

HCSS StratMon 2016

SI VIS PACEM, PARA UTIQUE PACEM

INDIVIDUAL EMPOWERMENT,
SOCIETAL RESILIENCE AND
THE ARMED FORCES



HCSS helps governments, non-governmental organizations and the private sector to understand the fast-changing environment and seeks to anticipate the challenges of the future with practical policy solutions and advice.



SI VIS PACEM, PARA UTIQUE PACEM

INDIVIDUAL EMPOWERMENT, SOCIETAL RESILIENCE AND THE ARMED FORCES

HCSS StratMon 2016

The Hague Centre for Strategic Studies

ISBN/EAN: 978-94-92102-31-7

Authors Willem Th. Oosterveld, Stephan De Spiegeleire, Marjolein de Ridder, Tim Sweijjs, Frank Bekkers, Dana Polackova, Scott Ward, Kamal Eldin Salah, Rik Rutten, Nathalie Olah

The HCSS StratMon Program offers strategic assessments of global risks to Dutch national security. The Program has received financial support from the Dutch Government within the context of the Dutch Government's Strategic Monitor.

© 2015 *The Hague* Centre for Strategic Studies. All rights reserved. No part of this report may be reproduced and/or published in any form by print, photo print, microfilm or any other means without prior written permission from HCSS. All images are subject to the licenses of their respective owners.

Graphic Design Joshua Polchar & Studio Maartje de Sonnaville

Graphs Juan Martin Sosa Mantz

The Hague Centre for Strategic Studies

Lange Voorhout 16
2514 EE The Hague
The Netherlands

info@hcss.nl
HCSS.NL

SI VIS PACEM, PARA UTIQUE PACEM

INDIVIDUAL EMPOWERMENT,
SOCIETAL RESILIENCE AND
THE ARMED FORCES

HCSS StratMon 2016

The Hague Centre for Strategic Studies

TABLE OF CONTENTS

1 EXECUTIVE SUMMARY	7
2 INTRODUCTION	13
WHATEVER HAPPENED TO TINA?	17
3 THE TWO SIDES OF THE SECURITY COIN	19
3.1 THE CONFLICT SIDE OF SECURITY	19
3.2 THE RESILIENCE SIDE OF SECURITY	21
3.3 HOW THE TWO SIDES DIFFER	24
4 INDIVIDUAL EMPOWERMENT: <i>TINA BELOW AT WORK</i>	27
4.1 ECONOMIC EMPOWERMENT	32
4.2 POLITICAL EMPOWERMENT	43
4.3 EDUCATIONAL EMPOWERMENT	53
4.4 TECHNOLOGICAL EMPOWERMENT	66
4.5 'QUALITY OF LIFE' AND INDIVIDUAL EMPOWERMENT	78
5 DEFENSE IMPLICATIONS: SOME FOOD FOR THOUGHT	93
5.1 VIGNETTES OF DEFENSE ORGANIZATIONS SUPPORTING INDIVIDUAL EMPOWERMENT AND RESILIENCE	95
5.2 IMPLICATIONS FOR DEFENSE ORGANIZATIONS	101
6 CONCLUSIONS	111
BIBLIOGRAPHY	117

1 EXECUTIVE SUMMARY

Defense organizations predominantly focus on the negative side of security: risks, threats, enemies, etc. They do so both in their analyses of what the security environment looks like (strategic orientation) and in their discussions about how they want to deal with that security environment (strategic navigation). The implicit paradigm here is a conflict-centric one. It focuses on the agents of conflict (the ‘bad guys’) over whom we (the West) want to maintain conflict dominance: the ability to intervene, to overwhelm with armed force (our own and/or that of local security actors) in order to return to either the pre-existing situation or to a situation that we find more desirable (and/or sustainable) than the pre-existing one. This paradigm is widely accepted. Many key stakeholders think this is precisely why we have defense organizations. We beg to differ.

Over the past few decades of expeditionary efforts from the Balkans to Afghanistan, our defense organizations have learned valuable lessons about conflict and how to respond to it. They have started graduating to more comprehensive approaches to the exercise of power, recognizing that local (security) actors (and sectors) have to be an integral part of any sustainable security outcome. They have started acknowledging that ‘an ounce of prevention is worth a pound of cure’—also in the defense and security business. However by and large, our defense efforts still focus on the conflict and the conflict management side of the security coin.

This report suggests that there is another side to security. It is as real and perceptible as the conflict side—even though it is widely ignored in the media and practitioner debate. We call it the resilience side, which in essence represents a society’s immune system against conflict. This resilience paradigm does not focus on the *agents of conflict*, but rather on the *agents of resilience*—people and structures resisting conflict when it threatens to break out and bouncing back whenever it does break out. This model recognizes that conflict is

likely to erupt when the *agents of resilience*—often the silent majority—become so weak that *agents of conflict* can jump in and take over. The main argument of this report is that the resilience side of security offers an unprecedented and underappreciated number of high-value opportunities for defense and security organizations to achieve their security objectives. Hence the title *si vis pacem, para utique pacem*.¹

The setbacks of recent years strongly suggest that we must explore fresh approaches to security engagement. One productive fresh approach for defense organizations is to focus on individual empowerment as a means of promoting societal security resilience. The argument is relatively straightforward: individual empowerment enhances societal security resilience, and societal security resilience underpins the stability and security of societies. The focus on individual empowerment is not primarily normative. It is also empirical, as despite all of the turmoil in the global South, even there the forces boosting individual empowerment continue to march onwards.

In the 1990s, the scenario team at Shell developed a set of popular global scenarios with the catchy title TINA (“There Is No Alternative”). TINA embodied the quintessential liberal dream in which globalization, technology and liberalization would empower both individuals and communities. It would allow them to break loose from the many shackles that inefficient structures and institutions had imposed on them, thus enabling them to realize their innate potential in ways heretofore unfathomable. In the aughts, marked by the 9/11 attacks and the Great Recession, this optimistic TINA vision gave way to a more somber analysis.

But what actually happened to TINA? This report amply documents that contrary to widespread popular opinion, TINA is still very much alive both above and below our organizations and institutions. The powerful engines behind *TINA Above*—creeping globalization, exponential technological innovation and expanding market liberalization—have barely been dented by the

1 ‘If you want Peace, also prepare for Peace.’ This title is a playful reference to the more frequently used Latin adage ‘Si vis pacem, para bellum’ (‘if you want peace, prepare for war’). HCSS has replaced war with peace, but has also added the word ‘utique’ (also) to emphasize that this is in our view not an either/or proposition. Rather, it is a matter of striking the appropriate balance of investment across these two indispensable defense and security tasks.

sledgehammers of terrorism, the financial and economic crisis and the various major security crises. Especially *TINA Below*—the idea that people empowered by education, wealth and choice would increasingly take their futures in their own hands—looks stronger than ever. Individual empowerment continues to expand all across the globe propelled by technological power multipliers, most visibly in the form of mobile devices. Mobile devices provide ever larger numbers of people access to the world’s information streams. Individual empowerment probably remains one of the single most potent mega-drivers in our societies. In the bigger scheme of things, individuals probably never had a better opportunity to live up to their innate potential as they have today, even if relative differences persist. We tend to forget this when we get immersed in the doom and gloom stories that our news cycle inundates us with 24/7.

The security implications of this mega-driver are enormous. This report aims to infuse our thinking about security and defense with a number of new ideas in this trend’s slipstream. It thereby seeks to trigger if not a paradigm shift then at least a widening of the prevailing paradigm. It offers three basic policy recommendations to strategic decision makers.

The first recommendation highlights the importance of a *more balanced net assessment* of our security environment as a basis for a more balanced discussion about our desired portfolio of strategic options, partners and capabilities. It is critically important for all of us—from regular taxpayers to strategic decision makers—to come to grips with the *real* big picture: the *downside* risk, the *upside* risk and everything in between. If and only if we can wrap our minds around this comprehensive picture can we start identifying and pursuing a new and more balanced options portfolio that may enable us to weather the numerous security challenges and opportunities that confront us.

The second recommendation is to start exploring actionable options to nudge positive security trends, especially in the field of resilience. The resilience side of the security coin is an area in which our defense organizations are already active, albeit more by default than by design. Most of our planning focuses on the conflict-side—how to stabilize conflicts, how to empower the security sector, etc. The suggestion in this report is to apply the same creativity, rigor and determination in figuring out how we can not only stem the conflict but also stimulate a fragile society’s resilience—its natural immune system against the

agents of conflict. We increasingly realize that we are not only losing hearts and minds in conflict zones with our current focus on the conflict side of the security coin, but that we also need a better value proposition at home. European taxpayers across the political spectrum might be much more easily persuaded that those resilience-enhancing efforts may offer far superior security value for money than many elements in our current investment portfolio. We owe it to ourselves as defense and security professionals and to the societies we serve to at least explore how we can find a better balance of investment between the ‘fighting the bad guys’–logic and the ‘boosting societal resilience’–logic.

The third—and probably most innovative and controversial—recommendation we make in this report is to extend our defense efforts to the individual level of resilience. Many of our most important defense choices today are focused on the nation state level. Our armed forces are umbilically connected to our nation state. Our principal partners but also enemies are nation states. The industrial-kinetic weapon systems that still play such an important role in our capability portfolio are owned by nation states. The agreements we conclude are with other nation states. We have grown accustomed to thinking that security means national security. We all see that nation states still matter. And there can be no doubt that our defense organizations have to be able to address the threats and opportunities that emerge from that level.

At the same time, however, people—both as individuals and as societies—today have opportunities that they could barely have dreamed of 20, 50 or 100 years ago. One part of this trend is that war amongst the people—as opposed to war between nation states—is becoming more prominent again. This has been widely recognized by defense organizations, at least in theory, if not in the capability requirements that derive from it.² But it is not just war amongst the people that is making inroads. It is also peace amongst the people. Individual empowerment—including the security implications it entails—continues to spread, as we demonstrate in this report.

2 Rupert Smith and Ilana Bet-El, “Military Capabilities for ‘War amongst the People,’” in *Adapting America’s Security Paradigm and Security Agenda*, by Roy Godson et al. (Washington, DC: National Strategy Information Center, 2011).

Individuals are both consumers and producers of security. Too often we focus on the former. When stability breaks down, individuals in those conflict zones are generally seen and portrayed (and rightfully so) as victims that have to be assisted. But we tend to forget that these very same individuals are also security producers. Individuals can be the genuine forces for positive peace, working together towards a more TINA-like future. Defense and security planners should start including the individual level of analysis in their efforts—both from the threat side and from the resilience side. The report contains a number of vignettes that illustrate what such efforts might look like.

Overall, this report demonstrates that TINA—including *TINA Below*—is still very much alive, even in the many regions of the global South that are engulfed by instability and violence. TINA continues to live and thrive in what we have dubbed the flip-side of the security coin: societal resilience. A number of powerful technological developments continue to engender unprecedented opportunities for individual empowerment across the globe. Defense and security organizations have, in our assessment, underestimated the profound security implications of these trends for the agents of (security) resilience. Up until now, this silent majority tended to get swept away in downward spirals of violence and chaos whenever conflict erupted. Arguably for the first time in history, *TINA Below* gives them a fighting chance to not only stay afloat in these spirals but to even start weighing up against different agents of conflict. This report shows that this burgeoning individual empowerment space offers quite a few actionable opportunities that responsible custodians of a broader defense and security ecosystem could leverage.

We therefore beg to differ with the view that defense organizations are only there to deal with the negative side of security: conflict. In the final analysis, they are the ultimate custodians of the entire security ecosystem. They have unique rights and responsibilities in the conflict space of this ecosystem. This includes fighting the predators and protecting the prey, as well as dealing with the complex and adaptive dynamics that take place between them. Does it therefore not stand to reason that they would also more systematically explore how they could fulfill their security custodial role in the resilience space—including at the individual level? Throughout this report, we have presented a number of tangible examples and vignettes of how this could work. We have

also outlined some concrete ways in which our defense and security organizations could start identifying and exploring those opportunities in their planning processes. We look forward to a broader discussion about how to cultivate, stimulate and leverage this important and growing security potential, and to subsequently integrate it into our strategic portfolio.³

3 The authors gratefully acknowledge the contributions by Mr. Chris Holloway from the Vice Chief Defense Force Group at the Australian Department of Defense.

2 INTRODUCTION

Analyses of the international security environment typically provide somber overviews of the various drivers and manifestations of conflict and instability around the world. Recent developments such as the terrorist attacks in Paris, Beirut and elsewhere, a Middle East in flames, a resurgent Russia, incessant violence in West Africa or turmoil in South China Sea only reinforce this view. By framing our analysis of the security environment in these terms, debates about how to anticipate and respond to these current and future threats invariably focus on those *forces of instability and conflict*: how to identify threats and enemies and then eliminate them. This report is based on the premise that this conflict-centric mindset has led to portfolio choices in terms of strategies (‘what do we do and how do we do it?’), capabilities (‘what do we do it with?’), and partners (‘who do we do it with?’) that have been excessively one-sided. This report argues that there is an alternative, complementary way of framing security that is equally real and equally actionable for defense and security organizations (DSOs⁴): a resilience-centric one.

The conflict-centric mindset remains dominant—even if over the past decade, Western defense⁵ organizations have started to develop somewhat more 3D (defense, diplomacy, development) or comprehensive approaches. These are

4 With DSOs, we mean Defense and Security Organizations—the official bodies of state that are directly responsible for defense and security. These include the Ministries of Defense, Foreign Affairs, and Development, but also other partners within the security sector such as Ministries of Justice, Interior Ministries, international security organizations such as NATO, penitentiary and border control institutions, national and local police and justice institutions.

5 In previous work, HCSS has documented how the definition, dimensions, sources and strategies of security in the international relations field differ (often quite dramatically) from the discussions on security in other disciplines. One of those notable differences is the focus on positive vs negative security. Stephan De Spiegeleire, Eline Chivot, and Tim Sweijts, “Conceptual Foundations of Security. Final Deliverable of Work Package 1.1 of ‘European Security Trends and Threats In Society’ (ETTIS), a European Union Seventh Framework Programme Collaborative Research Project,” *European Security Trends and Threats in Society (The Hague: The Hague Centre for Strategic Studies, December 2012)*, 122–123.

increasingly becoming standard *modus operandi*—although their scale remains modest.⁶ Both *fast* and *slow security* are becoming part and parcel of the mainstream defense policymaker’s lexicon.⁷ Over the past two decades defense organizations have, to their credit, assumed more nurturing roles—by offering shelter, food, administration and the rule of law—in addition to acting as conflict responders. Fostering resilient societies—which is so critical to sustainable security in the longer run—has proven difficult however, as ongoing civil strife in places such as Sudan, Mali, Iraq, Burundi and Afghanistan abundantly illustrates.

For a variety of reasons, the return on investment in security sector reform has been disappointing.⁸ Efforts to improve local infrastructure have at times failed to leave a lasting impact.⁹ In some cases, interventions have even been counterproductive, as the application of overwhelming armed force often further unravels the social fabrics it intended to protect.¹⁰ Instead of strengthening societal resilience, such approaches have often generated resistance to foreign assistance, and have thwarted the success of interventions.¹¹ Typically, these comprehensive efforts have been part of reactive rather than preventive responses. A wide range of assessments have therefore concluded that in order for operations to be successful, they must be a truly joint effort of military and civilian actors, involve local civil organizations and win over the

-
- 6 Tweede Kamer der Staten-Generaal, “Leidraad Geïntegreerde Benadering,” 2014; Stabilisation Unit, “About Us,” Gov.uk, accessed October 23, 2015, <https://www.gov.uk/government/organisations/stabilisation-unit/about>.
- 7 See Jeanine Hennis-Plasschaert, “Een Sterke Krijgsmacht, En Het Toegenomen Belang Daarvan,” *Defensie*, November 13, 2015, <https://www.defensie.nl/actueel/weblog/minister/2015/een-sterke-krijgsmacht-en-het-toegenomen-belang-daarvan>; Bert Koenders, *Beleidsbrief Internationale Veiligheid – Turbulente Tijden in Een Instabiele Omgeving* (Rijksoverheid, November 14, 2014).
- 8 Agence France-Presse, “Isis Captured 2,300 Humvee Armoured Vehicles from Iraqi Forces in Mosul,” *The Guardian*, June 1, 2015, <http://www.theguardian.com/world/2015/jun/01/isis-captured-2300-humvee-armoured-vehicles-from-iraqi-forces-in-mosul>; Demetri Sevastopulo and Sam Jones, “US Scraps Scheme to Create Syrian Rebel Force,” *Financial Times*, October 11, 2015, <http://www.ft.com/intl/cms/s/0/76ado76e-6e75-11e5-8171-ba1968cf791a.html#axzz3pOFzz5Vt>; Obaid Younossi et al., *The Long March: Building an Afghan National Army* (Santa Monica, CA: RAND Corporation, 2009).
- 9 “US Building Projects in Afghanistan ‘a Waste,’” *Al Jazeera English*, July 30, 2012, <http://www.aljazeera.com/news/asia/2012/07/2012730181354495196.html>.
- 10 International Human Rights and Conflict Resolution Clinic, “Living Under Drones: Death, Injury and Trauma to Civilians from US Drone Practices in Pakistan” (Stanford Law School, NYU School of Law, September 2012).
- 11 Theo Farrell and Antonio Giustozzi, “The Taliban at War: Inside the Helmand Insurgency, 2004–2012,” *International Affairs* 89, no. 4 (July 12, 2013). See also Christopher Paul et al., “Paths to Victory: Lessons from Modern Insurgencies” (Santa Monica, CA: RAND Corporation, 2013).

support of the host populace.¹² Defense organizations cannot be held solely accountable for the failure of peace to take root in societies which are trapped in vicious poverty and conflict cycles. But the setbacks of recent years strongly suggest that we must envisage fresh approaches to engagement that contribute to societal resilience and enhance peace and stability.¹³

One such fresh approach for defense organizations is to focus on individual empowerment as a means for promoting societal security resilience. The argument is relatively straightforward: individual empowerment enhances societal security resilience, and societal security resilience underpins the stability and security of societies.¹⁴ The focus on individual empowerment is not primarily a normative one. It is also an empirical one, as despite all of the turmoil in the global South, even there these forces continue to progress. The proverbial ‘TINA’ from the Shell scenarios of the optimistic 90s [see p. 17] is still very much alive, as chapters 2–5 of this report will amply illustrate.

Our key objective in this study is to identify the various ways in which defense and security organizations can contribute to individual empowerment and thereby enhance the security resilience of societies. In doing so, we seek to promote if not a paradigm shift, then at least a widening of the current paradigm with respect to the design and focus of future security efforts. We suspect that a better balance between conflict-centric and resilience-centric efforts in our strategic defense and security portfolio will lead to better (defense and security) value for (defense and security) money. Hence the title of our study *Si vis*

12 Rod Thornton, “Conclusion: The Way Forward,” *Contemporary Security Policy* 28, no. 1 (April 1, 2007); Eliot Cohen et al., “Principles, Imperatives, and Paradoxes of Counterinsurgency,” *Military Review* 86, no. 2 (2006).

13 This research project is prompted by the observation offered in the 2015 Strategic Monitor whether that portfolio should not also include ‘instruments that not only allow DSOs to forcefully intervene whenever things go wrong, but to also and equally forcefully strengthen some of the many positive structural trends that we still observe in the international system.’ Tim Sweijts et al., *StratMon 2015: The Return of Ghosts Hoped Past? Trends in Conflict and Cooperation* (The Hague: The Hague Centre for Strategic Studies, June 2015), 77. DSOs = defense and security organizations, see fn. 4.

14 See e.g. Ronald F. Inglehart, Bi Puranen, and Christian Welzel, “Declining Willingness to Fight for One’s Country: The Individual-Level Basis of the Long Peace,” *Journal of Peace Research* 52, no. 4 (July 1, 2015).

pacem, para utique pacem, which suggests that we also need to look at the anti-violent side of the security coin.¹⁵

This study is structured as follows: first, we look at how defense organizations deal with security issues along different stages of the conflict cycle and we introduce the two sides of the security coin: conflict on the one side and resilience on the other. Here we also explain in greater detail the relationship between individual empowerment, societal security resilience, and stability and security. In the five chapters that follow we examine some key sources of individual empowerment that underpin security resilience: Which developments make individual empowerment possible? How does individual empowerment in turn strengthen societal security resilience? And how can DSOs play a role in nurturing individual empowerment? We consider five key sources of individual empowerment: economic empowerment, political empowerment, educational empowerment, technological empowerment, and quality of life. Whilst describing the key trends across these five sources, we look at how these have been leveraged at the local and the individual level in countries around the world, and draw lessons for defense organizations.

The last part then focuses more specifically on the role of defense and security organizations: how can they ride the wave of positive developments that help empower people from the bottom up and do so from an unrelenting—but broadly defined—security perspective? What avenues and means are available for defense organizations to contribute to societal resilience and thus, to advancing peace and stability? This is done first through some vignettes that sketch ways in which DSOs can directly or indirectly empower individuals in order to help strengthen societal security resilience and then secondly by teasing out some of the implications for defense and security planners. We end by offering a number of concluding remarks.

15 *Si vis pacem, para utique pacem* (If you want Peace, prepare also for Peace). The title is a playful reference to the more frequently used Latin adage *‘Si vis pacem, para bellum’* (‘If you want peace, prepare for war’). The word ‘war’ is replaced by ‘peace,’ but the word ‘utique’ (also) has been added to emphasize that this is not an either/or proposition. It is a matter of striking the appropriate balance of investment across these two indispensable defense and security tasks.

WHATEVER HAPPENED TO TINA?

In the 1990s, the Shell scenario team developed a family of scenarios based on a series of powerful global drivers such as globalization, liberalization and technological advancement.¹⁶ Initially, the team described this trend as one possible direction in which the world might be heading. In 1992, they anticipated two possible responses to these drivers: in *New Frontiers*, the opportunities and challenges that were embraced, and in *Barricades*, those that were resisted.¹⁷ As the decade progressed and these drivers steadily picked up more steam, they were increasingly described by the Shell team as having become irresistible. This is how the acronym *TINA* ('There Is No Alternative') came into being.¹⁸ Towards the end of the decade, Shell described *TINA* as operating on two levels: 'at the level of markets, financial systems, governments, and other wide-reaching institutions *TINA Above*; and also at the level of individual people, who, in many parts of the world, rich and poor, are becoming wealthier, better educated, and freer to choose *TINA Below*.'¹⁹

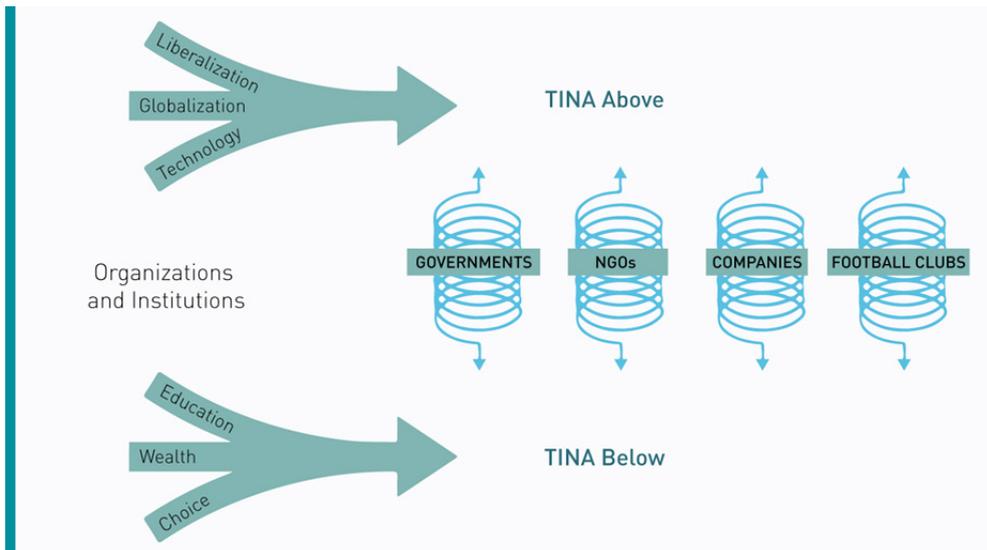


FIGURE 1. THE ORIGINAL TINA DESIGN AS PRESENTED BY SHELL²⁰

16 Some years later, in the years post-9/11 and the new disorder, this idea was adjusted and subsequently called TANIA (There Are No Ideal Answers, 2008), acknowledging that there is (most likely) no single path towards the future, or rather, no single guiding idea.

17 Shell, *Global Scenarios 1992–2020* (London: Shell International BV, 1992).

18 Shell, *Global Scenarios 1995–2020* (London: Shell International BV, 1995).

19 Shell, *Global Scenarios 1998–2020* (London: Shell International BV, 1998).

20 *Ibid.*, 9.

On the *TINA Below* trends, Shell noted that

[a]lthough wide variations exist, most people across the world are increasing in wealth and education and have more choices. As people move up the familiar Maslow hierarchy of human needs, they begin to exercise choice based on their values and desires rather than on hunger and fear. For example, in developed economies, wealthier people express a greater willingness to pay for goods and services that are sustainable or that are the products of socially responsible companies. What will be the effects of more people becoming wealthy enough to make such choices? In developing countries, emerging middle classes wish to exercise more choice about the way their countries are run. The increase in the number of these choices, as well as the growth in education and wealth, will create new pressures on government institutions, businesses, and even individuals themselves.²¹

In all, people want to enjoy those assets that contribute to resilience and stability.

In the aughts, TINA was overtaken by various dramatic events such as terrorism and the economic crises. The world's attitude became much more pessimistic. Even the Shell team abandoned TINA and replaced it with another, more subdued acronym: TANIA ('There Are No Ideal Answers,' 2008).²² And yet, as we will demonstrate in this report, the TINA forces are still very much with us and offer some unprecedented opportunities for security efforts.

But before we delve into the drivers or sources of individual empowerment, we will first take a look at some aspects of security that are, in our view, often underappreciated: the nether-regions of security where the TINA forces reside.

²¹ Ibid.

²² Shell, *Shell Energy Scenarios to 2050* (The Hague, The Netherlands: Shell International BV, 2008).

3 THE TWO SIDES OF THE SECURITY COIN

Security is more than just conflict; it also has another side: resilience. This side is as real as the conflict side and it offers a number of actionable opportunities to defense and security organizations (DSOs). This section will present the two sides, will tease out some important differences and will explain why the other side offers some interesting opportunities for security providers.

3.1 THE CONFLICT SIDE OF SECURITY

Many practitioners and analysts of military affairs are familiar with the conflict hump (see figure 2 below). It must be one of the most frequently used conceptualizations and visualizations in the Western defense analytical world.



FIGURE 2. THE CONFLICT SIDE OF SECURITY

The central concept in this security model is conflict. The model depicts the amount of violence that is applied throughout the conflict. It focuses on the *agents of conflict*: they are the ones that, throughout the hump, determine the intensity of conflict. The main idea is that there is always a certain amount of latent conflict in any society that can at any given moment erupt into manifest conflict when agents of conflict disrupt the relative stability in order to achieve some non-status-quo political goals. The Western version of this model posits that we need *agents of stability* to stem the violence, take control of the situation and return the system to the pre-existing levels of conflict intensity. Most of the efforts the Western defense community has made in the past few decades of expeditionary operations are predicated on this model. Not surprisingly, this also means that the overwhelming majority of the investments in our defense portfolio aim at sustaining the coercive capabilities that are required to maintain this conflict dominance.

To be fair, Western thinking about this conflict model has evolved over the past two decades. Until the early 2000s, the main focus was on the actual intervention and the need for stabilization. In the Balkan wars, for instance, Western defense organizations—after long and painful tergiversations—decided to intervene with boots on the ground to seize the military initiative and stabilize the situation. This approach to conflict response has by and large remained dominant throughout the period, but more emphasis has increasingly been put on making sure the hump does not become too high in the first place by trying to intervene earlier (see the green leftward arrow in figure 3 below).

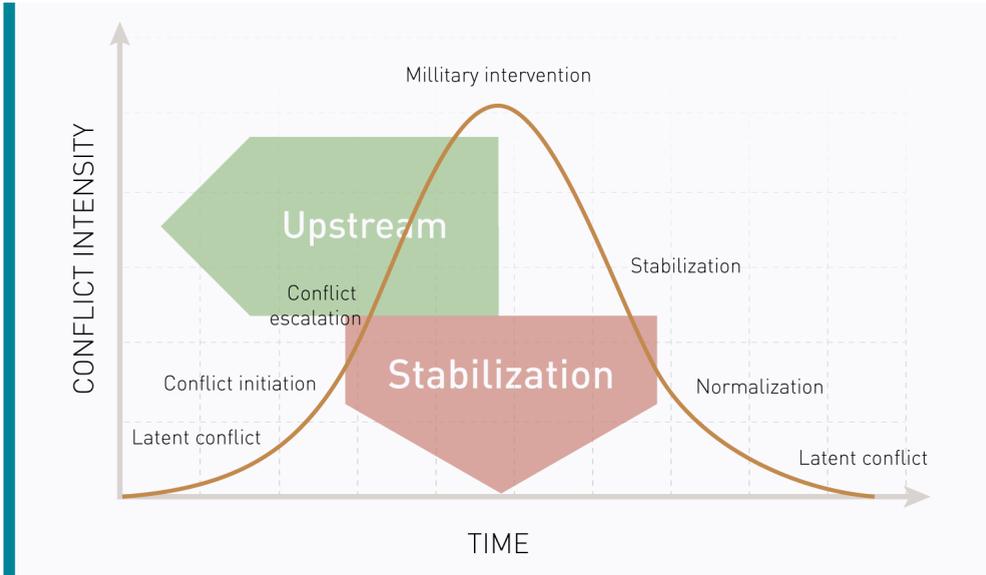


FIGURE 3. RECENT FOCUS WITHIN THE CONFLICT SIDE OF SECURITY

3.2 THE RESILIENCE SIDE OF SECURITY

What is often ignored or underestimated in this model—and in the policy discussions that are based on it—is that there is also a flip-side of this model.

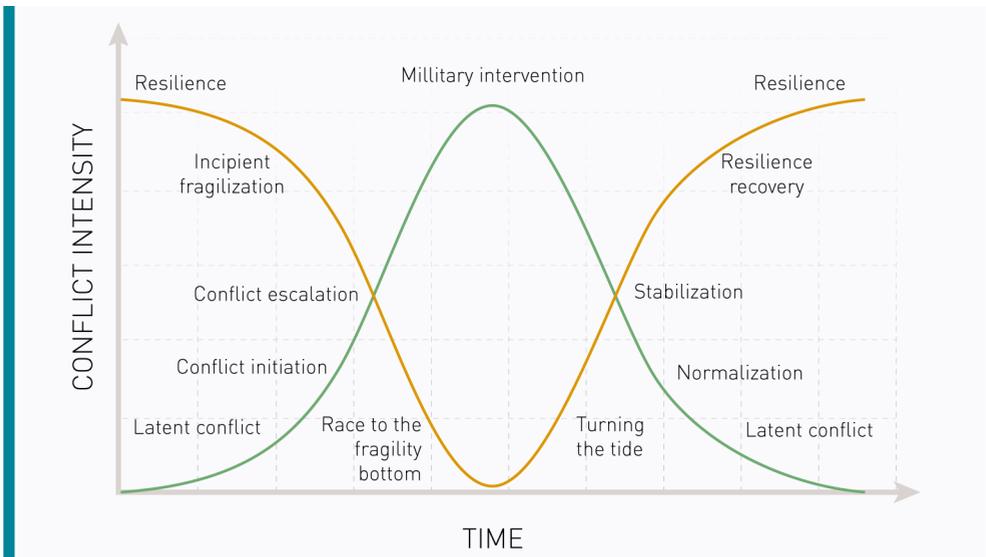


FIGURE 4. THE RESILIENCE-SIDE OF CONFLICT

This model does not focus on conflict between opposed factions, but on the society within which conflict erupts. It does not focus on the *agents of conflict* (both the destabilizing and the stabilizing ones), but on the *agents of resilience* within a society. It recognizes that conflict is likely to erupt when the healthy fibers of a society become so brittle that this creates permissive conditions for agents of conflict to jump in and take over. When we plot this ‘resilience’ side of security over time (see figure 4 above), we essentially see the mirror image of the conflict model.²³ We have observed time and time again in situations from the Balkans over Ukraine to Afghanistan that various societal groups that were able to live together relatively harmoniously can, under certain circumstances, descend precipitously into chaos and anarchy. This is the period in which the silent majority starts taking sides between quickly radicalizing factions.²⁴ Where the common ground evaporates, security becomes fragile.

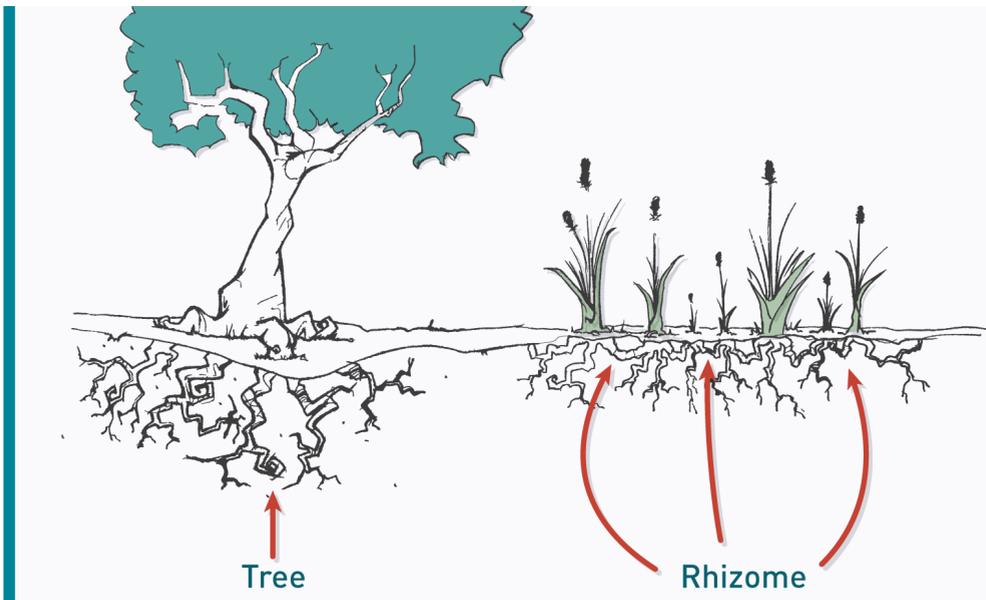


FIGURE 5. RHIZOMATIC STRUCTURE²⁵

23 In practice, this mirror—contrary to what we depict in our stylized visual—is typically not entirely synchronized. Resilience often disintegrates before conflict erupts and also may take longer to heal afterwards. Both aspects lend themselves to remedial action where outsiders might be able to play a resilience-enhancing role.

24 James D. Fearon and David D. Laitin, “Violence and the Social Construction of Ethnic Identity,” *International Organization* 54, no. 4 (2000).

25 Rick Instrell, “Barriers and Thresholds in Learning Media Studies: Part 3,” Accompanying visuals, *Media Education Journal* 57 (Summer 2015).

Another way of thinking about this side of security is to visualize an intricate societal root system, underneath any potential theater of conflict in which violence might or might not erupt. When we think of roots, we often think about individual trees with their own roots. In this case, it may be more appropriate to think in terms of rhizomes²⁶—complex root systems that are intricately interconnected and almost impossible to destroy, as they can always produce new shoots.

If we superimpose the conflict hump onto the rhizomatic idea of resilience, we get the following visual:

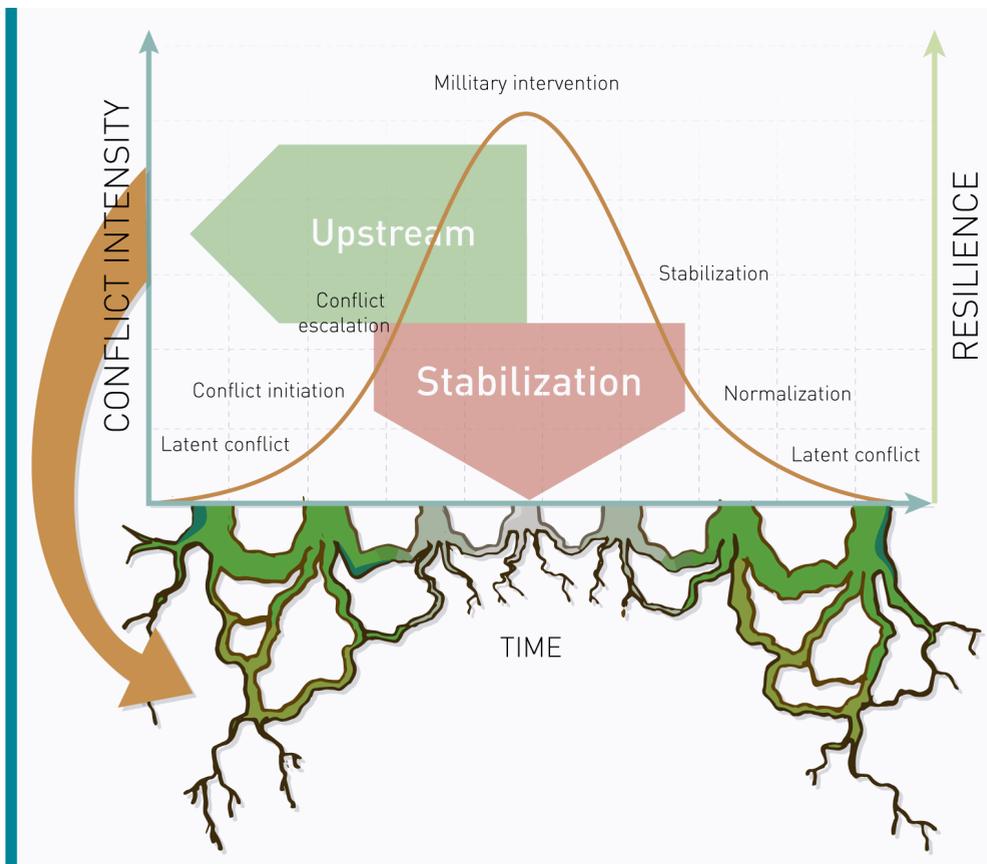


FIGURE 6. THE RESILIENCE SIDE OF CONFLICT AND THE RHIZOMATIC BASIS

26 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1987).

3.3 HOW THE TWO SIDES DIFFER

Figure 6 illustrates that we are really talking about two interrelated, but almost inverse universes, with different actors, different dynamics and different tools. On the left and right-hand sides of the time axis, this universe presents various opportunities to actively nurture what is in essence a society's natural immune system against conflict: its security resilience. The argument here is that in their focus on the conflict universe, defense organizations may tend to neglect the resilience universe of security, depicted here with rhizomatic roots underneath the x-axis. The orange arrow on the left suggests that alongside the need to stabilize existing conflicts (the red arrow), and to move upstream towards preventing or mitigating the conflict hump (the green arrow), defense organizations may also want to devote more attention to the flipside of the conflict side of security: to resilience.

An example of the real-life difference between these two universes might shed some more light on this. In most of the counterinsurgency literature, much attention is devoted to the need to win the hearts and minds of the local population. This population represents the silent majority that prior to the conflict might have coexisted quite peacefully, but that increasingly risks becoming polarized in the course of the conflict. Winning the hearts and minds in this context essentially implies pulling the local population from the resilience universe into the conflict universe where we try to co-opt them towards our side of the conflict. The operative verb that is being used here is to win, not to empower or to make more resilient. If a society is being brainwashed by propaganda from one or more of the conflicting parties in a conflict that we are involved in, we are often tempted to counter this propaganda with our own counter-narrative. The resilience paradigm would instead suggest looking for ways to make sure that people evolve towards a more critically reflective, evidence-based attitude towards *any* claims that are being made—including by ourselves. Rather than counter-propaganda, this would ask for anti-propaganda—for strengthening society's natural immune system against incendiary rhetoric.²⁷

²⁷ See e.g. Sijbren de Jong et al., *Beyond the Cold War of Words* (The Hague: The Hague Centre for Strategic Studies, 2015).

	The Conflict Model	The Resilience Model
Agents	Agents of conflict	Agents of resilience
Goals of main agents	Disruption	Normalcy
'Glue' between agents	Strong	Weak
Organizational form	(Mostly) Organized groups	(Maybe networked) Individuals
Operations by 'us'	PsyOps	Resilience-nurturing
Actions by 'us'	Force	Nudge
('Our') Desired effects	Stop conflict/'win'	Nurture conflict immunity

FIGURE 7. DIFFERENCES BETWEEN THE CONFLICT AND RESILIENCE PARADIGMS

The resilience model is as accurate a depiction of the realities in a conflict zone as the conflict model is. Most of our attention in any conflict goes out to the opposing actors and to the observable conflict dynamics between them. As Steven Pinker argued:

[p]eople’s sense of danger is warped by the availability of memorable examples—which is why we are more afraid of getting eaten by a shark than falling down the stairs, though the latter is likelier to kill us. Peaceful territories, no matter how numerous, don’t make news, and people quickly forget the wars and atrocities of even the recent past.²⁸

28 Steven Pinker, “Now for the Good News: Things Really Are Getting Better,” *The Guardian*, September 11, 2015, sec. Opinion, <http://www.theguardian.com/commentisfree/2015/sep/11/news-isis-syria-headlines-violence-steven-pinker>.

But any careful look at these very same conflict zones where the conflicting parties grab headlines will equally visibly discern the security rhizome in the form of a silent majority, sometimes as victims, as buffers, as targets for the conflict magnets.

In various parts of the world, especially but not exclusively in its more developed parts, one could argue that societies have graduated to structurally higher levels of resilience. This may even be part of the explanation why we observe ever lower levels of both interstate and interpersonal violence.²⁹ But let us take a look at how.

²⁹ See Steven Pinker, *The Better Angels of Our Nature: Why Violence Has Declined* (New York: Viking, 2011). This positive overall trend should, however, not serve as an excuse for complacency. We also see many signs of weakening societal resilience in the West due to persistent and—in some cases—growing social inequalities, new types of cybercrime, potential radical changes in our labor markets (due to migration and replacement of human labor by robots and AI), etc.

4 INDIVIDUAL EMPOWERMENT: *TINA BELOW AT WORK*

The central thesis proposed by this study is that Western defense organizations can improve their security value proposition by also focusing on the flip-side of the security coin representing the security fibers in a society. There are many aspects to the resilience side of conflict. The defense community has already recognized that there is a growing need to strengthen public institutions and civil society organizations in the shape of security sector reform (SSR), in which the Netherlands has played a prominent role in recent years. This report, however, focuses not on the security sector as an institution, but on the individuals that make up the primary active elements of the security fibers of any society. It looks at individuals not just as consumers of security, but also as potentially active suppliers of security resilience.

Our main inspiration for this individual-level focus is a number of technological and ideational trends that create new opportunities which can be leveraged directly by individuals, rather than being channeled through state institutions. This is what we call individual empowerment. As a result, individuals can take their destiny into their own hands and help build security from the bottom up—including the more institutional layer of resilience. Individual empowerment is an important macro-trend of our times that is playing itself out at the microlevel. In the most recent *Global Trends 2030* report, the US National Intelligence Council put individual empowerment front and center in its analysis, saying that it is:

the most important megatrend because it is both a cause and effect of most other trends—including the expanding global economy, rapid growth of the developing countries, and widespread exploitation of new communications and manufacturing technologies.³⁰

30 See US National Intelligence Council, *Global Trends 2030: Alternative Worlds* (Washington, DC: US National Intelligence Council, 2012), iii.

The same report considers ‘greater individual initiative as key to solving the mounting global challenges during the next 15–20 years.’³¹ The World Bank also acknowledges the importance of empowerment, defining it as ‘the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes.’³² Many organizations active outside the immediate defense and security realm have for that reason targeted their efforts at empowering individuals, often with great success, as the examples throughout this study will attest. The empowerment of individuals has already led to tremendous gains in welfare and prosperity worldwide. The upcoming 2016 World Development Report, which is focused on the digital dividends that internet and digital technologies are bringing for development, provides many examples of how individual empowerment has enabled hundreds of millions of individuals to achieve more prosperous and more peaceful lives, sometimes against overwhelming odds.

These developments help bolster the resilience of many societies which in turn decreases the odds of the outbreak of violent conflict (see figure 8 below).³³ We also have ample evidence that individual empowerment is strongly (cor)related to peace. Democracies and societies with inclusive forms of governance tend to experience fewer intrastate conflicts.³⁴ Higher levels of education lead to lower

31 Ibid., 8.

32 World Bank, “Empowerment,” *World Bank*, 2004, <http://web.worldbank.org/WBSITE/EXTERNALTOPICS/EXTPOVERTY/EXTEMPowerment/0,,contentMDK:20272299~menuPK:546167~pagePK:148956~piPK:216618~theSitePK:486411~isCURL:Y,00.html>. The report adds that ‘central to this process are actions which both build individual and collective assets, and improve the efficiency and fairness of the organizational and institutional context which govern the use of these assets.’

33 Of 163 countries included in the State Fragility Index, 117 experienced a decline in state fragility since 1995, with 78 of these countries showing a strong decline in state fragility. 28 countries show roughly no change from 1995–2013, with 9 of these countries experiencing some of the highest levels of state security and lack of fragility. 18 countries of the analysis have shown an increase in state fragility since 1995. See Monty G. Marshall and Benjamin R. Cole, *Global Report 2014: Conflict, Governance and State Fragility* (Vienna: Center for Systemic Peace, 2014).

34 Håvard Hegre et al., “Predicting Armed Conflict, 2010–2050,” *International Studies Quarterly* 57, no. 2 (June 2013).

levels of societal violence.³⁵ Greater gender equality has pacifying effects.³⁶ Better and stable supplies of food contribute positively to peace and security.³⁷

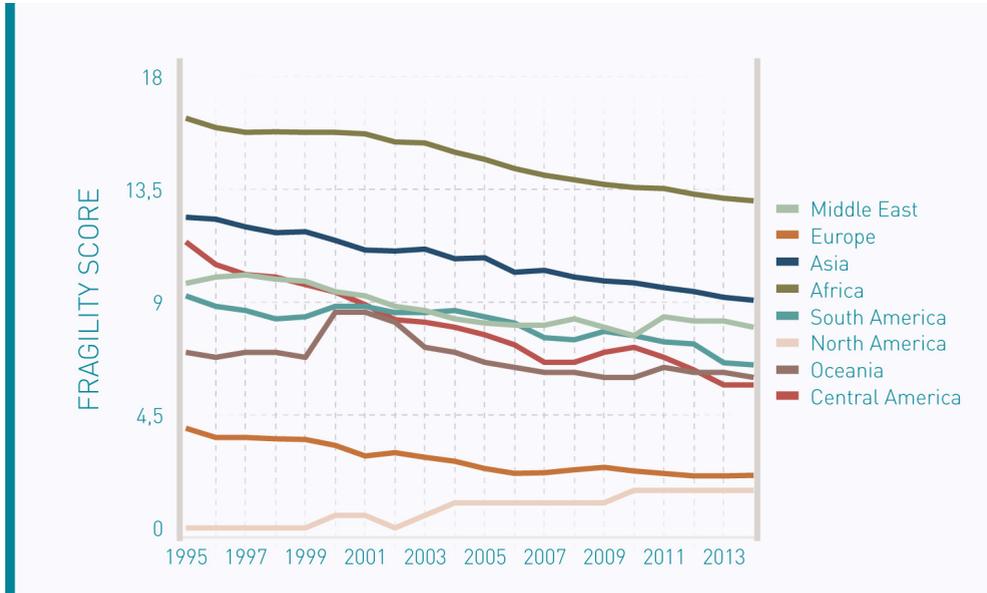


FIGURE 8. STATE FRAGILITY ACROSS DIFFERENT REGIONS 1995–2014³⁸

Even in unusually challenging security situations like Afghanistan, and in spite of the continuing war, we can still see various shoots of resilience spring up. For instance, 90% of the country’s population now has access to communication services and over 75% has access to mobile phones, with a mobile subscriber

35 Gudrun Østby and Henrik Urdal, *Education and Conflict: What the Evidence Says*, CSCW Policy Brief, 2 (Oslo: PRIO, 2011).

36 Mary Caprioli, “Primed for Violence: The Role of Gender Inequality in Predicting Internal Conflict,” *International Studies Quarterly* 49, no. 2 (2005); Erik Melander, “Gender Equality and Intrastate Armed Conflict,” *International Studies Quarterly* 49, no. 4 (December 2005).

37 See e.g. Emmy Simmons, “Harvesting Peace: Food Security, Conflict, and Cooperation,” Environmental Change & Security Program Report Vol. 14, Issue 3 (Washington, D.C.: Woodrow Wilson International Center for Scholars, 2013). But also think of Amartya Sen’s famous finding that no famine has ever occurred in a democracy. Amartya Sen, *Poverty and Famines: An Essay on Entitlement and Deprivation* (Oxford: Oxford Univ. Press, 2010).

38 Source: Centre for Systemic Peace, “Centre for Systemic Peace Rule of Law Index,” 2015, <http://www.systemicpeace.org/>.

growth rate of 10% per annum.³⁹ The education of girls has increased significantly over the past 10 years.⁴⁰ Mobile phones and educated girls may not seem like key contributions to security, but they offer millions of Afghans opportunities to start envisaging a future based on social and economic development. Educated girls will grow up as mothers who now know that there is an alternative pathway to personal development—also for their daughters and sons.

In shifting the focus to individual empowerment in the security realm, our approach builds conceptually on the work of Johan Galtung. He distinguishes between negative and positive peace, where negative peace is the absence of violence, and positive peace the presence of factors that contribute to what he terms ‘social harmony.’ The original approach of Galtung is broader than what is aimed at here, since he takes intangible concepts such as ‘social justice,’ ‘shared values’ or ‘feelings of humanity’ as yardsticks.⁴¹ Here we construct an argument based on more tangible and, where possible, measurable factors but the key argument stays the same: positive peace stems from individual empowerment.

In making the case for individual empowerment, we also follow in the footsteps of Julian Simon, who in *The State of Humanity* compiled rafts of statistics showing that in most domains, for most people, most of the time, conditions have improved, even if mainstream security discourses either ignore these trends or are ignorant about them.⁴² While identifying the principal sources of peace cannot be tantamount to producing a definitive list leading to a ‘grand unified theory,’⁴³ we propose to investigate individual empowerment across five areas: economics, politics, education, technology and what we call ‘quality of life.’

39 ‘After many years of war and civil strife, an encouraging aspect of the country’s efforts to rebuild has been the considerable success evident in the creating a functional telecommunications sector virtually from nothing. According to the Ministry of Communications and Information Technology (MCIT), the telecommunications networks covered almost 90% of the population by 2015.’ ‘Afghanistan - Telecoms, Mobile and Broadband - Statistics and Analyses,’ *BuddeComm*, September 7, 2015, <http://www.budde.com.au/Research/Afghanistan-Telecoms-Mobile-and-Broadband-Statistics-and-Analyses.html>.

40 Afghan Ministry of Education, “Afghanistan: Education for All 2015 National Review” (UNESCO’s World Education Forum, Incheon, Republic of Korea, 2015).

41 See e.g. Johan Galtung, *Peace by Peaceful Means: Peace and Conflict, Development and Civilization* (Oslo: PRIO, 1996).

42 Julian Lincoln Simon, ed., *The State of Humanity* (Oxford, UK ; Cambridge, MA: Blackwell; Cato Institute, 1995).

43 Pinker, *The Better Angels of Our Nature*, 672.

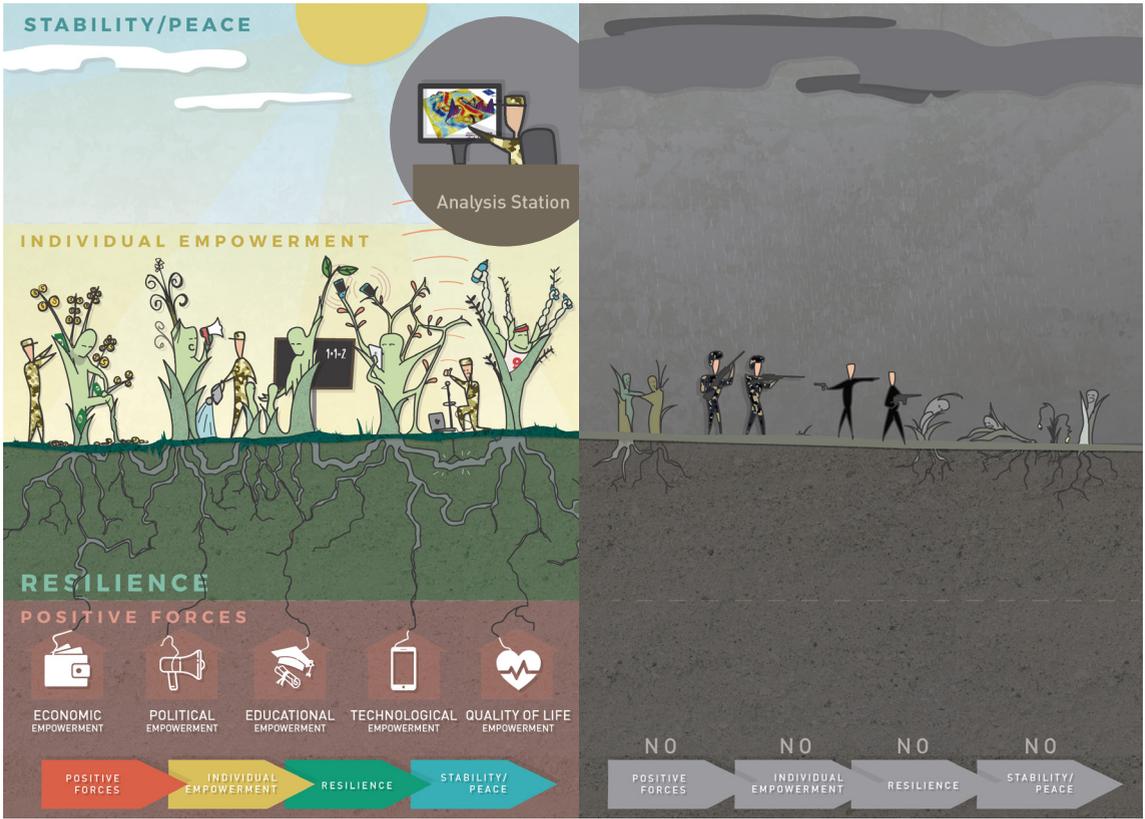


FIGURE 9. INDIVIDUAL EMPOWERMENT

Economic empowerment provides individuals with the skills to participate in, contribute to and benefit from the economy.⁴⁴ Political empowerment enables them to partake in the governance of their communities and gives them a voice. Educational empowerment equips people with the tools and the knowledge to engage meaningfully in societal and economic life. Technological empowerment opens up new avenues that facilitate new forms of interaction with others, close by and far away. Finally, improving quality of life—including in the areas of healthcare, nutrition and the environment—is an ancillary condition to enabling people to be able to realize their potential in an optimal way.

In highlighting the various trends and their impact on individual empowerment, the idea is not to argue that in their operations, defense organizations do not already seek in various ways to empower individuals. The point is to examine

44 Paraphrasing OECD DAC Network on Gender Equality (GENDERNET), “Women’s Economic Empowerment,” in *Poverty Reduction and Pro-Poor Growth: The Role of Empowerment*, by OECD (Paris: Organization for Economic Co-operation and Development, 2012), 300.

how they can leverage their inherent qualities even better, and to do so in closer cooperation with foreign affairs ministries, development aid organizations and local actors. Nudging can be a very effective mode of operation in this regard, where people are gently prodded to do the right thing.⁴⁵ Thus, defense forces cannot just make a difference with their military wherewithal, but also with their expertise in conflict and security issues, with the technological means they have at their disposal as well as their ability to provide sheer manpower where it is needed.

4.1 ECONOMIC EMPOWERMENT

Economic empowerment presupposes the ability of individuals to provide for their own living, and normally speaking, also for their immediate family or even community. In the words of the OECD,

[e]conomic empowerment is the capacity of women and men to participate in, contribute to and benefit from growth processes in ways which recognize the value of their contributions, respect their dignity and make it possible to negotiate a fairer distribution of the benefits of growth.⁴⁶

As a result, economic empowerment is in various respects a precondition for realizing all of the other sources of individual empowerment. But economic factors also contribute to resilience and peace in other ways. For instance, prosperity contributes to improving education and healthcare systems. In addition, economic empowerment invariably boosts someone's self-esteem and gives them more opportunities and choices to shape their own destiny. All of these factors help to improve a society's resilience and thus contribute to stability and peace in the long run.

45 See most prominently, Daniel Kahneman, *Thinking, Fast and Slow*, 1st pbk. ed (New York: Farrar, Straus and Giroux, 2013); Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness*, Rev. and expanded ed (New York: Penguin Books, 2009).

46 OECD DAC Network on Gender Equality (GENDERNET), "Women's Economic Empowerment."



FIGURE 10. ECONOMIC EMPOWERMENT

The idea that economic freedom and peace are interrelated has been around ever since the discipline of modern economics emerged in the 18th and 19th centuries. In *Perpetual Peace*, Immanuel Kant wrote for instance that ‘the spirit of commerce, which is incompatible with war, sooner or later gains the upper hand in every state.’⁴⁷ Following the experiences of World War I, after which confidence in the notion that economic openness and freedom promote peace greatly diminished,⁴⁸ the idea gradually re-emerged after World War II, when economic liberalism rooted in individual opportunity established itself as the dominant creed. In multiple ways, these links between economic liberalism and peace continue to persist.

THE LINKS BETWEEN ECONOMIC EMPOWERMENT, RESILIENCE AND STABILITY

The linkages between economic empowerment and peace and stability play at multiple levels. At one level, individuals contribute to the economy through value creation, whether manually, intellectually or otherwise. At another level, individuals also benefit if they are based in thriving economies that foster business and job creation and have the opportunity to generate an income that helps sustain themselves and their communities. All of these dynamics help to strengthen societal resilience.

For a long time, the question about the links between economic prosperity and peace had been discussed from the point of view of interaction between nations, where classical economics prescribed that the more interdependent countries would become, the lesser the chances that they would get into conflict with one another.⁴⁹ Indeed, evidence suggests that there is a positive link between ‘interstate trade [and] reductions in militarized disputes or wars.’⁵⁰

In this regard, and in considering economic dimensions of individual empowerment, it is important to look at domestic rates of economic growth, the quality of governance and inequality. Economic growth matters because it is

47 Immanuel Kant, *Kant: Political Writings*, ed. Hans Siegbert Reiss, trans. Hugh B. Nisbet, 2nd, enl. ed, Cambridge Texts in the History of Political Thought (Cambridge, UK; New York: Cambridge University Press, 1991).

48 See for instance John A. Hobson, *Imperialism, a Study* (Ann Arbor: University of Michigan Press, 1965).

49 Bruce M. Russett and John R. Oneal, *Triangulating Peace: Democracy, Interdependence, and International Organizations* (New York: Norton, 2001).

50 Erik Gartzke, Quan Li, and Charles Boehmer, “Investing in the Peace: Economic Interdependence and International Conflict,” *International Organization* 55, no. 02 (March 2001).

determinative of sustained income security. The quality of governance sets the parameters within which people seek to earn their income. These factors are particularly important to poor people. As stated by the OECD, “[t]he extent to which growth reduces poverty depends on the degree to which the poor participate in the growth process and share in its proceeds.”⁵¹ In cases where capital has the potential to be siphoned off by governments or other elites, economic growth can do little to prevent the onset of conflict.

Among the most contentious issues in recent years has been the question of inequality⁵² as a possible cause of fraying resilience, instability and conflict and in that respect, is often related to grievances. For instance, the Biafran conflict in Nigeria in 1967 or the secessionist conflict in Punjab in the early 1980s were fueled by perceptions of economic injustice.⁵³ These cases, as well as an increasing body of literature, serve to suggest that horizontal inequality can be a driver of civil unrest.⁵⁴ Indeed, ‘specified tests based on improved data suggest that vertical inequality could be as important a predictor of non-ethnic conflicts as horizontal inequality is in predicting ethnic conflicts.’⁵⁵ As a consequence, grievances borne out of perceived economic inequalities should become more of a consideration in peace efforts. The graph below suggests that less inequality is related to greater entrepreneurship opportunity—and thus boosts individual empowerment.

51 Department for International Development, “Growth: Building Jobs and Prosperity in Developing Countries” (DFID, 2008).

52 See most prominently, Thomas Piketty and Arthur Goldhammer, *Capital in the Twenty-First Century* (Cambridge, MA: The Belknap Press of Harvard University Press, 2014).

53 Lars-Erik Cederman, Nils B. Weidmann, and Kristian Skrede Gleditsch, “Horizontal Inequalities and Ethnonationalist Civil War: A Global Comparison,” *American Political Science Review* 105, no. 3 (August 2011).

54 Henrikas Bartusevičius, “The Inequality–Conflict Nexus Re-Examined: Income, Education and Popular Rebellions,” *Journal of Peace Research* 51, no. 1 (January 1, 2014); Frances Stewart, *Horizontal Inequalities and Conflict: Understanding Group Violence in Multiethnic Societies* (Basingstoke, England; New York: Palgrave Macmillan, 2008); Lars-Erik Cederman, Kristian Skrede Gleditsch, and Halvard Buhaug, *Inequality, Grievances, and Civil War*, Cambridge Studies in Contentious Politics (New York: Cambridge University Press, 2013). Much of this literature refutes the earlier evidence found by Collier and Hoeffler that inequality does not have a significant effect on the incidence of conflict. See Paul Collier and Anke Hoeffler, “Greed and Grievance in Civil War,” *Oxford Economic Papers* 56, no. 4 (June 22, 2004).

55 Bartusevičius, “The Inequality–conflict Nexus Re-Examined,” 47.



FIGURE 11. CORRELATION BETWEEN INEQUALITY AND ECONOMIC OPPORTUNITIES⁵⁶

Inequality and related perceptions thus inform an individual’s sense of opportunity. If he or she feels that someone else can benefit from opportunities that are not available to themselves, it can create resentment. The same applies at the community or group level. Hence inequality is an issue that concerns societal resilience and the stability of the social contract.

More in general, livelihoods also provide purpose and an incentive for individuals to avoid crime and/or violence:

[e]conomic opportunity can inhibit the use of violent means in transforming a conflict. (...) While poverty and despair are a breeding ground for violence and extremism, the prospects of prosperity and a better future are a powerful incentive to convince people of the benefits of peace.⁵⁷

56 Source: World Bank, “GINI Index (World Bank Estimate),” 2015, <http://data.worldbank.org/indicator/SI.POV.GINI>; Legatum Institute, “2015 Legatum Prosperity Index™,” 2015, <http://www.li.com/activities/publications/2015-legatum-prosperity-index>.

57 Andreas Wenger and Daniel Möckli, “Conflict Prevention: The Untapped Potential of the Business Sector,” *International Journal on World Peace* 21, no. 1 (March 2004).

Furthermore, a buoyant economy comprised of prosperous individuals becomes an increasingly attractive prospect to would-be investors and trade partners abroad. This has also shown to be a driver of peace at the interstate level.

TRENDS IN ECONOMIC EMPOWERMENT

An important indicator for assessing individual empowerment is the prevalence of poverty in societies. In this regard, developments in relation to increases in trade, whether at the global or local level, have helped to decrease poverty levels worldwide despite the recent recession (see figure 12 below). Partly, this has been driven by south-south trade, which increased from 8% in 1990 to 24% in 2011.⁵⁸ South-South cooperation (SSC) is estimated at between USD 16.1 billion and USD 19 billion in 2011.

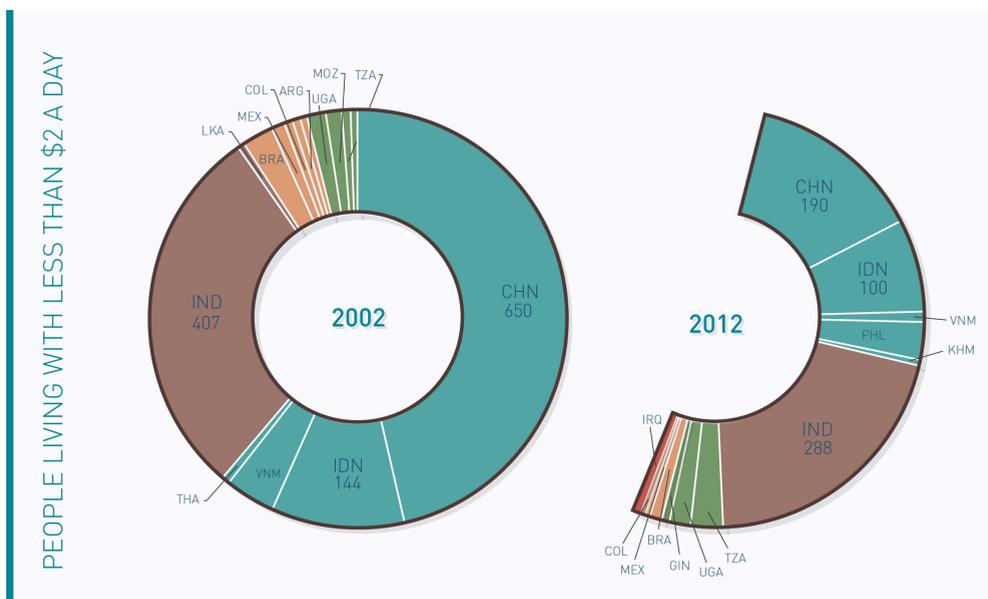


FIGURE 12. NUMBER OF PEOPLE LIVING WITH LESS THAN \$2 A DAY⁵⁹

58 African Development Bank, OECD Development Centre, and United Nations Development Programme, *African Economic Outlook 2014: Global Value Chains and Africa's Industrialisation* (OECD Publishing, 2014).

59 Source: Brookings Laurence Chandy and Geoffrey Gertz, *Poverty in Numbers: The Changing State of Global Poverty from 2005 to 2015* (Brookings Institution, 2011).

But this is far from the whole story. For in fact, increasing economic growth also corresponds to increasing dynamism in labor market patterns, and this has led to steady or sometimes significant increases in the number of women that have joined the ranks of the workforce worldwide. This is not just empowering women in the sense of providing them with their own income, but also has important social and security implications: if women can contribute to their family’s income, chances increase that they can send their children to school, thus improving short and long term prosperity prospects—or contributing to fast security (aimed at improving security in the immediate term) and slow security (where security is nurtured in the long run).

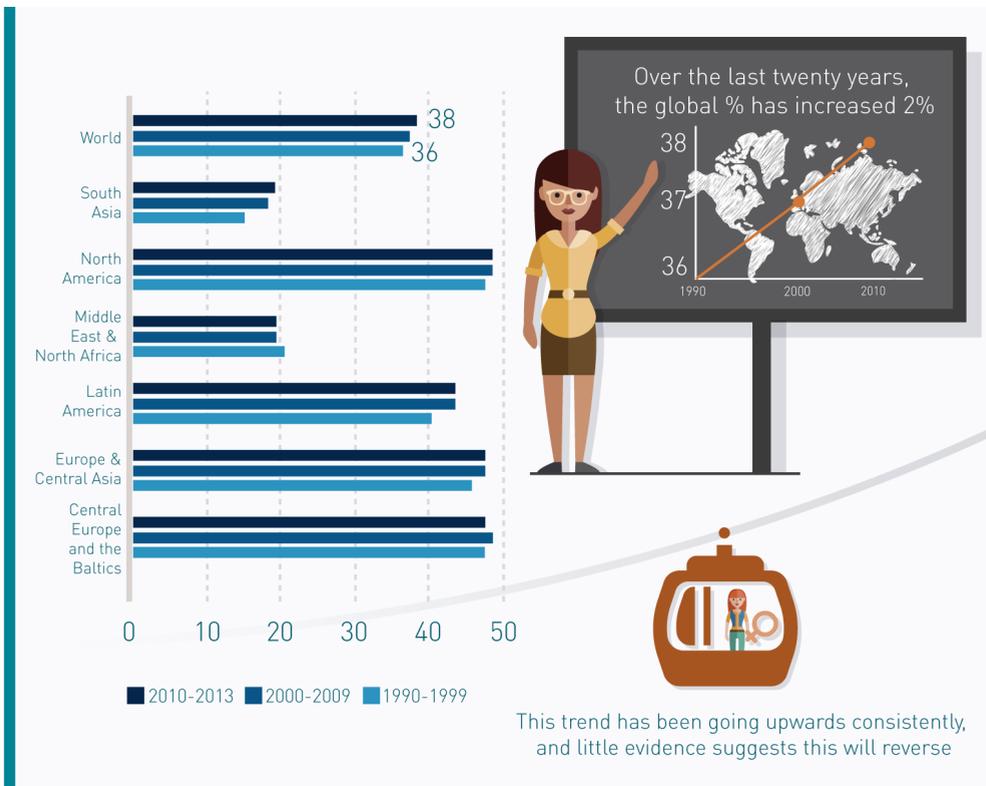


FIGURE 13. PERCENTAGE OF WOMEN IN WAGE EMPLOYMENT IN NON-AGRICULTURAL SECTOR⁶⁰

60 Source: World Bank, “Employment in Agriculture (% of Total Employment),” 2015, <http://data.worldbank.org/indicator/SL.AGR.EMPL.ZS>.

This larger trend is partly driven by fragmentation⁶¹ which leads to a diminution of the reach of the state and thus increases people’s autonomy and empowerment. A good example of this is microfinance. A UN paper has argued that microfinance or access to credit in general can also have added benefits such as ‘social mobilization, empowerment [and] stabilization.’⁶² Microfinance in particular has the potential to contribute to peace and stability provided it is granted to all demographics to stimulate cooperation throughout all social strata. This is particularly important for post-conflict environments.⁶³ An input paper for the *World Development Report 2011 on Conflict and Governance* listed other advantages to microfinance, such as facilitating the influx of remittances and limiting opportunities for predatory finance,⁶⁴ which in itself could be a factor for conflict. In essence, what microfinance does is to provide people with financial support where banks are unable or unwilling to provide this. This is not necessarily the result of investment decisions on the part of banks. It can also relate to issues of access, oversight, or because there is no appropriate collateral.⁶⁵ In this vein, the rise of electronic money schemes can also have a positive impact on local economies and small entrepreneurs. While not meant to actually replace existing currencies, they provide a means of exchange in those communities where hard currency is in short supply or where trust in the national currency is very low.⁶⁶

61 See Willem Th. Oosterveld et al., *The Fission of Power: Flex and Flux in an Age of Fragmentation* (The Hague: The Hague Centre for Strategic Studies & TNO, 2015).

62 Economic and Social Commission for Western Asia, “Microfinance in Conflict: Strategies for Development and Peace in the ESCWA Region,” Technical Paper 4 (ESCWA, 2009), 3.

63 *Ibid.*, 4.

64 Mary Porter Peschka, James J. Emery, and Keith Martin, “The Role of the Private Sector in Fragile and Conflict-Affected States,” *World Development Report 2011: Background Paper* (Washington, DC: World Bank Group, 2011), 22–3.

65 The fact that there is a lot of ‘hidden capital’ that can be leveraged has been discussed in Hernando de Soto, *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, 1. paperback ed., [updated ed.] (New York, NY: Basic Books, 2003).

66 Sarah Catherine Rotman, “Bitcoin Versus Electronic Money,” CGAP Brief (Washington, D.C: World Bank Group, 2014); Tilman Ehrbeck, “The Potential of Electronic Money for Social Good,” *CGAP*, May 22, 2015, <http://www.cgap.org/blog/potential-electronic-money-social-good>.

Case study: Women’s Global Empowerment Fund, Uganda

Women’s Global Empowerment Fund (WGEF), a non-profit organization established in 2007, is a microfinance initiative operating in northern Uganda that helps women gain access to microcredit loans and business opportunities as well as education and healthcare. Its goal is to achieve ‘poverty alleviation, increased human and food security and women’s empowerment.’⁶⁷ Since its inception, it has shown significant results in the post-conflict area. WGEF has already given more than a thousand loans to its clients who have become respected members of the community, political leaders and self-sufficient individuals.⁶⁸ Through targeting socio-economic conditions, WGEF empowers not only individuals, but in turn also whole communities.

At the same time, efforts in recent years to increase bankedness numbers in developing countries have been encouraging. For instance, the World Bank found earlier this year that in the past three years, some 700m people worldwide had obtained bank accounts.⁶⁹ Much of this improvement is driven by a rapidly expanding use of mobile phones in developing countries.⁷⁰

67 Women’s Global Empowerment Fund, “Microfinance & Empowerment Programs In Gulu,” *GlobalGiving*, 2015, <https://www.globalgiving.org/projects/empower-a-woman-with-wgef/>.

68 Ibid.; Women’s Global Empowerment Fund, “Our Story,” *Women’s Global Empowerment Fund*, 2013, <http://wgefund.org/who-we-are/our-story/>.

69 Shawn Donnan, “More than 700m People Leave Ranks of the ‘unbanked,’” *Financial Times*, April 15, 2015, <http://www.ft.com/intl/cms/s/0/98c57404-e378-11e4-aa97-00144feab7de.html#axzz3j6xt1Rxo>.

70 John D. Villasenor, Darrell M West, and Robin J Lewis, *The 2015 Brookings Financial and Digital Inclusion Project Report Measuring Progress on Financial Access and Usage* (Washington, D.C.: Center for Technology Innovation at Brookings, 2015).



FIGURE 14. FINANCIAL ACCESS⁷¹

71 Source: IMF, “IMF Data - Financial Access Survey,” 2015, <http://data.imf.org/?sk=E5DCAB7E-A5CA-4892-A6EA-598B5463A34C>.

Case study: M-pesa, Kenya

The best scoring country in bankedness has been Kenya, which has now achieved a bankedness rate of 75%. Instrumental in this development has been the introduction of M-pesa in 2007, a mobile money transferring system and a digital wallet which contributes almost 30% to the country's GDP. Its growth was quick, and new accounts had a cascading effect of widening the user base even further. M-pesa was in high demand in Kenya in the violent aftermath of the 2008 elections, when people deemed online banking as a safer option of storing their money and as a means of sending money to relatives. The system enables people to be in charge of their own finances and through saving time, it enables them to focus on other activities instead. It also increases household income by up to 30%.⁷² Hence such technologies do not just contribute to financial inclusion, but also have a positive effect on inequality and societal resilience.

SOME IMPLICATIONS FOR DEFENSE ORGANIZATIONS

As demonstrated, boosting economic empowerment can have positive impact on the resilience of communities and even countries. And defense organizations can make a difference here too. For instance, in terms of fast security, they can support microfinance initiatives for security projects, for instance involving businessmen in creating a neighborhood watch system that makes areas safe for economic activity. Or, they could help provide safety to small moneylenders who act in places where no banks are available.

In terms of slow security, defense organizations can seek to support security initiatives that help to reduce inequality or that promote the interests of minorities. Indeed, if intercommunal trust is a precondition for long-term stability, then supporting inclusion of minority individuals can make a great contribution to increasing local resilience. The same applies to including entrepreneurial women in security initiatives, and thus making them share in the responsibilities of keeping their community safe and stable.

⁷² The Economist, "Why Does Kenya Lead the World in Mobile Money?," *The Economist*, May 27, 2013, <http://www.economist.com/blogs/economist-explains/2013/05/economist-explains-18>.

4.2 POLITICAL EMPOWERMENT

Political empowerment matters for resilience and security in two important ways: one, it matters in giving people a say in how the authorities should provide basic safety and security; secondly, it matters in terms of providing a feedback mechanism for when security provision falls short. One paper defined it as ‘[t]he capacity to analyse, organise and mobilise. This results in the collective action that is needed for collective change. It is often related to a rights-based approach to empowerment and the empowering of citizens to claim their rights and entitlements.’⁷³ In other words, political empowerment is about voice and accountability, and about the legitimacy of the polity and its leadership in the eyes of its citizens. Being safe and secure in your rights enables you to pursue opportunities in full freedom, and in that way, contributes to a society’s resilience as a whole—and hence to peace and stability.

As Kant would have it, political or civic rights constitute an end in themselves for they embody what it means to be an autonomous human being. But of course, voice and accountability are also critical preconditions enabling individuals to exploit their potential within a given polity. Some larger trends such as democratization, the spread of rule-of-law principles and the protection of fundamental rights are indicative of how individual empowerment has increased over the past decades. All three of course have received support in various military and peacekeeping missions that defense organizations, including the Dutch Ministry of Defense, have been involved in. Here however, the focus will be on how these trends can be supported with a bottom-up approach rather than a top-down, institution-building approach.

73 See Cecilia Luttrell and Sitna Quiroz, *Understanding and Operationalising Empowerment* (London: Overseas Development Institute, 2009), 1.



FIGURE 15. POLITICAL EMPOWERMENT

THE LINKS BETWEEN POLITICAL EMPOWERMENT, RESILIENCE AND STABILITY

Politics being the vehicle to preserve peace in the polity, no area is more directly relevant in thinking about factors that affect peace and stability. In considering different regime types, constitutional democratic systems⁷⁴ provide on average better guarantees for individual empowerment in terms of facilitating economic, educational and other opportunities for individual development than anocratic or autocratic systems. What is more, constitutional democratic systems are also less likely to experience civil conflict than semi-democratic ones, and if they do, the number of fatalities is on average lower than in autocracies.⁷⁵

However, this is not to say that constitutional democracies are also the most stable regime type. Indeed, in times of crisis, autocratic regimes can prove to be more durable than democratic regimes.⁷⁶ Yet, their inherent flexibility to absorb shocks can be a redeeming feature of constitutional democracies, while autocratic regimes could easily crumble from one day to the next. By giving room to the expression of individuals' preferences, democratic systems are also characterized by incessant contestation, meaning that they can become unstable if put under excessive strain, for instance at times of grave economic crisis.⁷⁷

Well-functioning constitutional democratic systems empower their citizens through mechanisms that provide them with voice and accountability. Indeed, the democratic norm is so entrenched today that there is not a single country that does not have a popularly elected assembly of some sort. In that regard, the spread of democracy as a benchmark for governance is utterly compelling. But democracies also have other benefits. For instance, they are supportive of

74 Here, the term 'constitutional democracy' is used rather than simply the term democracy in order to distinguish those democratic systems that are apt to perpetuate the same leadership through elections without guarantees for individual rights ('illiberal democracies' in the words of Zakaria, see Fareed Zakaria, *The Future of Freedom: Illiberal Democracy at Home and Abroad* (New York: W.W. Norton & Co, 2007)) from those systems that are based on constitutional guarantees, i.e underpinned by the rule of law.

75 See e.g. James D. Fearon and David D. Laitin, "Ethnicity, Insurgency, and Civil War," *American Political Science Review* 97, no. 01 (2003); Nils Petter Gleditsch, Håvard Hegre, and Håvard Strand, "Democracy and Civil War," in *Handbook of War Studies III: The Intrastate Dimension* (Ann Arbor: University of Michigan Press, 2009).

76 Steven R. Levitsky and Lucan A. Way, "Beyond Patronage: Violent Struggle, Ruling Party Cohesion, and Authoritarian Durability," *Perspectives on Politics* 10, no. 4 (December 2012).

77 David Runciman, *The Confidence Trap: A History of Democracy in Crisis from World War I to the Present* (Princeton ; Oxford: Princeton University Press, 2013).

development, which in turn helps strengthen democratic institutions.⁷⁸ Democracy has also been shown to have a positive effect on economic growth rates.⁷⁹ There is also evidence that it has a positive impact on education and also on healthcare provision.⁸⁰ What is more, the OECD has argued that by enabling disenfranchised groups to become socially invested in society, social costs of participating in violence increase; this can discourage disenfranchised groups from participating in or supporting violence.⁸¹

However, supporting the creation of democratic institutions in the context of conflict or post-conflict situations has not proven to be easy. Indeed, there is plenty of evidence that shows that democratic systems prove to be very brittle in such contexts, and that relapses into conflict are real possibilities.⁸² But rather than building democratic institutions with top-down approaches that require buy-in from established elites, it can also be encouraged with bottom-up approaches that facilitate individual empowerment.

One such development is liquid democracy, also known as delegative democracy.⁸³ The idea behind this is to make collective decision-making more accessible, to increase the sense of involvement as well as to strengthen accountability. In practice, it allows an individual to directly participate in voting on issues, or, if they do not have the time to delve into the issue, to delegate their vote to someone else they trust. The liquidity lies in that people can reclaim their own vote at any time, or switch their delegated vote to another representative at any time.⁸⁴ Being

78 Allan Dafoe, John R. Oneal, and Bruce Russett, “The Democratic Peace: Weighing the Evidence and Cautious Inference,” *International Studies Quarterly* 57, no. 1 (March 2013); Adam Przeworski, ed., *Democracy and Development: Political Institutions and Well-Being in the World, 1950-1990*, Cambridge Studies in the Theory of Democracy (Cambridge: Cambridge University Press, 2000).

79 Daron Acemoglu et al., “Democracy Does Cause Growth” (Cambridge, MA: National Bureau of Economic Research, March 2014).

80 See e.g. Morton H. Halperin, Joseph T. Siegle, and Michael M. Weinstein, *The Democracy Advantage: How Democracies Promote Prosperity and Peace*, Rev. ed (New York: Routledge, 2010).

81 Lyndsay Hilker, *Empowerment in Fragile States and Situations of Fragility* (OECD, 2012).

82 See e.g. Barbara F. Walter, “Conflict Relapse and the Sustainability of Post-Conflict Peace,” *World Development Report 2011: Background Paper*, (2010); Håvard Hegre and Håvard Mokleiv Nygard, “Governance and Conflict Relapse,” *Journal of Conflict Resolution* 59, no. 6 (September 1, 2015).

83 See further explained in e.g. Steve Hardt and Lia C. R. Lopes, “Google Votes: A Liquid Democracy Experiment on a Corporate Social Network,” *Technical Disclosure Commons*, Defensive Publications Series, June 5, 2015, http://www.tdcommons.org/dpubs_series/79/.

84 Alois Paulin, “Through Liquid Democracy to Sustainable Non-Bureaucratic Government” (International Conference for E-Democracy and Open Government, Krems, Austria, 2014).

popular in anarchist circles, this mode of voting provides an easy way to engage otherwise disenfranchised people. So far, it has been experimented within the context of US Congressional elections, but given the low entry barriers, could be of use in post-conflict settings too.⁸⁵

Case Study: Liquid Democracy

The Industrial Workers of the World, an international labor union, uses multiple levels of democracy, including delegative democracy. Local branches are controlled directly and democratically by local members. Once per year these branches elect—and vote on direction for—delegates to send to a yearly general convention, at which they carry out deliberations and construct referendums. The convention has no power to make and enforce decisions on its own; changes are accomplished by way of mailed referendum ballot. This yearly ballot is also used to elect members to various union administrative roles. Alternatively to the delegative process, members may add proposals to the ballot by initiative.⁸⁶ There are also some apps being developed that facilitate liquid democracy.⁸⁷

But for democracy to be sustainable, more is needed than broadening the voter base. Rule of law also matters because it provides one more mechanism for channeling and resolving grievances.⁸⁸ With rule of law, we do not mean the simple enforcement of laws through courts, but enforcement on the basis of good governance principles, thus excluding otherwise repressive regimes with effective court systems. In the end, a rule of law system should enable individual empowerment—providing a basis of trust enabling transactions between individuals—and contribute to societal stability.⁸⁹ One reason why rule of law caught on in so many places is because it brought less ideological baggage than

85 Liquid Democracy, “Industrial Workers of the World,” *Liquid Democracy*, accessed November 30, 2015, <http://liquiddemocracy.org/view/industrial-workers-of-the-world>.

86 Industrial Workers of the World, “Preamble, Constitution, & General Bylaws of the Industrial Workers of the World” (IWW, amended January 1, 2015).

87 See e.g. Democracia en Red, “DemocracyOS - Change the Tool,” *DemocracyOS*, 2015, <http://democracyos.org/>.

88 Jane E. Stromseth, David Wippman, and Rosa Brooks, *Can Might Make Rights?: Building the Rule of Law after Military Interventions* (Cambridge; New York: Cambridge University Press, 2006), 141.

89 Thomas Carothers, “The Rule of Law Revival,” *Foreign Affairs*, March 1998, <https://www.foreignaffairs.com/articles/1998-03-01/rule-law-revival>.

democratization or state-building exercises, which were all invariably predicated on Western norms.⁹⁰

At the local or individual level, the difference can sometimes already be made when someone can document their identity. For this purpose, UNDP created one-stop mobile clinics in Sri Lanka in the wake of the Tsunami in 2004 that helped people to become fully registered again, so they could start their own businesses, go to school or receive government benefits.⁹¹

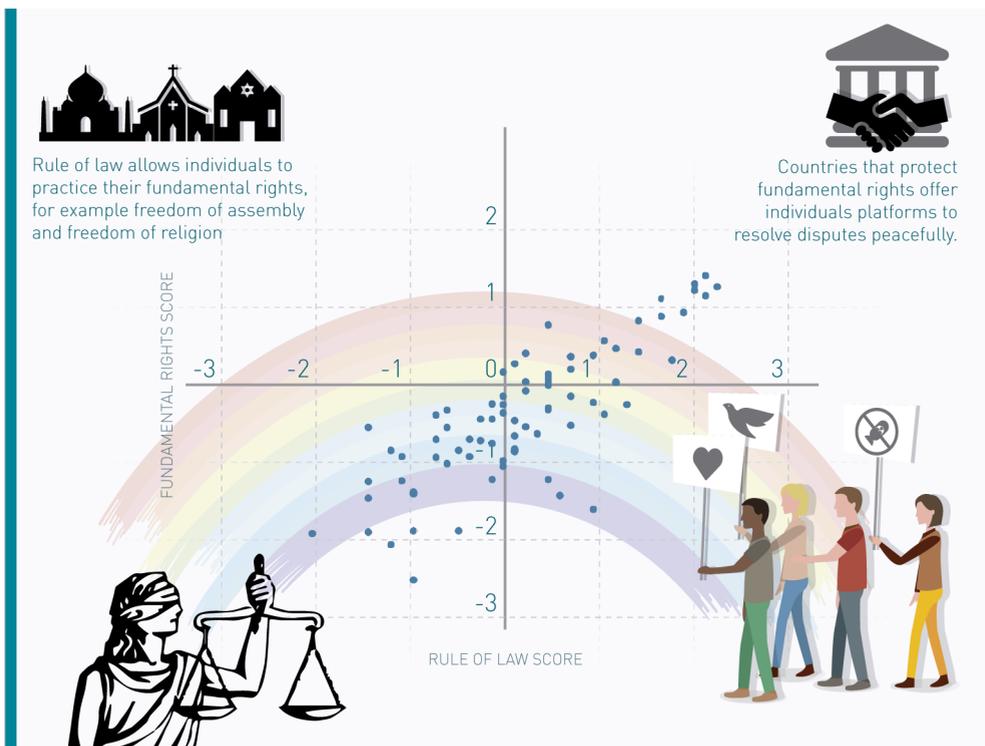


FIGURE 16. CORRELATION BETWEEN FUNDAMENTAL RIGHTS SCORE AND RULE OF LAW⁹²

90 Brian Z. Tamanaha, *On the Rule of Law: History, Politics, Theory* (Cambridge; New York: Cambridge University Press, 2004).

91 UNDP, “Sri Lankans Get Access to Justice through Mobile Clinics,” *UNDP*, February 20, 2015, <http://www.undp.org/content/undp/en/home/ourwork/ourstories/in-sri-lanka--providing-access-to-justice-through-mobile-clinics.html>.

92 Source: University of Gothenberg, “Quality of Government Institute,” 2015, <http://qog.pol.gu.se/>; World Justice Project, “WJP Rule of Law Index 2015,” 2015, <http://worldjusticeproject.org/rule-of-law-index>.

In conjunction with rule of law, protection of fundamental rights is another key distinguishing factor between countries that experience stability and those that do not.⁹³ These rights include for instance freedom of assembly, freedom of expression, freedom of movement and the right to a fair trial. Fundamental rights protection is not just an enabler and stabilizing factor because it helps protect individual citizens against possible arbitrary behavior on the part of the government, but also increases buy-in into the prevailing political regime: after all, if citizens have no confidence that an incoming government will respect their rights just as an outgoing government does, the political system itself loses legitimacy, and instability will ensue.

TRENDS IN POLITICAL EMPOWERMENT

In general, the increasing if sometimes grudging acceptance of democratic norms of governance coupled with the concomitant rise of human rights since World War II constitute an unprecedented development that has had a profound impact on individual empowerment. The most conspicuous trend in political empowerment in the past decades has been the steady rise of democratic countries. In spite of the economic crisis and the onset of the Arab spring movement, the number of democratic states has remained stable.

What is more, in countries where democracy has been threatened, the public has responded by supporting democracy and human rights. Examples include Thailand, Mexico, Turkey and Brazil. Conversely, in autocratic or anocratic countries there have been serious attempts clamoring for regimes to open up, examples include Russia, Iran and countries such as Tunisia and Egypt that had been affected by the Arab revolutions. However, whether we can speak of a ‘Fourth Wave of Democracy’⁹⁴ as a successor to the ‘Third Wave,’ termed by the late political scientist Samuel Huntington, remains to be seen.⁹⁵

93 Ted Robert Gurr et al., “State Failure Task Force Report: Phase III Findings,” *Environmental Change & Security Project Report*, no. 5 (1999), 50.

94 Larry Diamond, “A Fourth Wave or False Start?,” *Foreign Affairs*, May 22, 2011, <https://www.foreignaffairs.com/articles/middle-east/2011-05-22/fourth-wave-or-false-start>; Carl Gershman, “The Middle East Revolt’s Place in History,” *The New Republic*, March 14, 2011, <http://www.newrepublic.com/article/world/85143/middle-east-revolt-democratization>.

95 Samuel P. Huntington, *The Third Wave: Democratization in the Late Twentieth Century*, 1. paperback print, The Julian J. Rothbaum Distinguished Lecture Series 4 (Norman: Univ. of Oklahoma Press, 1993).

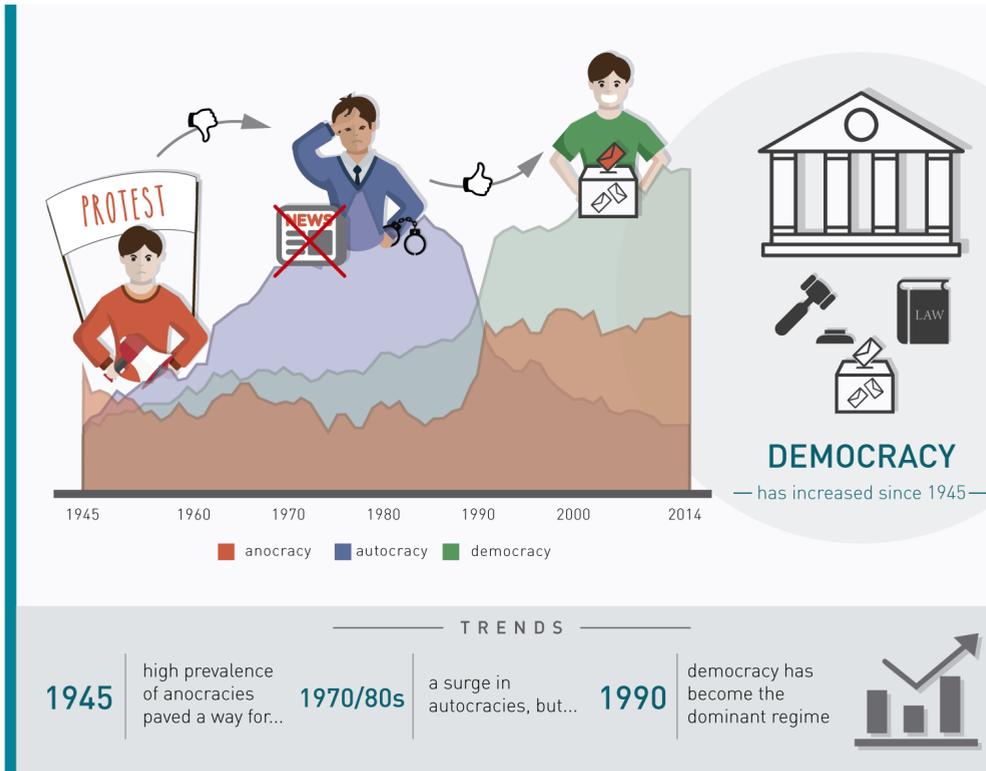


FIGURE 17. POLITIES OVER TIME⁹⁶

Rule of law is also proceeding apace. While trends over the past decades have been relatively flat across different regions of the world, interesting projects and initiatives have emerged to strengthen adherence to legal and societal norms at the local level. Among these is a trend towards virtual justice.⁹⁷ One example is the use of FrontlineSMS:Legal, an open-source judicial communication system that facilitates access to, say, legal documents or direct interaction between clients and lawyers. It has been used already in Kenya. Another example in the area of governance is Bribespot, a crowdsourcing application that helps to monitor where

96 Source: Centre for Systemic Peace, “Centre for Systemic Peace Rule of Law Index.”

97 See Raúl Zambrano, Ruhiya Kristine Seward, and Stephanie Ludwig, *Mobile Technologies and Empowerment: Enhancing Human Development through Participation and Innovation* (United Nations Development Programme, 2012); FrontlineSMS:Legal, “FrontLineSMS:Legal - Justice Mobilized,” *FrontLineSMS:Legal*, 2013, <http://legal.frontlinesms.com>.

bribes are being paid. Although not a tool for prosecution purposes, it helps to provide insight into patterns of bribery in different countries.⁹⁸

Case Study: Ushahidi

One tool strengthening rule of law is Ushahidi, a crowdsourcing platform that has been used to map emerging violence in Kenya following the 2007 elections, but which has subsequently been used in other contexts, including for humanitarian relief operations.⁹⁹ Ushahidi's initial purpose in Kenya was to give voice to the local community, which would otherwise not enjoy freedom of speech or proper access to information in the highly censored society. It empowered the people by both providing them access to uncensored security data as well as enabling them to contribute to the map themselves.

Worldwide though, as with rule of law, protection of political and civic rights has remained relatively constant, in spite of significant economic growth in countries across Africa and Asia. At the same time, respect for fundamental political rights has not markedly suffered in spite of the conflagrations we have witnessed in the past years. The approach to improving political and human rights proposed here is not to legislate from above, but to help people at the local level, where some of the tools mentioned can make a significant difference at the individual and communal level.

98 See Bribespot, "Bribespot," *Bribespot*, 2011, <http://bribespot.com/en/>.

99 See Ushahidi, "About Ushahidi," *Ushahidi*, 2008, <http://www.ushahidi.com/about>.

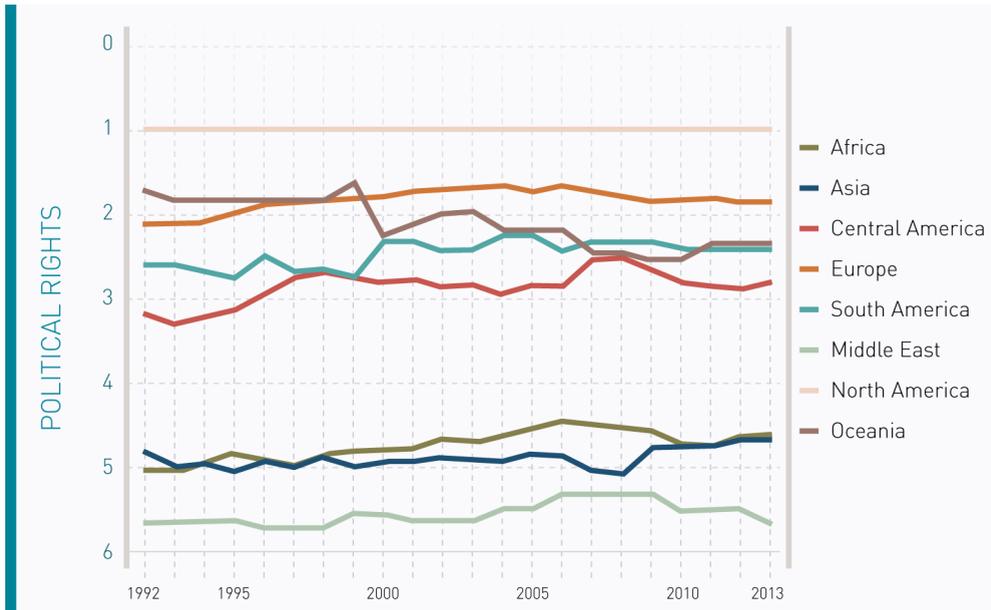


FIGURE 18. POLITICAL RIGHTS (FREEDOM HOUSE SCORE)¹⁰⁰

The purpose of this section was to highlight how wider trends can have a positive impact on improving peace, security and stability not just at the national but also at the local and individual levels of a country. Given that the record in terms of supporting governments and local elites with building governance systems and legal infrastructure is somewhat patchy,¹⁰¹ different kinds of opportunities can be pursued with bottom-up approaches. After all, in contexts where political power is conceived of as zero-sum, empowering individual citizens can be regarded as undermining the power of authorities, which is why institution building or promoting inclusive principles can prove to be harder than anticipated. What’s more, given that institutional support to building political structures is often highly sensitive, approaches that can balance these issues by starting at the individual level can pay dividends.

100 Source: Freedom House, “Freedom in the World,” 2015, <https://freedomhouse.org/report-types/freedom-world>.

101 For example in Somalia, numerous attempts to build a well-functioning state failed for their irresponsiveness to the local historical, cultural and sociopolitical conditions and reflected the international norms of state-building. The same happened in Afghanistan, and the initiatives to build a prosperous state have failed to a large degree. See for instance Oliver P. Richmond, *Failed Statebuilding: Intervention, the State, and the Dynamics of Peace Formation* (New Haven: Yale University Press, 2014); Seth Kaplan, “Rethinking State-building in a Failed State,” *The Washington Quarterly* 33, no. 1 (January 1, 2010).

SOME IMPLICATIONS FOR DEFENSE ORGANIZATIONS

For defense organizations, there are various tools and methods available today that help them to reach out to individuals and communities at the local level. Often, activities relating to peacebuilding or security sector reform (SSR) are undertaken by defense forces together with other security actors, both from the home country and those locally-based. In the immediate term, such activities can for instance include supporting the mapping of local security conditions or providing protection to mobile courts wherever needed. Finally, the creation of an online system that facilitates direct interaction between locals and the present military leadership—say in the shape of a twitter for illiterate people—can help to boost mutual confidence.

Slow security can be boosted for instance by setting up early warning monitoring systems to detect potential for escalating violence, an activity that can include elements of crowdsourcing. Supporting political education and conflict resolution mechanisms is another way Defense can support long-term stability. At the same time, it can be necessary for defense organizations to tread carefully when seeking to promote voice and accountability in foreign contexts.

4.3 EDUCATIONAL EMPOWERMENT

Arguably the least controversial factor in increasing individual empowerment and societal resilience is to improve levels of education. This is not merely important in terms of improving someone's future job opportunities, but helps to shape someone's overall thinking about and perspective on the future: from choosing how to live and where to becoming an engaged member of the community, and hence contributing to a society's resilience.



FIGURE 19. EDUCATIONAL EMPOWERMENT

Investments in education by governments or other entities can reap dividends in various ways: it can help to assuage certain grievances, create alternative opportunities apart from reaching for guns to make a living, and help to cultivate a culture of peace in itself.¹⁰² Indeed, it has been argued that, simply speaking, ‘[i]ncreasing education levels overall has pacifying effects.’¹⁰³ Some believe that societal well-being and human capital is directly influenced by one’s level of education,¹⁰⁴ or that education is directly related to civic participation—one’s desire to partake in the public affairs rises with more years spent in school.¹⁰⁵ Education is also seen as a key in getting to grips with population growth, and to push health standards.¹⁰⁶ In all of these respects, it is clear that education plays a key role in boosting individual empowerment, strengthening societal resilience and harnessing stability and peace.

THE LINKS BETWEEN EDUCATIONAL EMPOWERMENT, RESILIENCE AND STABILITY

The value of education as a factor that contributes to the well-being, stability and prosperity of a polity has long been recognized. Today, the focus is on inculcating theoretical and practical skills that prepare someone to be able to navigate an increasingly complex world, and to equip them with the required knowledge to exercise a particular profession. After World War II, education became one of the pillars of development aid. Today, the bulk of total ODA spent on education (some 7–8% in 2013) is being committed to Sub-Saharan Africa and Asia.

102 Østby and Urdal, *Education and Conflict: What the Evidence Says*, 2.

103 *Ibid.*, 1.

104 Robert K Crocker, *Learning Outcomes: A Critical Review of the State of the Field in Canada* (Ottawa: Council of Ministers of Education, Canada, 2002).

105 Wolfgang Lutz, Jesús Crespo Cuaresma, and Mohammad Jalal Abbasi-Shavazi, “Demography, Education, and Democracy: Global Trends and the Case of Iran,” *Population and Development Review* 36, no. 2 (2010).

106 Wolfgang Lutz and Samir KC, “Global Human Capital: Integrating Education and Population,” *Science* 333, no. 6042 (July 29, 2011).

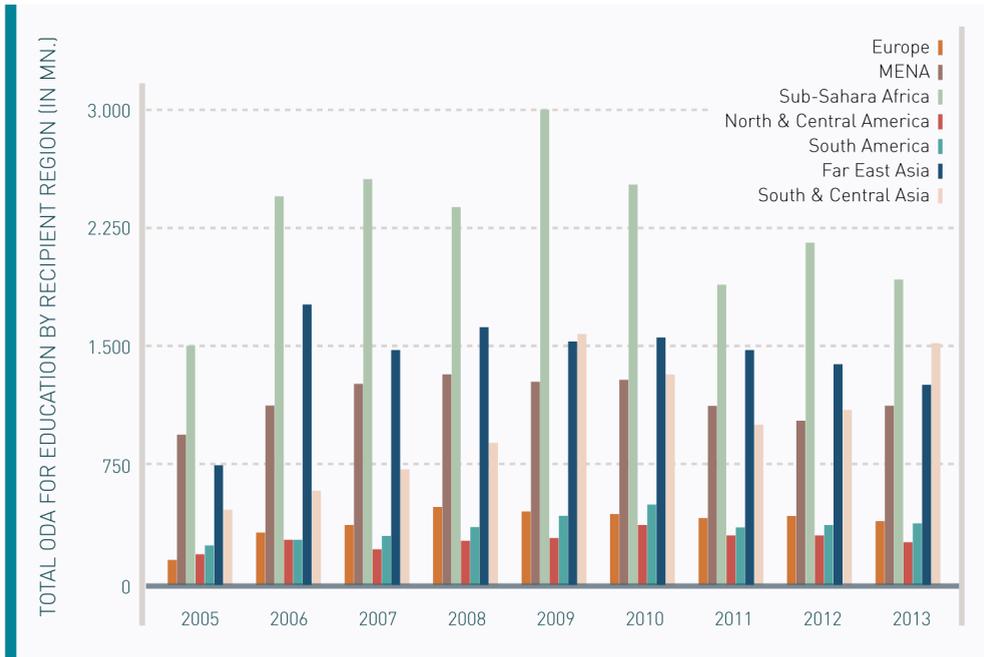


FIGURE 20. TOTAL ODA FOR EDUCATION BY RECIPIENT REGION¹⁰⁷

In various ways, education impacts economic growth. Development theory¹⁰⁸ affirms that a higher number of skilled and qualified people increases productivity of the workforce and contributes to technological innovation,¹⁰⁹ which in turn contributes to individual empowerment. The benefits of education differ depending on the type of schooling. Skills developed in school matter more than the level of education achieved: ‘cognitive skills (...) are powerfully related to individual earnings, to the distribution of income, and to economic growth,’ both through primary education and higher levels.¹¹⁰

107 Source: OECD, “GeoBook: Geographical Flows to Developing Countries,” 2015, <http://stats.oecd.org/Index.aspx?DataSetCode=DACGEO>.

108 Seymour Martin Lipset, “Some Social Requisites of Democracy: Economic Development and Political Legitimacy,” *The American Political Science Review* 53, no. 1 (March 1, 1959).

109 Robert J. Barro and Jong Wha Lee, “A New Data Set of Educational Attainment in the World, 1950–2010,” *Journal of Development Economics* 104 (September 2013).

110 Eric A. Hanushek and Ludger Woessmann, “The Role of Education Quality for Economic Growth,” SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, February 1, 2007).

Education has positive effects on one's self-esteem and social skills.¹¹¹ Individual education can increase one's income and social status and can also have positive effects for the neighborhood or community where educated individuals reside.¹¹² Education can also have important impacts on people's perspectives on politics, rights entitlements and justice issues.¹¹³ According to UNESCO, '[education is] essential for the exercise of all other human rights. It promotes individual freedom and empowerment and yields important development benefits.'¹¹⁴

This is not just a matter of nurturing civic pride. Increasing literacy levels in itself is a significant contributing factor to people getting more involved into how they are being governed, whether close by or from afar. Levels of education also matter. Indeed, one study found that a given high school dropout who would only have a 15.6% chance of participating in an election 'would have a 65.2% chance of turnout if randomly induced to graduate from high school.'¹¹⁵ In general, the lesson here is that education provides people with a voice: a voice to partake in governance, but also a voice to get involved in justice issues, or to protest in the streets when needed. It is thus not surprising that countries with higher percentages of people with at least secondary education are more likely to be democracies (see figure 21 below).

111 Tom Schuller et al., *Benefits of Learning the Impact of Education on Health, Family Life and Social* (London: RoutledgeFalmer, 2004).

112 Wei Zhang et al., "Predictors of Mental and Physical Health: Individual and Neighborhood Levels of Education, Social Well-Being, and Ethnicity," *Health & Place* 17, no. 1 (2011).

113 Lutz, Cuaresma, and Abbasi-Shavazi, "Demography, Education, and Democracy."

114 UNESCO, "The Right to Education," *United Nations Educational, Scientific and Cultural Organization*, accessed October 6, 2015, <http://www.unesco.org/new/en/right2education>.

115 Rachel Milstein Sondheimer and Donald P. Green, "Using Experiments to Estimate the Effects of Education on Voter Turnout," *American Journal of Political Science* 54, no. 1 (January 1, 2010), 185.

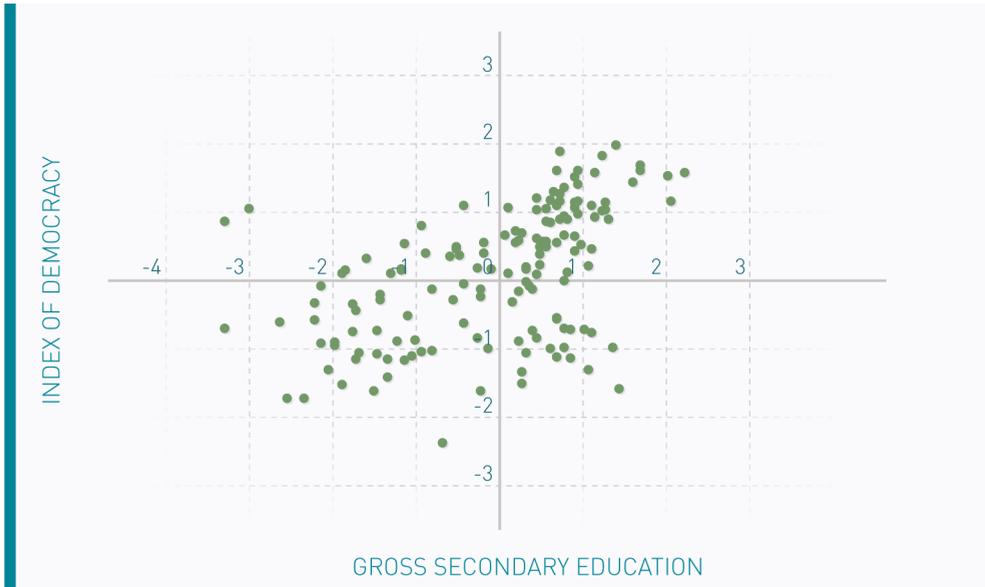


FIGURE 21. CORRELATION BETWEEN DEMOCRACY INDEX AND GROSS SECONDARY EDUCATION¹¹⁶

Another important effect of education is as a social equalizer, in particular regarding gender relations. Indeed, a recent RAND report concluded that ‘access to education must (...) be seen as a gateway to equality,’ since ‘education is at the heart of equal opportunity, enabling men and women across the world to participate in the labour market and the economy as a whole, as well as to take on leadership roles in society, politics and management.’¹¹⁷

Supporting women’s education is a significant component of gender equality. For instance, one researcher concluded that there is economic efficiency in supporting women in educational systems since ‘the social returns to the years of schooling of females are greater than the return to males.’¹¹⁸ Also, increasing schooling years for a woman positively influences the overall welfare of her

116 Source: Economist Intelligence Unit, “Democracy Index,” 2015, http://www.eiu.com/public/topical_report.aspx?campaignid=Democracy0814; UNDP, “Combined Gross Enrolment in Education (both Sexes) (%)” 2015, <http://hdr.undp.org/en/content/combined-gross-enrolment-education-both-sexes>.

117 Marlon Graf et al., *Individual Empowerment: Global Societal Trends to 2030: Thematic Report 3* (Santa Monica, CA: RAND Corporation, 2015), 19.

118 Paul T. Schultz, “Why Governments Should Invest More to Educate Girls,” *World Development* 30, no. 2 (February 2002), 207.

children; and female education boosts women’s labor market participation rates and thus contributes to a country’s tax revenue.¹¹⁹

Another important effect is demographic: women with higher educational attainment tend to have fewer children. Significant factors in this respect are ‘access to modern views about family size in general; changing aspirations for one’s children; the prestige of education being able to compensate for the loss of status associated with low fertility in uneducated families; the higher incomes which reduce the need for children as security; and the reduced fatalism about life (...) and fertility control (...) which brings conscious birth control.’¹²⁰ Hence, women’s education can therewith be an effective means for slowing down population growth and preventing youth bulges from expanding that could likely have a destabilizing impact in the long run.

TRENDS IN EDUCATIONAL EMPOWERMENT

There are various promising global trends that demonstrate the value of education. Student enrollment has increased on every educational level. Worldwide, pre-primary enrollment rates have augmented by about 60% since 1999 (equal to 184 million children), primary rates have gone from 84% to 93% since 1999 and lower secondary from 71% to 85% between 1999 and 2012. Adult literacy has somewhat decreased, from 18% to 14% in 15 years’ time.¹²¹ As a result, ‘the general expectation is that this phenomenon will contribute to empowerment at the individual level.’¹²²

One of the global trends which leverage education in connection with individual empowerment is the increasing importance of mastering English. Understanding English gives individuals access to an unparalleled amount of information resources, as well as entry into the world of international business. A recent RAND report concluded that in view of this development, ‘a certain convergence of attitudes and on-going globalisation of values may occur.’¹²³ What is more, countries that invest in learning English as a second language also experience a

119 Ibid.

120 Alaka M. Basu, “Why does Education Lead to Lower Fertility? A Critical Review of Some of the Possibilities,” *World Development* 30, no. 10 (2002), 1788.

121 UNESCO, *Education for All 2000-2015: Achievements and Challenges* (Paris: UNESCO Publishing, 2015).

122 Graf et al., *Individual Empowerment*, 18.

123 Ibid., 18.

period of economic growth due to the new possibilities in IT & communications sector and in trade, and through lowering unemployment.¹²⁴

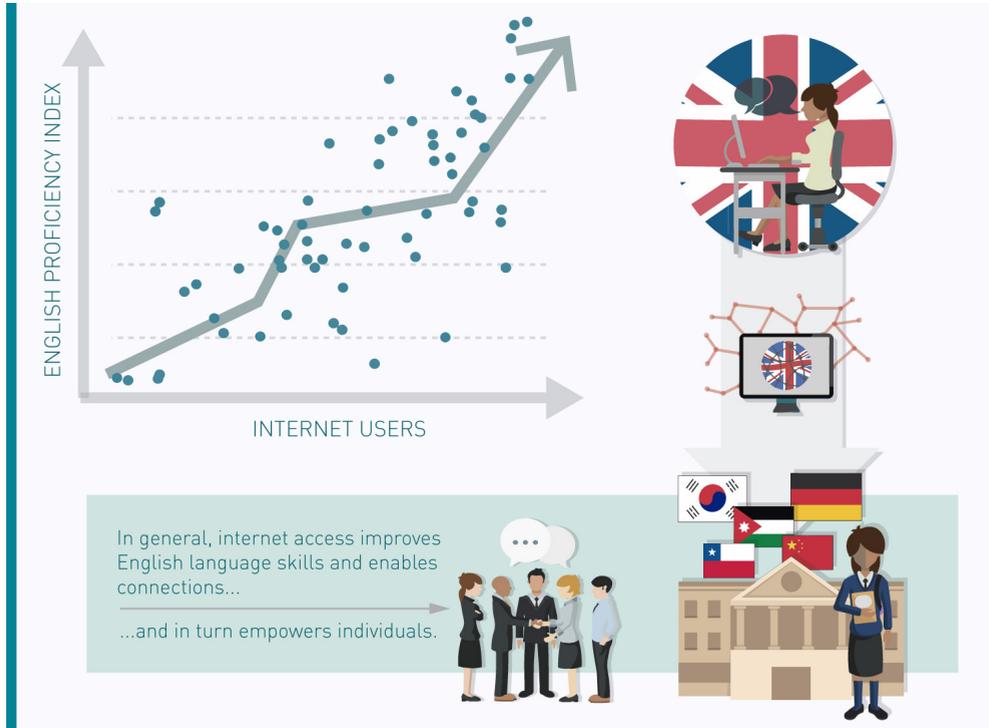


FIGURE 22. CORRELATION BETWEEN ENGLISH SKILLS AND INTERNET USE¹²⁵

Another significant trend is a perceived general convergence of the school attendance rates for girls and boys, and since 1970 there has been a significant improvement in the number of women participating in schooling (see figure 23 below). While some regions are close to achieving parity, in Latin America, for instance, girls have outnumbered boys in terms of school enrollment; the ratio in 2013 was a little more than 1.018. Yet it must be noted that even though gender parity can occur on the aggregate, there are communities within countries where the gap is more apparent.

124 Sowmya Ramaswami, Iyad Sarraf, and Jon Haydon, *The Benefits of the English Language for Individuals and Societies: Quantitative Indicators from Algeria, Egypt, Iraq, Jordan, Lebanon, Morocco, Tunisia and Yemen* (Euromonitor International, 2012).

125 Source: Education First, “English Proficiency Index,” 2015, <http://www.ef.co.uk/epi/>; World Bank, “Internet Users (per 100 People),” 2015, <http://data.worldbank.org/indicator/IT.NET.USER.P2>.

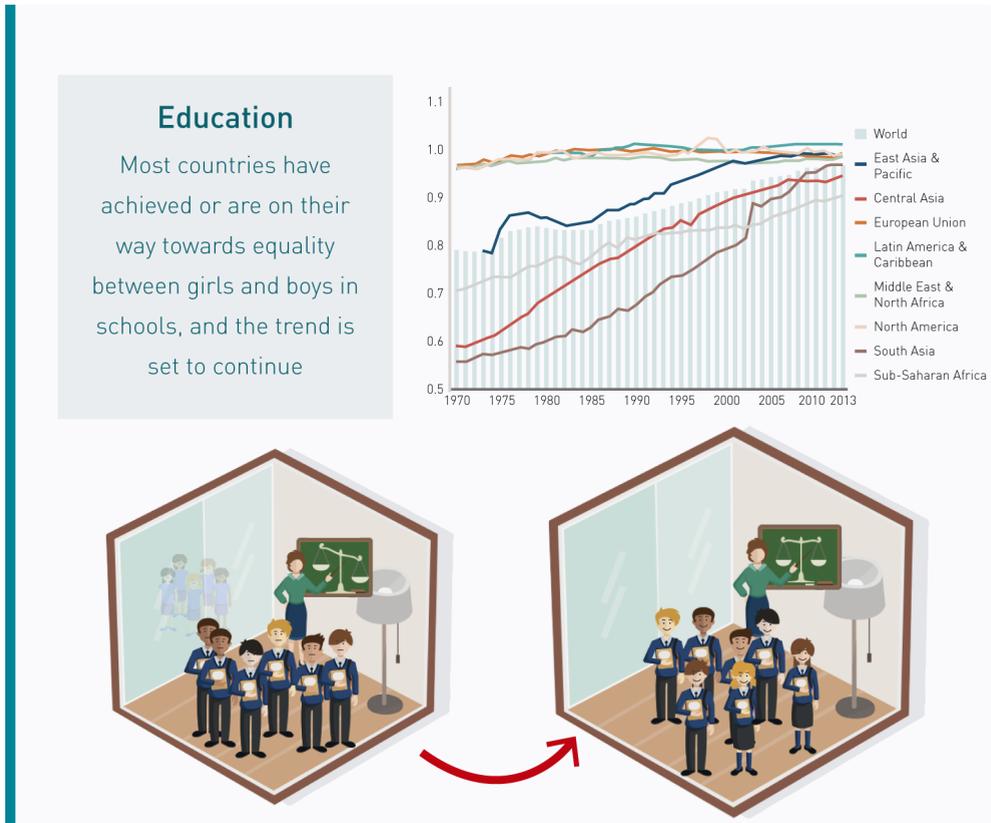


FIGURE 23. PRIMARY AND SECONDARY SCHOOL GIRL-TO-BOY RATIO¹²⁶

Despite this convergence in school enrollment, there are regional differences in the number of women enrolled in secondary education.¹²⁷ According to UNESCO, low participation rates in secondary education ‘in certain parts of the world [are] due to unsafe learning environments and social demands.’¹²⁸ But in general, there are various determinants that can hinder girls’ participation—‘social, cultural and political factors, (...) factors of exclusion such as poverty, ethnicity, location or disability.’¹²⁹ All these aspects can stall the progress

126 Source: World Bank, “School Enrollment, Primary and Secondary (gross), Gender Parity Index (GPI),” 2015, <http://data.worldbank.org/indicator/SE.ENR.PRSC.FM.ZS>.

127 Ibid.

128 UNESCO Institute for Statistics, *Global Education Digest 2010: Comparing Education Statistics across the World* (Montreal, Quebec: UNESCO Institute for Statistics, 2010), 3.

129 Ibid., 3.

towards gender parity and individual empowerment of women in any world region for a long time and pose a serious challenge to the world development goal of achieving universal access to education regardless of age, race, or gender.

In places where free public education fails the younger generation, for-profit education can fill a void and help boost individual empowerment. Today, in some African countries, up to 75% of pupils after having completed five or six years of primary school cannot read.¹³⁰ Parents also complain that public schools are less accountable, overcrowded and not free (as some school material is not covered).¹³¹ This led to initiatives such as dollar-a-day schools, which nowadays manage to ask as little as one dollar a week in tuition fees.¹³² The schools created by Bridge International Academies,¹³³ which provide standardized education that leverages ‘technology and economies of scale,’¹³⁴ are an example of this. Despite the higher financial burden on the parent, students of private schools often outperform those from public schools and parents are willing to pay the small amount of money.¹³⁵ A headmaster of a public school in Kenya said that ‘[t]he mentality is that if you send your child to public school you’re wasting the child’s destiny.’¹³⁶

130 Tosin Sulaiman, “Dollar-a-Day Schools,” *African Media Initiative*, 2015, <http://storychallenge.pageflow.io/africas-dollar-a-day-schools>.

131 Tosin Sulaiman, “Budget Private Schools: Solution to Africa’s Education Woes?,” *Financial Times*, December 16, 2014, <http://blogs.ft.com/beyond-brics/2014/12/16/budget-private-schools-solution-to-africas-education-woes/>.

132 The Economist, “The \$1-a-Week School,” *The Economist*, August 1, 2015, <http://www.economist.com/news/leaders/21660113-private-schools-are-booming-poor-countries-governments-should-either-help-them-or-get-out>.

133 Bridge International Academies, “About,” *Bridge International Academies*, 2013, <http://www.bridgeinternational-academies.com/company/about/>; Bridge International Academies, “History,” *Bridge International Academies*, 2013, <http://www.bridgeinternationalacademies.com/company/history/>.

134 Folashade Adebayo, “Now, an Elite School for Poor Pupils,” *The Punch*, September 11, 2015, <http://www.punchng.com/education/now-an-elite-school-for-poor-pupils/>.

135 The Economist, “The \$1-a-Week School.”

136 Quoted in Sulaiman, “Budget Private Schools.”

Case Study: School enrollment in Tanzania

Tanzania's primary school enrollment increased from 49% to 96% and completion rate from 55% to 100% between 1999 and 2009. While this was to a significant degree achieved with government support, empowering local governments in the administrations of schools—or decentralization—proved crucial. Progress was achieved also through extra services provided to the pupils, such as health care at schools, protection from physical punishment or wider access to textbooks.¹³⁷ The success can also be attributed to initiatives like BridgeIT, which was supported by the Tanzanian government and which used mobile phones to empower teachers and raise students' performance in mathematics and science.¹³⁸

Another significant development is the increasing availability of online educational resources. Platforms such as Khan Academy or Coursera offer high quality education, often only charging small fees or even being free, and thus being accessible to the indigent. Massive Online Open Courses (MOOCs) and other Open Educational Resources (OER) can empower 'especially women, children and youths all over the world' and 'address poverty, illiteracy, ill health, ignorance, unemployment, marginalisation, [and] social segregation.'¹³⁹ Online education brings several advantages. First, there is less need for time-consuming textbook exercises.¹⁴⁰ Second, teachers can shift their focus towards emotional and social learning, which are crucial for personal development yet not extensively covered. Third, teachers can make use of online assessments which will generate evaluations easily and help them improve teaching approaches. Fourth, more people can be reached.¹⁴¹

137 Laurie Lee, "21st Century Progress in Africa: Achieving MDG 2 in Tanzania," *Impatient Optimists*, November 4, 2013, <http://www.impatientoptimists.org/Posts/2013/10/21st-Century-Progress-in-Africa-Achieving-MDG-2-in-Tanzania#.VkXGH3arTIV>.

138 UNESCO, *Education for All 2000-2015*.

139 Olu Jugede, "Open Learning for Development: Towards Empowerment and Transformation," December 2013, <http://oasis.col.org/handle/11599/1156>, 4.

140 Gilad Ravid, Yoram M Kalman, and Sheizaf Rafaeli, "Wikibooks in Higher Education: Empowerment through Online Distributed Collaboration," *Computers in Human Behavior* 24, no. 5 (September 2008).

141 Salman Khan, "4 Ways Technology Can Help Empower Teachers And Students," *Co.Exist*, April 2, 2015, <http://www.fastcoexist.com/3044585/techsocial/4-ways-technology-can-help-empower-teachers-and-students>.

An example of how new forms of education can help nurture societal values and thus contribute to societal resilience is Colombia's Fundación Escuela Nueva (FEN), an NGO that has developed a curriculum that focuses on fostering social skills, entrepreneurship, leadership, teamwork and critical thinking.¹⁴² FEN also encourages parent participation in public affairs¹⁴³ and works within and thus strengthens existing school systems. The method has served some five million children all over the world.¹⁴⁴ Another example in this vein are Benin's Songhai centers, which provide training courses to individuals via personal mentorship.¹⁴⁵ Mentors teach the importance of social entrepreneurship thus empowering the individual and enabling them to become a force for change.¹⁴⁶ The centers have helped more than 1,700 individuals to initiate their own business¹⁴⁷ and have been successfully exported to Nigeria, Liberia, Sierra Leone, and the Republic of Congo.¹⁴⁸

142 Fundación Escuela Nueva Volvamos a la Gente, "Escuela Nueva Model - Components," *Escuela Nueva*, 2003, <http://www.escuelanueva.org/portal/en/escuela-nueva-model/components.html>.

143 Clemente Forero Pineda, Daniel Escobar Rodríguez, and Danielken Molina, "Escuela Nueva's Impact on the Peaceful Social Interaction of Children in Colombia," in *Education for All and Multigrade Teaching: Challenges and Opportunities*, ed. Angela W. Little (Dordrecht: Springer, 2006).

144 Fundación Escuela Nueva Volvamos a la Gente, "About Us," *Escuela Nueva*, 2003, <http://www.escuelanueva.org/portal/en/about-us.html>.

145 Songhai, "Songhai Training: Mission & Vision," *Songhai*, 2015, <http://www.songhai.org/index.php/en/training-mission-vision>.

146 Joachim von Braun, *The Poorest and Hungry: Assessment, Analyses, and Actions* (Washington, D.C.: International Food Policy Research Institute, 2009).

147 Loretta de Lucca et al., *Learning from Catalyst of Rural Transformation* (Italy: ILO, 2013).

148 Songhai, "Songhai in Action," *Songhai*, 2015, <http://www.songhai.org/index.php/en/songhai-en-action-en>.

Case study: schooling in Afghanistan

From 2002 onward, Afghanistan has seen significant progress in primary school enrollment: from approximately 800,000 to 8.2 million pupils in just 10 years and at the same time increasing the number of girls from almost none to nearly 40%.¹⁴⁹ This progress was achieved jointly by the government's laws establishing compulsory nine years of primary education and free secondary education, the involvement of non-state actors and support from defense organizations. The private sector was invaluable in the development of higher and technical and vocational education. Empowering local communities, teachers and students through student councils and cooperation with NGOs bred an encouraging learning environment.¹⁵⁰ The Dutch military mission in Afghanistan in Uruzgan played a constructive role here. After four years of Dutch engagement, employment opportunities and agricultural production has increased, and so did the number of health care facilities and schools. New media channels emerged, mobile coverage was introduced. These developments enabled various women in the province to successfully run for a seat in the parliament.¹⁵¹

SOME IMPLICATIONS FOR DEFENSE ORGANIZATIONS

Educational empowerment is an area that defense organizations can also contribute to, in particular in boosting long term societal resilience. One way is to support education in conflict resolution and in cultivating mutual understanding. For instance, by sharing their stories, they can help children in broadening their perspectives and encourage self-initiative. Furthermore, supporting women's education—where possible in conjunction with other actors

149 Taymor Shah Kamrany, "Afghanistan 2002-2012: A Decade of Progress and Hope," Middle East Institute, August 14, 2012, <http://www.mei.edu/content/afghanistan-2002-2012-decade-progress-and-hope>; Afghan Ministry of Education, "Afghanistan: Education for All 2015 National Review" (UNESCO's World Education Forum, Incheon, Republic of Korea, 2015).

150 Saif R. Samady, "Changing Profile of Education in Afghanistan," 2013, <http://eslus.com/articles/Ed-Afghanistan.pdf>; World Bank, "IDA at Work: Afghanistan - Expanding Access to Quality Education," World Bank, 2009, <http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/IDA/0,,contentMDK:21289161~menuPK:3266877~pagePK:51236175~piPK:437394~theSitePK:73154,00.html>.

151 The Liaison Office, *The Dutch Engagement in Uruzgan 2006 to 2010: A TLO Socio-Political Assessment* (Kabul, Afghanistan: The Liaison Office, 2010); The Liaison Office, *Three Years Later: A Socio-political Assessment of Uruzgan Province from 2006 to 2009* (Kabul, Afghanistan: The Liaison Office, 2009).

in the field—stimulates their individual empowerment, which in the process can help stem fertility levels such that more healthy demographic growth rates can be achieved.

In the more immediate term, defense forces can of course help in making schools safer places to go to, and thus help increase attendance rates. Focusing on slow security, defense forces have a unique opportunity when working with the next generation to help inculcate positive values and to provide young people with a perspective on the future that stresses individual opportunities and the notion that by helping themselves, they also help their families and communities.

4.4 TECHNOLOGICAL EMPOWERMENT

The growth in information technology has significantly impacted individual empowerment, contributing to societal resilience and peace. Indeed, the continuous integration of information technology into modern society is a critical factor in boosting other sources for individual empowerment, whether in the economy, in politics, in education or elsewhere. For instance today, in the United Kingdom more banking transactions happen online and through mobile banking than in stores.¹⁵² In 2005, Estonia became the first country to allow the general public to vote online.¹⁵³ And worldwide, some 40,000 health and well-being mobile phone apps have been developed to date.¹⁵⁴ Given that today there are some 2.5 billion internet users in the world, while an estimated 3.6 billion people will use the internet by 2017, the potential of technology as enabler of individual empowerment is considerable and will continue to grow.

152 Marion Dakers, "Mobile Banking Has Eclipsed Branches and Even the Rest of the Internet," *Telegraph*, June 14, 2015, <http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/11672021/Mobile-banking-has-eclipsed-branches-and-even-the-rest-of-the-internet.html>.

153 NBC, "Estonia First to Allow Online Voting Nationwide," *NBC News*, October 14, 2005, http://www.nbcnews.com/id/9697336/ns/technology_and_science-tech_and_gadgets/t/estonia-first-allow-online-voting-nationwide/.

154 John Walls, "Growing 'App'etite for Mobile Health," *The Washington Post*, 2013, <http://www.washingtonpost.com/sf/brand-connect/wp/2013/05/07/growing-appetite-for-mobile-health/>.

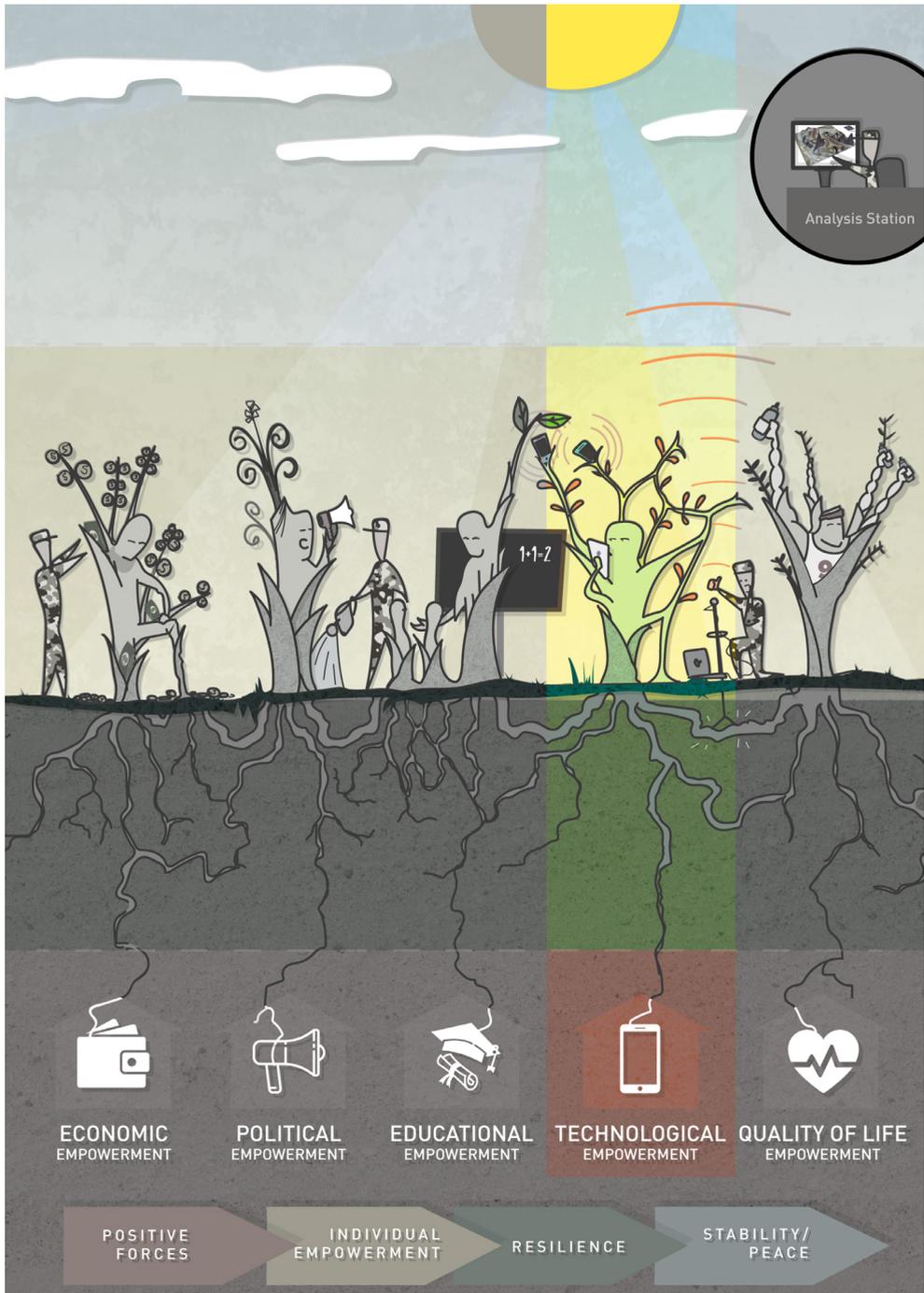


FIGURE 24. TECHNOLOGICAL EMPOWERMENT

THE LINKS BETWEEN TECHNOLOGICAL EMPOWERMENT, RESILIENCE AND STABILITY

The promises of information and communication technology (ICT) are felt across many domains, and above all as an enabler of human ingenuity. As individuals become computer-literate they will experiment with innovative ideas,¹⁵⁵ and in turn boost their society’s economic strength and resilience. Indeed, there is a strong positive correlation between access to internet services and a country’s ability to innovate (see figure 25 below).

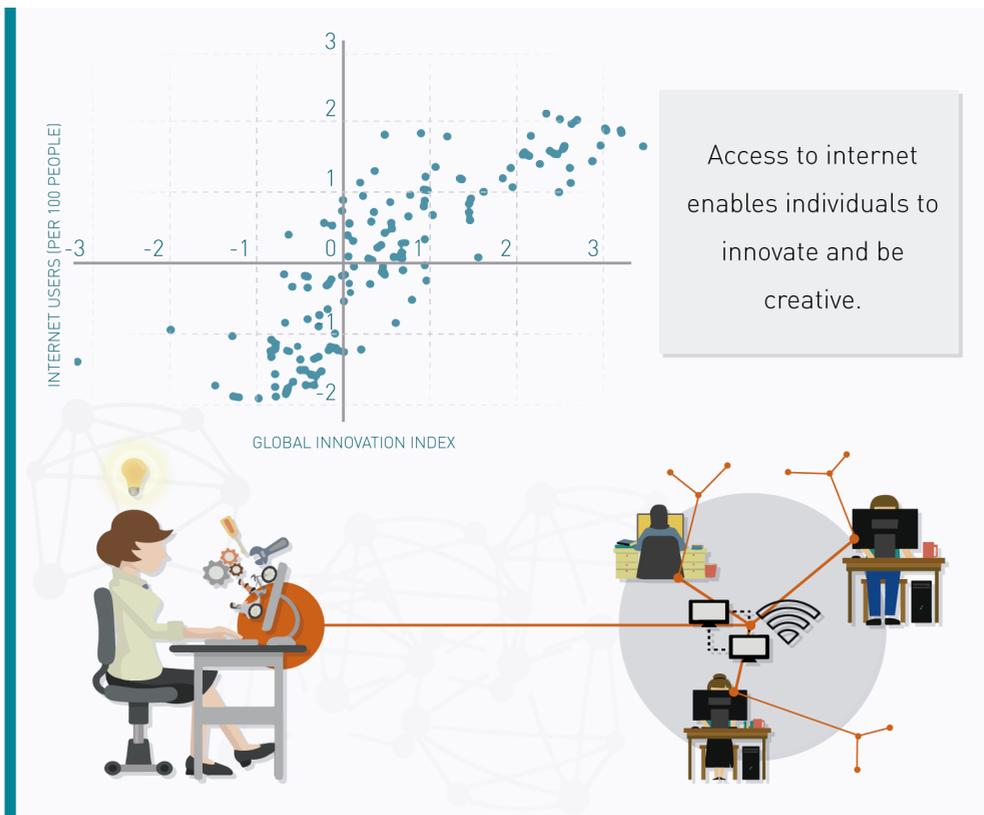


FIGURE 25. CORRELATION BETWEEN INTERNET USE AND INNOVATION¹⁵⁶

155 Peter Diamandis, *Abundance Is Our Future*, TED video, 2012, http://www.ted.com/talks/peter_diamandis_abundance_is_our_future?language=en.

156 Source: Global Innovation Index, “The Global Innovation Index,” 2015, <https://www.globalinnovationindex.org/content/page/GII-Home>; World Bank, “Internet Users (per 100 People).”

Significantly, over the past two decades information technology has moved power away from traditional power structures and towards the individual.¹⁵⁷ Thus, information technology has the potential to transform traditional societies, particularly empowering disenfranchised segments of society including women, minorities, and LGBT groups. With respect to the role of women, the United Nations in its 2005 study on ICT and gender empowerment listed some potential links between ICT and gender empowerment including:

- Knowledge of ICT can allow women to enter the labor market or receive higher-paid jobs. They can also enter the international market receiving better prices for their produce.
- Individuals can come together forming gender empowerment organizations. These groups in turn can advance the goals of gender emancipation.
- There is considerable evidence linking increased knowledge of technology to increased awareness of health, nutrition, education and increased political participation.¹⁵⁸

Information technology also democratizes access to knowledge. Every second more and more people have access to more and more information. In this regard, development economist and former World Bank official Joseph Stiglitz argues that

[t]he internet has in practice brought knowledge access closer to the ideal of a global public good. The communication revolution has made great strides in facilitating communication within countries and has also enhanced the ability of developing and transitional countries to tap into the global pool of (codified) knowledge.¹⁵⁹

Proponents of this view argue that the internet is the culmination of a process that began with the advent of the printing press. Through internet libraries, such as Google Books, individuals have access to over an estimated 129 million

157 USIP, “The PeaceTech Lab,” *United States Institute of Peace*, 2014, <http://www.usip.org/programs/projects/the-peace-tech-lab>.

158 UN Division for the Advancement of Women, “Women 2000 and beyond” (New York: United Nations, 2005).

159 Joseph Stiglitz, “Scan Globally, Reinvent Locally” (First Global Development Network Conference, Bonn, Germany, December 1999).

books. Furthermore, through options such as iTunesU and Youtube, individuals have access to expert opinion from some of the best universities and scholars in the world.¹⁶⁰ Individuals can also engage with independent newspapers from other countries which offer alternatives to state-run media outlets in authoritarian countries.

Case study: changing narratives

In Israel, a website and a political movement Peace Factory encourages Israelis to post videos and messages of friendship towards the Iranian people, challenging the Iranian government's narrative that all Israelis desire the destruction of Iran. Originally established in 2012 during escalating violent rhetoric between the Israeli and Iranian governments, images posted online by the organization have gone viral, leading Iranians to respond with similar messages of peace. The website also offers an option for Iranians and Palestinians to post messages of peace directly.¹⁶¹ The related TEDx talk has (at the time of writing) over 2 million views, and was featured on the TED home page as The Talk of the Week for two weeks.¹⁶²

Over the past decade, social media has amply demonstrated its transformative capacity in the socio-political domain, enabling people to exchange views where before this was difficult, if not impossible. Individuals are through social media able to challenge established narratives and factual contentions. Access to social media has boomed. Facebook has gone from receiving one million monthly users in 2004 to 1.2 billion monthly users in 2013. Facebook is now turning its attention to the developing world, developing a new 'Facebook lite' app.¹⁶³ The app is able to operate in areas with weak connectivity, requiring less data, making it suited to countries that still rely on 2G networks.¹⁶⁴

160 Matt Rosoff, "The \$3 Million iPhone: How Technology Has Raised Our Standard Of Living," *Business Insider*, December 23, 2014, <http://uk.businessinsider.com/technology-the-great-equalizer-2014-12?r=US&IR=T>.

161 Sandbox Good News, "Peace Factory," *PeaceFactory*, 2013, <http://thepeacefactory.org/>.

162 Sandbox Good News, "TED Talk/ PF on the Road," *PeaceFactory*, 2014, <http://thepeacefactory.org/ted-talk-pf-on-the-road/>.

163 Kyle Wiggers, "Facebook Lite Invites the next Billion Users in Asia, Africa, Europe, and Elsewhere to Join in," *Digital Trends*, June 4, 2015, <http://www.digitaltrends.com/mobile/facebook-lite-android-app-news/>.

164 Yasmeen Abutaleb, "Facebook Rolls out New Lightweight App for Africa," *Sunday Times*, June 5, 2015, <http://www.timeslive.co.za/sundaytimes/stnews/2015/06/05/Facebook-rolls-out-new-lightweight-app-for-Africa>.

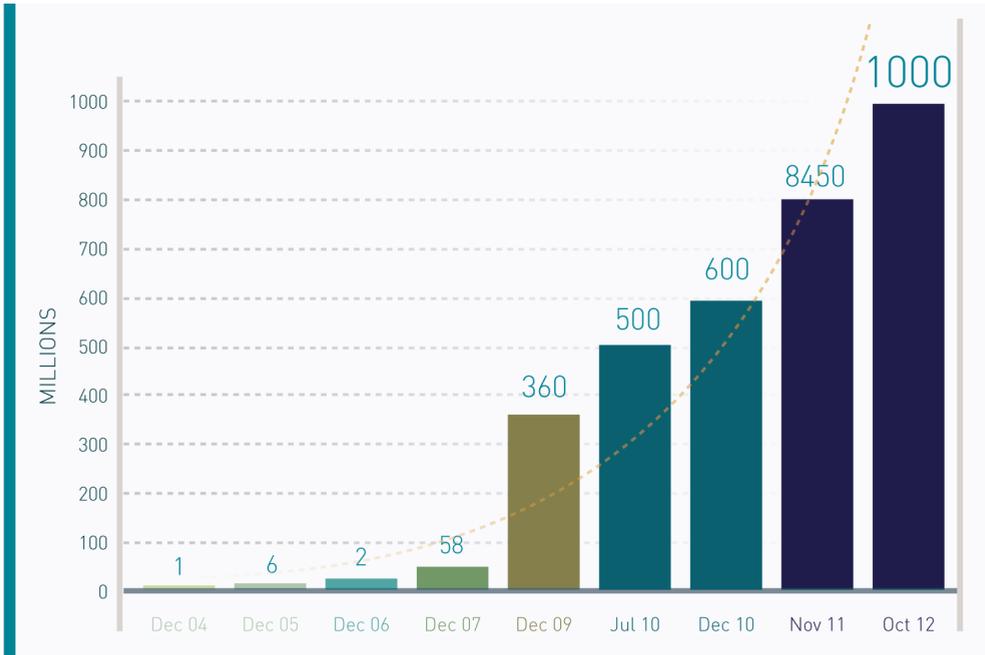


FIGURE 26. NUMBER OF FACEBOOK USERS¹⁶⁵

Information technology also provides opportunities for outlets to promote basic human rights. Today, there is a considerable body of literature analyzing the potential of ICT technologies in organizing and facilitating social movements. What is less studied is how internet allows individuals to experience human rights from an existential perspective. For example, evidence suggests the importance of information technology in allowing individuals to develop and express their gay identity.¹⁶⁶ In all, while some early promises about the impact of ICT as the inevitable harbinger of democracy have proven overblown, real change is happening at an individual level: ‘technology’s positive political effects are now gaining traction in subnational ways (...) without yet producing many changes of national regime type.’¹⁶⁷

165 Source: Facebook, “newsroom,” 2015, <http://newsroom.fb.com/company-info/>.

166 Gary W. Harper et al., “The Role of the Internet in the Sexual Identity Development of Gay and Bisexual Male Adolescents,” in *The Story of Sexual Identity*, by Phillip L. Hammack and Bertram J. Cohler (Oxford University Press, 2009).

167 Martin Tisne and Thomas Carothers, “Why Technology Hasn’t Delivered More Democracy,” *Foreign Policy*, 2015, <http://foreignpolicy.com/2015/06/03/why-technology-hasnt-delivered-more-democracy-democratic-transition/>.

Perhaps the most significant developments of information technology (especially for defense organizations) are the concepts of big data and crowdsourcing. It has been claimed that ‘almost unfathomably, in a single year, humans transmit more data than in all previous years combined.’¹⁶⁸ At an individual level, utilizing big data can encourage individual empowerment, for example by enabling individuals to get a better picture about their own financial status, health status, where the best schools are, and the safety of the neighborhood where they live.

The Kenyan internet start-up Ushahidi (meaning ‘witness’ in Swahili) created and now freely distributes big data analysis software. The software was developed during a period of sustained violence in Kenya during the 2007 elections, which left about 1,300 dead and some 600,000 displaced. The software relies on crowdsourcing: volunteers upload news reports, images, twitter posts, blog posts and SMS messages. The software filters through this data for quality and visualizes the data for analysis.¹⁶⁹ During the violence, the group used this data to map out hate speech, calls to violence and rising tensions.¹⁷⁰ The software also allowed individuals in remote areas that might otherwise have been ignored by global media to air their perspectives, thus improving understanding of events.¹⁷¹ Governments can also crowdsource feedback, allowing them to improve services. The National Health Service in the United Kingdom allows patients to give anonymous feedback online and the government encourages the NHS to use this information to improve its service.¹⁷²

TRENDS IN TECHNOLOGICAL EMPOWERMENT

In sync with Moore’s law, trend developments in the realm of ICT are more dramatic than ever before, giving more people access to the world’s repositories of knowledge and information, and facilitating more person-to-person connections.

168 Sheldon Himelfarb, “Can Big Data Stop Wars Before They Happen?,” *Foreign Policy*, April 25, 2014, <https://foreignpolicy.com/2014/04/25/can-big-data-stop-wars-before-they-happen/>.

169 Ushahidi, “About Ushahidi,” *Ushahidi*, 2008, <http://www.ushahidi.com/about>.

170 Himelfarb, “Can Big Data Stop Wars Before They Happen?.”

171 Meha Bahree, “Citizen Voices,” *Forbes*, November 29, 2008, <http://www.forbes.com/global/2008/1208/114.html>.

172 NHS, *How Services Can Benefit from Online Patient Feedback*, 2014, <http://www.nhs.uk/Video/Pages/how-services-can-benefit-from-online-patient-feedback.aspx>.

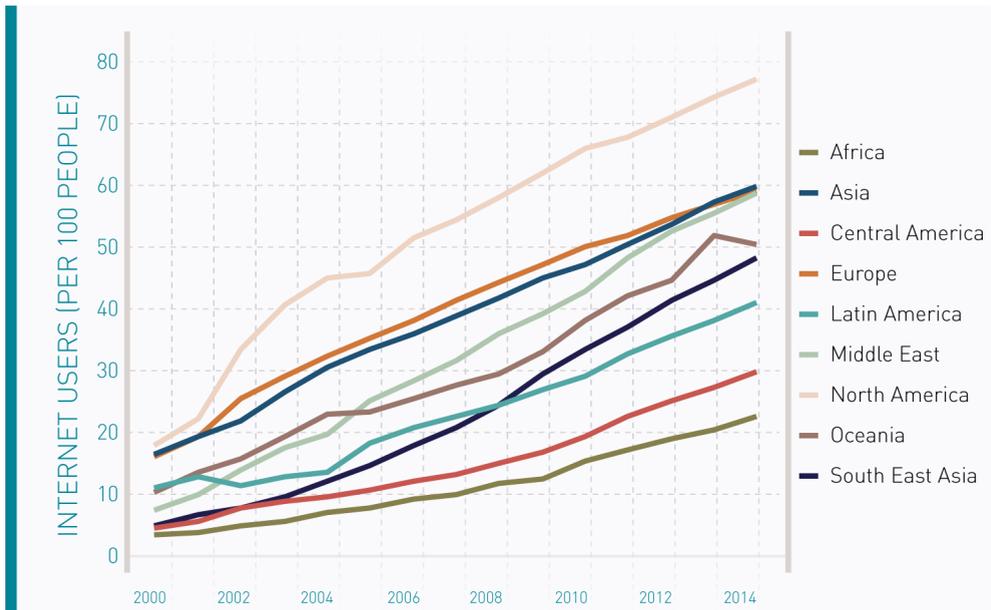


FIGURE 27. PERCENTAGE OF PEOPLE WHO HAVE USED THE INTERNET REGIONALLY BY YEAR¹⁷³

Even if many people in developing countries still do not regularly use internet services, rapid progress is made in providing access. Pushing such trends are projects such as ‘one laptop per child,’ which developed a computer that is affordable, low-power and capable of ‘operating in tough conditions and remote areas.’¹⁷⁴

Looking at mobile phone subscriptions, growth has been even more spectacular. Today, there are more mobile phones than human beings on the planet.¹⁷⁵ Mobile penetration is over 50% in every region of the world. Even if today half of the world’s population does not have mobile phones and 450 million people still live

173 Source: World Bank, “Internet Users (per 100 People).”

174 OLPC, “Mission,” *One Laptop per Child*, 2010, <http://one.laptop.org/about/mission>.

175 Zachary Davies Boren, “There Are Officially More Mobile Devices than People in the World,” *The Independent*, October 7, 2014, <http://www.independent.co.uk/life-style/gadgets-and-tech/news/there-are-officially-more-mobile-devices-than-people-in-the-world-9780518.html>.

out of reach of a mobile signal,¹⁷⁶ it is estimated that by 2020, a majority of people in all regions of the world will possess a mobile phone subscription (both prepaid and contracts).¹⁷⁷

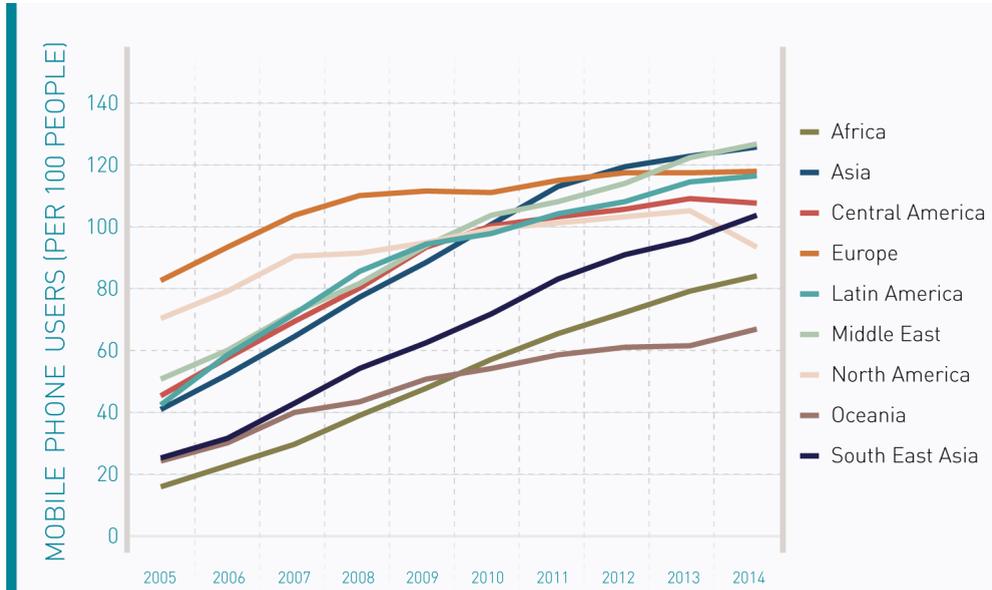


FIGURE 28. PERCENTAGE OF MOBILE PHONE USERS REGIONALLY BY YEAR¹⁷⁸

According to the World Bank, mobile technologies are the fastest growing technologies on the African continent. Information technology directly contributes 7% to Africa’s GDP every year.¹⁷⁹ In terms of boosting individual empowerment, mobile technologies offer unique opportunities to Africa, where electricity and landline access can be limited. For instance, mobile technologies have become the most common way of searching the internet in Africa,¹⁸⁰ and thus enable access to the world’s information resources.

176 Philippa Biggs et al., *The State of Broadband 2015: Broadband as a Foundation for Sustainable Development* (Geneva: ITU and UNESCO, September 2015).

177 GSMA Intelligence, *The Mobile Economy 2015* (London: GSMA, 2015).

178 Source: World Bank, “Mobile Cellular Subscriptions (per 100 People),” 2015, <http://data.worldbank.org/indicator/IT.CEL.SETS.P2>.

179 World Bank, African Development Bank, and African Union, “The Transformational Use of Information and Communication Technologies in Africa,” *eTransformAFRICA*, 2012.

180 David Smith, “Internet Use on Mobile Phones in Africa Predicted to Increase 20-Fold,” *The Guardian*, June 5, 2014, <http://www.theguardian.com/world/2014/jun/05/internet-use-mobile-phones-africa-predicted-increase-20-fold>.

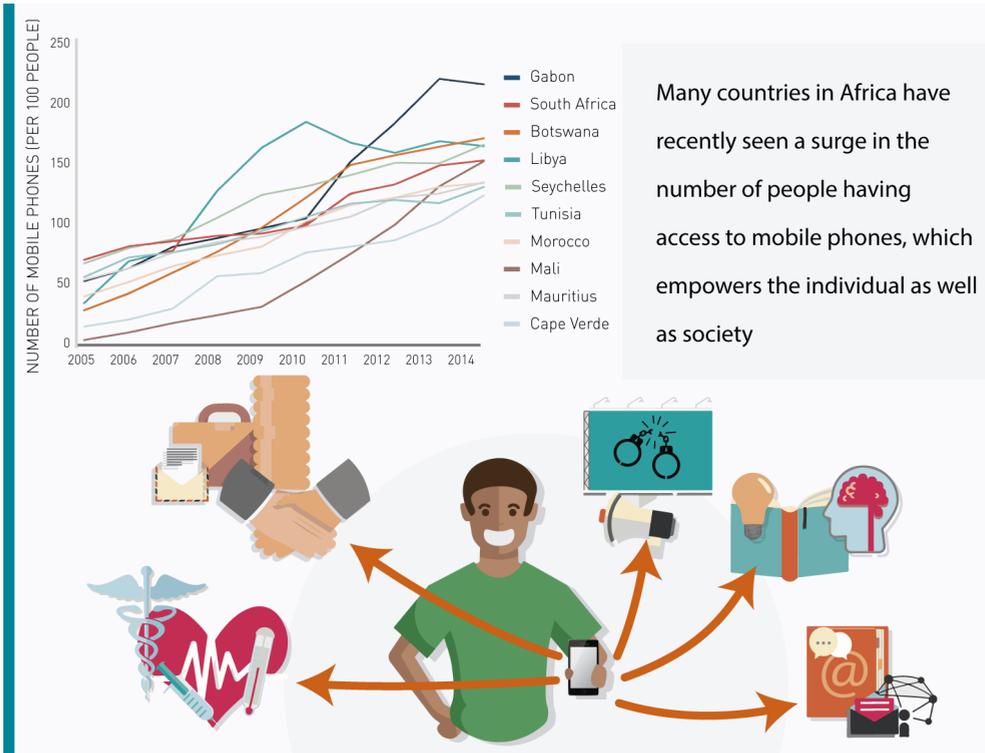


FIGURE 29. MOBILE GROWTH IN AFRICA¹⁸¹

Mobile technologies have important ramifications on economic activity, facilitating money transfers that boost local economies whilst linking them to global finance. A good example of this is Orange Money, which was created by the French telecommunications operator Orange for the purpose of money transfers, and introduced in Ivory Coast in 2008. By January 2015, it had 13 million users in 13 African countries. Between November and December 2014, a sum equivalent to 20% of Mali’s GDP passed through Orange Money.¹⁸² Its popularity derives from the fact that subscriptions to the service are free. Furthermore, individuals can make transfers starting from USD 1. As a result, it is rapidly eclipsing older money transferring services such as Western Union, which charges USD 10 per transaction.

¹⁸¹ Source: World Bank, “Mobile Cellular Subscriptions (per 100 People).”

¹⁸² Orange, “In Africa, Orange Money Is Making Your Life Easier,” *Orange*, 2015, <http://www.orange.com/en/Press-and-medias/Thematic-features/2015/SFM/In-Africa-Orange-Money-is-making-your-life-easier>.

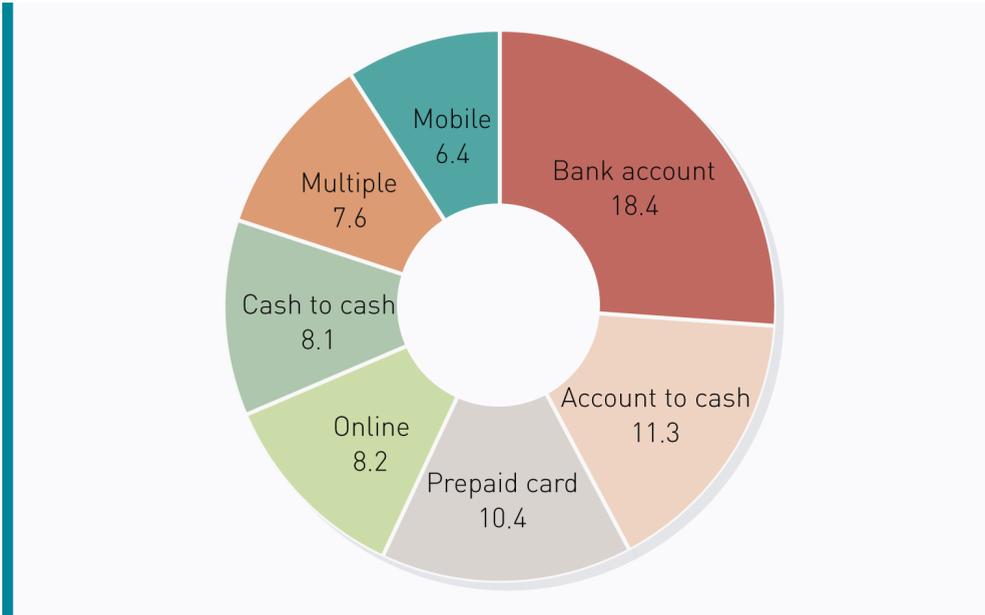


FIGURE 30. AVERAGE % COST OF TRANSFERRING USD 200¹⁸³

Smartphone technology is also having a significant impact in healthcare. Recently, *The Economist* reported that ‘[f]rom Kenya to Thailand to the US, smartphones and tablets are altering how [health]care is delivered and received.’¹⁸⁴ Applications being developed include wearable technology that regularly checks the wearer’s blood sugar level, as well as devices that will allow a patient to carry out regular tests on themselves. Results can then be sent directly to the doctor without the need for a possibly hazardous or time-consuming doctor’s visit. Today, over 40,000 health and well-being mobile apps have been developed. It is estimated that 30% of smartphone owners will use health and well-being apps in 2015.¹⁸⁵ In helping to better monitor health issues, such applications contribute not just to individual empowerment but certainly also to societal resilience.

183 Source: World Bank, “Send Money Africa,” *Send Money Africa*, 2015, <http://sendmoneyafrica.worldbank.org/en>.

184 The Economist Intelligence Unit, *Power to the Patient: How Mobile Is Transforming Healthcare* (The Economist Intelligence Unit, 2015).

185 Ibid.

Case study: mHealth

A specific development that leverages this kind of technology is mHealth, which aims at providing health services through mobile telecommunication. MHealth empowers individuals in that they can establish at an earlier stage whether they are in need of healthcare assistance, and in the process re-calibrates the relationship between doctor and patient, giving the latter more autonomy over decisions. A good example is a mobile app developed by the Burmese start-up Koe Koe Tech. It aims at mitigating the country's high infant mortality rate, infant malnutrition and limited infrastructure. Since 70% of births in Myanmar happen outside hospital, there is great potential for mHealth technologies. The app, named Maymay, provides women with information on childbirth, pregnancy and well-being. Supported by USAID, the UN and the Myanmar Ministry of Health, the app has 11,000 active users (May 2015).¹⁸⁶

SOME IMPLICATIONS FOR DEFENSE ORGANIZATIONS

At various levels, technological empowerment supports individual empowerment: it enables access to knowledge, enables communication between people close by and away, and has democratizing and equalizing effects. In these regards, technology is also an ever more important factor in economic and political development in countries and communities, enabling individuals anywhere more than ever before to participate in and to contribute to the societies in which they live.

For defense organizations, this provides several avenues for contributing to security and resilience at the local level, where possible together with 3D partners. For instance, technological solutions can be harnessed in helping otherwise marginalized people to participate in local decision-making, or in promoting narratives that stress inclusiveness and people's self-esteem. Sometimes, the mechanisms to boosting security and resilience at the local level can be even simpler. For example, research in post-conflict Liberia has demonstrated simply having a mobile phone can make people feel more secure,

186 Biggs et al., *The State of Broadband 2015*.

as it enables them to contact close relatives. Information technology also allows individuals to feel more connected to the outside world.¹⁸⁷

In all, being in contact with the local communities through mobile devices and social media gives deployed defense personnel a whole new array of possibilities for cooperation. For instance, they could use crowdsourcing at the local level to enhance security conditions. This also adds to the sense of local ownership. And as the big data revolution marches onward, the contributions of individuals to databases that gather metadata on social activity contributes to fast and slow security, and in turn bolsters societal resilience and individual empowerment.

4.5 'QUALITY OF LIFE' AND INDIVIDUAL EMPOWERMENT

The potential for building resilience, peace and security in relation to individual empowerment through advances in quality of life (QoL) is vast and diverse. With quality of life we mean certain preconditions that, if fulfilled, enable an individual to exploit their full economic, political or intellectual potential. Here, we focus on three aspects: food security, healthcare and the environment. The idea behind this is twofold: firstly, societies that have achieved high levels of stability and societal resilience also tend to have high levels in food quality, healthcare and environmental standards. Secondly, it is not possible for any individual to exploit their full potential if they, for example, do not have access to proper food, or if their health is affected due to substandard sanitation.

¹⁸⁷ Michael L. Best, "Uses of Mobile Phones in Post-Conflict Liberia," *Information Technologies and International Development* 6, no. 2 (2009).



FIGURE 31. QUALITY OF LIFE EMPOWERMENT

Quality of life is often expressed in terms of the need for food, water, shelter, sanitation, education and health.¹⁸⁸ For instance, the World Bank—which defines poverty as the lack of access to basic human needs¹⁸⁹—uses poverty lines to determine to what extent these needs remain unmet,¹⁹⁰ and traditionally presents economic development as the main remedy to achieve better access.

The alternative is to look at quality of life in a broader, nonmonetary fashion. Accordingly, we conceptualize QoL as resulting from an ensemble of factors that positively contribute to and enable the well-being of individuals and which strengthen societal resilience. By looking at these factors, QoL becomes broader than poverty and standard of living, concepts that look primarily at income and other economic factors, which were discussed in chapter four.

THE LINKS BETWEEN QUALITY OF LIFE, RESILIENCE AND STABILITY

From the perspective of human security, QoL could be looked at as resulting from the nexus between safety, rights and security.¹⁹¹ Countries that experience a substantial shift in their QoL indicators are also expected to experience a positive shift towards democracy.¹⁹² This points to a key advantage for QoL advances: because issues such as healthcare and food safety tend to be less politicized than, say, human rights promotion, they are less controversial in terms of promoting societal resilience.¹⁹³

188 For instance, see Paul Streeten et al., *First Things First: Meeting Basic Human Needs in the Developing Countries*. (New York: Oxford University Press, 1981).

189 World Bank, “Choosing and Estimating a Poverty Line,” *World Bank*, accessed October 1, 2015, <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTPA/0,,contentMDK:20242879~menuPK:435055~pagePK:148956~piPK:216618~theSitePK:430367,00.html>.

190 Ibid.

191 Shahrbanou Tadjbakhsh and Anuradha Chenoy, *Human Security: Concepts and Implications* (London: Routledge, 2007).

192 Jack E. Vincent and Sean McCluskie, “Promoting Political Liberties through Quality of Life,” *International Journal on World Peace* 14, no. 2 (1997).

193 Health workers, for instance, ‘can use their position to debunk ethnic prejudices, or be credible sources of information about human rights abuses. [And] health care providers hold a great deal of legitimacy. They are consistently considered members of an honest and ethical profession, and are more trusted than politicians.’ In: Andrew D. Pinto, “Peace through Health,” *University of Toronto Medical Journal* 80, no. 2 (2003), 159.

Food security was defined at the World Food Summit of 1996 as the condition ‘when all people, at all times, have (...) access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life.’¹⁹⁴ We measure food security along four dimensions: (1) the physical availability of sufficient quantities of food, (2) economic and physical access to nutritious food, (3) adequate knowledge of food utilization, including knowledge about water and sanitation, and (4) stability of access to food over time.¹⁹⁵ The international community affirmed the importance of food security twice; first in the Millennium Development Goals (MDGs) by pledging to reduce world hunger and second in the MDGs’ successor, the Sustainable Development Goals (SDGs), by aiming to ‘end hunger, achieve food security and improved nutrition and promote sustainable agriculture.’¹⁹⁶

In relation to individual empowerment and resilience, there is a political dimension in that, as economist and Nobel prize winner Amartya Sen pointed out, hunger is the result of corruption, conflict or marginalization, rather than an issue of absolute scarcity.¹⁹⁷ Hence, political empowerment becomes an important condition in securing sufficient food supplies. That food insecurity at the individual level can contribute to social instability and conflict has been amply shown in the run-up to the Arab revolutions.¹⁹⁸ Rooting out food insecurity can also help reduce the risk of countries relapsing into conflict.¹⁹⁹ What is more, food security increases productivity, raises incomes, creates jobs and adds to the demand of goods and services throughout the economy.²⁰⁰

194 FAO, “Rome Declaration on World Food Security” (Rome: World Food Summit (WFS), 1996).

195 Marjolein de Ridder, *Food Security* (The Hague: The Hague Centre for Strategic Studies & TNO, 2011).

196 United Nations, “United Nations Millennium Development Goals,” *United Nations: We Can End Poverty*, 2015, <http://www.un.org/millenniumgoals/poverty.shtml>.

197 Amartya Sen, “Hunger in the Contemporary World,” *London School of Economics*, Discussion Paper for the Suntory Centre, 1997.

198 Rami Zurayk, “Use Your Loaf: Why Food Prices Were Crucial in the Arab Spring,” *The Guardian*, July 17, 2015, <http://www.theguardian.com/lifeandstyle/2011/jul/17/bread-food-arab-spring>.

199 FAO, *FAO and Peacebuilding: Supporting Peace through Food Security and Resilience* (Rome: FAO, 2015).

200 FAO, “Food, Security, Justice and Peace,” 2002, <http://www.fao.org/worldfoodsummit/msd/y68o8e.htm>.

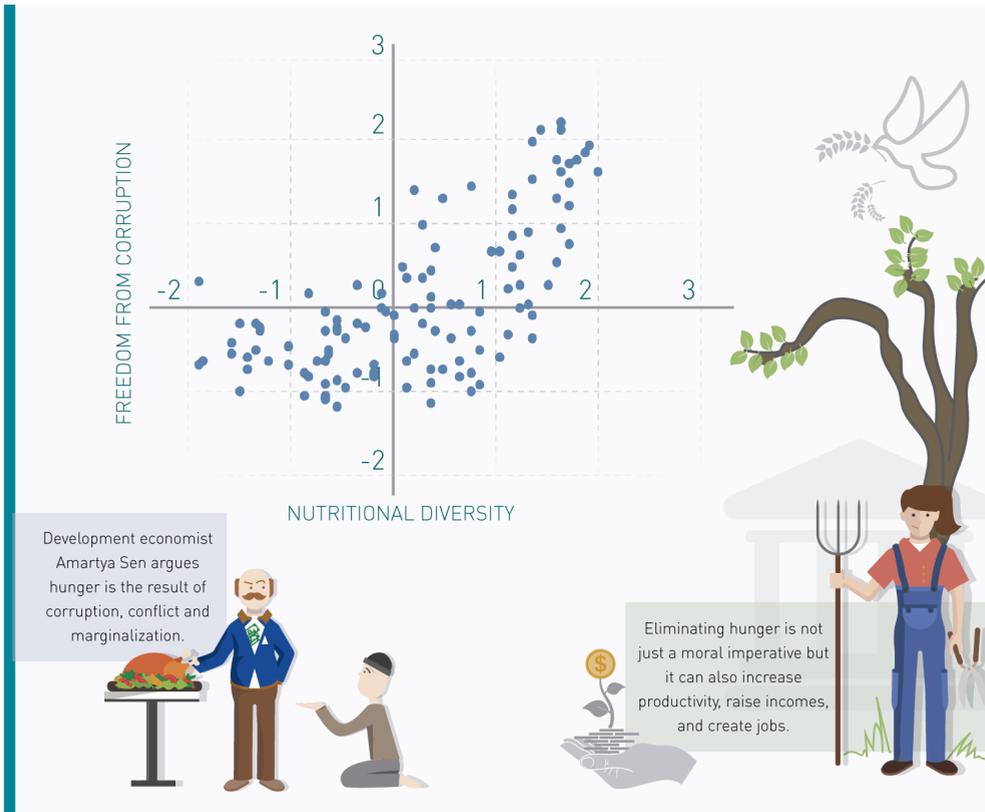


FIGURE 32. CORRELATION BETWEEN CORRUPTION AND NUTRITION²⁰¹

Programs aimed at improving food security are part of the strategies and projects for peacebuilding and conflict prevention within international organizations, local communities and NGOs. Some 80% of such projects run by the FAO and UNDP take place in Africa and center on training, education, capacity building and rehabilitation of infrastructure as well as the distribution of seeds, agricultural kits and livestock. These projects contribute to individual empowerment, as they create opportunities for more equal access to physical, natural, financial and institutional resources for sustainable and peaceful livelihoods.

²⁰¹ Source: Heritage Foundation, “Index of Economic Freedom: Promoting Economic Opportunity and Prosperity by Country,” 2015, <http://www.heritage.org/index/>; Oxfam, “Global Food Index,” 2015, <http://www.oxfam.org.uk/what-we-do/good-enough-to-eat>.

Case study: environmental rehabilitation in Cambodia

Around the world, communities are forging peace through rehabilitating the local environment for sustainable food production. For example, in Cambodia, communities surrounding Lake Tonle Sap—an essential resource for the surrounding fishing communities—resolved their disputes by coming together with local authorities and NGOs in order to jointly end overfishing, promote income diversification among villagers and increase government accountability in protecting the lake.²⁰² Restoring the environment and promoting sustainable food production are central conditions for individual empowerment and peacebuilding, as they reduce poverty, prevent environmental destruction and break the vicious cycle of poverty, scarcity and violence.²⁰³

Like food security, healthcare is a common staple in the basket of sustainable development. Better health services promote individual empowerment by tackling horizontal inequalities: the social, political, and economic inequalities that persist among different groups in societies and commonly drive intergroup conflict.²⁰⁴ With improvements in the quality of and access to health, grievances over social deprivation and other grievance-based tensions can be reduced.²⁰⁵ Beyond that, good health will make it easier for marginalized individuals and minority groups to gain access to the political arena and the employment market.

Health systems also contribute to individual empowerment by strengthening the social contract between governments and citizens. When governments increase their capacity to deliver healthcare to their citizens, trust in the government and the popular perception of an accountable government are likely to increase. Improving access to health systems is a way through which

202 Blake D. Ratner, Kosal Mam, and Guy Halpern, “Collaborating for Resilience: Conflict, Collective Action, and Transformation on Cambodia’s Tonle Sap Lake,” *Ecology and Society* 19, no. 3 (2014), 31.

203 Indra de Soysa et al., “To Cultivate Peace: Agriculture in a World of Conflict,” *Environmental Change & Security Project Report*, no. 5 (Oslo: International Peace Research Institute, 1999).

204 Stewart, *Horizontal Inequalities and Conflict*.

205 Margaret E. Kruk et al., “Rebuilding Health Systems to Improve Health and Promote Statebuilding in Post-Conflict Countries: A Theoretical Framework and Research Agenda,” *Social Science & Medicine* 70, no. 1 (2010).

governments meet their obligations towards their citizens. Such measures contribute to good governance, which can lower the likelihood of conflict recurrence.²⁰⁶ In a post-conflict environment of uncertainty and distrust, steps such as improving governance and building trust are particularly important. In post-Apartheid South Africa, the delivery of early successes in health care, among other sectors, helped sustain confidence in the first government.²⁰⁷

Finally, health care can promote security through prevention programs that focus on taking away the root causes of violence. Public health initiatives have been a part of efforts against gang violence in Nicaragua²⁰⁸ and in the United States, where home visitations by nurses have lowered the prevalence of arrests, runaway cases and alcohol consumption, which are all associated with gang violence.²⁰⁹ Reproductive health offers another road to individual empowerment: sexual education and family planning help to improve maternal health and give people more security, more awareness of their bodily integrity and more respect for others.²¹⁰

Environmental degradation is alarming not only because it is a human-made phenomenon,²¹¹ but all the more so because environmental factors are said to play an important role in generating and exacerbating instability and armed conflict.²¹² A clean environment is crucial for individual empowerment as it leads to lower health risks, fewer disease outbreaks and less scarcity of soil and water, which therefore increases food production.

While world leaders struggle to solve the global challenge of climate change, citizens around the world also develop projects to promote a sustainable environment at the grassroots level. Local projects that aim to reduce the

²⁰⁶ Ibid.

²⁰⁷ World Bank, *World Development Report 2011: Conflict, Security, and Development* (Washington, D.C.: World Bank, 2011), 115.

²⁰⁸ Ibid., 173.

²⁰⁹ Dawn D. McDaniel, Joseph E. Logan, and Janet U. Schneiderman, “Supporting Gang Violence Prevention Efforts: A Public Health Approach for Nurses,” *OJIN: The Online Journal of Issues in Nursing* 19, no. 1 (2014).

²¹⁰ Athanase Nzokirishaka, “Burundi Agenda Setting for Sexual and Reproductive Health and Rights Knowledge Platform; Mission Report Submitted to Share-Net International” (Share-Net International, June 2014).

²¹¹ Nils Petter Gleditsch, “Environmental Change, Security, and Conflict,” in *Leashing the Dogs of War: Conflict Management In a Divided World* (Washington D.C.: United States Institute of Peace Press, 2007), 179.

²¹² Thomas F. Homer-Dixon, *Environment, Scarcity, and Violence* (Princeton: Princeton University Press, 2010).

pollution of air, water, and soil contribute to the quality of life of citizens, and make places more attractive to live and invest in. Especially in urban areas, people are taking responsibility to make their own neighborhoods more livable by increasing the levels of greenery. Interest in urban farming is also on the rise, reducing the distance between people and the food they consume.²¹³

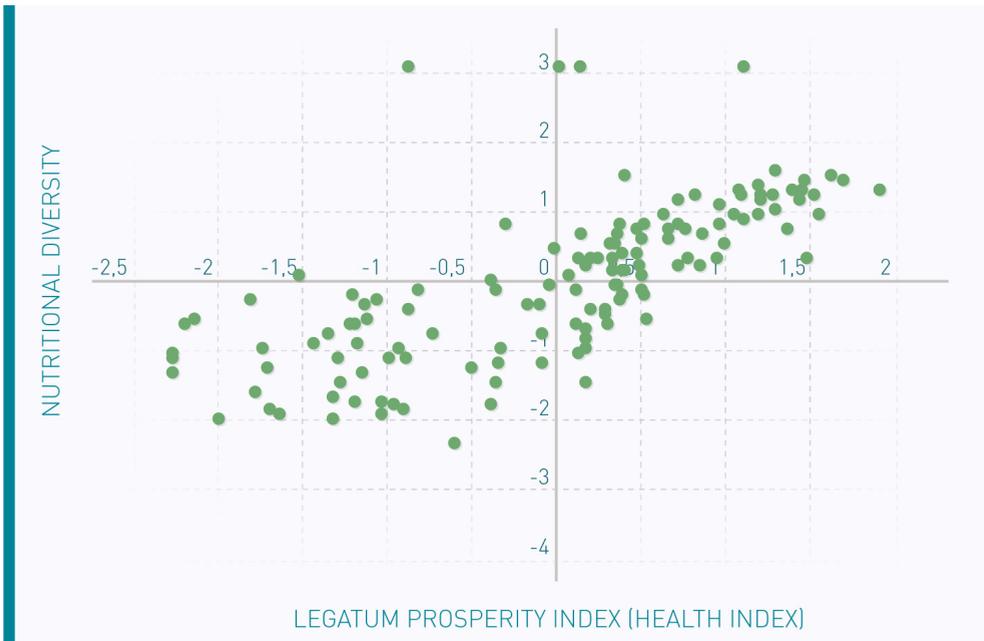


FIGURE 33. CORRELATION BETWEEN NUTRITION AND PROSPERITY²¹⁴

The different elements of QoL also reinforce one another. There is a strong relation between food security and health. Food insecurity can lead to hunger and related health problems. Hunger and malnutrition undermine individual empowerment: they can lead to problems in children’s brain development, while a lack of access to vital micronutrients can also lead to diseases and health problems.²¹⁵ Access to sufficient, safe, nutritious food contributes to the health

213 Nancy Karanja and Mary Njenga, “Chapter 10: Feeding the Cities,” in *State of the World 2011: Innovations That Nourish the Planet* (Worldwatch Institute, 2011).

214 Source: Oxfam, “Global Food Index”; Legatum Institute, “2015 Legatum Prosperity Index™.”

215 Francesco Burchi, Jessica Fanzo, and Emile Frison, “The Role of Food and Nutrition System Approaches in Tackling Hidden Hunger,” *International Journal of Environmental Research and Public Health* 8, no. 2 (2011).

of individuals (see figure 33 above), allowing for a healthy and active life. Innovation in food can contribute to improved health levels. In developing countries, for example, biofortification of staple foods is an efficient way to combat micronutrient deficiencies.²¹⁶

Second, there is a relationship between environmental health and food security (below, figure 34). One of the causes of food insecurity is environmental degradation, which can lead to scarcity of agricultural inputs, such as fertile land and water. Unsustainable land use undermines food security by causing land degradation and biodiversity loss. On the other hand, innovations aimed at improving food security can contribute to a better environment. Insect farming, for instance, offers a way to expand and diversify the food supply while its environmental impact is only a fraction of livestock emissions.²¹⁷ In sum, the three dimensions of QoL compound each other as sources of individual empowerment, and as such, of societal resilience and peace.

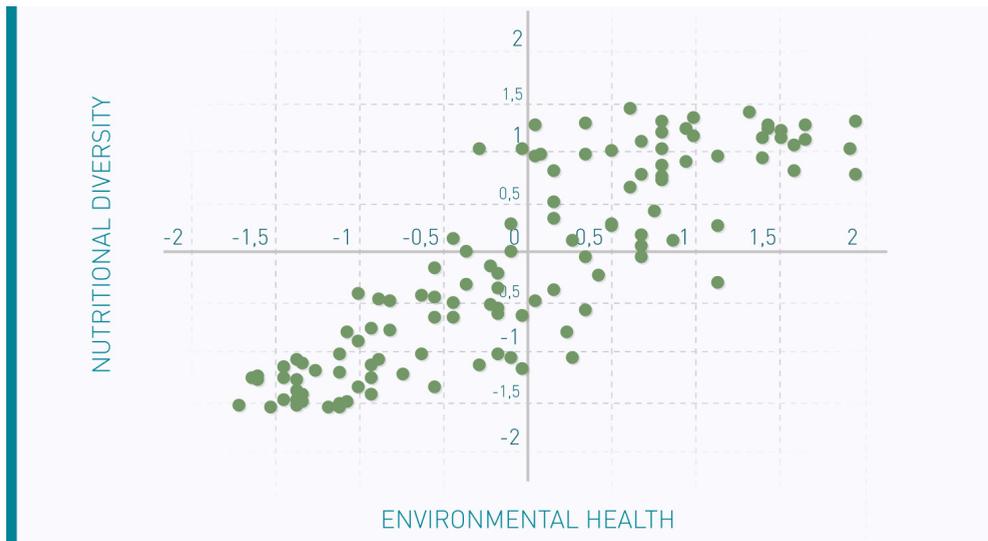


FIGURE 34. CORRELATION BETWEEN NUTRITION AND ENVIRONMENTAL HEALTH²¹⁸

216 J. V. Meenakshi et al., “How Cost-Effective Is Biofortification in Combating Micronutrient Malnutrition? An Ex Ante Assessment,” *World Development* 38, no. 1 (2010).

217 Afton Halloran and Paul Vantomme, *The Contribution of Insects to Food Security, Livelihoods and the Environment* (Food and Agriculture Organization (FAO), 2013).

218 Source: Oxfam, “Global Food Index.”; EPI Yale, “Environmental Performance Index,” Yale, 2015, <http://epi.yale.edu/>.

TRENDS IN QUALITY OF LIFE

The world food situation has improved in the past years.²¹⁹ Food availability per capita has risen from about 2220 kcal/person/day in the early 1960s to 2790 kcal/person/day in 2006–08. In developing countries per capita food availability leaped from 1850 kcal/person/day to over 2640 kcal/person/day.²²⁰ Developing regions saw a 42% reduction in the prevalence of undernourished people between 1990–1992 and 2012–2014. The percentage of the overall population in developing countries that remains chronically undernourished went down from 23.4% in 1990–1992 to 13.5 % in 2012–2014. China alone has been responsible for more than three quarters of the global progress between 1990 and 2005 on lifting people out of poverty.²²¹



FIGURE 35. DECLINING PREVALENCE OF UNDERNOURISHMENT²²²

219 Food and Agriculture Organization of the United Nations, International Fund for Agricultural Development, and World Food Programme, *The State of Food Insecurity in the World 2014* (Rome: FAO, 2014), 8–12.

220 FAO, *FAO Statistical Yearbook 2012* (Rome: FAO, 2012), 174.

221 Elizabeth Stuart, “China Has Almost Ended Urban Poverty – a Promising Start for the SDGs,” *Overseas Development Institute*, August 19, 2015, <http://www.odi.org/comment/9803-china-urban-poverty-reduction-sdgs-inequality>.

222 FAO, “ESS Website ESS : Food Security,” 2015, <http://www.fao.org/economic/ess/ess-fs/en/>.

Ongoing technological development and innovation will continue to impact food security and thus increase societal resilience and the likelihood of sustainable peace. Innovation will help to raise productivity growth and to strengthen the supply side of global agriculture. It can increase the availability of food in various ways, including the development of higher quality seeds, improved pest management and better farming practices. It can also make agriculture more sustainable by reducing the negative environmental costs of fertilizer use, improving water management, contributing to better soil conservation and reducing the number of people suffering from hidden hunger.²²³

The global public health situation has developed positively over time, even if many important public health challenges remain. As a result of this progress, the average global life expectancy at birth has increased by six years for both men and women since 1990.²²⁴ New health technologies and improved access to healthcare and medicine will continue to extend the average age of individuals around the world, and improve their QoL by improving their physical and mental conditions and overall well-being.²²⁵ For instance, researchers are finding efficient ways to turn seawater into safe drinking water.²²⁶

Another significant development is the great increases in worldwide child survival rates, falling from 90 deaths per 1000 live births in 1990 to 46 deaths per 1000 live births in 2013. The WHO calls it ‘one of the greatest success stories of international development.’²²⁷ Similarly, the targeted reduction of 75% of maternal mortality will not be achieved, but nonetheless maternal mortality has fallen in every region, and globally the number of women dying during pregnancy or childbirth has almost fallen between 1990 and 2013.²²⁸

223 Business and Industry Advisory Committee to the OECD, *Innovation to Address Food Security* (Paris: BIAC, November 2009).

224 World Health Organization, *World Health Statistics 2010* (Luxembourg: World Health Organization, 2015).

225 US National Intelligence Council, *Global Trends 2030*.

226 Delft University of Technology, “Turning Sea Water into Safe Drinking Water,” *Delft Outlook*, February 2012, <http://www.tudelft.nl/en/current/university-magazines/delft-outlook/former-editions/2012/2012-2/delft-outlook-2012-2/alumni-world/turning-sea-water-into-safe-drinking-water/>.

227 WHO World Health Organization, *World Health Statistics 2010*.

228 Ibid.

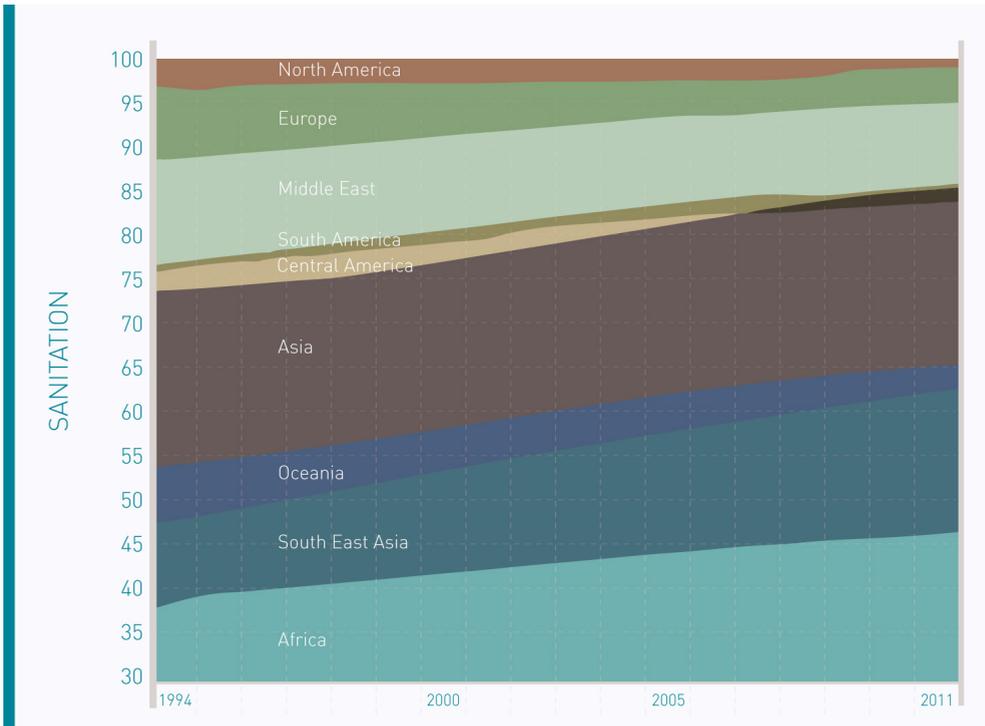


FIGURE 36. SANITATION PER REGION²²⁹

To summarize, significant progress in increasing access to healthcare and improving the global health situation has been made on many fronts. And these advances have made a great difference to individual empowerment in that the healthier the person, the more a person can contribute, and the more resilient society becomes overall.

Environmental trend lines present a mixed picture. Environmental destruction continues to increase when measured in absolute terms. At the same time, global CO₂ emissions did not grow further in 2014 despite renewed economic

²²⁹ Source: EPI Yale, “Environmental Performance Index.” Despite criticism, child mortality remains a valuable indicator general population health, especially considering the availability of data for more complex measures. For a more extensive discussion, see Daniel D. Reidpath and Pascale Allotey, “Infant Mortality Rate as an Indicator of Population Health,” *Journal of Epidemiology and Community Health* 57, no. 5 (2003).

growth.²³⁰ Energy consumption around the world may still be rising, but it has largely plateaued due to slowing population growth, demand saturation in developed parts of the world and technological improvements.²³¹

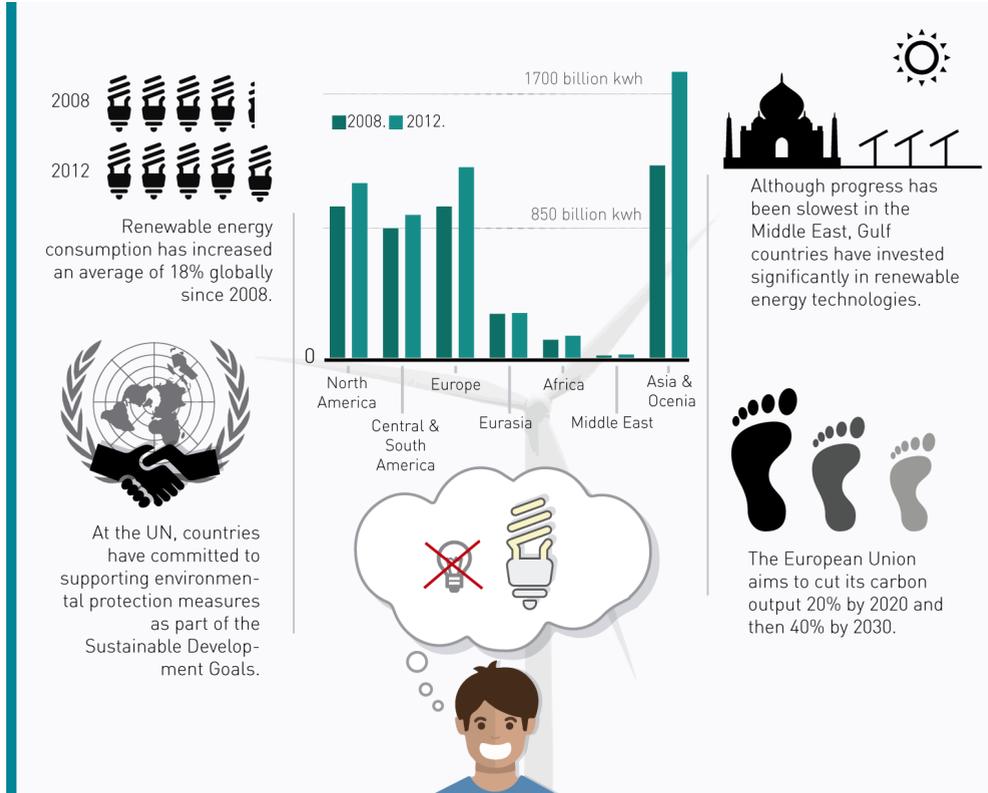


FIGURE 37. RENEWABLE ENERGY CONSUMPTION BY REGION²³²

Apart from various worldwide government initiatives, community-based efforts often merge environmental goals with individual empowerment, from housing displaced residents in ecovillages to achieving food security for small farmers

230 Helen Briggs, “Global CO2 Emissions ‘Stalled’ in 2014,” *BBC News*, March 13, 2015, <http://www.bbc.com/news/science-environment-31872460>.

231 Dan Brockington, Rosaleen Duffy, and Jim Igoe, *Nature Unbound: Conservation, Capitalism and the Future of Protected Areas* (Earthscan, 2008).

232 Source: EIA, “Data,” U.S. Energy Information Administration, 2015, <http://www.eia.gov/renewable/data.cfm#summary>.

who otherwise risk marginalization.²³³ Locally driven reforestation²³⁴ and land rehabilitation²³⁵ are other successful examples of practices that reduce individual insecurity and help build resilience at the local level. With more people, fewer resources and a changing environment, such efforts reduce the security risk of resource conflicts and climate refugee flows.

SOME IMPLICATIONS FOR DEFENSE ORGANIZATIONS

There are a variety of ways that defense organizations can help strengthen individual empowerment and resilience in relation to food security, healthcare and environmental standards—in many instances, with support from 3D partners or other security actors. On the first point, defense organizations could, for instance, help in cattle feed distribution (fast security) or by empowering individual herdsman (slow security), as was done respectively in northeast Mali and in southern Niger in recent years. These actions helped reduce food insecurity, support the mending of communal relations between herders, and prevent land conflicts from escalating.²³⁶

Defense organizations can also make a difference in the health domain, not just in supporting humanitarian organizations where possible,²³⁷ but also by protecting civilians from rape in the first place.²³⁸ They can also play a role in health education, for example by helping individuals and communities with demining activities. Preventing debilitating injuries from occurring is a very powerful way to sustain individual empowerment.

233 Helen Long, “Ten Grassroots Environmental Justice Campaigns from Around the World,” *Perma Culture News*, August 18, 2014, <http://permaculturenews.org/2014/08/18/ten-grassroots-environmental-justice-campaigns-around-world/>.

234 Hai Dinh Le, Carl Smith, and John Herbohn, “What Drives the Success of Reforestation Projects in Tropical Developing Countries? The Case of the Philippines,” *Global Environmental Change* 24 (2014).

235 Chris Reij, Gray Tappan, and Malinda Smale, “Re-Greening the Sahel: Farmer-Led Innovation in Burkina Faso and Niger.” In *Millions Fed: Proven Successes in Agricultural Development*, 2009.

236 Rhaly Ag Mossa, “Advocacy-Lobbying Tools to Fight against Food Insecurity in Mali” (SNV, 2012); Shuichi Oyama, “Farmer-Herder Conflict, Land Rehabilitation and Conflict Prevention in the Sahel Region of West Africa,” *African Study Monographs* 50 (October 2014).

237 N. W. Douma and Dorothea Hilhorst, “Fond de Commerce?: Sexual Violence Assistance in the Democratic Republic of Congo,” Research Brief (Wageningen: Disaster Studies, 2012).

238 United Nations Security Council, “Security Council Says States Have Primary Responsibility for Protecting Civilians in Conflict, Reaffirms Peacekeeping Missions Need Protection Mandate, Resources (6917th Meeting),” 2013.

Finally, defense organizations can support activities relating to individual empowerment and the environment. For instance, demining could help make arable land available once more, obviating the need to take down forests elsewhere. Also, in helping to create a safe environment, farmers may not need to let their cattle graze in places where such activity would lead to environmental damage. Many of these interventions contribute to slow security, and have great dividends for societal resilience.

5 DEFENSE IMPLICATIONS: SOME FOOD FOR THOUGHT

Why would enhancing personal empowerment be of any relevance to defense planners or operators? Especially in a period where Europe's neighborhood is in turmoil, and where this turmoil is showing up on our doorsteps in the form of refugees in many of our towns and terrorist attacks in some of our capitals. Should defense organizations not exclusively focus on violence—how to prevent it, control it, quell it, overwhelm it? Mobile phones, financial inclusion, small privatized schools, and decentralized energy generation might all be positive developments, but what could they possibly have to do with defense planning?

In the previous Strategic Monitor, HCSS introduced the concept of 'net assessment.' This notion originated in the US Defense Department, which has had an Office of Net Assessment since 1973.²³⁹ Especially under its founder and long-term (1973–2015) first director Andrew Marshall, this office's reputation attained almost mythical proportions within the defense community worldwide. The use of the word net may seem puzzling at first glance. Most of us are familiar with the net-concept in an economic context through terms like net personal income (after taxes are deducted from the gross income). This is also how the term ended up in a military context. The initial idea behind the concept of net (military) assessment was that the gross assessment of the actual security value of our capabilities portfolio had to be adjusted for the capabilities of the opponent. Over the course of ONA's history, its use of the term widened to include not only the opponent's hardware, but also his entire way of thinking, his institutional set-up—the entire system.

239 Paul Bracken, "Net Assessment: A Practical Guide," *Parameters : Journal of the US Army War College*. 36, no. 1 (2006), 90.

In this report we go a few steps further by using the term strategic net assessment in an even broader sense. Rather than merely focusing on the conflict side of the security coin and figuring out what DSOs can do about that, *strategic net assessment* should, in our broader definition, also encompass the flip-side of the security ledger, which examines the healthy fibers of a security and defense (eco)system and explores what role DSOs can play there. We submit that giving that side of reality short shrift is as perilous to the prudent strategic planner as doing the same with the negative side of the ledger.

This report does not suggest turning our military into educational, mobile telephone, big data, or financial inclusion specialists. What it does suggest, however, is that as custodians of a broader defense and security ecosystem, DSOs start paying more attention to those deeper and—on balance—still mostly positive developments that affect societies all over the world, including in many fragile states. Other parts of government already do this. Diplomats focus on the positive *and* negative political dynamics between actors in the international system which they track, assess and try to affect change in. Development professionals focus on positive *and* negative socio-economic developments, which they monitor, analyze, and where possible, try to influence in a positive way. DSOs currently focus overwhelmingly on the conflict rather than on the resilience-side of security dynamics, even though their value for money proposition in that area, including—increasingly—at the individual level, might be quite attractive in terms of finances (money), security value (effectiveness) and domestic political support.

Monitoring, analyzing, planning or acting cannot, and should not, be done by any one of these organizations on their own. Our societies and nations do, however, require a group of security professionals to assume a custodial role over these very fundamental *security* aspects of international interactions. There are a number of conceivable ways in which societies and nations could shape that custodial role institutionally. In our own assessment, we are at least intrigued by the possibility to entrust this role to our defense organizations, since they—and they alone—can bring various critical assets to the table, including an ability to coordinate large security efforts, a sharp focus on effects-based actions, an ability and willingness to operate in dangerous environments, and an unprecedented degree of situational awareness.

In the remainder of this chapter, we will sketch a few illustrative vignettes of ways in which defense organizations might realize this role. All of them describe how defense organizations, as responsible custodians of the security ecosystem, might be able to pursue their broader, publicly mandated, mission statement by designing ways to enhance those forms of personal empowerment—especially in fragile states—that can contribute to better security resilience. After providing a few concrete but hypothetical examples, we will then turn our attention to some more structural recommendations for how defense organizations can start exploring how to leverage such personal wellsprings of security resilience more systematically.

5.1 VIGNETTES OF DEFENSE ORGANIZATIONS SUPPORTING INDIVIDUAL EMPOWERMENT AND RESILIENCE

In this section, we sketch a number of possible concrete ways in which defense organizations might be able to stimulate personal empowerment from a security perspective. We do this in the form of a few ‘vignettes’—hypothetical stories that are intended to explore the general idea in a more tangible way. Some of them are placed in the future. Others are placed in a—counterfactual—past. None of them should be taken literally—all they intend to do is to illustrate the idea and to trigger more creative thinking.

APPS FOR SECURITY RESILIENCE

The Hague – 29 November 2017. The Dutch Ministry of Defense today announced the laureates of its yearly Apps4Sec competition. Apps4Sec is unique in its genre in that it requires Dutch app developers to work together with teams of individuals from fragile states. They first have to jointly identify a relevant security challenge where local agents of resilience could make a difference. They then have to develop a software application that helps address those challenges, be it for the web, personal computers, mobile handheld devices, consoles, SMS, or any software platform broadly available to the local community. The 5 winning teams receive an award of €2500 and are offered an additional €2500 if they are willing to test and improve their solutions in the field through their local counterparts.

Here is how 17-year old Muhammad Abdul Mohsen, a Leiden-based member of one of the winning teams, describes his experience: ‘When my family came to Holland in 2015 to escape the war in my native Syria, we all felt so helpless. But my brother and I became friends with some boys from our new neighborhood

who liked developing games for their mobile phones. Their father had heard about this Apps4Sec competition and so we all started thinking together about what we could do to help people in our old neighborhood in Homs. That's how our app was born. We still have lots of friends who stayed there and they really helped us in thinking through our idea on the internet. Our app is ready now and we are extremely excited to find out whether our idea actually works. All of our friends and family members have already downloaded our app and are starting to make many suggestions on how we can improve it.'

A representative from the Dutch Ministry of Defense, one of the initiators of this competition, stands smiling next to Muhammad. 'When I joined the Armed Forces 25 years ago, I would never have thought that I'd end up doing these kind of things,' said the representative. 'But it feels right. We are security professionals and our task is to enhance security. Especially today, there is not a single Dutch citizen who can doubt that what is happening in Syria affects them. As defense and security professionals, it is our task to think creatively about the contribution we can make there. And we can do that in many different ways—this being one of them. When we ran this competition the first time around, last year, it was really more of a gimmick. But this year we are much more actively involved in the entire process. We have selected our winners from regions where we are also militarily active. We have helped teams where, like in Muhammad's case, friends in the local countries want to stay anonymous with secure communication links. We are closely monitoring and learning from the entire experience and are also exploring whether we can use some other platforms like Kickstarter, Indiegogo, Kiva, Innocentive and others.'

DUTCH DEFENSE ATTACHÉS AT THE GATES FOUNDATION

The Hague – 29 November 2017. Dutch Defense Minister Ahmed Aboutaleb and Bill Gates, co-founder of the Gates Foundation today signed an agreement for a three-year strategic partnership between the two organizations. In this period, five Dutch officers will take on supportive roles to the Gates Foundation in various offices around the world on a full-time basis. They will contribute their know-how about the security contexts and implications of some of the projects the Gates Foundation runs in fragile states in the areas of health, education and development. In return, the Gates Foundation will help these officers identify areas where the Dutch Ministry of Defense might be able to leverage ongoing efforts by both sides in order to explore sustainable security solutions.

Bill Gates, ex-CEO of Microsoft, noted that ‘As a foundation, security is not an area that we fund. But we are of course fully (and painfully) aware that there are strong linkages between security and the areas in which we do try to make an effort. Security affects education, for instance, but education also affects security. We are therefore delighted to enter into a partnership with the Dutch MoD to better understand these linkages and to explore where together we can make a difference.’ Minister Aboutaleb emphasized that the yearly outlays of both organizations are roughly the same size, and that the Dutch Defense Organization is eager to learn how the Gates Foundation manages to make its impact felt across the world. ‘We may seem like strange bedfellows. But every employee in both of our organizations sees equal value in all lives. And we share the same passion to unlock the potential that resides inside every individual—also in the many fragile states that are caught in the poverty-conflict trap.’

TNO DISCOVERS PATHWAYS TO CONFLICT

Soesterberg – 29 November 2017. The world-renowned scientific journal *Science* today publishes the results of an innovative new research project conducted by the Dutch research organization TNO on behalf of the Dutch Ministry of Defense. The aim of the project was to explore various datasets in order to identify different pathways that lead to conflict. The lead investigator explains: ‘As we all know, there is an increasing amount of personal data available in the form of the digital exhaust that all of us leave behind on the internet, our mobile phones, etc. We know this is the case in the developed world, and private companies are discovering all sorts of new ways to make money out of these data. Our aim is different: not to make money, but to generate security value for money. Our efforts in this project were focused on conflict zones and on how we can leverage these big data to advance the public good—in this case by boosting security resilience. Our team collected a number of these public but also private individual-level datasets from a few conflict zones, anonymized them and then looked at whether we could find some regularities or patterns in them. And we did!’

When asked about the practical implications of this research, the investigator mentioned that ‘We can now start exploring to what extent we might be able to influence the individual behaviors of these different people in ways that might lead away from conflict. We have also submitted a new proposal to the Dutch MoD to explore whether we could disseminate, based on our findings, some

public service announcements to local people in those areas—such as things to do or not to do under certain circumstances, etc.—on people’s mobile phones. Think of Android’s *Google Now*. Android is by far the world’s market leader in smartphones—especially in the Global South. So on my phone, *Google Now* shows me the weather, my agenda, how long it will take me drive to work, personalized news, upcoming flight and hotel reservations, etc. But our findings would allow *Google Now* to start displaying cards with personalized security-relevant information in conflict zones like where to go and where not to go; places where I could be of assistance given my skill-set; the types of things I should be paying attention to; etc.’ He adds that the Dutch military has already started planning a number of experiments based on these findings in some of the conflict zones where it is currently active.

DESIGNING SECURITY RESILIENCE SOLUTIONS IN POTENTIAL CONFLICT ZONES

Donetsk, Ukraine – 29 November 2013. A team of the Dutch military’s well-known design team from its 1st Civil-Military Integration Command (1CMICO) has just concluded a two-week engagement in Ukraine. Tensions in the country run high as President Yanukovich appears to be vacillating between signing a Deep and Comprehensive Free Trade Agreement with the European Union and moving towards closer rapprochement with the country’s eastern neighbor, Russia. Some analysts are warning that the country, which has so far been able to avoid bloodshed in its turbulent transition from a Communist Soviet republic to an independent democratic state, might actually descend into violent civil war.

The commander of 1CMICO explains the background of the mission: ‘We are a battalion-sized unit that consists of both professional military, reservists and civilian functional specialists. When a number of recent reports started highlighting security risks along Europe’s eastern borders, we decided to explore whether our design team might be able to do some useful security work there. Our design team consists of a mix of military and civilian experts in areas such as mediation, sociology, ethnography, security analysis, operations research, serious gaming, human factors specialists, area specialists and many other types of skills or knowledge. It essentially follows some of the main precepts of the famous Dutch design school, but then applies those to defense and security. Our design team can deploy in permissive environments where it can start exploring various security solutions to emerging security

challenges. We found the Ukrainian government willing to co-sponsor a few joint exploratory activities in this area—funded by us. The activities essentially consisted of a number of serious games in 3 different parts of the country: in Ukrainian-speaking and Western-leaning Ivano-Frankivsk, in Russian-speaking and -leaning Lugansk and in mixed Mykolaiv. In all of these places we brought together mixed groups of representatives of the key factions in those regions—what one might call the hotheads. We also made sure to involve a number of civil society representatives, of which there—fortunately—are quite a few in Ukraine. We played through a number of scenarios where things might get out of control and then tried to design various options that might be able to prevent (or minimize) escalation in those scenarios. At the end of the trip, we presented the findings from these three sessions to a final two-day design session in the capital Kyiv—again with representatives of the key stakeholders, including civil society.’

When asked to comment on a criticism voiced by Dutch website GeenStijl that this is nothing more than an expensive form of military tourism, the commander shook his head: ‘First of all, the costs of such a mission are minimal. The entire out-of-pocket costs of these two weeks amounted to something like €50k. In the best case scenario—if Ukraine remains stable, which is what we of course all hope—our design team has once again learned some valuable lessons about what works and what doesn’t work in such volatile settings. We have established a working relationship with some of the key security players there, who have also witnessed first hand that we acted as honest brokers. If, on the other hand, the situation were to spiral out of control, we can explore and examine how we might be able to help empower the moderate but active parts in those regions to fight the more radical elements that tend to quickly gain the upper hand in escalations. And finally, if for some reason the Dutch Armed Forces were to get embroiled in some way in that crisis, we would have gathered extremely useful and actionable intelligence. But I want to emphasize that this is *not* the reason why we do this. Our design team is explicitly not an intelligence operation—it is an attempt to nurture local security resilience and to find sustainable security solutions to what may seem like quite intractable security challenges. I’d encourage organizations like GeenStijl to come up with anything that comes even close to this in terms of (security!) value for money.’

DESIGNING SECURITY RESILIENCE SOLUTIONS IN ACTUAL CONFLICT ZONES

The Hague – 29 July 2014. The Dutch military’s highly-renowned design team from its 1st Civil-Military Integration Command (1CMICO) is continuing its efforts in Ukraine. We already reported last November that the mixed civilian-military design team had deployed to the country to explore the key potential security cleavages and to game some possible solutions to deal with various conflict scenarios. As we all know, the situation in Ukraine has taken a dramatic dive for the worse since then. Russia has annexed Ukraine’s Crimea and a bloody civil war has erupted between the Ukrainian central government and two secessionist regions in the East—in all likelihood supported by Russian troops, equipment and money.

We caught up with the commander of 1CMICO, to find out how their involvement in the Ukrainian crisis had changed: ‘When we first deployed our design team to Ukraine last November, we were dealing with a different Ukraine, a different Russia, and—frankly—a different Holland. In November, the deployment of our design team was our initiative. The Dutch and Ukrainian governments both gave us a green light for running a few design sessions in Ukraine itself. Our all in all relatively uncontroversial initiative also probably passed under the radar screen of the Russian Federation. But if it had not, we would have gladly invited them to participate as well. All of this is unthinkable today. Dutch-Russian relations are dramatically different after Crimea, MH17 and the sanctions and counter-sanctions. The Ukrainian government would in all likelihood welcome us with open arms, but Russian reactions would be swift and, I fear, extremely negative. No sound-thinking Dutch expert, policymaker or military professional would even consider putting Dutch military boots on the ground under the current circumstances—even if they are just design boots. This does not mean, however, that all we can do is to just passively observe these dramatic events as they unfold. Already during our meetings last November, we were surprised by the vibrancy of Ukraine’s civil society. In many of our design sessions there, they were usually the ones who tended to take the upper hand over the hotheads—both in pointing out the suicidal consequences of letting these dynamics spiral out of control and in finding workable solutions. When the conflict actually did explode, this very same civil society, which had already impressed us in November, started displaying a significant amount of bottom-up initiatives to make up for the inefficient (and corrupt) state security structures that were unable to master the situation. These efforts ranged from people knitting warm underwear for Ukrainian soldiers in

various cities all across Ukraine, to young urban professionals working for multinational companies who contributed some of their skills and knowledge to help with various desk-office defense tasks (logistics, stratcom, cyberdefense, etc.), to the volunteer battalions that sprung up to speed-train themselves and then deploy in theater. So what we have been doing is to try to find ways to empower these civil society expressions against security radicals on both sides. Our design team has identified a number of Dutch non-governmental organizations and even individuals who have proved able and willing to assist some of these Ukrainian volunteers in many different ways.’

When asked whether he considers it uncomfortable to be saying these things dressed in a green Dutch Army combat uniform, the commander smiles and replies: ‘Not at all. We, military, see ourselves first and foremost as defense and security professionals. The Army as a service bears special responsibility for what we call the human terrain. If the Dutch political class wants us to intervene heavy-handedly in any crisis situation and to knock some sense into various hotheads that take over that human terrain where we all live, we of course stand prepared to do so. But increasingly we see that such political mandates are harder and harder to come by. So we see this efforts as a way to continue to contribute positively to our nation’s security goals even when a political mandate for intervention proves impossible.’ And with a smile on his face he adds: ‘And let’s not forget that green is the color of hope!’

5.2 IMPLICATIONS FOR DEFENSE ORGANIZATIONS

The vignettes presented could have happened, or could happen, if and only if our defense and security organizations—and in particular our defense and security planners—are willing to start exploring actionable opportunities in the nether-region of security: resilience. This section develops some ideas for how this could be achieved. We structure this section along the lines of what we at HCSS have called **STRONG**: strategic orientation and navigation guidance,²⁴⁰ which tries to spell out the various strategic building blocks that organizations who want to remain strong in today’s quickly changing world have to constantly juggle.

²⁴⁰ Stephan De Spiegeleire et al., *STRONG in the 21st Century. Strategic Orientation and Navigation under Deep Uncertainty* (The Hague: The Hague Centre for Strategic Studies, 2010).

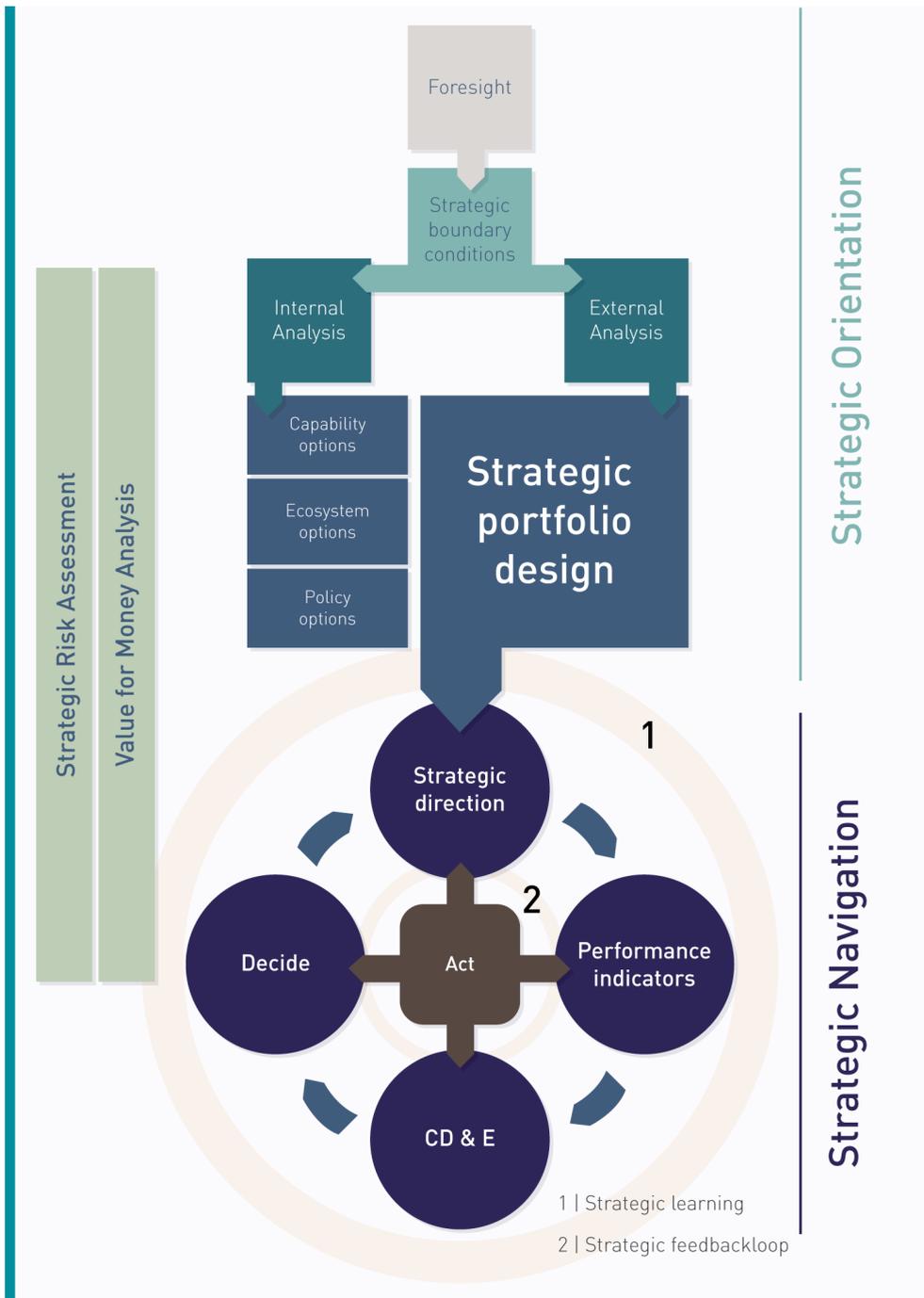


FIGURE 38. HCSS STRONG PROPOSITION

We first look at what this new focus on resilience—and more specifically on individual empowerment—means for what HCSS calls strategic orientation: how defense organizations (increasingly) try to orient themselves in their strategic environment. Subsequently, we look at what we call strategic portfolio design: the portfolio options, partners and capabilities that organizations—including defense organizations—should design and invest in, in order to be better prepared to deal with different futures. Especially in periods of rapid and profound change, such a portfolio has to be diversified and agile. Prudent military planners must pay attention to the entire futurespace of risks and opportunities in order to design a more future-resilient strategic portfolio. One of the reasons for embarking on this research project was because there are many promising security portfolio elements at the individual empowerment level.

STRATEGIC ORIENTATION

We suggest three main changes to the orientation efforts of our defense organizations: 1) strive for a more balanced net picture of the security environment by looking at both negative and positive trends; 2) look at both the conflict *and* the resilience sides of the security coin; and 3) put more (but responsible) focus at the individual level of analysis, where momentous changes are taking place.

In the first place, the increasing efforts that many defense organizations are now making in the foresight area require more balance. It is obvious that no responsible defense organization can afford to ignore the many negative trends that occur at any given moment of time in their direct neighborhoods and across the globe. It is equally self-evident, however, that responsible defense organizations should also track and monitor the many positive trends that we continue to observe around us—even in a number of fragile states. This is important to produce a more balanced net big picture for policymakers, politicians and our societies at large. If and only if we are able to present this more balanced picture will we be able to make better informed choices and design more effective portfolios with respect to policies, partners and capabilities. Showing the good and the bad might also give our orientation efforts more credibility in the eyes of our own publics, who are increasingly skeptical about the overwhelmingly negative focus of our security foresight products. This contribution to the 2016 Strategic Monitor argues—and presents some evidence—that this is both possible and relevant.

Secondly, both the conflict and the resilience sides of the security ledger should be better monitored. Here too, it is obvious that no self-respecting security organization can ignore keeping a watchful eye on the agents of (potential) conflict. But the same is true for the agents of resilience. Neither of these two sides is easily recognizable. Agents of conflict typically have a powerful incentive to hide themselves from the public eye so as not to be detected. At the same time, agents of resilience can be hard to detect before conflict erupts—they may only emerge once conflict has erupted. However, if defense organizations would dedicate equal efforts to both of them, this would greatly benefit their strategic situational awareness as well as their efforts to come up with actionable options that provide optimal value for money.

The third suggestion is that our current orientation efforts should be both widened and sharpened by including a focus on the individual. At the tactical-operational level, this is not new. Our intelligence and security services often zoom in on smaller groups or even individuals when they suspect them of violent intentions. This report, however, suggests a different, more strategic focus on the individual as an increasingly powerful agent of positive security change in many areas of private and public life.

In a recent HCSS report we argued that we are witnessing the fission of power.²⁴¹ For many millennia and centuries power seemed to accrue to ever larger entities. Geopolitical entities grew from clans to settlements to cities to nation states. Economic agents exploded from clans to guilds to small local companies to large multinational companies. This trend towards *mass* is now accompanied by a powerful counter-trend in which power seems to be returning to the individual level. This requires and—for the first time in history—also allows for our strategic security orientation efforts to embrace these individual-level trends. Our datasets at this level remain limited, but they are rapidly mushrooming. And in many ways they carry far greater potential for keeping close tabs on security than the country-level datasets that we now mostly use.

As we are finding out at the tactical-operational level, collecting these micro-datasets raises a number of critically important ethical and political issues surrounding personal privacy and institutional oversight. Our sense is that

241 Oosterveld et al., *The Fission of Power*.

common sense can prevail if (and only if) we engage in a more open and inclusive debate about whether our societies would accept allowing responsible security ecosystem custodians, firmly embedded in robust oversight systems, to collect and analyze these data. But this report has also shown that there are a number of anonymized, uncontroversial, widely used datasets that can be used for this purpose.

STRATEGIC PORTFOLIO DESIGN

Ecosystem Choices

Defense organizations may either directly or indirectly stimulate societal security resilience through personal empowerment. In the direct option, defense organizations could identify—arguably in regions that are of importance to them for historical, economic, political or ideational reason—networks of empowered individuals and see how they could interact with them to achieve security effects. The indirect option would be to identify key ecosystem partners that are already working in this space and to engage with them in order to identify, track and pursue promising security-enhancing initiatives. We see great potential in both avenues, but we still suspect that defense organizations are currently poorly positioned to pursue the direct option. In a parallel report, called *Better Together*, we are currently exploring some promising ways in which defense organizations could cooperate in novel ways with new counterparts. There are reasons to suspect that the transaction costs that larger organizations incur when they look for the right individuals or networks of individuals to work with will always be higher than if they work through intermediaries. As we argue in *Better Together*, new technologies are slashing these transaction costs, enabling larger organizations to increasingly cut out the middle man.

While recommending that defense organizations keep exploring the edges of the cooperation space, this report focuses on low-hanging fruit that they could start exploiting even in the short-term by using the indirect approach and working with and through some third parties. Throughout many of the case studies, there are a number of organizations that keep popping up on the forefront of these individual empowerment efforts. Obvious examples include organizations such as the Bill and Melinda Gates Foundation, PACT, Open Society, Google and IDEO. Some of these organizations already operate at the cutting edge of many of these self-empowerment trends globally. Their situational awareness of the right targets for leveraging personal empowerment (also) for security purposes vastly exceeds

that of any defense organization. But how much time and effort do our defense organizations currently put in that part of their partnership portfolio? Should we not invest more to reap the potential benefits we may derive from reaching out to organizations like Google, IBM, Facebook or the Gates Foundation?

The main argument here is that the ecosystem-portfolio of our defense organizations should be widened to include agents of resilience and stability. There may be some shortcuts that allow defense organizations that are open to these opportunities to derive significant security dividends from teaming up with cutting-edge organizations that are active in actual or latent conflict zones and to explore where they might piggy-back on those existing efforts and know-how.

Capability Choices

Capability is at the heart of any defense organization.²⁴² Action is a key component of any security activity. But it is not the only component—action presupposes planning and reflection.²⁴³ The ability to make a third party do something that it may not want to do out of their own volition is a critical part of the exercise of power. In order to be able to exercise this power, defense organizations spend significant efforts in defining capability requirements and then acquiring access to them.

Concrete scenarios play a crucial role in contemporary capability analysis. Right now, these scenarios tend to be conflict-centric. They describe some plausible future conflicts and put great emphasis on the capabilities of the presumed opponent. Many of these ‘capabilities’ development efforts focus on how we can counter the capabilities of our opponents in order to achieve our own policy objectives. This report suggests a different, complementary center of gravity for these efforts. Rather than focusing exclusively on us and/or the adversary, it identifies a sizeable silent majority of individuals who typically resent conflict as the real center of gravity in a potential conflict. Such people may be favorably inclined towards one side or the other, but still consider the cause undeserving of bloodshed and massive societal disruption. They are

²⁴² Stephan De Spiegeleire, “Ten Trends in Capability Planning for Defence and Security,” *The RUSI Journal* 156, no. 5 (October 1, 2011).

²⁴³ Sometimes defense organizations are called upon to intervene without the full benefit of these more reflexive components.

often the first victims of a conflict, and can feel compelled to pick sides. Capability planning today tends not to take this important stakeholder into consideration. This report suggests it should.

It should be perfectly feasible to weave various initiatives that bolster individual empowerment (leading to more security resilience) into our capability planning processes. In practice, this would imply two main new analytical efforts. The first one would be to enrich the task lists that we currently use to translate scenarios into desired capabilities with some of these personal security empowerment tasks. Experience both within NATO (Allied Command Transformation and the NATO Communications and Information Agency) and within the European Defence Agency shows that a few days of structured discussion with a diversified group of knowledgeable experts and stakeholders would suffice to develop a taxonomy of such tasks and to merge it with the existing taxonomies. Some nations have already done some work along those lines that could also be included in the effort.

A second analytical effort could be to develop some metrics to assess the relative security value for money of these options vis-a-vis the traditional options. Defense planners have made little progress in incorporating balance of investment considerations into their capability-based planning models, but these can make a significant difference.²⁴⁴ Today, the analytical component of our capability derivation and development processes is the only counterweight we have against the various powerful parochial interests that try to pull the capability discussion and the resulting money flows in their own parochial direction. If we want to have a more objective, balanced and level-headed assessment about where to invest our defense and security resources, our analytical tools should at least allow us to think through the relative return on our investments from militarily fighting the combatants, as opposed to producing a more resilient society.

Policy choices

Defense choices not only include deliberations about *with whom one might want to do something* (partners/ecosystems) or about *with what one might be*

²⁴⁴ Stephan De Spiegeleire et al., *Closing the Loop: Towards Strategic Defence Management* (The Hague: The Hague Centre for Strategic Studies, 2009); Stephan De Spiegeleire, "Ten Trends in Capability Planning."

able to do things (capabilities), but also about *what one might actually want to do*. This report suggests a number of qualitatively different policy choices that should be examined by defense organizations.

Based on a better orientation effort that would identify resilience-enhancing policy options, defense planners might be able to design and experiment with a number of promising policy options for stimulating societal security resilience at the micro level. This would require a willingness to either set up a synthetic experimentation environment at home, or to possibly even consider deploying some design²⁴⁵ soldiers into potential theaters where security dilemmas might spiral out of control. In both cases, the real commander's intent would be to experiment with various options to find out which of these offers the best return on taxpayers' investment. Many of the policy options that are currently debated whenever a crisis erupts tend to be quite heavy-handed and consequential—both in terms of lives lost and economic cost. They therefore require heavy political oversight—as is the case with the Article-100 letters that the Dutch parliament requires before authorizing a deployment troops abroad. The resilience-side of security offers a wide range of actionable policy options that could be pursued more easily—even though these would benefit from a broader preliminary political debate. This is certainly the case in permissive environments, as some of the vignettes illustrated. But it may also be the case in a number of environments that would not easily lend themselves to boots on the ground, yet might still provide a number of stand-off options for achieving desired security effects by focusing on the resilience-side of security.

STRATEGIC NAVIGATION

The final recommendation that flows out of this report pertains to what defense organizations actually (could) do. In much of our work at HCSS we have emphasized how important it is to move from purposive planning to a better balance between purposive and emergent planning.²⁴⁶ In more recent work,

245 For a background on design and how it applies in a military context, please see Stephan De Spiegeleire, Tim Sweijs, Peter Wijnnga, and Joris van Esch, *Designing Future Stabilization Efforts*, HCSS Research Project for the Dutch Ministry of Defense (The Hague: The Hague Centre for Strategic Studies, 2014). See also our vignettes about a possible iCMICO design team.

246 See also Henry Mintzberg and James A. Waters, "Of Strategies, Deliberate and Emergent," *Strategic Management Journal* 6, no. 3 (July-September 1985).

inspired by the design thinking literature, we have started emphasizing the importance of fast prototyping.²⁴⁷

A creative, rigorous and balanced analysis of the various portfolio options in the individual empowerment space is likely to yield a number of actionable options that defense (and security) organizations could start experimenting with. As we already suggested in some of our vignettes, especially (still) permissive security environments might lend themselves very well to such incremental (Dutch?) defense design experiments. But even in less- or non-permissive environments we suspect there might still be many actionable options for either direct (stand-off) or indirect (through third parties) resilience-enhancing efforts that target (in the sense of empower) individuals.

Although this is not entirely uncharted territory for our defense organizations, this territory is new enough to warrant a broad preliminary societal discussion about what our various national constituencies would be willing to support in this area. As many of these new opportunities are likely to be ICT-related, we certainly anticipate a number of political and ethical objections that would have to be carefully debated and resolved before we lunge ourselves into any significant efforts along those lines. The respective roles, rights, and responsibilities of various organizations (including the defense organization itself) would undoubtedly also represent a topic of debate here. One reasonable course of action might therefore include a number of experimentation cycles at home with representatives of various stakeholder groups to explore the confines of what we might find effective (from a security point of view), acceptable (from an ethical/legal/political point of view) and affordable (from a financial point of view).

247 For an HCSS literature review of design thinking (also as it applies to defense and security), see De Spiegeleire, Sweijts, Wijninga, and van Esch, *Designing Future Stabilization Efforts*. For an excellent toolkit on how to implement design thinking in practice, see IDEO, ed., *The Field Guide to Human-Centered Design: Design Kit*, 1st. ed (San Francisco, Calif: IDEO, 2015). For some more recent insights in how the private sector is weaving design into strategy, see Adi Ignatius, “Design as Strategy,” *Harvard Business Review* 93, no. 9 (September 2015); Jon Kolko, “Design Thinking Comes of Age,” *Harvard Business Review* 93, no. 9 (September 2015); Cristóbal Hildebrandt, Tim Brown, and Roger Martin, “Design Interventions: Interaction,” *Harvard Business Review* 93, no. 11 (November 2015); Tim Brown and Roger Martin, “Design for Action,” *Harvard Business Review* 93, no. 9 (September 2015).

6 CONCLUSIONS

Whatever happened to TINA (“There Is No Alternative”)? The beguiling imaginary woman Shell scenarios conjured up in the 1990s that embodied the quintessential liberal dream in which increasing globalization, technological development and market liberalization would empower both individuals and communities, thus enabling them to realize their innate potential in ways heretofore unfathomable. This report has focused on what the Shell team by the end of the 90s called *TINA Below*: the idea that people with education, wealth and choice would keep pushing for change. The headstrong 1990s, however, gave way to the skepticism if not pessimism of the much more somber first decade of the new millennium, which brought us first 9/11 followed by a crippling financial and economic crisis whose aftermath we are struggling with today. TINA, in Shell scenario parlance, morphed into TANIA—“There Are No Ideal Answers.” A sense of malaise took over economic, political and characteristically somber security elites. This morose mood persists to this date.

So where is TINA today? Did she really die as the news coverage and talk shows seem to suggest? This report has documented that contrary to widespread popular opinion, TINA is still very much alive. The powerful engines behind *TINA Above*—creeping globalization, exponential technological innovation and expanding market liberalization—have barely been dented by the sledgehammers of terrorism, the financial and economic crisis and the various more recent security crises. Especially *TINA Below* looks stronger than ever. Individual empowerment continues to expand all across the world through better educational, economic, political, identity and social opportunities for individuals—all propelled by technological power multipliers and all leading to noticeable advances in quality of life. It probably remains the single most important mega-driver in our societies, as the reports of the US National Intelligence Council attests. Indeed, individual people have—irrespective of gender, ethnic, religious, sexual and other differences—never had a better

opportunity to live up to their innate potential as they have today. We tend to forget this when we get immersed into the doom and gloom stories that our news cycle inundates us with 24/7.

This report has first and foremost advocated the importance of a more *balanced net assessment* of our security environment as a basis for a more balanced discussion about our desired portfolio of strategic options, partners and capabilities. It is critically important for all of us—from regular taxpayers to strategic decision-makers—to come to grips with the real big picture: the downside risk, the upside risk and everything in between. If and only if we can really wrap our minds around this comprehensive big picture can we start identifying and pursuing a new and more balanced options portfolio that may enable us to weather the weather the numerous and real security challenges and opportunities that we are confronted with.

Secondly, the report has made an important claim about new areas where our defense organizations could make significant improvements to their security value proposition by looking at actionable options to nudge positive security trends. Here, the complementary—and emphatically not alternative—value proposition to traditional hard power military capabilities outlined in this report centers around a stimulating security resilience narrative. The resilience side of the security coin is an area in which our defense organizations are already active, albeit more by default than by design. Most of our planning focuses on the conflict-side—how to stabilize conflicts, how to empower the security sector, etc. The suggestion in this report is to apply the same creativity, rigor and determination in figuring out how we can not only stem the conflict but also stimulate a fragile society’s resilience—its natural immune system against the agents of conflict. We increasingly realize that we are not only losing hearts and minds in conflict zones with our current focus on the conflict side of the security coin, but that we also need a better value proposition at home. European taxpayers across the political spectrum might be much more easily persuaded that those comparatively cheap resilience-enhancing efforts may offer far superior security value for money than many of the increasingly expensive threat-based, kinetic-industrial value propositions. We owe it to ourselves as defense and security professionals and to the societies we serve to at least explore how we can find a better balance of investment between the logic of fighting the bad guys and the logic of boosting societal resilience.

The third important claim we make in this report is that we should extend our defense efforts to the individual level of resilience. Many of our most important defense choices today are focused on the nation state level. Our armed forces are umbilically connected to our nation state. Our principal partners and enemies are nation states. The industrial-kinetic weapon systems that still play such an important role in our capability portfolio (and our capability development efforts) are weapons systems of nation states. The agreements we conclude are with other nation states. We have grown accustomed to thinking that security means *national* security. We all see that nation states still matter. There can be no doubt that our defense organizations still have to be able to address the threats and opportunities that emerge from that level.

At the same time, however, people—both as individuals and as societies—today have opportunities that they could barely have dreamed of 20, 50 or 100 years ago. One part of this trend is that war amongst the people—as opposed to war between nation states—is becoming more prominent again. This has been widely recognized across defense organizations, at least in theory, even if not in the capability requirements that derive from it.²⁴⁸ But it is not just war amongst the people that is making inroads. It is also peace amongst the people. Individual empowerment—including the security implications it entails—continues to spread, as we have demonstrated in this report.

Individuals are both consumers and producers of security. Too often we focus on the former. When stability breaks down, individuals in those conflict zones are often seen and portrayed as poor victims that have to be assisted. Few of us will ever forget the image of little Aylan Al-Kurdi, drowned with his brother off the coastal town of Bodrum in Turkey after a failed attempt to flee war-ravaged Syria. Aylan was a hapless consumer of security who did not get the chance to satisfy his need for security in what might be seen as a cruel security market failure. This is the sort of a trigger that pushes our politicians to engage our military in actions abroad.

There is, however, also another side to this story. Contrary to many other developing countries, Syria actually had a sizeable well-educated, reasonably affluent, fairly secular and technologically savvy middle class. This group

²⁴⁸ Smith and Bet-El, “Military Capabilities for ‘War amongst the People.’”

represented the silent majority that embodied the constituency for peaceful change towards a more TINA-like future. They had the education that we talked about in section 4. They were economically empowered along the lines we discussed in section 2. They possessed many of the technological enablers we discussed in section 5. Their quality of life had increased as we described in section 6. They were not just consumers of security but also—at least potentially—producers of it. All they were missing—and were hoping for—was the political empowerment that we outlined in section 3 but that the Assad regime had not given them. When the country descended into violence, these agents of societal resilience initially may have wanted to exercise voice²⁴⁹ to effect peaceful change. However, they were quickly overwhelmed by the more radical fringes of the Syrian society and the Syrian state that were bent on pursuing more violent options. And they were confronting various well-known collective action problems²⁵⁰ that prevented them from coalescing into a genuine force for positive peace. Since they were not given the opportunity to play their natural role of providers of security, they opted for an exit and turned into consumers of security by seeking refuge in countries that offered them a better chance to pursue their TINA aspirations.

In conclusion, this report has demonstrated that TINA—including *TINA Below*—is still very much alive, even in the many regions of the global South that are affected by instability and violence. ‘She’ continues to live and thrive in what we have dubbed the flip-side of the security coin (or the nether-regions of security): societal resilience. A number of powerful technological developments (internet, mobile phones, global accessibility of cutting-edge knowledge, micro-financing or new educational opportunities) continue to engender unprecedented opportunities for personal empowerment across the globe. Defense and security organization have, in our assessment, underestimated the profound security implications of these trends for the agents of (security) resilience. Up until now, this silent majority tended to get swept away in infernal downward spirals of violence and chaos whenever conflict erupted.

249 Albert O. Hirschman, “Exit, Voice and the State,” *World Politics* 31, no. 1 (October 1978).

250 Mancur Olson, *The Logic of Collective Action Public Goods and the Theory of Groups* (Cambridge, Mass.: Harvard University Press, 1965).

Arguably for the first time in history, *TINA Below* gives them a fighting chance to not only stay afloat in these spirals but to even weigh up against the agents of conflict. We have argued in this report that this personal empowerment space offers quite a few actionable opportunities that responsible custodians of a broader defense and security ecosystem could leverage. We have sketched a few illustrative vignettes of how this could work and have presented some concrete ways in which our DSOs could start identifying and exploring those opportunities in their planning processes. We look forward to a broader discussion about how to cultivate, stimulate and leverage this important and growing security potential, and how to integrate this into our strategic portfolio.

BIBLIOGRAPHY

- Abutaleb, Yasmeen. “Facebook Rolls out New Lightweight App for Africa.” *Sunday Times*, June 5, 2015. <http://www.timeslive.co.za/sundaytimes/stnews/2015/06/05/Facebook-rolls-out-new-lightweight-app-for-Africa>.
- Acemoglu, Daron, Suresh Naidu, Pascual Restrepo, and James Robinson. “Democracy Does Cause Growth.” Cambridge, MA: National Bureau of Economic Research, March 2014. <http://www.nber.org/papers/w20004.pdf>.
- Adebayo, Folashade. “Now, an Elite School for Poor Pupils.” *The Punch*, September 11, 2015. <http://www.punchng.com/education/now-an-elite-school-for-poor-pupils/>.
- “Afghanistan - Telecoms, Mobile and Broadband - Statistics and Analyses.” *BuddeComm*, September 7, 2015. <http://www.budde.com.au/Research/Afghanistan-Telecoms-Mobile-and-Broadband-Statistics-and-Analyses.html>.
- Afghan Ministry of Education. “Afghanistan: Education for All 2015 National Review.” Incheon, Republic of Korea, 2015. <http://unesdoc.unesco.org/images/0023/002327/232702e.pdf>.
- African Development Bank, OECD Development Centre, and United Nations Development Programme. *African Economic Outlook 2014: Global Value Chains and Africa’s Industrialisation*. OECD Publishing, 2014.
- Agence France-Presse. “Isis Captured 2,300 Humvee Armoured Vehicles from Iraqi Forces in Mosul.” *The Guardian*, June 1, 2015. <http://www.theguardian.com/world/2015/jun/01/isis-captured-2300-humvee-armoured-vehicles-from-iraqi-forces-in-mosul>.

- Ag Mossa, Rhaly. “Advocacy-Lobbying Tools to Fight against Food Insecurity in Mali.” SNV, 2012. http://www.snvworld.org/sites/www.snvworld.org/files/publications/advocacy-lobbying_tools_to_fight_against_food_insecurity_in_mali.pdf.
- Bahree, Meha. “Citizen Voices.” *Forbes*, November 29, 2008. <http://www.forbes.com/global/2008/1208/114.html>.
- Barro, Robert J., and Jong Wha Lee. “A New Data Set of Educational Attainment in the World, 1950–2010.” *Journal of Development Economics* 104 (September 2013): 184–98. doi:10.1016/j.jdeveco.2012.10.001.
- Bartusevičius, Henrikas. “The Inequality–Conflict Nexus Re-Examined: Income, Education and Popular Rebellions.” *Journal of Peace Research* 51, no. 1 (January 1, 2014): 35–50.
- Basu, Alaka M. “Why does Education Lead to Lower Fertility? A Critical Review of Some of the Possibilities.” *World Development* 30, no. 10 (2002): 1779–90.
- Best, Michael L. “Uses of Mobile Phones in Post-Conflict Liberia.” *Information Technologies and International Development* 6, no. 2 (2009): 91–108.
- Biggs, Phillippa et al. *The State of Broadband 2015: Broadband as a Foundation for Sustainable Development*. Geneva: ITU and UNESCO, September 2015. <http://www.broadbandcommission.org/publications/Pages/SOB-2015.aspx>.
- Bracken, Paul. “Net Assessment: A Practical Guide.” *Parameters : Journal of the US Army War College*. 36, no. 1 (2006): 90–100.
- Bribespot. “Bribespot.” *Bribespot*, 2011. <http://bribespot.com/en/>.
- Bridge International Academies. “About.” *Bridge International Academies*, 2013. <http://www.bridgeinternationalacademies.com/company/about/>.

- . “History.” *Bridge International Academies*, 2013. <http://www.bridgeinternationalacademies.com/company/history/>.
- Briggs, Helen. “Global CO₂ Emissions ‘Stalled’ in 2014.” *BBC News*, March 13, 2015. <http://www.bbc.com/news/science-environment-31872460>.
- Brockington, Dan, Rosaleen Duffy, and Jim Igoe. *Nature Unbound: Conservation, Capitalism and the Future of Protected Areas*. Earthscan, 2008. <https://books.google.com/books?hl=nl&lr=&id=hanwVhP-JFQC&oi=fnd&pg=PR7&dq=nature+unbound&ots=b4dAjOig8o&sig=AIodZrIR-cR7QKjgN-gW7ozwAoY>.
- Brown, Tim, and Roger Martin. “Design for Action.” *Harvard Business Review* 93, no. 9 (September 2015): 56–64.
- Burchi, Francesco, Jessica Fanzo, and Emile Frison. “The Role of Food and Nutrition System Approaches in Tackling Hidden Hunger.” *International Journal of Environmental Research and Public Health* 8, no. 2 (2011): 358–73.
- Business and Industry Advisory Committee to the OECD. *Innovation to Address Food Security*. Paris: BIAC, November 2009. <http://www.fki.or.kr/Common/Download.aspx?id=c1cb9240-09c0-4f67-b451-0d11e3986138>.
- Caprioli, Mary. “Primed for Violence: The Role of Gender Inequality in Predicting Internal Conflict.” *International Studies Quarterly* 49, no. 2 (2005): 161–78.
- Carothers, Thomas. “The Rule of Law Revival.” *Foreign Affairs*, March 1998. <https://www.foreignaffairs.com/articles/1998-03-01/rule-law-revival>.
- Cederman, Lars-Erik, Kristian Skrede Gleditsch, and Halvard Buhaug. *Inequality, Grievances, and Civil War*. Cambridge Studies in Contentious Politics. New York: Cambridge University Press, 2013.

- Cederman, Lars-Erik, Nils B. Weidmann, and Kristian Skrede Gleditsch. “Horizontal Inequalities and Ethnonationalist Civil War: A Global Comparison.” *American Political Science Review* 105, no. 3 (August 2011): 478–95.
- Centre for Systemic Peace. “Centre for Systemic Peace Rule of Law Index,” 2015. <http://www.systemicpeace.org/>.
- Chandy, Laurence, and Geoffrey Gertz. *Poverty in Numbers: The Changing State of Global Poverty from 2005 to 2015*. Brookings Institution, 2011. <http://www.brookings.edu/research/papers/2011/01/global-poverty-chandy>.
- Cohen, Eliot, Conrad Crane, Jan Horvath, and John Nagl. “Principles, Imperatives, and Paradoxes of Counterinsurgency.” *Military Review* 86, no. 2 (2006): 49–53.
- Collier, Paul, and Anke Hoeffler. “Greed and Grievance in Civil War.” *Oxford Economic Papers* 56, no. 4 (June 22, 2004): 563–95.
- Crocker, Robert K. *Learning Outcomes: A Critical Review of the State of the Field in Canada*. Ottawa: Council of Ministers of Education, Canada, 2002.
- Dafoe, Allan, John R. Oneal, and Bruce Russett. “The Democratic Peace: Weighing the Evidence and Cautious Inference.” *International Studies Quarterly* 57, no. 1 (March 2013): 201–14. doi:10.1111/isqu.12055.
- Dakers, Marion. “Mobile Banking Has Eclipsed Branches and Even the Rest of the Internet.” *Telegraph*, June 14, 2015. <http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/11672021/Mobile-banking-has-eclipsed-branches-and-even-the-rest-of-the-internet.html>.
- de Jong, Sijbren, Willem Th. Oosterveld, Artur Usanov, Katarina Kertysova, Ihor Ilko, and Juncal Fernández-Garayzábal González. *Beyond the Cold War of Words*. The Hague: The Hague Centre for Strategic Studies, 2015. <http://www.hcss.nl/reports/beyond-the-cold-war-of-words/165/>.

- Deleuze, Gilles, and Félix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis: University of Minnesota Press, 1987.
- Delft University of Technology. “Turning Sea Water into Safe Drinking Water.” *Delft Outlook*, February 2012. <http://www.tudelft.nl/en/current/university-magazines/delft-outlook/former-editions/2012/2012-2/delft-outlook-2012-2/alumni-world/turning-sea-water-into-safe-drinking-water/>.
- de los Arcos, Beatriz, Robert Farrow, Leigh-Anne Perryman, Rebecca Pitt, and Martin Weller. *OER Evidence Report 2013-2014: Building Understanding of Open Education*. OER Research Hub, 2014. <https://oerresearchhub.files.wordpress.com/2014/11/oerrh-evidence-report-2014.pdf>.
- de Lucca, Loretta, Hélène Sahy, Saba Joshi, and Mayra Cortés. *Learning from Catalyst of Rural Transformation*. Italy: ILO, 2013. http://www.ilo.org/employment/units/rural-development/WCMS_234874/lang--en/index.htm.
- Democracia en Red. “DemocracyOS - Change the Tool.” *DemocracyOS*, 2015. <http://democracyos.org/>.
- Department for International Development. “Growth: Building Jobs and Prosperity in Developing Countries.” DFID, 2008. <http://www.oecd.org/derec/unitedkingdom/40700982.pdf>.
- de Ridder, Marjolein. *Food Security*. The Hague: The Hague Centre for Strategic Studies & TNO, 2011. <http://hollandfoodpartner.com/wp-content/uploads/Food-Security-Strategy-and-Change-Vision-Paper.pdf>.
- de Soysa, Indra, Nils Petter Gleditsch, Michael Gibson, and Margareta Sollenberg. “To Cultivate Peace: Agriculture in a World of Conflict.” Environmental Change & Security Project Report, Issue 5. Oslo: International Peace Research Institute, 1999. <http://www.wilsoncenter.org/sites/default/files/feature2.pdf>.

- De Spiegeleire, Stephan. “Ten Trends in Capability Planning for Defence and Security.” *The RUSI Journal* 156, no. 5 (October 1, 2011): 20–28. doi:10.1080/03071847.2011.626270.
- De Spiegeleire, Stephan, Eline Chivot, and Tim Sweijs. “Conceptual Foundations of Security. Final Deliverable of Work Package 1.1 of ‘European Security Trends and Threats In Society’ (ETTIS), a European Union Seventh Framework Programme Collaborative Research Project.” European Security Trends and Threats in Society. The Hague: The Hague Centre for Strategic Studies, December 2012.
- De Spiegeleire, Stephan, Paul van Hooft, Charles Culpepper, and Rene Willems. *Closing the Loop: Towards Strategic Defence Management*. The Hague: The Hague Centre for Strategic Studies, 2009.
- De Spiegeleire, Stephan, Tim Sweijs, Jaakko Kooroshy, and Aurélie Basha i Novosejt. *STRONG in the 21st Century. Strategic Orientation and Navigation under Deep Uncertainty*. The Hague: The Hague Centre for Strategic Studies, 2010.
- De Spiegeleire, Stephan, Tim Sweijs, Peter Wijninga, and Joris van Esch. *Designing Future Stabilization Efforts*. HCSS Research Project for the Dutch Ministry of Defense. The Hague: The Hague Centre for Strategic Studies, 2014. <http://www.hcss.nl/reports/designing-future-stabilisation-efforts/153/>.
- Diamandis, Peter. *Abundance Is Our Future*. TED video, 2012. http://www.ted.com/talks/peter_diamandis_abundance_is_our_future?language=en.
- Diamond, Larry. “A Fourth Wave or False Start?” *Foreign Affairs*, May 22, 2011. <https://www.foreignaffairs.com/articles/middle-east/2011-05-22/fourth-wave-or-false-start>.
- Donnan, Shawn. “More than 700m People Leave Ranks of the ‘unbanked.’” *Financial Times*, April 15, 2015. <http://www.ft.com/intl/cms/s/0/98c57404-e378-11e4-aa97-00144feab7de.html#axzz3j6xt1Rxo>.

- Douma, N. W., and Dorothea Hilhorst. “Fond de Commerce?: Sexual Violence Assistance in the Democratic Republic of Congo,” Research brief. Wageningen: Disaster Studies, 2012. <http://library.wur.nl/WebQuery/wurpubs/personal/488903>.
- Economic and Social Commission for Western Asia. “Microfinance in Conflict: Strategies for Development and Peace in the ESCWA Region.” Technical Paper 4. ESCWA, 2009. <http://www.escwa.un.org/information/pubaction.asp?PubID=698>.
- Education First. “English Proficiency Index,” 2015. <http://www.ef.co.uk/epi/>.
- Ehrbeck, Tilman. “The Potential of Electronic Money for Social Good.” *CGAP*, May 22, 2015. <http://www.cgap.org/blog/potential-electronic-money-social-good>.
- EIA. “Data,” *U.S. Energy Information Administration*, 2015. <http://www.eia.gov/renewable/data.cfm#summary>.
- EIU. “Democracy Index,” 2015. http://www.eiu.com/public/topical_report.aspx?campaignid=Democracy0814.
- Facebook. “newsroom,” 2015. <http://newsroom.fb.com/company-info/>.
- FAO. “ESS Website ESS : Food Security,” 2015. <http://www.fao.org/economic/ess/ess-fs/en/>.
- . *FAO and Peacebuilding: Supporting Peace through Food Security and Resilience*. Rome: FAO, 2015. <http://www.fao.org/3/a-i4348e.pdf>.
- . *FAO Statistical Yearbook 2012*. Rome: FAO, 2012. <http://www.fao.org/docrep/015/i2490e/i2490e03a.pdf>.
- . “Food, Security, Justice and Peace,” 2002. <http://www.fao.org/worldfoodsummit/msd/y6808e.htm>.

———. “Rome Declaration on World Food Security.” Rome, 1996. <http://www.fao.org/docrep/003/w3613e/w3613e00.htm>.

Fearon, James D., and David D. Laitin. “Ethnicity, Insurgency, and Civil War.” *American Political Science Review* 97, no. 01 (2003): 75–90.

———. “Violence and the Social Construction of Ethnic Identity.” *International Organization* 54, no. 04 (2000): 845–77.

Food and Agriculture Organization of the United Nations, International Fund for Agricultural Development, and World Food Programme. *The State of Food Insecurity in the World 2014*. Rome: FAO, 2014. <http://www.fao.org/3/a-i4030e.pdf>.

Forero Pineda, Clemente, Daniel Escobar Rodríguez, and Danielken Molina. “Escuela Nueva’s Impact on the Peaceful Social Interaction of Children in Colombia.” In *Education for All and Multigrade Teaching: Challenges and Opportunities*, edited by Angela W. Little, 265–300. Dordrecht: Springer, 2006.

Freedom House. “Freedom in the World,” 2015. <https://freedomhouse.org/report-types/freedom-world>.

FrontlineSMS:Legal. “FrontLineSMS:Legal - Justice Mobilized.” *FrontLineSMS:Legal*, 2013. <http://legal.frontlinesms.com>.

Fundación Escuela Nueva Volvamos a la Gente. “About Us.” *Escuela Nueva*, 2003. <http://www.escuelanueva.org/portal/en/about-us.html>.

———. “Escuela Nueva Model - Components.” *Escuela Nueva*, 2003. <http://www.escuelanueva.org/portal/en/escuela-nueva-model/components.html>.

Galtung, Johan. *Peace by Peaceful Means: Peace and Conflict, Development and Civilization*. Oslo: PRIO, 1996.

- Gartzke, Erik, Quan Li, and Charles Boehmer. “Investing in the Peace: Economic Interdependence and International Conflict.” *International Organization* 55, no. 02 (March 2001): 391–438.
- Gershman, Carl. “The Middle East Revolt’s Place in History.” *The New Republic*, March 14, 2011. <http://www.newrepublic.com/article/world/85143/middle-east-revolt-democratization>.
- Gleditsch, Nils Petter. “Environmental Change, Security, and Conflict.” In *Leashing the Dogs of War: Conflict Management In a Divided World*, 177–95. Washington D.C.: United States Institute of Peace Press, 2007.
- Gleditsch, Nils Petter, Håvard Hegre, and Håvard Strand. “Democracy and Civil War.” In *Handbook of War Studies III: The Intrastate Dimension*, 155–92. Ann Arbor: University of Michigan Press, 2009.
- Global Innovation Index. “The Global Innovation Index,” 2015. <https://www.globalinnovationindex.org/content/page/GII-Home>.
- Graf, Marlon, Jeremy J. Ghez, Dmitry Khodyakov, and Ohid Yaqub. *Individual Empowerment: Global Societal Trends to 2030: Thematic Report 3*. Santa Monica, CA: RAND Corporation, 2015. http://www.rand.org/pubs/research_reports/RR920z3.html.
- GSMA Intelligence. *The Mobile Economy 2015*. London: GSMA, 2015. http://www.gsamobileeconomy.com/GSMA_Global_Mobile_Economy_Report_2015.pdf.
- Gurr, Ted Robert, Barbara Harff, Marc Levy, Geoffrey D. Dabelko, Pamela T. Surko, and Alan N. Unger. “State Failure Task Force Report: Phase III Findings.” *Environmental Change & Security Project Report*, no. 5 (1999): 50.
- Halloran, Afton, and Paul Vantomme. *The Contribution of Insects to Food Security, Livelihoods and the Environment*. Food and Agriculture Organization (FAO), 2013. <http://www.fao.org/docrep/018/i3264e/i3264e00.pdf>.

- Halperin, Morton H., Joseph T. Siegle, and Michael M. Weinstein. *The Democracy Advantage: How Democracies Promote Prosperity and Peace*. Rev. ed. New York: Routledge, 2010.
- Hanushek, Eric A., and Ludger Woessmann. “The Role of Education Quality for Economic Growth.” SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, February 1, 2007. <http://papers.ssrn.com/abstract=960379>.
- Hardt, Steve, and Lia C. R. Lopes. “Google Votes: A Liquid Democracy Experiment on a Corporate Social Network.” *Technical Disclosure Commons*, Defensive Publications Series, June 5, 2015. http://www.tdcommons.org/dpubs_series/79/.
- Harper, Gary W., Douglas Bruce, Pedro Serrano, and Omar B. Jamil. “The Role of the Internet in the Sexual Identity Development of Gay and Bisexual Male Adolescents.” In *The Story of Sexual Identity*, by Phillip L. Hammack and Bertram J. Cohler, 297–326. Oxford University Press, 2009. <http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780195326789.001.0001/acprof-9780195326789>.
- Hegre, Håvard, Joakim Karlsen, Håvard Mogleiv Nygård, Håvard Strand, and Henrik Urdal. “Predicting Armed Conflict, 2010-2050.” *International Studies Quarterly* 57, no. 2 (June 2013): 250–70.
- Hegre, Håvard, and Håvard Mogleiv Nygard. “Governance and Conflict Relapse.” *Journal of Conflict Resolution* 59, no. 6 (September 1, 2015): 984–1016. doi:10.1177/0022002713520591.
- Hennis-Plasschaert, Jeanine. “Een Sterke Krijgsmacht, En Het Toegenomen Belang Daarvan.” *Defensie*, November 13, 2015. <https://www.defensie.nl/actueel/weblog/minister/2015/een-sterke-krijgsmacht-en-het-toegenomen-belang-daarvan>.
- Heritage Foundation. “Index of Economic Freedom: Promoting Economic Opportunity and Prosperity by Country,” 2015. <http://www.heritage.org/index/>.

- Hildebrandt, Cristóbal, Tim Brown, and Roger Martin. “Design Interventions: Interaction.” *Harvard Business Review* 93, no. 11 (November 2015): 24–24.
- Hilker, Lyndsay. *Empowerment in Fragile States and Situations of Fragility*. OECD, 2012. <http://www.oecd.org/dac/povertyreduction/50157608.pdf>.
- Himelfarb, Sheldon. “Can Big Data Stop Wars Before They Happen?” *Foreign Policy*, April 25, 2014. <https://foreignpolicy.com/2014/04/25/can-big-data-stop-wars-before-they-happen/>.
- Hirschman, Albert O. “Exit, Voice and the State.” *World Politics* 31, no. 1 (October 1978): 90–107.
- Hobson, John A. *Imperialism, a Study*. Ann Arbor: University of Michigan Press, 1965.
- Homer-Dixon, Thomas F. *Environment, Scarcity, and Violence*. Princeton: Princeton University Press, 2010. <https://books.google.com/books?hl=nl&lr=&id=B6B-3CugWGoC&oi=fnd&pg=PP2&dq=Thomas+Homer+Dixon&ots=splUepuapj&sig=uZyyjVxsgxTqe8nHYsZbxgFqJx8>.
- Huntington, Samuel P. *The Third Wave: Democratization in the Late Twentieth Century*. 1. paperback print. The Julian J. Rothbaum Distinguished Lecture Series 4. Norman: Univ. of Oklahoma Press, 1993.
- IDEO, ed. *The Field Guide to Human-Centered Design: Design Kit*. 1st. ed. San Francisco, Calif: IDEO, 2015.
- Ignatius, Adi. “Design as Strategy.” *Harvard Business Review* 93, no. 9 (September 2015): 12–12.
- IMF. “IMF Data - Financial Access Survey,” 2015. <http://data.imf.org/?sk=E5DCAB7E-A5CA-4892-A6EA-598B5463A34C>.

- Industrial Workers of the World. “Preamble, Constitution, & General Bylaws of the Industrial Workers of the World.” IWW, amended January 1, 2015. <http://www.iww.org/PDF/Constitutions/CurrentIWWConstitution.pdf>.
- Inglehart, Ronald F., Bi Puranen, and Christian Welzel. “Declining Willingness to Fight for One’s Country: The Individual-Level Basis of the Long Peace.” *Journal of Peace Research* 52, no. 4 (July 1, 2015): 418–34.
- Instrell, Rick. “Barriers and Thresholds in Learning Media Studies: Part 3,” Accompanying Visuals, *Media Education Journal*, 57 (Summer 2015). <http://ames.scot/resources/pdf/visualizations.pdf>.
- International Human Rights and Conflict Resolution Clinic. “Living Under Drones: Death, Injury and Trauma to Civilians from US Drone Practices in Pakistan.” Stanford Law School, NYU School of Law, September 2012. http://law.stanford.edu/wp-content/uploads/sites/default/files/publication/313671/doc/slspublic/Stanford_NYU_LIVING_UNDER_DRONES.pdf.
- Jugede, Olu. “Open Learning for Development: Towards Empowerment and Transformation.” December 2013. <http://oasis.col.org/handle/11599/1156>.
- Kahneman, Daniel. *Thinking, Fast and Slow*. 1st pbk. ed. New York: Farrar, Straus and Giroux, 2013.
- Kamrany, Taymor Shah. “Afghanistan 2002-2012: A Decade of Progress and Hope.” *Middle East Institute*, August 14, 2012. <http://www.mei.edu/content/afghanistan-2002-2012-decade-progress-and-hope>.
- Kant, Immanuel. *Kant: Political Writings*. Edited by Hans Siegbert Reiss. Translated by Hugh B. Nisbet. 2nd, enl. ed. Cambridge Texts in the History of Political Thought. Cambridge, UK ; New York: Cambridge University Press, 1991.

- Kaplan, Seth. “Rethinking State–building in a Failed State.” *The Washington Quarterly* 33, no. 1 (January 1, 2010): 81–97. doi:10.1080/01636600903418710.
- Karanja, Nancy, and Mary Njenga. “Chapter 10: Feeding the Cities.” In *State of the World 2011: Innovations That Nourish the Planet*. Worldwatch Institute, 2011.
- Khan, Salman. “4 Ways Technology Can Help Empower Teachers And Students.” *Co.Exist*, April 2, 2015. <http://www.fastcoexist.com/3044585/techsocial/4-ways-technology-can-help-empower-teachers-and-students>.
- Koenders, Bert. *Beleidsbrief Internationale Veiligheid – Turbulente Tijden in Een Instabiele Omgeving*. Rijksoverheid, November 14, 2014. <https://www.rijksoverheid.nl/documenten/kamerstukken/2014/11/14/beleidsbrief-internationale-veiligheid-turbulente-tijden-in-een-instabiele-omgeving>.
- Kolko, Jon. “Design Thinking Comes of Age.” *Harvard Business Review* 93, no. 9 (September 2015): 66–71.
- Kruk, Margaret E., Lynn P. Freedman, Grace A. Anglin, and Ronald J. Waldman. “Rebuilding Health Systems to Improve Health and Promote Statebuilding in Post-Conflict Countries: A Theoretical Framework and Research Agenda.” *Social Science & Medicine* 70, no. 1 (2010): 89–97.
- Lee, Laurie. “21st Century Progress in Africa: Achieving MDG 2 in Tanzania.” *Impatient Optimists*, November 4, 2013. <http://www.impatientoptimists.org/Posts/2013/10/21st-Century-Progress-in-Africa-Achieving-MDG-2-in-Tanzania#.VkXGH3arTIV>.
- Legatum Institute. “2015 Legatum Prosperity Index™,” 2015. <http://www.li.com/activities/publications/2015-legatum-prosperity-index>.
- Le, Hai Dinh, Carl Smith, and John Herbohn. “What Drives the Success of Reforestation Projects in Tropical Developing Countries? The Case of the Philippines.” *Global Environmental Change* 24 (2014): 334–48.

- Levitsky, Steven R., and Lucan A. Way. “Beyond Patronage: Violent Struggle, Ruling Party Cohesion, and Authoritarian Durability.” *Perspectives on Politics* 10, no. 4 (December 2012): 869–89.
- Lipset, Seymour Martin. “Some Social Requisites of Democracy: Economic Development and Political Legitimacy.” *The American Political Science Review* 53, no. 1 (March 1, 1959): 69–105.
- Liquid Democracy. “Industrial Workers of the World.” *Liquid Democracy*. Accessed November 30, 2015. <http://liquiddemocracy.org/view/industrial-workers-of-the-world>.
- Long, Helen. “Ten Grassroots Environmental Justice Campaigns from Around the World.” *Perma Culture News*, August 18, 2014. <http://permaculturenews.org/2014/08/18/ten-grassroots-environmental-justice-campaigns-around-world/>.
- Luttrell, Cecilia, and Sitna Quiroz. *Understanding and Operationalising Empowerment*. London: Overseas Development Institute, 2009. <http://www.odi.org.uk/resources/download/4525.pdf>.
- Lutz, Wolfgang, Jesús Crespo Cuaresma, and Mohammad Jalal Abbasi-Shavazi. “Demography, Education, and Democracy: Global Trends and the Case of Iran.” *Population and Development Review* 36, no. 2 (2010): 253–81.
- Lutz, Wolfgang, and Samir KC. “Global Human Capital: Integrating Education and Population.” *Science* 333, no. 6042 (July 29, 2011): 587–92. doi:10.1126/science.1206964.
- Marshall, Monty G., and Benjamin R. Cole. *Global Report 2014: Conflict, Governance and State Fragility*. Vienna: Center for Systemic Peace, 2014.
- McDaniel, Dawn D., Joseph E. Logan, and Janet U. Schneiderman. “Supporting Gang Violence Prevention Efforts: A Public Health Approach for Nurses.” *OJIN: The Online Journal of Issues in Nursing* 19, no. 1 (2014). <http://>

www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-19-2014/No1-Jan-2014/Gang-Violence-Prevention-Public-Health-Approach.html.

Meenakshi, J. V., Nancy L. Johnson, Victor M. Manyong, Hugo DeGroot, Josyline Javelosa, David R. Yanggen, Firdousi Naher, Carolina Gonzalez, James Garcia, and Erika Meng. "How Cost-Effective Is Biofortification in Combating Micronutrient Malnutrition? An Ex Ante Assessment." *World Development* 38, no. 1 (2010): 64–75.

Melander, Erik. "Gender Equality and Intrastate Armed Conflict." *International Studies Quarterly* 49, no. 4 (December 2005): 695–714. doi:10.1111/j.1468-2478.2005.00384.x.

Mintzberg, Henry, and James A. Waters. "Of Strategies, Deliberate and Emergent." *Strategic Management Journal* 6, no. 3 (July-September 1985): 257–72.

NBC. "Estonia First to Allow Online Voting Nationwide." *NBC News*. October 14, 2005. http://www.nbcnews.com/id/9697336/ns/technology_and_science-tech_and_gadgets/t/estonia-first-allow-online-voting-nationwide/.

NHS. *How Services Can Benefit from Online Patient Feedback*, 2014. <http://www.nhs.uk/Video/Pages/how-services-can-benefit-from-online-patient-feedback.aspx>.

Nzokirishaka, Athanase. "Burundi Agenda Setting for Sexual and Reproductive Health and Rights Knowledge Platform; Mission Report Submitted to Share-Net International." Share-Net International, June 2014. <http://www.share-netinternational.org/publication/burundi-agenda-setting-sexual-and-reproductive-health-and-rights-knowledge-platform>.

Obaid Younossi, Peter Dahl Thruelsen, Jonathon Vaccaro, Jerry M. Sollinger, and Brian Grady. *The Long March: Building an Afghan National Army*. Santa Monica, CA: RAND Corporation, 2009. http://www.rand.org/content/dam/rand/pubs/monographs/2009/RAND_MG845.pdf.

- OECD. “GeoBook: Geographical Flows to Developing Countries,” 2015. <http://stats.oecd.org/Index.aspx?DataSetCode=DACGEO>.
- OECD DAC Network on Gender Equality (GENDERNET). “Women’s Economic Empowerment.” In *Poverty Reduction and Pro-Poor Growth: The Role of Empowerment*, by OECD, 300. Paris: Organization for Economic Co-operation and Development, 2012. <http://www.oecd.org/dac/povertyreduction/50157530.pdf>.
- OLPC. “Mission.” *One Laptop per Child*, 2010. <http://one.laptop.org/about/mission>.
- Olson, Mancur. *The Logic of Collective Action Public Goods and the Theory of Groups*. Cambridge, Mass.: Harvard University Press, 1965. <http://site.ebrary.com/id/10314321>.
- Oosterveld, Willem Th., Sijbren de Jong, Stephan De Spiegeleire, Joshua Polchar, and Anne-Fleur van Veenstra. *The Fission of Power: Flex and Flux in an Age of Fragmentation*. The Hague: The Hague Centre for Strategic Studies & TNO, 2015. <http://www.hcss.nl/reports/the-fission-of-power-flex-and-flux-in-an-age-of-fragmentation/159/>.
- Orange. “In Africa, Orange Money Is Making Your Life Easier.” *Orange*, 2015. <http://www.orange.com/en/Press-and-medias/Thematic-features/2015/SFM/In-Africa-Orange-Money-is-making-your-life-easier>.
- Østby, Gudrun, and Henrik Urdal. *Education and Conflict: What the Evidence Says*. CSCW Policy Brief, 2. Oslo: PRIO, 2011.
- Oxfam. “Global Food Index,” 2015. <http://www.oxfam.org.uk/what-we-do/good-enough-to-eat>.
- Oyama, Shuichi. “Farmer-Herder Conflict, Land Rehabilitation and Conflict Prevention in the Sahel Region of West Africa.” *African Study Monographs* 50 (October 2014): 103–22.

- Paul, Christopher, Colin P. Clarke, Beth Grill, and Molly Dunigan. “Paths to Victory: Lessons from Modern Insurgencies.” Santa Monica, CA: RAND Corporation, 2013. http://www.rand.org/pubs/research_reports/RR291z1.html.
- Paulin, Alois. “Through Liquid Democracy to Sustainable Non-Bureaucratic Government.” Krems, Austria, 2014. <http://research.apaulin.com/research/2014/cedem14-ld-snbg>.
- Peschka, Mary Porter, James J. Emery, and Keith Martin. “The Role of the Private Sector in Fragile and Conflict-Affected States.” *World Development Report 2011: Background Paper*. Washington, DC: World Bank Group, 2011. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/06/06/000356161_20110606032439/Rendered/PDF/620590WP0TheoRoBOX0361475BooPUBLICo.pdf.
- Piketty, Thomas, and Arthur Goldhammer. *Capital in the Twenty-First Century*. Cambridge, MA: The Belknap Press of Harvard University Press, 2014.
- Pinker, Steven. “Now for the Good News: Things Really Are Getting Better.” *The Guardian*. September 11, 2015, sec. Opinion. <http://www.theguardian.com/commentisfree/2015/sep/11/news-isis-syria-headlines-violence-steven-pinker>.
- . *The Better Angels of Our Nature: Why Violence Has Declined*. New York: Viking, 2011.
- Pinto, Andrew D. “Peace through Health.” *University of Toronto Medical Journal* 80, no. 2 (2003): 158–60.
- Przeworski, Adam, ed. *Democracy and Development: Political Institutions and Well-Being in the World, 1950-1990*. Cambridge Studies in the Theory of Democracy. Cambridge: Cambridge University Press, 2000.
- Ramaswami, Sowmya, Iyad Sarraf, and Jon Haydon. *The Benefits of the English Language for Individuals and Societies: Quantitative Indicators from*

- Algeria, Egypt, Iraq, Jordan, Lebanon, Morocco, Tunisia and Yemen.* Euromonitor International, 2012. <https://www.teachingenglish.org.uk/article/benefits-english-language-individuals-societies-quantitative-indicators-algeria-egypt-iraq>.
- Ratner, Blake D., Kosal Mam, and Guy Halpern. “Collaborating for Resilience: Conflict, Collective Action, and Transformation on Cambodia’s Tonle Sap Lake.” *Ecology and Society* 19, no. 3 (2014): 31.
- Ravid, Gilad, Yoram M Kalman, and Sheizaf Rafaeli. “Wikibooks in Higher Education: Empowerment through Online Distributed Collaboration.” *Computers in Human Behavior* 24, no. 5 (September 2008): 1913–28. doi:10.1016/j.chb.2008.02.010.
- Reidpath, Daniel D., and Pascale Allotey. “Infant Mortality Rate as an Indicator of Population Health.” *Journal of Epidemiology and Community Health* 57, no. 5 (2003): 344–46.
- Reij, Chris, Gray Tappan, and Malinda Smale. “Re-Greening the Sahel: Farmer-Led Innovation in Burkina Faso and Niger.” In *Millions Fed: Proven Successes in Agricultural Development*, 53–58, 2009. <http://www.cabdirect.org/abstracts/20103071389.html>.
- Richmond, Oliver P. *Failed Statebuilding: Intervention, the State, and the Dynamics of Peace Formation*. New Haven: Yale University Press, 2014. <http://www.betterworldbooks.com/failed-statebuilding-id-0300175310.aspx>.
- Rosoff, Matt. “The \$3 Million iPhone: How Technology Has Raised Our Standard Of Living.” *Business Insider*, December 23, 2014. <http://uk.businessinsider.com/technology-the-great-equalizer-2014-12?r=US&IR=T>.
- Rotman, Sarah Catherine. “Bitcoin Versus Electronic Money.” CGAP Brief. Washington, D.C: World Bank Group, 2014. <http://documents>.

worldbank.org/curated/en/2014/01/19539084/bitcoin-versus-electronic-money.

Runciman, David. *The Confidence Trap: A History of Democracy in Crisis from World War I to the Present*. Princeton ; Oxford: Princeton University Press, 2013.

Russett, Bruce M., and John R. Oneal. *Triangulating Peace: Democracy, Interdependence, and International Organizations*. New York: Norton, 2001.

Samady, Saif R. “Changing Profile of Education in Afghanistan,” 2013. <http://eslus.com/articles/Ed-Afghanistan.pdf>.

Sandbox Good News. “Peace Factory.” *PeaceFactory*, 2013. <http://thepeacefactory.org/>.

———. “TED Talk/ PF on the Road.” *PeaceFactory*, 2014. <http://thepeacefactory.org/ted-talk-pf-on-the-road/>.

Schuller, Tom, Cathie Hammond, Angela Brassett-Grundy, John Preston, and John Bynner. *Benefits of Learning the Impact of Education on Health, Family Life and Social*. London: RoutledgeFalmer, 2004. <http://public.eblib.com/choice/publicfullrecord.aspx?p=181955>.

Schultz, Paul T. “Why Governments Should Invest More to Educate Girls.” *World Development* 30, no. 2 (February 2002): 207–25. doi:10.1016/S0305-750X(01)00107-3.

Sen, Amartya. “Hunger in the Contemporary World.” *London School of Economics*, Discussion Paper for the Suntory Centre, 1997. http://eprints.lse.ac.uk/6685/1/Hunger_in_the_Contemporary_World.pdf.

———. *Poverty and Famines: An Essay on Entitlement and Deprivation*. Oxford: Oxford Univ. Press, 2010.

- Sevastopulo, Demetri, and Sam Jones. "US Scraps Scheme to Create Syrian Rebel Force." *Financial Times*, October 11, 2015. <http://www.ft.com/intl/cms/s/0/76ad076e-6e75-11e5-8171-ba1968cf791a.html#axzz3pOFzz5Vt>.
- Shell. *Global Scenarios 1992–2020*. London: Shell International BV, 1992. <http://so6.static-shell.com/content/dam/shell/static/future-energy/downloads/shell-scenarios/shell-global-scenarios19922020.pdf>.
- . *Global Scenarios 1995–2020*. London: Shell International BV, 1995. <http://so2.static-shell.com/content/dam/shell/static/future-energy/downloads/shell-scenarios/shell-global-scenarios19952020.pdf>.
- . *Global Scenarios 1998–2020*. London: Shell International BV, 1998. <http://so6.static-shell.com/content/dam/shell/static/future-energy/downloads/shell-scenarios/shell-global-scenarios19982020.pdf>.
- . *Shell Energy Scenarios to 2050*. The Hague, The Netherlands: Shell International BV, 2008. <https://so0.static-shell.com/content/dam/shell/static/future-energy/downloads/shell-scenarios/shell-energy-scenarios2050.pdf>.
- Simmons, Emmy. "Harvesting Peace: Food Security, Conflict, and Cooperation." Environmental Change & Security Program Report Vol. 14, Issue 3. Washington, D.C.: Woodrow Wilson International Center for Scholars, 2013. <http://www.indiaenvironmentportal.org.in/files/file/HarvestingPeace.pdf>.
- Simon, Julian Lincoln, ed. *The State of Humanity*. Oxford, UK ; Cambridge, MA: Blackwell; Cato Institute, 1995.
- Smith, David. "Internet Use on Mobile Phones in Africa Predicted to Increase 20-Fold." *The Guardian*, June 5, 2014. <http://www.theguardian.com/world/2014/jun/05/internet-use-mobile-phones-africa-predicted-increase-20-fold>.

- Smith, Rupert, and Ilana Bet-El. “Military Capabilities for ‘War amongst the People.’” In *Adapting America’s Security Paradigm and Security Agenda*, by Roy Godson, Richard H Shultz, Querine Hanlon, and Samantha Fay Ravich. Washington, DC: National Strategy Information Center, 2011.
- Sondheimer, Rachel Milstein, and Donald P. Green. “Using Experiments to Estimate the Effects of Education on Voter Turnout.” *American Journal of Political Science* 54, no. 1 (January 1, 2010): 174–89. doi:10.1111/j.1540-5907.2009.00425.x.
- Songhai. “Songhai in Action.” *Songhai*, 2015. <http://www.songhai.org/index.php/en/songhai-en-action-en>.
- . “Songhai Training: Mission & Vission.” *Songhai*, 2015. <http://www.songhai.org/index.php/en/training-mission-vision>.
- Soto, Hernando de. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. 1. paperback ed., [updated ed.]. New York, NY: Basic Books, 2003.
- Stabilisation Unit. “About Us.” *Gov.uk*, 2015. <https://www.gov.uk/government/organisations/stabilisation-unit/about>.
- Stewart, Frances. *Horizontal Inequalities and Conflict: Understanding Group Violence in Multiethnic Societies*. Basingstoke, UK; New York: Palgrave Macmillan, 2008.
- Stiglitz, Joseph. “Scan Globally, Reinvent Locally.” presented at the First Global Development Network Conference, Bonn, Germany, December 1999. [https://www.gsb.columbia.edu/faculty/jstiglitz/new_web/download/papers/ScanGlobally-ReinventLocally\(GDN\)-WB-Bonn-Dec99.pdf](https://www.gsb.columbia.edu/faculty/jstiglitz/new_web/download/papers/ScanGlobally-ReinventLocally(GDN)-WB-Bonn-Dec99.pdf).
- Streeten, Paul, Shahid Javed Burki, Ul Haq, Norman Hicks, and Frances Stewart. *First Things First: Meeting Basic Human Needs in the Developing Countries*. New York: Oxford University Press, 1981. <http://www.popline.org/node/398777>.

- Stromseth, Jane E., David Wippman, and Rosa Brooks. *Can Might Make Rights?: Building the Rule of Law after Military Interventions*. Cambridge; New York: Cambridge University Press, 2006.
- Stuart, Elizabeth. “China Has Almost Ended Urban Poverty – a Promising Start for the SDGs.” *Overseas Development Institute*, August 19, 2015. <http://www.odi.org/comment/9803-china-urban-poverty-reduction-sdgs-inequality>.
- Sulaiman, Tosin. “Budget Private Schools: Solution to Africa’s Education Woes?” *Financial Times*, December 16, 2014. <http://blogs.ft.com/beyond-brics/2014/12/16/budget-private-schools-solution-to-africas-education-woes/>.
- . “Dollar-a-Day Schools.” *African Media Initiative*, 2015. <http://storychallenge.pageflow.io/africas-dollar-a-day-schools>.
- Sweijjs, Tim et al. *StratMon 2015: The Return of Ghosts Hoped Past? Trends in Conflict and Cooperation*. The Hague: The Hague Centre for Strategic Studies, June 2015.
- Tadjbakhsh, Shahrbanou, and Anuradha Chenoy. *Human Security: Concepts and Implications*. London: Routledge, 2007.
- Tamanaha, Brian Z. *On the Rule of Law: History, Politics, Theory*. Cambridge; New York: Cambridge University Press, 2004.
- Thaler, Richard H., and Cass R. Sunstein. *Nudge: Improving Decisions about Health, Wealth, and Happiness*. Rev. and expanded ed. New York: Penguin Books, 2009.
- The Economist. “The \$1-a-Week School.” *The Economist*, August 1, 2015. <http://www.economist.com/news/leaders/21660113-private-schools-are-booming-poor-countries-governments-should-either-help-them-or-get-out>.

- . “Why Does Kenya Lead the World in Mobile Money?” *The Economist*, May 27, 2013. <http://www.economist.com/blogs/economist-explains/2013/05/economist-explains-18>.
- The Economist Intelligence Unit. *Power to the Patient: How Mobile Is Transforming Healthcare*. The Economist Intelligence Unit, 2015. <http://www.economistinsights.com/sites/default/files/HowMobileIsTransformingHealthcare.pdf>.
- The Liaison Office. *The Dutch Engagement in Uruzgan 2006 to 2010: A TLO Socio-Political Assessment*. Kabul, Afghanistan: The Liaison Office, 2010. [http://www.tloafghanistan.org/Dutch%20Engagement%20in%20Uruzgan%20\(2006%20-%202010\).pdf](http://www.tloafghanistan.org/Dutch%20Engagement%20in%20Uruzgan%20(2006%20-%202010).pdf).
- . *Three Years Later: A Socio-political Assessment of Uruzgan Province from 2006 to 2009*. Kabul, Afghanistan: The Liaison Office, 2009. http://vorige.nrc.nl/multimedia/archive/00250/TLO_Uruzgan_Assessm_250835a.pdf.
- Theo Farrell, and Antonio Giustozzi. “The Taliban at War: Inside the Helmand Insurgency, 2004–2012.” *International Affairs* 89, no. 4 (July 12, 2013).
- Thornton, Rod. “Conclusion: The Way Forward.” *Contemporary Security Policy* 28, no. 1 (April 1, 2007): 212–19. doi:10.1080/13523260701240708.
- Tisne, Martin, and Thomas Carothers. “Why Technology Hasn’t Delivered More Democracy.” *Foreign Policy*, 2015. <http://foreignpolicy.com/2015/06/03/why-technology-hasnt-delivered-more-democracy-democratic-transition/>.
- Tweede Kamer der Staten-Generaal. “Leidraad Geïntegreerde Benadering,” 2014. <http://www.kpsrl.org/browse/download/t/leidraad-geintegreerde-benadering>.

- UN Division for the Advancement of Women. “Women 2000 and beyond.” New York: United Nations, 2005. <http://www.un.org/womenwatch/daw/public/w2000-09.05-ict-e.pdf>.
- UNDP. “Combined Gross Enrolment in Education (both Sexes) (%)” 2015. <http://hdr.undp.org/en/content/combined-gross-enrolment-education-both-sexes>.
- . “Sri Lankans Get Access to Justice through Mobile Clinics.” *UNDP*, February 20, 2015. <http://www.undp.org/content/undp/en/home/ourwork/ourstories/in-sri-lanka--providing-access-to-justice-through-mobile-clinics.html>.
- UNESCO. *Education for All 2000-2015: Achievements and Challenges*. Paris: UNESCO Publishing, 2015. <http://unesdoc.unesco.org/images/0023/002322/232205e.pdf>.
- . “The Right to Education.” *United Nations Educational, Scientific and Cultural Organization*. Accessed October 6, 2015. <http://www.unesco.org/new/en/right2education>.
- UNESCO Institute for Statistics. *Global Education Digest 2010: Comparing Education Statistics across the World*. Montreal, Quebec: UNESCO Institute for Statistics, 2010.
- United Nations. “United Nations Millennium Development Goals.” *United Nations: We Can End Poverty*, 2015. <http://www.un.org/millenniumgoals/poverty.shtml>.
- United Nations Security Council. “Security Council Says States Have Primary Responsibility for Protecting Civilians in Conflict, Reaffirms Peacekeeping Missions Need Protection Mandate, Resources (6917th Meeting),” 2013. <http://www.un.org/press/en/2013/sc10913.doc.htm>.
- University of Gothenberg. “Quality of Government Institute,” 2015. <http://qog.pol.gu.se/>.

- “US Building Projects in Afghanistan ‘a Waste.’” *Al Jazeera English*, July 30, 2012. <http://www.aljazeera.com/news/asia/2012/07/2012730181354495196.html>.
- Ushahidi. “About Ushahidi.” *Ushahidi*, 2008. <http://www.ushahidi.com/about>.
- USIP. “The PeaceTech Lab.” *United States Institute of Peace*, 2014. <http://www.usip.org/programs/projects/the-peacetech-lab>.
- US National Intelligence Council. *Global Trends 2030: Alternative Worlds*. Washington, DC: US National Intelligence Council, 2012. <https://globaltrends2030.files.wordpress.com/2012/11/global-trends-2030-november2012.pdf>.
- Villasenor, John D., Darrell M West, and Robin J Lewis. *The 2015 Brookings Financial and Digital Inclusion Project Report Measuring Progress on Financial Access and Usage*. Washington, D.C.: Center for Technology Innovation at Brookings, 2015. <http://www.brookings.edu/~media/Research/Files/Reports/2015/08/financial-digital-inclusion-2015-villasenor-west-lewis/fdip2015.pdf?la=en>.
- Vincent, Jack E., and Sean McCluskie. “Promoting Political Liberties through Quality of Life.” *International Journal on World Peace* 14, no. 2 (1997): 77–100.
- von Braun, Joachim. *The Poorest and Hungry: Assessment, Analyses, and Actions*. Washington, D.C.: International Food Policy Research Institute, 2009. <http://cdm15738.contentdm.oclc.org/utills/getfile/collection/p15738coll2/id/31334/filename/31335.pdf>
- Walls, John. “Growing ‘App’etite for Mobile Health.” *The Washington Post*, 2013. <http://www.washingtonpost.com/sf/brand-connect/wp/2013/05/07/growing-appetite-for-mobile-health/>.
- Walter, Barbara F. “Conflict Relapse and the Sustainability of Post-Conflict Peace.” *World Development Report 2011: Background Paper*, 2010. http://web.worldbank.org/archive/website01306/web/pdf/wdr%20background%20paper_walter_o.pdf.

- Wenger, Andreas, and Daniel Möckli. “Conflict Prevention: The Untapped Potential of the Business Sector.” *International Journal on World Peace* 21, no. 1 (March 2004): 89–92.
- Wiggers, Kyle. “Facebook Lite Invites the next Billion Users in Asia, Africa, Europe, and Elsewhere to Join in.” *Digital Trends*, June 4, 2015. <http://www.digitaltrends.com/mobile/facebook-lite-android-app-news/>.
- Women’s Global Empowerment Fund. “Microfinance & Empowerment Programs In Gulu.” *GlobalGiving*, 2015. <https://www.globalgiving.org/projects/empower-a-woman-with-wgef/>.
- . “Our Story.” *Women’s Global Empowerment Fund*, 2013. <http://wgefund.org/who-we-are/our-story/>.
- World Bank. “Choosing and Estimating a Poverty Line.” *World Bank*. Accessed October 1, 2015. [http://web.worldbank.org/WBSITE/EXTERNAL/ TOPICS/EXTPOVERTY/EXTPA/0,,contentMDK:20242879~menuPK: 435055~pagePK:148956~piPK:216618~theSitePK:430367,00.html](http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTPA/0,,contentMDK:20242879~menuPK:435055~pagePK:148956~piPK:216618~theSitePK:430367,00.html).
- . “Employment in Agriculture (% of Total Employment) ,” 2015. [http:// data.worldbank.org/indicator/SL.AGR.EMPL.ZS](http://data.worldbank.org/indicator/SL.AGR.EMPL.ZS).
- . “Empowerment.” *World Bank*, 2004. [http://web.worldbank.org/ WBSITE/EXTERNAL/ TOPICS/EXTPOVERTY/ EXTEMPowerment/0,,contentMDK:20272299~menuPK:546167 ~pagePK:148956~piPK:216618~theSitePK:486411~isCURL:Y,00.html](http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/ EXTEMPowerment/0,,contentMDK:20272299~menuPK:546167 ~pagePK:148956~piPK:216618~theSitePK:486411~isCURL:Y,00.html).
- . “GINI Index (World Bank Estimate) ,” 2015. [http://data.worldbank.org/ indicator/SI.POV.GINI](http://data.worldbank.org/indicator/SI.POV.GINI).
- . “Send Money Africa,” *Send Money Africa*, 2015. [http://sendmoneyafrica. worldbank.org/en](http://sendmoneyafrica.worldbank.org/en).
- . “IDA at Work: Afghanistan - Expanding Access to Quality Education.” *World Bank*, 2009. <http://web.worldbank.org/WBSITE/EXTERNAL/>

EXTABOUTUS/IDA/0,,contentMDK:21289161~menuPK:3266877
~pagePK:51236175~piPK:437394~theSitePK:73154,00.html.

———. “Internet Users (per 100 People) ,” 2015. <http://data.worldbank.org/indicator/IT.NET.USER.P2>.

———. “Mobile Cellular Subscriptions (per 100 People) ,” 2015. <http://data.worldbank.org/indicator/IT.CEL.SETS.P2>.

———. “School Enrollment, Primary and Secondary (gross), Gender Parity Index (GPI) ,” 2015. <http://data.worldbank.org/indicator/SE.ENR.PRSC.FM.ZS>.

———. *World Development Report 2011: Conflict, Security, and Development*. Washington, D.C.: World Bank, 2011.

World Bank, African Development Bank, and African Union. “The Transformational Use of Information and Communication Technologies in Africa.” eTransformAFRICA, 2012. <http://siteresources.worldbank.org/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/282822-1346223280837/Summary.pdf>.

World Health Organization. *World Health Statistics 2010*. Luxembourg: World Health Organization, 2015. http://www.who.int/gho/publications/world_health_statistics/2015/en/.

World Justice Project. “WJP Rule of Law Index 2015,” 2015. <http://worldjusticeproject.org/rule-of-law-index>.

Yale. “Environmental Performance Index,” *EPI*, 2015. <http://epi.yale.edu/>.

Zachary Davies Boren. “There Are Officially More Mobile Devices than People in the World.” *The Independent*, October 7, 2014. <http://www.independent.co.uk/life-style/gadgets-and-tech/news/there-are-officially-more-mobile-devices-than-people-in-the-world-9780518.html>.

Zakaria, Fareed. *The Future of Freedom: Illiberal Democracy at Home and Abroad*. New York: W.W. Norton & Co, 2007.

Zambrano, Raúl, Ruhya Kristine Seward, and Stephanie Ludwig. *Mobile Technologies and Empowerment: Enhancing Human Development through Participation and Innovation*. United Nations Development Programme, 2012.

Zhang, Wei, Qi Chen, Hamilton McCubbin, Laurie McCubbin, and Shirley Foley. “Predictors of Mental and Physical Health: Individual and Neighborhood Levels of Education, Social Well-Being, and Ethnicity.” *Health & Place* 17, no. 1 (2011): 238–47.

Zurayk, Rami. “Use Your Loaf: Why Food Prices Were Crucial in the Arab Spring.” *The Guardian*, July 17, 2015. <http://www.theguardian.com/lifeandstyle/2011/jul/17/bread-food-arab-spring>.

The Hague Centre for Strategic Studies

Lange Voorhout 16
2514 EE The Hague
The Netherlands

info@hcass.nl
HCSS.NL