

## 2017 Annual Security Report October 2017 Louisville Ky Campus

This book presents a comprehensive view of the state of social progress worldwide over an entire 50-year period beginning 1970. It discusses original time-series research for the period 1970-2018 as well as contemporary trends in quality of life and well-being research for the period since 2018, and provides innovative research findings into the nature, history, and status of 160 of the world's economically advanced and developing nations. Among the topics included are discussion of the worldwide development trends occurring with especially vulnerable population groups, such as children and youth, the elderly, women, persons with disabilities, sexual minorities, and economic migrants. Further, this book reports social indicator trends at four unit of analysis: individuals, nations, world regions, and for the world-as-a-whole. This book offers a comprehensive account of the status and dynamics of people participating in the small-scale fisheries (SSF) of Europe. It covers the situation of SSF in 25 coastal countries, thereby providing a portrait of almost every coastal country on the continent and analyzing the recent evolution of the sector. Small-scale fisheries are argued to be extremely important in Europe, as they provide employment and welfare, while increasing food sovereignty and maintaining communities in coastal areas. The recent worldwide focus on SSF derives from their environmental sustainability, which distinguishes many of their activities from those of large-scale fisheries. This book analyses the diversity of SSF and shows how fishing communities have sometimes developed successful governing models, demonstrating social and economic resilience. While the book emphasizes the strengths of SSF and the synergies that occur with other marine sectors, it also presents cases of failure, in which collective action and policy have actually contributed to a weakening of the sector. In this context, the book shows how governmental policies toward SSF vary considerably from country to country, in a way that is not entirely consistent with European policies.

This book challenges the traditional approach to international law by concentrating on international humanitarian law and placing the focus beyond States: it reflects on current legal, policy and practical issues that concern non-State actors in and around situations of armed conflict. With the emergence of the nation-State, international law was almost entirely focused on inter-State relations, thus excluding - for the most part - non-State entities. In the modern era, such a focus needs to be adjusted, in order to encompass the various types of functions and interactions that those entities perform throughout numerous international decision-making processes. The contributions that comprise this volume are oriented towards a broad readership audience in the academic and professional fields related to international humanitarian law, international criminal law, international human rights law and general public international law. Ezequiel Heffes, LL.M., is a Thematic

Legal Adviser in the Policy and Legal Unit at Geneva Call in Geneva, Switzerland, Marcos D. Kotlik, LL.M., is Academic Coordinator at the Observatory of International Humanitarian Law of the University of Buenos Aires, School of Law and was a Judicial Fellow at the International Court of Justice between 2018-2019, and Manuel J. Ventura, LL.M. (Hons), is an Associate Legal Officer in the Office of the Prosecutor at the International Residual Mechanism for Criminal Tribunals, an Adjunct Fellow at the School of Law at Western Sydney University, and a Director of The Peace and Justice Initiative. This powerful and empowering text offers a way forward for alleviating human suffering, presenting a realistic roadmap for enhanced global governance that can create workable solutions to mass poverty. William Felice and Diana Fuguitt emphasize the critical links between international human rights law, international political economy, and global organizations to formulate effective public policy to alleviate human suffering and protect basic human rights for all. They introduce students to the key legal and economic concepts central to economic and social human rights, including the right to education, a healthy environment, food, basic health care, housing, and clean water. They analyze the legal approaches undertaken by the United Nations and explain the key theories of international political economy (including liberalism, nationalism, and structuralism) and central economic concepts (including global public goods, economic equality, and the capabilities approach). In the last decade, a backlash against economic globalization has been fueled by a variety of politicians around the world. A resurgent nationalism is often pitted against international organizations and frameworks for global cooperation. In this new edition, Felice and Fuguitt account for how the current global political climate has affected national and global policies for the provision of public goods and the protection of human rights. They focus on practical policies and actions that both state and nonstate actors can take to uphold economic and social rights. As the first book to integrate these legal and economic approaches, it provides a practical path to action for students, academics, and policy makers alike.

The United States has been the world's dominant power for more than a century. Now many analysts believe that other countries are rising and the United States is in decline. Is the unipolar moment over? Is America finished as a superpower? In this book, Michael Beckley argues that the United States has unique advantages over other nations that, if used wisely, will allow it to remain the world's sole superpower throughout this century. We are not living in a transitional, post-Cold War era. Instead, we are in the midst of what he calls the unipolar era—a period as singular and important as any epoch in modern history. This era, Beckley contends, will endure because the US has a much larger economic and military lead over its closest rival, China, than most people think and the best prospects of any nation to amass wealth and power in the decades ahead. Deeply researched and brilliantly argued, this book covers hundreds of years of great power politics and develops new methods for measuring power and predicting the rise and fall of nations.

By documenting long-term trends in the global balance of power and explaining their implications for world politics, the book provides guidance for policymakers, businesspeople, and scholars alike.

The ways in which the rapid urbanization of the Global South is transforming food systems and food supply chains, and the food security of urban populations is an often neglected topic. This international group of authors addresses this profound transformation from a variety of different perspectives and disciplinary lenses, providing an important corrective to the dominant view that food insecurity is a rural problem requiring increases in agricultural production.

This anthology provides insights into processes of violent extremism, both locally and globally, questioning how and why it arises and what can be done about it. The book will be relevant for policy makers, post-graduates and researchers in the social and political sciences, religious studies, law, psychology, medicine and education, as well as practitioners in direct contact with targeted individuals or vulnerable groups. The anthology contributes models, analyses and practical tools helpful for first-liners who are well placed to both see and prevent incipient extremism and to rehabilitate: to aid those who have been extremists in returning to society and finding a life worth living. In addition to chapters focusing on work in Norway, Denmark and Sweden, there are contributions from North America, Africa, Australia, the Middle East and Europe.

This book explores how climate change and disaster risks threaten human security in Asia. Climate change and disaster risks have emerged as major human security challenges in the twenty-first century, and are an imminent “threat multiplier” with the potential to harm the vital core of human life and curtail people’s freedom and ability to live with dignity. Climate change and disaster risks undermine the security of individuals, communities, nations, and the world, considering the increasing trend in the frequency and magnitude of hydro-meteorological disasters and the projections on their future adverse impacts. Despite recent advances in the literature, there is still a major gap in understanding the relationship and linkages between climate change, disaster risks, and human security, particularly as gleaned from the Asian experience. Asia is the world’s most vulnerable region in terms of the quantity and magnitude of impacts from various forms of disaster. At the same time, it has developed a number of innovative responses to address those risks, offering a wealth of experience. Exploring and capitalizing on the Asian perspective, this book provides valuable resource material for students, academics, researchers, policymakers, and development practitioners working in these areas. Africa’s Development Dynamics uses lessons learned in the continent’s five regions – Central, East, North, Southern and West Africa – to develop policy recommendations and share good practices. Drawing on the most recent statistics, this analysis of development dynamics attempts to help African leaders reach the targets of the African Union’s Agenda 2063 at all levels: continental, regional, national and local.

Child soldiers remain poorly understood and inadequately protected, despite significant media attention and many policy initiatives. This Research Handbook aims to redress this troubling gap. It offers a reflective, fresh and nuanced review of the complex issue of child soldiering. The Handbook brings together scholars from six continents, diverse experiences, and a broad range of disciplines. Along the way, it unpacks the life-cycle of youth and militarization: from recruitment to demobilization to return to civilian life. The overarching aim of the Handbook is to render the invisible visible – the contributions map the unmapped and chart new directions. Challenging prevailing assumptions and conceptions, the Research Handbook on Child Soldiers focuses on adversity but also capacity: emphasising the resilience, humanity, and potentiality of children affected (rather than 'afflicted') by armed conflict.

This book provides a thought provoking outline of the solutions already in hand to the challenges now facing humanity with respect to prevalent gross social and economic inequalities, ecological thresholds and tipping points, and the ever-looming threat of climate catastrophe. The authors find these solutions in the arenas of renewable energy systems, agroecological methods, and reimagined social organization. Clarity is brought to the political economic obstacles standing in the way as well as the false solutions and alleged barriers that pervade the discourse thereby delaying and obstructing progress to the solutions advanced. The authors provoke readers to face up to these challenges by demonstrating how people, all over the world, have already begun this effort through collective action ranging from the local to the global community. Drawing on their own and many other scholar's research, they reject a reliance on the 'business as usual' approach trusting the capitalist market and existing global institutions, and provide an accessible popular account with thoroughly footnoted endnotes that contain technical details and references to the scientific literature. The Earth is Not for Sale informs its readers and provides well-documented solutions in a bid to inspire readers to think critically, and potentially become more active in society.

This book uses comparative law and comparative international law approaches to explore the role of human rights ombuds, classic-based ombuds and other types of ombuds institutions in human rights protection and promotion, their methods of application of international and domestic human rights law and their roles in strengthening good governance. It highlights the increasing importance of national human rights ombuds institutions globally and their roles as national human rights institutions (NHRIs). The 18 full and 13 short papers presented were carefully reviewed and selected from 255 submissions. There were organized in topical sections named: Image Processing, Pattern Analysis and Machine Vision; Information and Data Convergence; Disruptive Technologies for Future; E-Governance and Smart World

This first volume of a two-volume set describes general aspects, such as the historical view on the topic, the role of information distribution and preparedness of health-care systems and preparedness in emergency cases. Part two describes and discusses in detail the pathogens and toxins that are potentially used for biological attacks. As such, the book is a valuable resource for faculties engaged in molecular biology, genetic engineering, neurology, biodefense, biosafety & biosecurity, virology, and infectious disease programs, as well as professional medical research organizations.

Ethiopia has experienced impressive agricultural growth and poverty reduction, stemming in part from substantial public investments in agriculture. Yet, the agriculture sector now faces increasing land and water constraints along with other challenges to growth. Ethiopia's Agrifood System: Past Trends, Present Challenges, and Future Scenarios presents a forward-looking analysis of Ethiopia's agrifood system in the context of a rapidly changing economy. Growth in the agriculture sector remains essential to continued poverty reduction in Ethiopia and will depend on sustained investment in the agrifood system, especially private sector investment. Many of the policies for a successful agricultural and rural development strategy for Ethiopia are relevant for other African countries, as well. Ethiopia's Agrifood System should be a valuable resource for policymakers, development specialists, and others concerned with economic development in Africa south of the Sahara.

Over the last years, sophisticated policy making propositions for sustainable rural and urban development have been recorded. The smart village and smart city concepts promote a human-centric vision for a new era of technology-driven social innovation. This Special Issue offers a useful overview of the most recent developments in the frequently overlapping fields of smart city and smart village research. A variety of topics including well-being, happiness, security, open democracy, open government, smart education, smart innovation, and migration have been addressed in this Special Issue. They define the direction for future research in both domains. The organization of the relevant debate is aligned around three pillars: Section A: Sustainable Smart City and Smart Village Research: Foundations • Clustering Smart City Services: Perceptions, Expectations, and Responses • Smart City Development and Residents' Well-Being • Analysis of Social Networking Service Data for Smart Urban Planning Section B: Sustainable Smart City and Smart Village Research: Case Studies on Rethinking Security, Safety, Well-being, and Happiness • Exploring a Stakeholder-Based Urban Densification and Greening Agenda for Rotterdam Inner City—Accelerating the Transition to a Liveable Low Carbon City • The Impact of the Comprehensive Rural Village Development Program on Rural Sustainability in Korea • Analyzing the Level of Accessibility of Public Urban Green Spaces to Different Socially Vulnerable Groups of People • Consumers' Preference and Factors Influencing Offal Consumption in the Amathole District Eastern Cape, South Africa • Sustainable Tourism: A Hidden Theory of the Cinematic Image? A Theoretical and Visual Analysis of the Way of St. James • Future Development of Taiwan's Smart Cities from an Information Security Perspective • Towards a Smart and Sustainable City with the Involvement of Public Participation—The Case of Wroclaw Section C: Sustainable Smart City and Smart Village Research: Technical Issues • Detection and Localization of Water Leaks in Water Nets Supported by an ICT System with Artificial Intelligence Methods as a Way Forward for Smart Cities • A Study of the Public Landscape Order of Xinye Village • Spatio-Temporal Changes and Dependencies of Land Prices: A Case Study of the City of Olomouc • Geographical Assessment of Low-Carbon Transportation Modes: A Case Study from a Commuter University • Performance Analysis of a Polling-Based Access Control Combined with the Sleeping Schema in V2I VANETs for Smart Cities.

Since China adopted its 'open door' policy in 1978, which altered its development strategy from self-sufficiency to active participation in the world market, its goal has remained unchanged: to assist the readjustment of China's economy, to coordinate its modernization programs,

and to improve its quality of life. With the 1997 launch of the 'Going Global' policy, an outward focus regarding foreign investment was added, to circumvent trade barriers and improve the competitiveness of Chinese firms. In order to accommodate inward and outward investment, China's participation in the international investment regime has underpinned its efforts to join multilateral investment-related legal instruments and conclude international investment agreements. This collection, compiled by award-winning scholar Professor Julien Chaisse, explores the three distinct tracks of China's investment policy and strategy: bilateral agreements including those with the US and the EU; regional agreements including the Free Trade Area of the Asia Pacific; and global initiatives, spear-headed by China's presidency of the G20 and its 'Belt and Road initiative'. The book's overarching topic is whether these three tracks compete with each other, or whether they complement one another - a question of profound importance for the country's political and economic future and world investment governance.

This book explains supply chain management (SCM) using the strategy–structure–process–performance (SSPP) framework. Utilizing this well-known framework of contingency theory in the areas of strategic management and organizational design, SCM is firmly positioned among management theories. The author specifically proposes a theoretical foundation of SCM that will be relevant to such areas as operations management, logistics management, purchasing management, and marketing. Both the static and dynamic sides of SCM are reported. On the static side, supply chain strategies are divided into three patterns: efficiency-oriented, responsiveness-oriented, and the hybrid efficiency- and responsiveness-oriented pattern. For each strategy, suitable internal and external supply chain structures and processes are proposed. On the dynamic side, the big issue is to overcome performance trade-offs. Based on theories of organizational change, process change, and dynamic capabilities, the book presents a model of supply chain process change. On structure, the focus is on the role of an SCM steering department. Illustrative cases are included from such diverse industries as automobiles (Toyota and Nissan), personal computers (Fujitsu), office equipment (Ricoh), air-conditioning (Daikin), tobacco (Japan Tobacco), chemicals and cosmetics (Kao), and casual fashion (Fast Retailing and Inditex). The strategy and organization of SCM is systematically presented on the basis of the SSPP framework. In particular, the relationships among three management elements—strategy, structure, and process—can be identified in an SCM context. From many of the cases contained in this volume, there emerges an understanding of how to analyze the success and failure factors of SCM using the SSPP framework. In addition, the reader sees not only the static side SCM such as process operation but also its dynamic side such as process innovation and process improvement.

Leuprecht and McNorton offer the only systematic comparison of the world's most powerful intelligence alliance, colloquially known as the Five Eyes: the United States, the United Kingdom, Canada, Australia, and New Zealand. The book examines developments and mechanisms in holding each country's intelligence community accountable.

This comprehensive Research Handbook examines the key drivers of the arms trade, mapping the main trends in Asia, Europe, the Middle East, Africa and Latin America. It also explores the principal defence markets internationally, including the US, China, India, Russia and the UK in greater detail.

This book examines whether India is successfully integrating and adapting to the global strategic management system. It offers essential insights into the evolution of export controls for goods, which may have implications for the development of Weapons of Mass Destruction – an aspect that is especially relevant given India's robust biotechnological, chemical and nuclear industrial base. In security studies, the phrase "strategic trade management" is now slowly replacing the phrase "export control". However, for the policymaking community, export control remains popular, at least for the sake of reference. The book also describes the mechanisms India is adopting in this regard. It

demonstrates the shift in the Indian approach to strategic trade management, from an outspoken critic to a supporter. Politically, the country was initially skeptical of the idea of export controls because it was a target of such systems. The book also explains the tools, forces and incentives that moved India to adapt its policy on export controls or strategic trade management.

Increases in cereal prices can have adverse effects on poor net food buyers. This is a particular problem in Ethiopia because of frequent natural calamities – especially droughts – that lead to significant price hikes. Conversely, falling domestic prices of some cereals (especially maize), typically at harvest time, can be detrimental to producers who are net sellers. Price stabilization efforts are therefore an important consideration for Ethiopian policy makers. This paper sheds light on options for cereal price stabilization in Ethiopia drawing on experiences of other developing countries. The international experience in food price stabilization shows that while some countries have achieved success, the efforts of many others have actually destabilized market prices at great fiscal cost. We assess the extent to which price stabilization efforts in Ethiopia were effective during the major El Niño induced drought of 2015/16 and find that opportunities were missed to enhance food security and consumer welfare through permitting private sector imports in order to curtail the rise in cereal prices and to reduce fiscal costs for the government and donors.

This is not another alternative energy study. Rather, *The Prologue* identifies and charts the security-related trajectory of a relatively new global phenomenon: the ascent of alternative energy as a 21st century megatrend. Why and how have contemporary alternative energy developments evolved into a 21st century global socio-political and techno-economic megatrend? What are the security implications of this megatrend? And what does the megatrend's evolution reveal about upcoming geopolitical, energy, defense, environmental, and economic security challenges? This book endeavors to answer these questions by establishing the conceptual framework of a universally securitized world in which mutually interacting threats have expanded the needs and security considerations of today's globalized and interdependent actors, including states, international organizations, multinational corporations, and political and social movements. "Alexander Mirtchev's sweeping exploration of the changing energy landscape looks far into the future and outlines issues that will occupy scholars and policymakers for decades to come."—The Hon. Henry Kissinger, Chairman, Kissinger Associates, Former Secretary of State and National Security Advisor "With the advancements in alternative energy technology at the beginning of the 21st century, energy security thinking and planning will never be the same—Alexander Mirtchev's profoundly original book reveals these new dilemmas that will challenge policymakers in all major economies and provides for dealing with the new realities in a smart way."—The Hon. Judge William H. Webster, Chairman, Homeland Security Advisory Council, Former Director of the CIA and FBI

This book provides a comprehensive overview of the practice of sustainability through a diverse range of case studies spanning across varied fields and areas of expertise. It provides a clear indication as to the contemporary state of sustainability in a time faced by issues such as global climate change, challenges of environmental justice, economic globalization and environmental contamination. The Palgrave Handbook of Sustainability explores three broad themes: Environmental Sustainability, Social Sustainability and Economic Sustainability. The authors critically explore these themes and provide insight into their linkages with one another to demonstrate the substantial efforts currently underway to address the sustainability of our planet. This handbook is an important contribution to the best practises on sustainability, drawn from many different examples across the fields of engineering, geology, anthropology, sociology, biology, chemistry and religion.

A sobering account of a disenfranchised American working class and important policy solutions to the nation's economic

inequalities One of the country's leading scholars on economics and social policy, Isabel Sawhill addresses the enormous divisions in American society—economic, cultural, and political—and what might be done to bridge them. Widening inequality and the loss of jobs to trade and technology has left a significant portion of the American workforce disenfranchised and skeptical of governments and corporations alike. And yet both have a role to play in improving the country for all. Sawhill argues for a policy agenda based on mainstream values, such as family, education, and work. While many have lost faith in government programs designed to help them, there are still trusted institutions on both the local and federal level that can deliver better job opportunities and higher wages to those who have been left behind. At the same time, the private sector needs to reexamine how it trains and rewards employees. This book provides a clear-headed and middle-way path to a better-functioning society in which personal responsibility is honored and inclusive capitalism and more broadly shared growth are once more the norm.

This Handbook gives a wide-ranging account of the theory and practice of human rights in China, viewed against international standards, and China's international engagements around human rights. The Handbook is organised into the following sections: contested meanings; international dimensions; economic and social rights; civil and political rights; rights in/action and access to justice; political dimensions of human rights in Greater China; and new frontiers.

This book focuses on the Mediterranean/MENA migration crisis and explores the human security implications for migrants and refugees in this troubled region. Since the Arab uprisings of 2010/2011, the Middle East and North Africa region has experienced major political transformations and called into question the legitimacy of states in the region. Displaced populations continue to suffer due to the major conflicts in Syria, Iraq and elsewhere, causing fragmentation and dis-integration of communities. Contributors to this volume analyze how and why this crisis differs significantly from previous migration/refugee flows in the region, explain the historical and political antecedents of this crisis which have played a part in its shaping, and explore the relationship between human security and the protection of vulnerable individuals and groups.

This publication highlights the fast-moving technological advancement and infiltration of Artificial Intelligence into society. Concepts of evolution of society through interconnectivity are explored, together with how the fusion of human and technological interaction leading to Augmented Humanity is fast becoming more than just an endemic phase, but a cultural phase shift to digital societies. It aims to balance both the positive progressive outlooks such developments bring with potential issues that may stem from innovation of this kind, such as the invasive procedures of bio hacking or ethical connotations concerning the usage of digital twins. This publication will also give the reader a good level of understanding on fundamental cyber defence principles, interactions with Critical National Infrastructure (CNI) and the



Command, Control, Communications and Intelligence (C3I) decision-making framework. A detailed view of the cyber-attack landscape will be garnered; touching on the tactics, techniques and procedures used, red and blue teaming initiatives, cyber resilience and the protection of larger scale systems. The integration of AI, smart societies, the human-centric approach and Augmented Humanity is discernible in the exponential growth, collection and use of [big] data; concepts woven throughout the diversity of topics covered in this publication; which also discusses the privacy and transparency of data ownership, and the potential dangers of exploitation through social media. As humans are become ever more interconnected, with the prolificacy of smart wearable devices and wearable body area networks, the availability of and abundance of user data and metadata derived from individuals has grown exponentially. The notion of data ownership, privacy and situational awareness are now at the forefront in this new age.

What are public health services? Countries across Europe understand what they are, or what they should include, differently. This study describes the experiences of nine countries, detailing the ways they have opted to organize and finance public health services and train and employ their public health workforce. It covers England, France, Germany, Italy, the Netherlands, Slovenia, Sweden, Poland and the Republic of Moldova, and aims to give insights into current practice that will support decision-makers in their efforts to strengthen public health capacities and services. Each country chapter captures the historical background of public health services and the context in which they operate; sets out the main organizational structures; assesses the sources of public health financing and how it is allocated; explains the training and employment of the public health workforce; and analyzes existing frameworks for quality and performance assessment. The study reveals a wide range of experience and variation across Europe and clearly illustrates two fundamentally different approaches to public health services: integration with curative health services (as in Slovenia or Sweden) or organization and provision through a separate parallel structure (Republic of Moldova). The case studies explore the context that explain this divergence and its implications. This study is the result of close collaboration between the European Observatory on Health Systems and Policies and the WHO Regional Office for Europe, Division of Health Systems and Public Health. It accompanies two other Observatory publications Organization and financing of public health services in Europe and The role of public health organizations in addressing public health problems in Europe: the case of obesity, alcohol and antimicrobial resistance(both forthcoming).

The UN's capacity as an administrative decision-maker that affects the rights of individuals is a largely overlooked aspect of its role in international affairs. This book explores the potential for a model of administrative justice that might act as a benchmark to which global decision-makers could develop procedural standards. Applied to the UN's internal justice, refugee status determination, NGO participation and the Security Council, the global administrative justice model

is used to appraise the existing procedural protections within UN administrative decision-making.

This book explores the viability of future UK-EU internal security arrangements in light of Brexit, including their impact on the UK's and the EU's security and international standings. The authors discuss on-going negotiations and address the main political and legal concerns of possible future arrangements. As the UK prepares to leave the EU, the country is faced with having to develop new cooperation models with its neighbours to fight growing transnational security threats, as well as new strategies to maintain its leading role as an international security actor. In exploring these issues, the book aims to contribute to the general knowledge on the risks and opportunities associated with the disentanglement of the UK from European internal security cooperation; to shed more light on the debates surrounding the negotiations; and to inform the policy discussions that form the basis of proposed cooperation models and that are likely to significantly shape the future UK-EU security relationship.

Giving students a perspective on US foreign policy that is critical and connected, *US Foreign Policy, Third Edition*, is the student toolkit for navigating the ever-changing dynamics of the subject area. Using the book, students learn how to critically assess US foreign policy, as they are presented with diverse political perspectives and given the tools to come to their own conclusions. Carefully developed "major debates" and "controversies" features help students to connect theory with the real-world politics. As policy continues to change before our eyes, *US Foreign Policy, Third Edition*, brings together the world's leading experts in the field to provide the most comprehensive overview of America's ever-changing role in international politics. This new edition reflects the legacy of the Obama administration, the unfurling impacts of President Trump, and the American role in world affairs. It includes new chapters on gender, religion, East Asia, and the Liberal International Order. The following online resources for students and lecturers accompany the book: For students: Interactive map detailing U.S. foreign policy by region Multiple choice questions For lecturers: Essay and seminar questions

This book provides a comprehensive guide to the design and prototyping of wearable technology and internet of things (IoT), in addition to their various components, applications, and practical considerations. The book also offers detailed design and prototyping of vital examples of these technologies covering all practical considerations. The authors begin with an introduction and brief history of wearable tech and IoT. They then move on to describe applications of the technology in the fields of biomedicine, civil defense, education, and more. This is followed by a review of electronic and digital circuits and other critical components. Later chapters discuss product development, security and privacy concerns, and software development.

How hackers and hacking moved from being a target of the state to a key resource for the expression and deployment of state power. In this book, Luca Follis and Adam Fish examine the entanglements between hackers and the state, showing how hackers

and hacking moved from being a target of state law enforcement to a key resource for the expression and deployment of state power. Follis and Fish trace government efforts to control the power of the internet; the prosecution of hackers and leakers (including such well-known cases as Chelsea Manning, Edward Snowden, and Anonymous); and the eventual rehabilitation of hackers who undertake “ethical hacking” for the state. Analyzing the evolution of the state's relationship to hacking, they argue that state-sponsored hacking ultimately corrodes the rule of law and offers unchecked advantage to those in power, clearing the way for more authoritarian rule. Follis and Fish draw on a range of methodologies and disciplines, including ethnographic and digital archive methods from fields as diverse as anthropology, STS, and criminology. They propose a novel “boundary work” theoretical framework to articulate the relational approach to understanding state and hacker interactions advanced by the book. In the context of Russian bot armies, the rise of fake news, and algorithmic opacity, they describe the political impact of leaks and hacks, hacker partnerships with journalists in pursuit of transparency and accountability, the increasingly prominent use of extradition in hacking-related cases, and the privatization of hackers for hire.

Provides a detailed look at how war affects human life and health far beyond the battlefield Since 2010, a team of activists, social scientists, and physicians have monitored the lives lost as a result of the US wars in Iraq, Afghanistan, and Pakistan through an initiative called the Costs of War Project. Unlike most studies of war casualties, this research looks beyond lives lost in violence to consider those who have died as a result of illness, injuries, and malnutrition that would not have occurred had the war not taken place. Incredibly, the Cost of War Project has found that, of the more than 1,000,000 lives lost in the recent US wars, a minimum of 800,000 died not from violence, but from indirect causes. War and Health offers a critical examination of these indirect casualties, examining health outcomes on the battlefield and elsewhere—in hospitals, homes, and refugee camps—both during combat and in the years following, as communities struggle to live normal lives despite decimated social services, lack of access to medical care, ongoing illness and disability, malnutrition, loss of infrastructure, and increased substance abuse. The volume considers the effect of the war on both civilians and on US service members, in war zones—where healthcare systems have been destroyed by long-term conflict—and in the United States, where healthcare is highly developed. Ultimately, it draws much-needed attention to the far-reaching health consequences of the recent US wars, and argues that we cannot go to war—and remain at war—without understanding the catastrophic effect war has on the entire ecosystem of human health.

For the past couple of years, network automation techniques that include software-defined networking (SDN) and dynamic resource allocation schemes have been the subject of a significant research and development effort. Likewise, network functions virtualization (NFV) and the foreseeable usage of a set of artificial intelligence techniques to facilitate the processing of customers' requirements and the subsequent design, delivery, and operation of the corresponding services are very likely to dramatically distort the conception and the management of networking infrastructures. Some of these techniques are being specified within standards developing organizations while others remain perceived as a “buzz” without any concrete deployment plans disclosed by service providers. An in-depth understanding and analysis of these approaches should be conducted to help internet players in

making appropriate design choices that would meet their requirements as well as their customers. This is an important area of research as these new developments and approaches will inevitably reshape the internet and the future of technology. Design Innovation and Network Architecture for the Future Internet sheds light on the foreseeable yet dramatic evolution of internet design principles and offers a comprehensive overview on the recent advances in networking techniques that are likely to shape the future internet. The chapters provide a rigorous in-depth analysis of the promises, pitfalls, and other challenges raised by these initiatives, while avoiding any speculation on their expected outcomes and technical benefits. This book covers essential topics such as content delivery networks, network functions virtualization, security, cloud computing, automation, and more. This book will be useful for network engineers, software designers, computer networking professionals, practitioners, researchers, academicians, and students looking for a comprehensive research book on the latest advancements in internet design principles and networking techniques.

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