy/financing-for-development-1-45/general-analysis-on-financing-for-development/52302-the-microfinance-illusion-the-post-2015-development-agenda-should-rethink-its-development-approach-for-local-financing.html>

44 In the Netherlands, this is conceptually framed in the 3D approach. See for a brief evaluation, IOB, Dutch Ministry of Foreign Affairs, “Mixed Results for Dutch Policy in Fragile States”, available at <http://www.government.nl/documents-and-publications/leaflets/2013/04/01/iob-newsletter-1308-mixed-results-for-dutch-policy-in-fragile-states.html>

same time, development also becomes increasingly mixed with foreign economic policy, thus further chipping away at development aid as a field of its own.⁴⁵ With development aid becoming more interlinked with neighboring policy areas, the number of actors that claim a say on development policy also becomes larger – and in several instances, these are not insignificant actors, for instance if they include the armed forces. The result is that development cooperation as such may become more fragmented or diluted in terms of constituting an autonomous approach to interstate cooperation.

A NEW LANDSCAPE OF ACTORS

The landscape of actors active in development policy has witnessed some important changes. Not only are there more actors out there than ever before, but they also differ much more in nature – leading to multiple actors sometimes pursuing opposite objectives. One report notes that “Recipient countries are faced with an increasing number of donors engaged in delivering development assistance. For instance, in 1960 a developing country received aid from less than two donors on average, while in 2006 the average number of donors per recipient had risen to more than twenty eight.”⁴⁶ Among these twenty-eight donors are often multiple government agencies from a single country, given that development aid has long ceased to be the prerogative of a single government ministry. But more importantly, the donor landscape has also changed, and now includes a plethora of NGOs among which are not just Western aid organizations, but also charities and foundations that are critical for the disbursement of financial support, as well as actors from new, non-OECD DAC donors.

The changed composition of the donor community is most pronounced in the area of private vs public support, or PDA (private development assistance) versus ODA (official development assistance). According to

45 Again, in the Netherlands, these dossiers have been explicitly combined in the portfolio of the current trade minister.

46 Quoted from Frot and Santiso, “Development Aid and Portfolio Funds: Trends, Volatility and Fragmentation”, *OECD Development Centre* (2008), in Stephen Knack and Lodewijk Smets, “Aid Tying and Donor Fragmentation”, *World Bank* policy research working paper 5934 (2012), p.3

one measure, the balance between these two flows today is almost even, whereby “[i]n some recipient countries, private aid for specific projects and programs may even surpass official aid.”⁴⁷

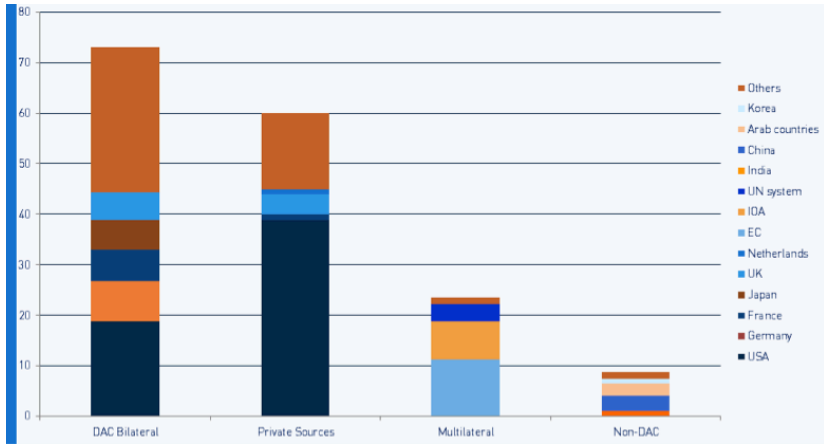


FIGURE 4: PDA VS. ODA.⁴⁸

Another significant trend is that of the rise of non-DAC donors and that of their disbursement portfolios. One statistic concludes that “[b]etween 2005 and 2009 foreign assistance from non-DAC donors more than doubled from US\$4.6 billion to US\$10.4 billion.” In the same period, aid disbursed by DAC members totalled some US\$ 101 billion in 2007. In the 1960-70s, this was much lower, around US\$ 40 billion on average.⁴⁹

47 Homi Kharas, *Development Assistance in the 21st Century*, Brookings research paper, 2009, p. 5

48 Source: OECD/DAC, *The Index of Global Philanthropy 2009*

49 *Ibid*, p. 4

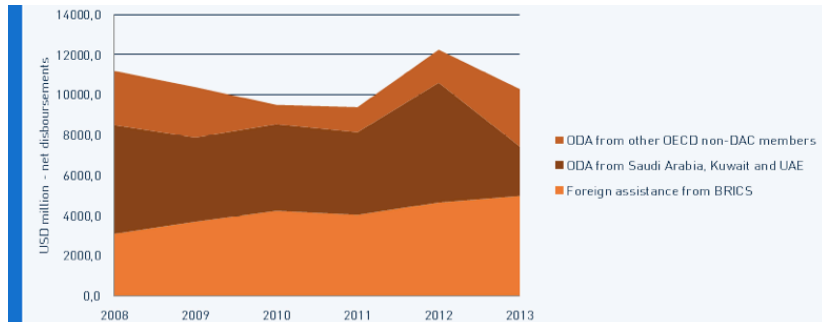


FIGURE 5: AID FROM EMERGING ECONOMIES, 2008-13.⁵⁰

These findings have important ramifications, highlighting some of the dimensions of fragmentation that development assistance worldwide is subject to. On the upside, the proliferation of actors enables a more targeted approach to more specific issues at the micro level, something that is even more likely given that many of the new actors are relatively small agencies with a limited reach that need to concentrate their activities on specific projects so as to achieve a maximum impact. Another advantage — at least to the recipient countries — is that they have “more policy space in negotiations” resulting in fewer constraints being imposed on how development aid is being spent.⁵¹ On the downside however, there are sometimes so many organizations on the ground that they effectively obstruct one another’s work, a tendency that can be further fueled by ‘unhealthy competition’ between them that can emerge once such organizations need to strain themselves for attention and to create impact.⁵²

50 Source: K. Smith, *Non-DAC Donors and Humanitarian Aid: Shifting Structures, Changing Trends* (Somerset, UK: Development Initiatives, Global Humanitarian Assistance, 2011). Notes: Aid data are for official development assistance (ODA).

51 See OECD, “The New Development Finance Landscape: Developing Countries’ Perspective” (Working Draft presented at the OECD workshop on development finance on June 25, 2014), p. 29, available at http://www.oecd.org/dac/aid-architecture/The%20New%20Development%20Finance%20Landscape_19%20June%202014.pdf

52 See e.g. discussed in William Easterly and Thomas Pfitzner, “Where Does the Money Go? Best and Worst Practices in Foreign Aid”, *Journal of Economic Perspectives*, Volume 22 (2008), No 2

A related trend is that with the proliferation of (mostly) Western-based aid agencies, governments themselves also spread their bets. It is no longer the case that only a country's development agency is in charge of a country's development agenda. Other government departments, such as economic affairs and defense also have a say, and IFIs (World Bank, African Development Bank, Asian Development Bank, OECD etc.) are also becoming more important as disbursers, rather than mere coordinating bodies, of aid. One study found for instance that "[t]he major aid unit in the US is the aid agency USAID but according to Oxfam only 45% of total US foreign aid is overseen by this agency. All in all, US foreign assistance programs are fragmented across 12 departments, 25 different agencies and nearly 60 government offices."⁵³ The same study concluded that on average, donors gave the same amount of money, but to more countries, leading to more fragmentation.⁵⁴ Indeed, "Easterly and Pfutze (2008) calculated that the probability that two randomly selected dollars in the international aid effort will be from the same donor to the same country for the same sector is 1 out of nearly 2660."⁵⁵

A particular development in this area is the rise of private charities and foundations that have become active in development assistance. These foundations spurred the growth of PPP arrangements, making philanthropy a major contributor to development, the best-known examples being the Bill and Melinda Gates and the Clinton Foundations. Helping their rise has been the fact that they can apply their own rigorous standards to aid disbursements, setting new standards for accountability to provide a yardstick for the sector as a whole. On top of this, the recent trend of 'open spending' could soon provide added impetus to the demand for more transparent financing and reporting on results achieved, and affect both new as well as traditional donor organizations.⁵⁶

53 OECD, "Crushed Aid? Fragmentation in Sectoral Aid" *OECD Working Paper* no. 284 by Emmanuel Frot and Javier Santiso, p. 9

54 *Crushed Aid, op cit.*, p. 9

55 *Ibid.*, p. 10

56 See for instance the OpenSpending Initiative to track spending of foreign aid money at <https://openspending.org/>

GENERAL FRAGMENTATION IN AID PROJECTS...

Apart from institutional fragmentation, there is also absolute fragmentation in the sense that there are more projects being undertaken by more partners across more disciplines in more countries than ever before. One IMF paper concluded that “[i]n fact, aid fragmentation has substantially increased in the last 50 years, the period since the OECD Development Assistance Committee (DAC) was established. The average donor disbursed aid to about 20 recipient countries in 1960, but 85 in 2009. When focusing only on donors that already provided aid in 1970 (when the lion’s share of the large donors was already operational), the 2009-number is roughly 105.”⁵⁷

Beyond the number of countries served, the number of projects across different sectors is also showing more lopsided numbers. The OECD found that “[a]ll in all, 601 aid projects run simultaneously in the average recipient (the median is 434). Similarly, a single sector easily accommodates 400 aid projects. However the distribution is quite skewed with on average 44 projects in a recipient-sector. The median is 19 projects in a recipient sector. It indicates that some sectors in some countries attract disproportionate quantities of projects, whereas others might actually suffer from too low donors’ attention.”⁵⁸ The upward trend of proliferating projects is clearly evident in the graph below:

⁵⁷ See *Donor Competition for Aid Impact, and Aid Fragmentation*, p. 5

⁵⁸ *Crushed Aid*, *op cit*, p. 27

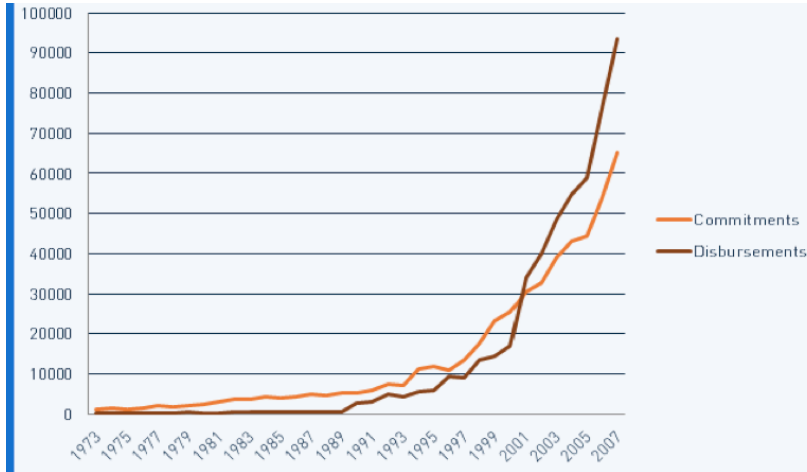


FIGURE 6: NUMBER OF AID PROJECTS.⁵⁹

The same OECD study from which the above graph derives found that “(...) counting the number of aid projects in the developing world (...) in 2007, more than 90,000 projects were running simultaneously. Project proliferation is on a steep upward trend and will certainly be reinforced by the emergence of new donors. Developing countries with the largest numbers of aid projects have more than 2,000 in a single year.”⁶⁰ At the same time, the relative crumbling in the sector has also led to the average size of projects becoming gradually smaller, both in terms of commitments and disbursements.

59 Source: From: “Crushed Aid”, Frot and Santiso, p. 14, based on OECD DAC Databases, 2009

60 See *Crushed Aid*, *op cit.*, p. 5

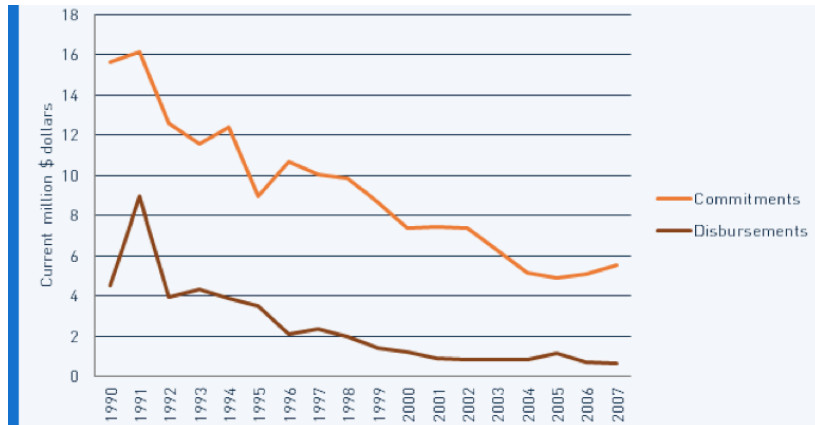


FIGURE 7: AVERAGE PROJECT SIZE, IN US\$.⁶¹

A study from Brookings found that “if half of the smallest donor programmes were terminated only 5 percent of country program aid would be affected.”⁶² In other words, there is much room for consolidation without seriously affecting major development initiatives — the marginal returns in this sense are substantial at this stage. Overall then, fragmentation is occurring at several levels: number of donors, number of recipients, number of projects, and smaller instead of larger projects.

...EVEN IF AID AS SUCH IS BECOMING RELATIVELY LESS IMPORTANT

From a broader perspective, data shows that ODA as such is becoming less important overall on the whole.⁶³ Other important sources for income include trade, capital flows and remittances.⁶⁴ Part of this has to do with

61 Source: Frot and Santiso, 2009, based on OECD DAC databases, 2009

62 David Phillips, *Development without Aid: The Decline of Development Aid and the Rise of the Diaspora* (London: Anthem Press, 2013), p. 82. Indeed, governments in Ghana, Kenya and Mozambique have instituted mission-free periods so that civil servants can do their regular work. Ibid.

63 Suzanne Steensen et al., “Where does ODA matter most?” *OECD-DAC*, January 2014, available at www.oecd.org

64 See e.g. Eytan Bensoussan et al., “Innovative Development Financing” *McKinsey Insights and Publications*, August 2013, available at http://www.mckinsey.com/insights/social_sector/innovative_development_financing

the fact that ODA often comes with many strings attached, what was called conditionality in the 1980s and 90s. Now however, with the economic rise of many formerly HIPC (highly indebted poor countries, World Bank definition), the dependency relations have altered, and various developing countries have become important sources for raw materials, for instance. As a result, the focus has shifted more towards trade instead of aid, a development that has prompted the creation of aid-for-trade schemes, and the more explicit joining of development and trade policies, as is seen in the Netherlands for example. At the same time, FDI and portfolio investments have also gained in importance, creating alternative sources of funding that contribute to development objectives.

Finally, remittances have also become an important source of development finance. According to the World Bank, “[o]fficially recorded remittances to developing countries were an estimated \$404 billion in 2013, an increase of about 3.3% over the previous year. Global remittance flows, including those to high-income countries, are estimated at \$542 billion in 2013.” This is, the Bank says, “equivalent to more than three times the size of official development assistance.”⁶⁵

In the face of fragmentation across the development sector, the donor community has sought to impose a measure of streamlining and consolidation among the variety of actors and programs through adoption of the Paris Declaration on Aid Effectiveness (2005) and the Accra Agenda for Action (2008). These declarations called for focusing on alignment and harmonization in aid delivery (Paris) and to promote coordination at the country level through local ownership (Accra). In spite of new initiatives such as Joint Assistance Strategies, Sector-Wide Approaches (SWAs) and the creation of a Partnership for Effective Development Cooperation (2011), only “limited progress” has been achieved so far, as the aid architecture remains fragmented and new players such as China and Brazil are looking for a larger role.⁶⁶

65 World Bank website, see <<http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20648762-pagePK:64257043-piPK:437376-theSitePK:4607,00.html>>

66 See Marian Leonardo Lawson, “Foreign Aid: International Donor Coordination of Development Assistance” *Congressional Research Service* (Washington, February 5, 2013), p.2

CONCLUSIONS AND COMMONALITIES

Development as a goal-oriented enterprise is becoming more caught up with other strategic interests in the political, military and economic areas. On the one hand, this helps to bring more attention to issues in development, but also makes it more closely intertwined with the many diverging political and economic preferences referred to in the previous chapter. The development aid sector is becoming an important means for countries to exert power beyond using military, political or economic means. Ostensibly altruistic, it is covertly becoming another tool in the great powers' toolbox. Given the security interests that it involves, it makes development part of the defense sphere just as conventional militaries are. At the same time however, the continuing proliferation of agents means that development as a means to build a sphere of influence is a much harder task. Finally, the fact that top-down efforts to organize the donor community have proven to be little fruitful so far is indicative of how the landscape has changed, and that achieving a truly more effective aid policy requires more than reforming policy modalities, namely, a broader understanding of the role that development aid plays in the larger global political and economic context.

4 ENERGY

SPRAWLING OF ORGANIZATIONS AND CHALLENGES TO INTERNATIONAL OIL COMPANIES

Back in the 1970s, global energy governance was dominated by two institutions: the Organization of the Petroleum Exporting Countries (OPEC) and the International Energy Agency (IEA), the latter of which was created in the wake of the 1973 oil embargo triggered by OPEC's Arab members. These two organizations formed each other's counterweights for many years. However, much has changed since these early days of global energy governance.

Today, we witness a myriad of organizations and institutions that play a role in global energy governance, including international intergovernmental organizations such as the World Bank, the International Renewable Energy Agency (IRENA), the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Forum (IEF), but also increasingly more informal governmental fora such as the G8, G20 and collaborative networks and bottom-up initiatives such as the Renewable Energy Policy Network for the 21st Century (REN21) and the Covenant of Mayors.

Looking at the role of major international oil companies, much has also changed since halfway through the 20th century, when the market was dominated by the so-called 'Seven Sisters'.⁶⁷ Recently however, important changes have taken hold of global energy markets. The pro-market ideology of the 1980s and 1990s has been giving way to a resurgence of

⁶⁷ The Seven Sisters at the time consisted of Standard Oil of New Jersey (Esso), Royal Dutch Shell, Anglo-Persian Oil Company, Standard Oil Company of New York (Socony), Standard Oil of California, Gulf Oil and Texaco. Today, after a series of mergers and takeovers, only four of the original seven remain as stand-alone operating companies, namely ExxonMobil, Chevron, Shell and BP.

state capitalism and a return of National Oil Companies (NOCs), reminiscent of the wave of nationalizations in the 1970s.⁶⁸ Large NOCs now constitute five out of the ten largest oil producers in the world according to the Petroleum Intelligence Weekly Top 50 ranking of oil companies for 2013.⁶⁹ As a consequence, licenses to drill in an NOC's backyard are increasingly difficult to obtain, leading Western oil majors such as Shell, BP, Statoil, ExxonMobil and others to spend significant portions of their long-term capital on costly deep-water oilfields in unforgiving areas of the world.⁷⁰

DECENTRALIZED POWER GENERATION

At the national level, power vested within large energy companies is facing stiff competition from bottom-up initiatives. In the UK for example, the dominance of the 'Big Six',⁷¹ or the six major energy companies who in 2010 controlled around 90% of the UK electricity sector, is being challenged by decentralized electricity generation by companies, communities, public sector and third sector organizations.⁷² The aim is to turn the 'Big Six' into the 'Big 60,000'.⁷³ The idea behind this is that of 'decentralized energy generation'. In such a system, electricity is generated close to or at the point of where it is consumed. Heralded by some at Greenpeace as an energy revolution, this system renders buildings actual power stations instead of mere passive energy consumers. Houses and office buildings could be fitted with solar panels, solar water heaters, micro wind turbines

68 Ann Florini and Navroz K. Dubash, "Introduction to the Special Issue: Governing Energy in a Fragmented World," *Global Policy* 2 (2011): 2, doi:10.1111/j.1758-5899.2011.00131.x; Andreas Goldthau, "From the State to the Market and Back: Policy Implications of Changing Energy Paradigms," *Global Policy* Volume 3, (2012) No. 2, doi:10.1111/j.1758-5899.2011.00145.x.

69 Energy Intelligence, "PIW Top 50 Ranking of the World's Largest Oil Companies 2013," 2013, http://www2.energyintel.com/PIW_Top_50_ranking_about.

70 See "The Global Oil Industry: Supermajordämmerung," *The Economist*, August 3, 2013, accessed November 16, 2014 <http://www.economist.com/news/briefing/21582522-day-huge-integrated-international-oil-company-drawing>.

71 The 'Big Six' consist of Centrica-owned British Gas, French EDF Energy, the two German-owned firms npower and E.ON UK, Spanish-owned Scottish Power, and the Scottish firm SSE.

72 Greg Barker, "Gas Isn't the Bogeyman," *The Guardian*, September 12, 2013, sec. Comment is free, <http://www.theguardian.com/commentisfree/2013/sep/12/gas-cleaner-energy-sector>.

73 Ibid.

and heat pumps for extracting energy from the earth.⁷⁴ Such systems are already common in countries such as Denmark, which saw its energy imports decrease significantly as a result.⁷⁵

ENERGY REVOLUTIONS

A totally different kind of revolution however has shaken up the American energy landscape in recent years. The onset of shale gas and tight oil has set the US on a quest to overtake Saudi Arabia and — at least temporarily — to become the world's largest oil producer by mid-2020 and a net oil exporter by 2030.⁷⁶ Although good news for energy importing countries from a supply point of view, this development chips away at the power base of traditional oil and gas producers in the Middle East, North Africa and the former Soviet Union who rely heavily on the income generated by energy exports.⁷⁷ Countries particularly vulnerable to changes in export revenue patterns caused by shale gas and other unconventional are fledgling democracies suffering from high youth unemployment and limited financial buffers (sovereign wealth funds). Examples include countries such as Russia, Venezuela and Algeria.⁷⁸

Notwithstanding the impact of shale gas and other unconventional and the boost this has given to the US-based hydrocarbon industry, innovations from outside of the traditional energy sector (oil, gas and the petrochemical

74 Greenpeace, *Decentralising Power: An Energy Revolution for the 21st Century* (London: Greenpeace UK, July 2005).

75 William Pentland, "The Answer To The Energy Problem," *Forbes*, July 8, 2008, http://www.forbes.com/2008/08/06/denmark-energy-electricity-biz-energy-cx_wp_0807power.html.

76 *World Energy Outlook 2012*, World Energy Outlook (Paris: International Energy Agency (IEA), 2012), 23; John Sfakianakis, "Oil Kingdom," *Foreign Policy*, August 7, 2013, http://www.foreignpolicy.com/articles/2013/08/07/why_saudi_arabia_still_rules_global_energy_oil.

77 Joris van Esch, Sijbren de Jong, and Marjolein de Ridder, *No Blood for Oil? Economic Security, Energy Security and the Military* (The Hague: The Hague Centre for Strategic Studies — HCSS, January 2014), p. 49.

78 Sijbren de Jong, Willem Auping, and Joris Govers, *The Geopolitics of Shale Gas — The Implications of the US' Shale Gas Revolution on Intra-State Stability within Traditional Oil and Natural Gas Exporting Countries in the EU Neighborhood*, HCSS & TNO Strategy and Change (The Hague: The Hague Centre for Strategic Studies — HCSS, 2014,) p. 21.

industries) are also increasingly making their mark. Technology breakthroughs such as electric vehicles with a far greater range; next generation wind turbines capable of power generation during periods of low wind; lighter and powerful batteries; energy generation from ocean waves; and ultra-thin solar cells are but a few of the innovations that will draw power away from the traditional energy sector towards smaller-sized, more flexible energy producers.⁷⁹

QUICKLY EMERGING, YET DIFFICULT TO KEEP A SUSTAINABLE ADVANTAGE

A characteristic of the changing power dynamics is the pace with which new players and their products emerge onto the market, and the stiff competition that they experience. Many of the frontrunners in energy innovation nowadays are companies that have rapidly emerged onto the global market. The market for electric vehicles for example is currently dominated by Tesla Motors, an American company barely ten years old that designs, produces and sells electric cars. In recent years we also witnessed a veritable rise in so-called 'smart' IT applications; the kind of Wi-Fi-enabled, self-learning and programmable thermostats and smoke detectors. Nest Labs for example, a start-up company founded by two former Apple engineers and now owned by Google, quickly grew into an established name in this business.

Competition on the market is fierce. Illustrative are developments in the market for electric vehicle batteries and solar energy. ENER1, the owner of a company that received \$118 million from the U.S. Energy Department to make lithium-ion batteries for plug-in electric cars, filed for bankruptcy in January 2012. As a reason for the bankruptcy, the company's CEO cited heavy competition from battery developers in China and South Korea, who

79 Fast Company, "The World's Top 10 Most Innovative Companies In Energy", *Fast Company*, 2014, <http://www.fastcompany.com/most-innovative-companies/2014/industry/energy>; Kiley Kroh and Jeff Spross, "13 Major Clean Energy Breakthroughs Of 2013," December 18, 2013, <http://thinkprogress.org/climate/2013/12/18/3060131/13-clean-energy-breakthroughs-2013-2/>.

operate under lower manufacturing costs.⁸⁰ A few months later, A123 Systems, a company which makes rechargeable batteries for large automotive companies such as General Motors also filed for bankruptcy. In an attempt to salvage the battery assets of the company, A123 Systems struck a deal with Chinese-owned Wanxiang America Corporation. The latter's purchase of A123's battery assets for \$256.6 million stoked controversy in the US Congress where politicians voiced concerns over taxpayer-funded intellectual property ending up in the hands of other countries.⁸¹

Similarly, competition and rapid technological developments in the photovoltaic (PV) industry have brought about significant cost reductions throughout the value chain. The positive thing about this is that it has made solar technology more accessible and widespread. However, it has also caused profit margins to come under pressure. This situation has caused financial problems for startups and established market players alike.⁸² Germany, traditionally a powerhouse for renewable energy, saw new investments in this sector decline by 46% in 2013 compared to the previous year.⁸³

The energy industry has also come under pressure as a result of large-scale accidents. Offshore oil drilling for example came to be viewed rather negatively after the Deep Water Horizon oil rig operated by BP exploded

80 Phil Milford and Dawn McCarty, "Ener1, Battery Maker, Seeks Chapter 11 Bankruptcy Protection," *BusinessWeek: Undefined*, February 8, 2012, <http://www.businessweek.com/news/2012-02-08/ener1-battery-maker-seeks-chapter-11-bankruptcy-protection.html>.

81 Martin LaMonica, "A123 Systems Headed for Chinese Ownership (Again)," *MIT Technology Review*, December 10, 2012, <http://www.technologyreview.com/view/508551/a123-systems-headed-for-chinese-ownership-again/>; Martin LaMonica, "A123's China Deal Is the Latest Energy Controversy," *MIT Technology Review*, August 13, 2012, <http://www.technologyreview.com/news/428811/a123s-china-deal-is-the-latest-energy-controversy/>.

82 Becky Beetz, "Bankruptcy or Acquisition Facing Half of PV Manufacturers," *Pv Magazine*, accessed May 15, 2014, http://www.pv-magazine.com/news/details/beitrag/bankruptcy-or-acquisition-facing-half-of-pv-manufacturers_100006977/.

83 Ernst & Young, *Renewable Energy Country Attractiveness Index* (Ernst and Young, February 2014), p. 6.

and sank off the coast of Louisiana, causing one of the world's largest accidental oil spills.⁸⁴ The incident proved highly damaging to BP's reputation and the company had to put US\$ 14 billion aside for the clean-up operation — two and a half times more than BP's entire profit in 2009.⁸⁵ Soon thereafter however, this figure proved insufficient owing to greater than anticipated economic losses, legal battles, and soaring cleanup and restoration costs.⁸⁶

Similarly, the nuclear industry was profoundly rocked by the Fukushima nuclear disaster that occurred in the wake of the tsunami that struck Japan in March 2011. The disaster triggered a renewed widespread debate on the safety risks involved with nuclear energy. Following the disaster, the government of Japan decided to phase out all nuclear power. The German government, which saw large-scale protests erupt after the Fukushima disaster, announced it too would phase out all nuclear power by 2020.

Despite this stiff competition and the pressure on the industry resulting from the Deepwater Horizon spill and the Fukushima disaster, the energy industry is also capable of quickly realigning itself. A good example is Tesla Motors' desire to make a cheaper, mass-market electric vehicle. To that end, Tesla is constructing a mega battery factory which — according to Tesla — will enable the company to cut battery costs by 30% and possibly allow it to compete with conventional cars without subsidies. Although there are doubts regarding these claims, the produced batteries could also serve as input for the market for distributed generation in case demand for electric cars were to stall.⁸⁷

84 Mark Kinver, "Eco-Impact of the BP Oil Spill?," *BBC*, April 20, 2011, sec. Science & Environment, <http://www.bbc.co.uk/news/science-environment-13123036>.

85 John Mervin, "Counting the Cost of the BP Disaster One Year on," *BBC*, April 20, 2011, at <http://www.bbc.co.uk/news/business-13120605>.

86 Selina Williams, "BP Expects to Pay More Over Deepwater," *Wall Street Journal*, March 10, 2013, at <http://online.wsj.com/news/articles/SB10001424127887323628804578348320742310086>.

87 Elon Musk, "Assault on Batteries," *The Economist*, June 14, 2014, <http://www.economist.com/news/business/21604174-better-power-packs-will-open-road-electric-vehicles-assault-batteries>.

CONCLUSIONS AND COMMONALITIES

Centralized power with major international oil companies is a thing of the past. However, major National Oil Companies will not necessarily replace this structure on a 1-on-1 basis, as there are many breakthroughs in the energy field. Internationally, shale gas and oil have already led to increasing the clout of OECD countries for example. Hence, there is no such thing as a definite 'shift of power to the emerging economies'. Power is always in flux; periods of high oil prices grant power to national oil companies, yet also stimulate a search for alternatives as evidenced by the arrival of shale gas and shale oil.

At the domestic level, centralized power generation is being challenged. Rather than this being a bad thing however, it empowers the many — essentially anyone can generate electricity. Moreover, this kind of competition also means that energy companies must become more versatile and flexible. Tesla Motors' move into the battery market is a good example of such flexibility. And these are possibly only the first harbingers of new waves of technology-driven disruptive innovation that may bring even more fundamental change — and dramatic power reconfigurations — to the energy field. Other breakthroughs such as algae fuel generation, intelligent wind turbines⁸⁸ and 'flammable ice' are around the corner, and may be with us sooner than anticipated.

88 See "The World's Top 10 Most Innovative Companies In Energy," *op cit*.

5 INFORMATION AND COMMUNICATION TECHNOLOGY

Like no other means, the internet has the capacity to bring people together, or to divide them. In doing so, it has changed our world drastically, altering our view on the world. For example, while the internet has given a boost to the emergence of NGOs that help strengthen civil societies worldwide, universal access to information also leaves many governments edgy about potential security threats, whether as a result of domestic opposition being mobilized, or as an enabler of criminal and terrorist groups operating across borders. The question is whether the internet and attendant technologies will eventually help to create a true 'global village', and foster values such as democracy, human rights and international cooperation, or whether on balance, communication technologies rather encourage ideological and religious strife, thus exacerbating a slide towards a 'clash of civilizations.' In response, countries and societies can be led to retrench, and hence, move the world towards fragmentation. What are the consequences for international security of these developments? The fast-changing nature of the internet economy has a definite impact. Meanwhile, governance of the internet, the vital infrastructure that supports these developments, is also undergoing changes, partly as a result of geopolitical considerations. These forces are thus likely to have an effect beyond the virtual world.

THE EMERGENCE OF THE INCUMBENTS OF THE INTERNET ECONOMY

The emergence of the internet is a fairly recent development, meaning that unlike the oil industry, for example, internet companies have had less time to establish themselves as incumbents. Some of the more traditional ICT companies, such as IBM ('big blue') and Nokia have a long history going back all the way to the nineteenth century, when they were not yet ICT companies: IBM manufactured machinery such as scales, time recorders and cheese slicers, along with tabulators and punched cards while Nokia

started as a wood pulp mill. The current internet giants were established more recently: Microsoft in 1975,⁸⁹ Apple in 1976,⁹⁰ Amazon in 1994,⁹¹ Google in 1998,⁹² and Facebook in 2004.⁹³ Discussion is ongoing whether the large internet companies are the 'big four' (exempting Microsoft) or 'big five'. Google's Eric Schmidt and *The Economist* consider Microsoft part of the traditional ICT companies (producing and selling hardware and software) rather than the internet companies dominating a specific — online — platform.⁹⁴ Considering that Microsoft was fined by the European Commission for not allowing sufficient competition both in 2008 and 2013,⁹⁵ and that Google is currently under scrutiny of the Commission for not ensuring comparable display of specialized search rivals,⁹⁶ these organizations can now be considered incumbents.

89 Microsoft, "Facts about Microsoft", last updated in 2015 http://www.microsoft.com/en-us/news/inside_ms.aspx.

90 Apple, "Company history: 1976-1981", last updated in 2015 <http://apple-history.com/h1>.

91 Amazon, "About Amazon", last updated in 2015 <http://www.amazon.com/Careers-Homepage/b?ie=UTF8&node=239364011>.

92 Google, "Our history in depth", last updated in 2015 <http://www.google.com/about/company/history/>.

93 "Sarah Phillips, "A brief history of Facebook", *The Guardian*, July 25, 2007, <http://www.theguardian.com/technology/2007/jul/25/media.newmedia>.

94 Jason Hiner, "Schmidt calls tech a 4-way race: Google, Apple, Amazon, and Facebook", *TechRepublic*, June 1, 2011, <http://www.techrepublic.com/blog/tech-sanity-check/schmidt-calls-tech-a-4-way-race-google-apple-amazon-and-facebook/>; "Another game of Thrones", *The Economist*, December 1, 2012, <http://www.economist.com/news/21567361-google-apple-facebook-and-amazon-are-each-others-throats-all-sorts-ways-another-game>

95 "Antitrust: Commission imposes € 899 million penalty on Microsoft for non-compliance with March 2004 Decision", European Commission (press release), February 27, 2008, http://europa.eu/rapid/press-release_IP-08-318_en.htm?locale=en; European Commission (press release), "Antitrust: Commission fines Microsoft for non-compliance with browser choice commitments", March 6, 2013, http://europa.eu/rapid/press-release_IP-13-196_en.htm.

96 European Commission, "39740 Google", European Commission (Competition, cases), 2010, http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_39740.

While American, and usually more specifically Silicon Valley-based, internet companies are exceptionally well known and dominate the internet economy, huge internet companies have also emerged in other parts of the world, in particular in China. They are strikingly similar to their American counterparts. Four companies dominate the Chinese internet: Alibaba (essentially Amazon, eBay, and PayPal folded in one), Tencent (comparable to Facebook, including WhatsApp), Baidu and Sohu (both search engines). QQ, Tencent’s social network, has more accounts than any other company in the world (more than 1 billion) and Alibaba has more revenues than Amazon and eBay combined.⁹⁷ The comparative size of the American and Chinese companies is shown below, comparing monthly unique visitors in January 2013 and March 2014. The graphs demonstrate the growth of the internet as a whole and the rapid rise of Chinese websites, measured by number of visitors, in particular.

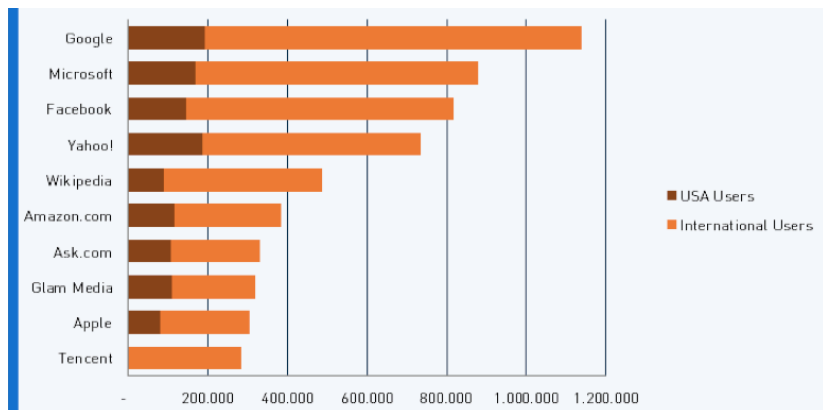


FIGURE 8: TOP 10 GLOBAL INTERNET PROPERTIES BY GLOBAL MONTHLY UNIQUE VISITORS, JANUARY 2013.⁹⁸

97 Kim Gittleson, “Tencent and Alibaba battle for internet dominance in China”, *BBC*, March 18, 2014, <http://www.bbc.com/news/business-26540666>.

98 Source: Source: Mike Orcutt, “Chinese Companies Are Changing the “State of the Internet””, *MIT Technology Review*, May 29, 2014, <http://www.technologyreview.com/view/527706/chinese-companies-are-changing-the-state-of-the-internet/>.

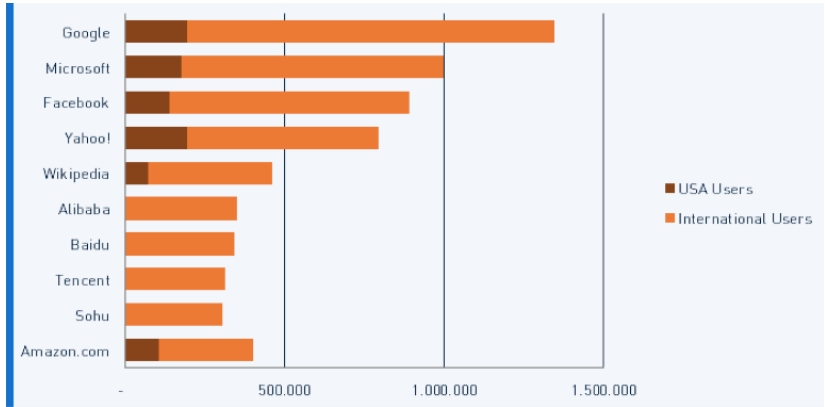


FIGURE 9: TOP 10 GLOBAL INTERNET PROPERTIES BY GLOBAL MONTHLY UNIQUE VISITORS, MARCH 2014.⁹⁹

INCREASINGLY CHALLENGED BY INTERNET STARTUPS

Next to the Chinese internet giants rivalling their American counterparts in numbers of visitors, the large internet companies also face competition from a great number of internet startups. “Most big cities, from Berlin and London to Singapore and Amman, now have a sizeable startup colony (“ecosystem”) [which are] home to hundreds of startup schools (“accelerators”) (...).¹⁰⁰ As many internet companies never fully develop, it is generally difficult to obtain clear numbers for their figures. However, a recent study concluded that the number of startups are biggest in the United States, China, the UK and Germany, with 87 companies valued over USD 1bn located in the US, 26 in China, ten in the UK and three in Germany.¹⁰¹

99 Source: Source: Mike Orcutt, “Chinese Companies Are Changing the “State of the Internet””, MIT Technology Review, May 29, 2014, <http://www.technologyreview.com/view/527706/chinese-companies-are-changing-the-state-of-the-internet/>.

100 “Tech startups: A Cambrian moment”, *The Economist*, January 18, 2014, <http://www.economist.com/news/special-report/21593580-cheap-and-ubiquitous-building-blocks-digital-products-and-services-have-caused>.

101 See “Internet startups: Technoglobe”, *The Economist*, January 20, 2014, <http://www.economist.com/blogs/graphicdetail/2014/01/internet-startups>.

The question is whether these startups can be considered real competition for the 'big four'. Often these startups should be seen as "experiments on top of such platforms, testing what can be automated in business and other walks of life",¹⁰² rather than competitors to the dominant platforms. Still, while platforms such as PayPal build on top of existing platforms or services, some of these startups have proven to become strong competitors to the existing online platforms. The dynamics of these platforms mean that users easily switch, making retaining users and their data difficult. Young people, for instance, are generally moving towards less public and more ad-hoc social media, such as WhatsApp, Instagram and Snapchat.¹⁰³ And in the past dominant platforms emerged to become obsolete after a while, the best known being MySpace and MSN Messenger. In order to retain their position and access to user data, the 'big four' continue to acquire startups. For example, Facebook recently bought WhatsApp in order to continue to serve the younger generation of users of social media.¹⁰⁴

IMPACTING THE ECONOMY BEYOND THE ICT SECTOR

The distinction between the data economy and the 'regular' economy is fading: internet companies such as LinkedIn, Airbnb and Uber seek to reshape industries: LinkedIn has changed the recruiting business, Airbnb has an impact on the hotel industry, and Uber is trying to take over taxi services in many of the world's cities. This also means that internet companies are no longer not only buying internet startups. For instance, Facebook recently acquired virtual reality company Oculus Rift, Apple bought Dr. Dre's Beats earphones,¹⁰⁵ while Google took over home appliances company Nest. Hence, internet companies are increasingly becoming competitors not only to other online platforms, but also to

102 "Tech startups: A Cambrian moment", *op cit*.

103 Robin Harris, "Yes, Facebook's popularity will decline", *ZDNet*, July 10, 2014, <http://www.zdnet.com/article/yes-facebooks-popularity-will-decline/>.

104 Sarah Frier, "Facebook's \$22 Billion WhatsApp Deal Buys \$10 Million in Sales", *Bloomberg*, October 29, 2014, <http://www.bloomberg.com/news/2014-10-28/facebook-s-22-billion-whatsapp-deal-buys-10-million-in-sales.html>.

105 Michael Vakulenko, "To understand Beats you need to understand Lady Gaga", *Medium*, May 29, 2014, <https://medium.com/@mvakulenko/to-understand-beats-you-need-to-understand-lady-gaga-e334de3da6d2>.

offline businesses and sectors. At the same time, companies in traditional industries such as agriculture and healthcare, are buying internet startups to catch up with the ongoing 'datafication' of their industries.¹⁰⁶

Software and platforms thus become intertwined with the physical world and new products and services are emerging, such as smart grids, smart wallets and self-steering cars.¹⁰⁷ Hence, the internet plays an important facilitating role for developments in other sectors such as the rise in decentralized energy production and open spending trends in development aid. Some believe that these developments will result in a 'zero margin society': "The inherent dynamism of competitive markets is bringing costs so far down that many goods and services are becoming nearly free, abundant, and no longer subject to market forces. While economists have always welcomed a reduction in marginal cost, they never anticipated the possibility of a technological revolution that might bring those costs to near zero."¹⁰⁸ This will mean that power will be very differently distributed: access to platforms will become more important for gaining economic advantage. Already, competition between platforms can be fierce, illustrated by the 'war' between taxi app Uber and its competitor Lyft.¹⁰⁹

A few incumbents remain important in the internet economy, but power is fleeting as startups emerge at a high rate in almost every developed country. While the current 'big four' seem to be well-placed to retain their role in the internet economy, new players may emerge very quickly to take their place. As the internet becomes a driving force for shifts in other

106 Leena Rao, "As Software Eats the World, Non-Tech Corporations Are Eating Startups", *TechCrunch*, December 14, 2013, <http://techcrunch.com/2013/12/14/as-software-eats-the-world-non-tech-corporations-are-eating-startups/>.

107 Jop Esmeyjer, Anne Fleur van Veenstra, Bas Kotterink, Tom Bakker en Anna van Nunen, *Data-driven value chain innovation*, OECD study New Sources of Growth, TNO report, forthcoming.

108 Jeremy Rifkin, "The rise of anti-capitalism", *The New York Times*, March 15, 2014, http://www.nytimes.com/2014/03/16/opinion/sunday/the-rise-of-anti-capitalism.html?action=click&contentCollection=Middle%20East&module=MostEmailed&version=Full®ion=Marginalia&src=me&pgtype=article&_r=0.

109 Casey Newton, "This is Uber's playbook for sabotaging Lyft", *The Verge*, August 26, 2014, <http://www.theverge.com/2014/8/26/6067663/this-is-ubers-playbook-for-sabotaging-lyft>.

sectors, the distinction between the data economy and the ‘regular’ economy is fading. The impact of these dynamics makes debates about the openness of the internet and internet governance as such more poignant than ever.

NET NEUTRALITY AS THE KEY TO OPENNESS OF THE INTERNET

The internet economy — and increasingly also the economy as a whole — relies on a trustworthy infrastructure: a ‘free and open’ internet. According to the US Federal Communications Committee (FCC): “The ‘Open Internet’ is the Internet as we know it. It’s open because it uses free, publicly available standards that anyone can access and build to, and it treats all traffic that flows across the network in roughly the same way. The principle of the Open Internet is sometimes referred to as ‘net neutrality’. Under this principle, consumers can make their own choices about what applications and services to use and are free to decide what lawful content they want to access, create, or share with others. This openness promotes competition and enables investment and innovation.”¹¹⁰ Preserving this openness is currently much debated with different outcomes across the globe.

Three countries have adopted legislation establishing net neutrality: Chile (in 2010), The Netherlands (in 2012) and Slovenia (in 2014). This legislation determines that internet service providers (ISPs) cannot differentiate between data traffic passing through their networks (except for specific purposes of quality of service) and that they are fined if they do not comply. Recently, the European Parliament voted in favor of making net neutrality part of the European Commission’s telecommunications reform.¹¹¹ In the US, the debate on net neutrality has taken a different turn. A federal appeals court decision voiding FCC’s rules on net neutrality,¹¹² paved the way for a deal between Netflix and Comcast ensuring preferential treatment

110 Federal Communication Commission, “Open Internet”, FCC, <http://www.fcc.gov/openinternet>.

111 BBC, “Net neutrality law adopted by European Parliament”, *BBC*, April 3, 2014, <http://www.bbc.com/news/technology-26865869>.

112 Gautham Nagesh and Amol Sharma. “Court Tosses Rules of Road for Internet”, *The Wall Street Journal*, January 4, 2014, <http://www.wsj.com/articles/SB10001424052702304049704579320500441593462>.

of its traffic.¹¹³ The FCC is set to introduce new rules soon, which, barring possible court challenges, are set to preserve net neutrality in the United States.¹¹⁴ Another group of countries is much less concerned with net neutrality as they have digital censorship in place, blocking websites and social media, parallel to censoring printed press. Notable examples include Iran's 'Halal web',¹¹⁵ and China's 'Great Firewall' that block social media.¹¹⁶ Consequently, it becomes harder to continue to speak of 'the internet', as, in fact, parallel networks emerge that may still be technically interconnected, but which make it much harder for people to find or access information.¹¹⁷

Notwithstanding debates and regulations on net neutrality or censorship elsewhere, the fact remains that most internet companies are US-based and, therefore, have to comply with American legislation. This means, for example, that all personal data collected by these companies is subject to the USA PATRIOT Act,¹¹⁸ and could thus be requisitioned for investigation by the US government. The NSA files leaked by Edward Snowden show that many ISPs have indeed given the US government access to telephone and internet data of its users both at home and abroad and that these data are collected, stored and mined on a very large scale using very sophisticated processing techniques.¹¹⁹ The NSA is indeed conducting

113 Nilay Patel, "The internet is fucked (but we can fix it)", *The Verge*, February 25, 2014, <http://www.theverge.com/2014/2/25/5431382/the-internet-is-fucked>.

114 Jonathan Weisman, „F.C.C. Net Neutrality Rules Clear Hurdle as Republicans Concede to Obama" *The New York Times*, February 24, 2015, <http://www.nytimes.com/2015/02/25/technology/path-clears-for-net-neutrality-ahead-of-fcc-vote.html>.

115 Saeed Kamali Dehghan, "Iran clamps down on internet use", *The Guardian*, January 5, 2012, <http://www.theguardian.com/world/2012/jan/05/iran-clamps-down-internet-use>.

116 "The Great Firewall: The art of concealment", *The Economist*, April 6, 2013, <http://www.economist.com/news/special-report/21574631-chinese-screening-online-material-abroad-becoming-ever-more-sophisticated>.

117 See e.g. Gordon Goldstein, "The End of the Internet? ", *The Atlantic Monthly*, (July/August 2014), available at <http://www.theatlantic.com/magazine/archive/2014/07/the-end-of-the-internet/372301/>

118 The United States Department of Justics, "Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act", <http://www.justice.gov/archive/ll/highlights.htm>.

119 Ewen Macaskill and Gabriel Dance, "The NSA files", *The Guardian*, November 1, 2013, <http://www.theguardian.com/us-news/the-nsa-files>.

surveillance globally, but under US jurisdiction. Besides access to a lot of personal data for national security purposes, the US also exerts power over the governance of internet because the IP address system is managed on American soil.

INTERNET GOVERNANCE IS ALSO SHIFTING: THE IANA TRANSITION PROCESS

The domain name system (DNS) of the internet is undergoing change. A commonly held idea is that the internet would be different from other infrastructures as it is set up by enthusiasts rather than governments,¹²⁰ and, therefore, it would not need central governance other than management of its address system (such as the extensions .com, .org, .edu, .nl and .uk). Currently, the US government performs this role, via its National Telecommunications and Information Administration (NTIA) which has assigned management of the DNS to the non-profit organization Internet Corporation for Assigned Names and Numbers (ICANN).¹²¹ From the setup of ICANN, it was always envisioned that the US government's role in the Internet Assigned Numbers Authority (IANA) would be temporary and that, in time, this role would be given to the private sector. At the beginning of 2014, the NTIA announced "its intent to transition key Internet domain name functions to the global multi-stakeholder internet community."¹²²

The issue at stake in this 'IANA transition process' is this: "how can we have an effective regime for global governance of Internet identifiers that

120 In contrast to the widely held belief that the internet is exclusively created by a group of pioneers at universities for communication purposes, the US government was actually deeply involved in the development. The development of core technologies of the internet, such as the TCP/IP standards, were sponsored by the US Department of Defense. (Andrew L. Russell, *Open standards and the digital age: history, ideology, and networks*, Cambridge University Press, 2014.)

121 ICANN, "Bylaws for Internet Corporation for Assigned Names and Numbers: A California Nonprofit Public-Benefit Corporation", July 30, 2014, <https://www.icann.org/resources/pages/bylaws-2012-02-25-en#1>.

122 United States Department of Commerce, National Telecommunications & Information Administration, "NTIA Announces Intent to Transition Key Internet Domain Name Functions", NTIA (press release), March 14, 2014, <http://www.ntia.doc.gov/press-release/2014/ntia-announces-intent-transition-key-internet-domain-name-functions>.

maintains the decentralized and distributed, open, free and innovative nature of the Internet? In other words, there is something at stake here more important than accountability, and that is the scope of ICANN's mission, and Internet freedom itself."¹²³ While this transition process suggests handing governance over to the internet community, the question is whether this will be at all possible. It is unclear who exactly comprises the international internet community and it is also unclear which organization will be trusted by all involved to take over the role of ICANN.¹²⁴ Furthermore, the US still will have the final say as they have stated that they will not accept a "government-led or inter-governmental organization 'solution'."¹²⁵ As the internet has become of great importance to the worldwide economy, the envisaged 'technical' function of assigning domain names has, thus, become subject to geopolitical interests.

The issues concerning the governance of the DNS and the ongoing debate on net neutrality show that the internet can no longer be considered a 'neutral' infrastructure. Rather, the internet — as a source of economic power as well as a source of intelligence essential to security — is becoming closely intertwined with the many diverging political and economic preferences worldwide. While the internet reshapes the economy beyond the ICT sector and impact political and military power, geopolitical forces, in turn, shape the internet and its governance.

IMPACT OF THE INTERNET ON POLITICAL AND MILITARY POWER

Today, it is clearer than ever that the internet affects geopolitics and vice-versa. It is thus no surprise that it impacts national security and military power as well. Examples of how the internet has played a role in politics are

123 Milton Mueller, "What's more important than accountability?" *Internet Governance Project*, August 17, 2014, <http://www.internetgovernance.org/2014/08/17/whats-more-important-than-accountability/>.

124 Craig Timberg, "U.S. to relinquish remaining control over the Internet", *The Washington Post*, March 14, 2014, http://www.washingtonpost.com/business/technology/us-to-relinquish-remaining-control-over-the-internet/2014/03/14/Oc7472d0-abb5-11e3-adbc-888c8010c799_story.html.

125 See Trademarks and Brands Online, "A rock or a hard place? The post-NTIA era" Juannuary 5, 2014, available at <http://www.trademarksandbrandsonline.com/article/a-rock-or-a-hard-place-the-post-ntia-era>

the so-called Facebook and Twitter revolutions in (amongst others) The Philippines, Iran, Tunisia and Egypt. Social media were instrumental in organizing manifestations and getting people out on the streets to protest. Discussion is still ongoing on the extent to which these ‘revolutions’ are actually driven by the internet, or rather are a different way to communicate and organize previously offline movements, but these modern ways of communication did play a large role in the organization of these manifestations.¹²⁶ Similarly, less benign groups, such as Al-Qaeda and Islamic State (IS) also make sophisticated use of the internet.¹²⁷ Not dissimilar to startups challenging the incumbents of the internet economy, IS is ahead of its predecessors and knows how to make better use of social media for purposes of communication, propaganda and recruitment.¹²⁸ In response, the US military is active on social media now to counter IS propaganda.¹²⁹

The importance of the internet as a communication tool and as a central element of our vital infrastructure, both economically and physically, makes that it has become a target for attacks with potentially disastrous consequences. The first wide-scale denial-of-service cyberattack was launched at Estonia on April 26, 2007, most likely originating in Russia, targeting government websites, banks, universities and newspapers,

126 See for instance: Ethan Zuckerman, “The First Twitter Revolution?”, *Foreign Policy*, January 15, 2011, <http://foreignpolicy.com/2011/01/15/the-first-twitter-revolution-2/>; Henry Jenkins, “Twitter Revolutions?”, *Spreadable Media*, <http://spreadablemedia.org/essays/jenkins/#.VJ3e9QCABg>; Saleem Kassim, “Twitter Revolution: How the Arab Spring Was Helped By Social Media”, *PolicyMic*, July 3, 2012, <http://mic.com/articles/10642/twitter-revolution-how-the-arab-spring-was-helped-by-social-media>; Evgeny Morozov, “Iran: Downside to the “Twitter Revolution””, *Dissent*, Fall 2009, p. 10-14, http://www.evgenymorozov.com/morozov_twitter_dissent.pdf.

127 Namosha Veerasamy and Marthie Grobler (2011), “Terrorist use of the Internet: Exploitation and Support Through ICT Infrastructure”, Proceedings of the 6th International Conference on Information Warfare and Security, March 17-18, 2011, Washington, DC, USA, pp. 260-267.

128 Laura Ryan, “Al-Qaida and ISIS Use Twitter Differently. Here’s How and Why.”, *National Journal*, October 9, 2014, <http://www.nationaljournal.com/tech/al-qaida-and-isis-use-twitter-differently-here-s-how-and-why-20141009>.

129 Brian Knowlton, “Digital War Takes Shape on Websites Over ISIS”, *The New York Times*, September 26, 2014, http://www.nytimes.com/2014/09/27/world/middleeast/us-vividly-rebuts-isis-propaganda-on-arab-social-media.html?_r=0.

something which brought many people to the streets in protest.¹³⁰ But as the internet is becoming more important for running infrastructure in other sectors, these also become vulnerable to cyberattacks or cyberterrorism: anything with a chip or a sensor could now become a target. A virtual attack can be launched on bridges, airports, banks and nuclear plants. One example is the use of the Stuxnet virus aimed to set back development of Iran's nuclear facilities at Natanz, allegedly orchestrated by the US and Israeli government.¹³¹ And British intelligence office GCHQ spied on Belgium's telecom operator Belgacom planting malware to infect the network in order to better understand its operations.¹³²

Furthermore, the internet also gives rise to electronic forms of criminal activity, such as phishing, hacking, and identity theft. While each of these activities has an 'offline' counterpart, they can now be committed by someone on the other side of the world, thereby making it much harder to identify, investigate and prosecute such persons. Beside the 'regular' internet, there are also many websites created specifically for illegal activities. Together they are often called the dark web. This consists of websites using 'onion' addresses that use Tor anonymity software to hide the physical location the servers that host these sites — that often contain only very minimal information, pictures and formatting. The infamous Silkroad market place for any products that cannot be traded in broad daylight has been taken down recently.¹³³ This means that not only the military, but also police forces and judiciaries around the world need to adjust their ways of working to combat and suppress these new forms of crime.

130 Jason Richards, "Denial-of-Service: The Estonian Cyberwar and Its Implications for U.S. National Security", *International Affairs Review*, <http://www.iar-gwu.org/node/65>.

131 Kim Zetter, "An Unprecedented Look at Stuxnet, the World's First Digital Weapon", *Wired*, March 11, 2014, <http://www.wired.com/2014/11/countdown-to-zero-day-stuxnet/>.

132 Der Spiegel Newspaper, "Belgacom Attack: Britain's GCHQ Hacked Belgian Telecoms Firm", *Der Spiegel*, September 20, 2013, <http://www.spiegel.de/international/europe/british-spy-agency-gchq-hacked-belgian-telecoms-firm-a-923406.html>.

133 Andy Greenberg, "Global Web Crackdown Arrests 17, Seizes Hundreds Of Dark Net Domains", *Wired*, July 11, 2014, <http://www.wired.com/2014/11/operation-onymous-dark-web-arrests/>.

An underlying question to all the shifts that occur as a result of the emergence of the internet is how it generally affects relations between people, organizations or even nations. Will the existence of multiple platforms in itself exacerbate fragmentation? Already, individuals use multiple platforms: LinkedIn for professional use, Facebook for chatting with friends and Twitter, WhatsApp and Instagram for sharing pictures. An interesting development is the emergence of an ephemeral web ecosystem, consisting of fleeting apps and content, including SnapChat, which allows users to create and share content that is only available for a short time and that is subsequently deleted.¹³⁴ Furthermore, the question arises whether the divide along language barriers may lead to fragmentation. Chinese internet users use different platforms than Europeans who, together with many others, mainly use American internet platforms. Russians (VKontakte) and Brazilians (Orkut) use yet other social networks, albeit that Orkut is in decline at the moment.¹³⁵ This gives rise to the question of whether these social networks really promote exchange of information across borders of countries and social groups, or whether they in fact reinforce existing communities, moving them from offline to online. Finally, increasing control and individualization of web usage could also lead to a form of fragmentation, as people become less exposed to ‘new’ or ‘outlying’ information finding themselves inside a ‘filter bubble’.¹³⁶

CONCLUSIONS AND COMMONALITIES

Thinking about fragmentation, one key question regarding the use of ICT and the emergence of the internet is whether they bring people together and promote values such as democracy and international cooperation, or that they are ultimately divisive forces leading to ideological strife. In the early days of the internet, it was envisioned as a unifying instrument, but it increasingly appears to become a facilitator of fragmentation. Although the supply of information is endless and it is easier to keep in touch with

¹³⁴ CB Insights, “The Ephemeral App Ecosystem – Over \$180M Raised; Snapchat & Whisper Dominate App Store Rankings”, *CB Insights*, February 16, 2014, <http://www.cbinsights.com/blog/ephemeral-app-itunes-rankings/>.

¹³⁵ Harrison Weber, “Russia’s largest social network, VKontakte, grows in Brazil – thanks to Google”, *VentureBeat News*, July 15, 2014, <http://venturebeat.com/2014/07/15/russias-largest-social-network-vkontakte-just-got-big-in-brazil/>.

¹³⁶ Eli Pariser, *The Filter Bubble: What the Internet Is Hiding from You* (London: Penguin Books, 2012).

people at the other side of the world, countries deliberately carve up the internet as it becomes increasingly intertwined with diverging economic and political preferences. Geopolitical forces, in turn, shape the internet and its governance. The dependence of people, governments and companies on the internet is, however, different from dependence on, for instance, raw materials.

ICT is both a means of communication and a service in itself, is part of our vital infrastructure but also steering it, and can empower and mobilize people and communities as much as it can be used as a means of control by state authorities. Furthermore, the internet has an increasingly important facilitating role for developments in other sectors, such as the emergence of decentralized energy production and open spending trends in development aid, leading to a fading distinction between the economy and the internet economy and possibly leading to a 'zero margin economy'. This will mean that power will be very differently distributed: access to platforms will become more important for gaining economic advantage than access to primary resources. Who will be in charge of these platforms remains to be seen. A few incumbents, such as Google and Amazon, are likely to remain important, but as many startups are created every day, this power may be fleeting swiftly.

Meanwhile, the debate on openness of the internet, and the infrastructure on which these economic developments are built, is ongoing, as the internet is undergoing changes in governance. The country that seems to be the most powerful in the virtual realm continues to be the US: besides access to a lot of personal data for national security purposes, they have the largest say regarding internet governance. These matters demonstrate that the internet can no longer be considered a 'neutral' infrastructure. The internet is increasingly used as a means to exert power in the traditional sense (military, economic, ideological), and can, thereby, help to consolidate or fragment power.

Finally, fragmentation is not only embodied in the emergence of separate internets, such as the 'Halal Web', or the 'Great Firewall', but also in the behavior of individuals that interact online exclusively with like-minded people. As information is abundant, people start selecting based on their (political) preferences having little incentive in actively searching for other

opinions. This is also likely to have implications for the dispersal of ideologies. Similarly, individuals voluntarily and involuntarily disperse their information consumption as a result of personalization of websites and filter bubbles. Still, the great potential of the internet is not at all lost: even if they have to make use of proxies or onion routers, individuals globally now have access to more information than ever before: 90% of data available is created in the past two years. Hence, the internet will remain a critical factor in geopolitics, for better or for worse.

6 WHITHER FRAGMENTATION? CONCLUSIONS AND IMPLICATIONS

Across various areas, power is changing. But that does not have to leave us powerless. By understanding the changes that we are experiencing, we can adapt and exercise our power as individuals, organizations, and societies in more effective ways. Organizations must build flexibility into every aspect of their governance:

- Strategy: vision and objectives may have to be adjusted to take new dynamics into account and to learn from experience, that is, more interactive forms of design and fast prototyping
- Implementation: diverse and complex environments may require more devolved and networked approaches.
- Policy development: organizations have to be able to shift more flexibly than ever between different ‘modes’ of decision-making.

Some perceive the trends outlined in this paper as part of a decay of power.¹³⁷ They fear a world where power is irretrievably transferred from Goliaths to Davids, where the global institutional framework that was constructed after World War II is crumbling, where grand schemes seems increasingly doomed, and where momentum is harder to build and faster to lose. Such a ‘fragmented’ world sounds unstable, unaccountable, and unmanageable.

¹³⁷ See Moises Naim, *The End of Power: From Boardrooms to Battlefields and Churches to States, Why Being In Charge Isn't What It Used to Be* (New York: Basic Books, 2014); but see also the recently released United States *National Security Strategy*, pp. <http://www.whitehouse.gov/the-press-office/2015/02/06/fact-sheet-2015-national-security-strategy>

But it also sound implausible. If we were increasingly powerless against potentially harmful forces such as nature, violence, or chaos, then we would expect to see falling life expectancies, rising conflict, and a breakdown in social order. Yet the opposite is true. As humans we have been able to exert increasing power over our environment as living standards and life expectancy have shot up. Our power for good is also evident in the long-term decline of war and violence over centuries and decades.¹³⁸ And although our societies are increasingly complex, democracy and the rule of law are on the rise.¹³⁹

This paper has proposed an alternative way of looking at what is happening to power. Instead of talking about fragmentation, we have talked about fission, analogous to the process of nuclear fission whereby the nucleus of an atom splits into ever smaller parts in a process that, if properly controlled, releases a very large amount of 'power'.

Furthermore, not only is it possible to adapt to the new world we face, it is a strategic necessity: "Central control can only be had if subordinate units conform to a detailed script of guidelines and rules designed to make their operations predictable and reportable in standardized forms. This generally fails on two counts. First, such control can only be won at the price of responsiveness and flexibility, the very assets needed to deliver complex activities in a changing environment. Second, such rules are usually sufficiently complex and contradictory that they cannot all be obeyed. This gives subordinates new forms of discretion and thus leads to unpredictability."¹⁴⁰

138 HCSS Poster, *Peace and Conflict Across Time*, available at <http://www.hcss.nl/news/peace-and-conflict-across-time/837/>; Steven Pinker, *The Better Angels of our Nature* (New York: Penguin Books, 2013)

139 Consider the 'waves of democracy' according to Samuel Huntington, *The Third Wave of Democracy* (Oklahoma City: the University of Oklahoma, 1992).

140 Paul Hirst, "Can associationalism come back?", *Critical Review of International Social and Political Philosophy*, Vol, 4 (2001), no 1, p. 19

EFFECTIVENESS IN FLEXIBILITY

A world in flux means greater uncertainty. Uncertainty means that predictions of the future are potentially misleading and that plans based on them are inherently imprudent.¹⁴¹ Strategies based on ‘plan and pray’ must be replaced by ones which ‘sense, anticipate and respond’. Sensing means more than just making predictions and planning only for those eventualities. Instead, organizations should envisage a breadth of scenarios and develop strategies to cope with any of them. An example from the energy industry is the Tesla move into battery manufacturing: by using its production capacities to cover two different markets, Tesla spreads its risks. This approach leads to a different way of strategic planning in the face of uncertainty, comprising the need for balanced portfolio choices – portfolio of goals, capabilities, and relationships within an ecosystem – in which flexible ecosystem choices, based on network strategy, are becoming ever more important.

EFFECTIVENESS IN DIVERSITY

A world saturated with small actors need not spell doom for larger ones. It is all a matter of how they are organized. And in a world that is characterized by networked cooperation and real-time information flows, for large organizations to be able to operate is a matter of devolving responsibilities and interacting in more specialized networks: this implies flex-scaling. Like C2, this is better thought of not as either-or (big or small) but as situationally contingent: big companies that can hold on to some of the advantages of large scale, but are also able to piggy-back on the advantages of small-scale, e.g. through their internal organization or ecosystem choices.

Second, such solutions should be implemented on the ground. Examples abound in various areas. In governance, the EU and Google are good instances. The former has explicitly adopted an agenda of decentralization (subsidiarity) that should stem centralizing tendencies. Google is making similar attempts, and decided for instance to separate its innovation management from the rest of the franchise. Other examples include

¹⁴¹ See e.g. Philip Tetlock, *Expert Political Judgment: How Good Is it? How Can We Know?* (Princeton: Princeton University Press, 2006)

decentralized energy provision, decentralized defense procurement and large development agencies working in the guise of more specialized units on the ground with local organizations.

EFFECTIVENESS IN EXPERIMENTATION

Just as the problems of fragmentation lie in plurality and tendency to rapid change, so do the solutions. Organizations can adopt a variety of approaches to decision-making or modes of governance. The transition to be made here is from a ‘classic organization’ towards an ‘edge organization.’ These modes can be described along three main dimensions:

- Allocation of decision rights: the extent to which decisions are made at one extreme by unitary, authoritative decision-makers, or at the other extreme in a mutual, peer-to-peer manner.
- Patterns of interaction: the extent to which agents within an organization interact at one extreme in a way tightly controlled and constrained by procedure, or at the other extreme in a way totally unconstrained and free.
- Distribution of information: the extent to which information is at one extreme controlled and concentrated in the hands of a certain number of agents, or at the other extreme broadly disseminated.

At least in this transitional period, agents have to be able to shift more flexibly than ever between different modes of decision-making.

CLASSIC ORGANIZATION	EDGE ORGANIZATION
decision rights confined to unitary actors	peer-to-peer decision-making
patterns of interaction tightly constrained	patterns of interaction unconstrained
information distribution tightly controlled	information broadly disseminated

FIGURE 10: FORMS OF ORGANIZATION.¹⁴²

142 Source: David S. Alberts and Richard E. Hayes, *Understanding Command and Control*. Washington, DC: CCRP, 2006.

This is not to say that 'edge' organizational forms are superior to 'traditional' ones. It is more that every position on the continuum has situationally contingent advantages and disadvantages — so any agent that can shift adaptively to whatever is required in certain domains will have a comparative advantage.

SOME PRACTICAL IMPLICATIONS

Surveying the consequences of fragmentation and fission, a number of commonalities emerge across the various domains that were studied here: 1) the number of relevant actors has greatly increased and often changed the terms of interaction within a given policy domain entirely; 2) the position of the state within the constellation of actors has often been greatly affected; and 3) more often than ever before, interest and impact achieved in one area has more consequences for what goes on elsewhere.

But against these trends are some others — which should not necessarily be seen as countervailing forces. One is that in the face of fragmentation and uncertainty, people seek affirmation of their identities, and find that the nation-state plays a vital role in that respect. Second, in the area of energy provision, state oil companies are making a comeback at the expense of the traditional privately-owned multinational oil companies. In the defense sector, something similar is occurring, albeit that it concerns large firms that enjoy strong government support. In development aid, it is not global civil society taking over the torch from traditional OECD donors, but emerging nations such as Brazil, India and China that now run their own programs, according to their own philosophies. In the area of internet governance, arguably the least likely domain to appreciate government tutelage, it seems that the state — and more specifically, the US — will continue to wield significant clout in terms of controlling flows of, and access to, information.

The chief reason why state institutions are not withering away in the face of fragmentation is because many states manage to reinvent themselves as they undergo transformations. They often adapt to the new environment, become more accessible, more responsive, more transparent and show themselves to be indispensable. And in places where they cannot, they reassert themselves either by promoting or nationalizing domestic corporations — as in the case of oil companies — or by putting up barriers

to the outside world — as in the case of internet governance. What is more, fragmentation is also giving states more choice, whether it is in terms of defense procurement or sources of development aid.

All of these demonstrate that fragmentation has had a profound influence on power as such. It is not so much a matter of fragmenting of power, or power being dispersed or withering away, but a transformation of power whereby it reappears in a new guise: fission under flux. As it were, states have discovered 'new' sources of power: where military or economic power become less useful as foreign policy instruments, now 'soft power', or the power of attraction or persuasion becomes more important. Providing access to information is also a source of power today. And governments can exert power as a result of linkages between issue areas. All of these sources are characteristic of a networked world, and all are sources that non-state actors have used to exploiting in absence of possessing hard power tools. But now state institutions are catching up. Not only is this leading to a new equilibrium, but also to efforts to seek to consolidate — or even to reassert control — within the issue areas discussed here.

Even so, the big question is whether a new equilibrium can be found given the speed at which developments take place across issue areas, and given the ways power is being transformed. For instance, internet and energy technology are moving very fast and mostly in a direction that favors individual autonomy and decentralization that lead state institutions to lose grip altogether when it comes to regulating these domains. In defense and security, a host of new actors which themselves create additional demand for weaponry could lead to indefinitely fragmented — and therefore insufficiently regulated — international arms markets. In development, the relative decline of ODA and the rapid emergence of new sources of development support puts relations between the global North and South further under pressure. Remaining flexible is key, but the first step is to ensure being aware of the changing nature of power in a world of flux.

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