EUROPEAN SCIENCE FOUNDATION

Standing Committee for the Humanities (SCH)

The Future of Security Research in the Social Sciences and Humanities

Discussion Paper

European Science Foundation (ESF)

The European Science Foundation (ESF) was established in 1974 to provide a common platform for its Member Organisations to advance European research collaboration and explore new directions for research. It is an independent organisation, owned by 66 Member Organisations, which are research funding organisations, research performing organisations and academies from 29 countries. ESF promotes collaboration in research itself, in funding of research and in science activities at the European level. Currently ESF is reducing its research programmes while developing new activities to serve the science community, including peer review and evaluation services.

www.esf.org

Author:

Professor J. Peter Burgess
J. Peter Burgess is a philosopher, political scientist and cultural historian. He is currently Research Professor at the Peace Research Institute Oslo (PRIO) and Senior Researcher at the Institute for European Studies of the Vrije Universiteit Brussels. He is Editor of Security Dialogue, an international scholarly journal dedicated to innovation in security research, and Series Editor of the Routledge/PRIO New Security Studies collection.

Editor:

- **Dr Nina Kancewicz-Hoffman**

European Science Foundation:

- **Dr Nina Kancewicz-Hoffman**
  Senior Science Officer, Humanities and Social Sciences (to Dec 2013)
- **Ms Claire Rustat-Flinton**
  Administrative Coordinator

ISBN: 978-2-36873-011-9

Contents

Foreword

Security, the security of society and of individuals, is at the centre of concerns of contemporary society. In recent years it has, however, become clear that developing new technologies alone will not improve our security. It is now widely accepted that security depends as much on attitudes and behaviour of individuals and groups as on availability of new technological solutions. If we want to feel more secure, better protected, we need to better understand the social, cultural and psychological factors underlying human understanding of security but also of insecurity. We should also be able to analyse the factors and conditions which bring insecurity. This can only be achieved through contributions from multiple disciplines of social sciences and humanities: sociology and psychology, history and philosophy, law and theology, anthropology and linguistics, and others. The disciplines of social sciences and humanities should not only collaborate among themselves to analyse issues related to security; they should also work closely together with medical, technical and environmental sciences. This new multidisciplinary approach to security research is reflected in the work programme of *Societal Challenge 7: Secure societies – Protecting freedom and security of Europe and its citizens* of Horizon 2020.

This innovative, multidisciplinary research model is by no means easy to implement. Aware of the challenge to integrate the humanities and social sciences in considerations of security, the ESF Standing Committee for the Humanities (SCH) invited Professor J. Peter Burgess to prepare a discussion paper analysing the current state of security research and proposing new research avenues. The paper is very timely. As Professor Burgess argues, security research faces a major change and calls for new and innovative scientific thinking.

The paper is a follow-up to a Forward Look *Security: Advancing a Framework for Enquiry (SAFE)* launched by the SCH in 2007. The SAFE project identified and analysed contributions of humanities and social sciences to security research at four international workshops and concluded with a conference summarising its findings (see Annex 4.1). The project and the conference proved that the issue of the role of social sciences and humanities disciplines in security research is complex and can be approached from different angles. The present paper broadens the discussion field by taking stock of recent debates and developments and it challenges up-to-date approach to security research. It concludes with outlining new directions in humanities and social sciences based security research. It is addressed not only to research policy makers and research funders but also to researchers involved in security research. Its findings and recommendations are aimed at enriching the understanding of this research field and stimulating innovative proposals. It is the intention of the Standing Committee for the Humanities that the paper opens a discussion on new ways forward.

Professor Milena Žic Fuchs
Chair, ESF Scientific Review Group Humanities (former SCH)

Introduction

Security research in Europe is on the verge of a major change. It has long been based on a stable set of ideas about the world that rely on traditional principles, values, responsibilities, and assumptions about what is necessary to uphold these. This traditional view is now being challenged by emerging and unprecedented dangers, alongside new and innovative ways of addressing them. At the same time there are new approaches to understanding the way societies interact and coexist with danger.

Traditionally, security has been considered to be both a primary need and universal right. Article 3 of the Universal Declaration of Human Rights even asserts that "Everyone has the right to life, liberty and security of person". Yet immense changes in the nature and causes of insecurity in the last two decades have left public officials, national governments, international organisations, local and regional officials, and individuals unable to understand, communicate and above all address the new insecurities that confront modern societies. New and enhanced research is clearly needed to help analyse modern security issues and articulate the solutions to the challenges they present.

Europe is also at a crossroads over the principles, values, means and methods of security research *policy*. The seismic shift in the security landscape has not yet been met with a corresponding renewed reflection on the type of security research that should be carried out. Yet the force of events has meant that more resources than ever before are being committed to security research, but often with the wrong focus. Crucial decisions are being taken over what security research should be done, how it should be carried out, who should fund it, and who should benefit from it, without sufficient understanding of the surrounding new social, political, cultural, ethical and scientific environment. There is increasing concern at the political level over the methods and aims of European security research, reflecting a fundamental lack of consensus about what security actually is, how it should best be provided, and how security research can best contribute.

The crucial question of what it means to be secure, or to make someone or something secure, provokes a number of answers. While a diminishing few would respond that security still primarily concerns the protection of national borders against foreign invasion, an increasing number claim that it means securing infrastructure, highways and bridges, airports and train stations, oil refineries and energy production plants, etc. Yet others respond that security is about protecting institutions, such as those that provide public health, education, financial stability, etc. Others again argue that security is concerned with our economic well-being, i.e. jobs, price stability, etc. There are some who still claim that it is about our democracy or other rights and privileges, our values, etc. But whether one refers to institutions, infrastructure, the economy, finance, rights, or rule of law, the interest and value of these different components of social life, in Europe as elsewhere, ultimately comes back to the security of citizens. The common denominator for all aspects of security and its research is the society whose values, legal and economic institutions, and cultures makes these things possible in the first place.

Today, there are signs that the debates may be shifting somewhat towards a better understanding of the societal and cultural nature of security. This can be seen in the growing awareness of the importance of society in the security equation in European research, particularly in the framework

programmes funded by the European Commission. Indeed the last few framework programmes have developed a dedicated rubric for this function alone. Discussions on the shape and content of Horizon 2020 also include intensified consideration of the role of security in society and in turn society's role in assuring security. This has become visible as the first call of the research programme is published. Among the 'societal challenges' to be covered in the first Horizon 2020 announcements, 'Challenge 7' is dedicated to 'Secure societies – protecting freedom and security of European citizens', including the foci disaster resilience, the fight against crime and terrorism, border security and external security, and digital security. Yet, beyond the important insight that security and society can be studied in relation to each other, another insight has begun to emerge, namely that security itself is fundamentally societal. In short, societal matters are beginning to be seen as being at the core of security research rather than an add-on.

The aim of this report is twofold. First, it will seek to describe the premises, values, and the social, political and scientific institutions, funding arrangements, and cultural activities around which security research revolves today. This will entail both setting out the terms for *understanding* security and insecurity, and setting out the premises for actions that can be taken *in the name of* security. Second, it will seek to develop the new research challenges, based on the hypothesis that the social and human dimensions of security are both indispensable. It will develop the assertion that security has never been separable from the social, cultural, political, historical and ethical elements at its core, and that the social sciences and humanities are indispensable for understanding present and future security challenges.

The general question structuring the debate on the future of security research opposes industry-driven, technologically-oriented research and development to societal conceptions of both security and insecurity. Security is either regarded as a technological challenge or as a societal matter. In the first case, security would be assured through long-term technological research and development. In the second case, security is primarily societal, enhanced or weakened through societal mechanisms that do include technology, requiring fundamental research on the nature of insecurity in society and the societally based measures that are available to assure it. This opposition is both unnuanced and somewhat exaggerated. Unfortunately, it continues to nourish and harden a divide between research, researchers, practitioners and funding arrangements. This divide is increasingly a source of tension amongst researchers and research policy makers. More importantly, this divide contributes to closing, instead of opening, research horizons, weakening the position of the most visionary thinkers and researchers. It implicitly gives free reign to technology research that, while perhaps at the forefront of technological advances, is out of touch with the public sphere where security is provided. As a consequence, security research, perhaps more than any other field of research, is deeply contested, riddled by conflicting financial, ideological, cultural, social and political interests.

This report takes the assumed technology-society opposition as its starting point. It catalogues current security challenges in these terms (part 1), and reviews recent and on-going security research relative to these axes as well as the institutional and funding mechanisms that currently support these (part 2). It then assesses the evolution of security thinking, its concepts, values, premises, assumptions and methodologies, asking, on the basis of these, what role can be played by the social sciences and humanities in understanding and contributing to the security of European society. It goes on to explore the possibilities and limits of bringing these two poles together, on the one hand reflecting on the technological nature of societal security, and on the other the societal and cultural aspects of security technologies (part 3).

1.
Historical and Conceptual Frameworks for Security Research

There is widespread disagreement today about what security is, what threats contribute to making us insecure, and how one should best seek to enhance security through research, communication policy, legal instruments and practice on the ground (Aradau 2006, Baldwin 1995; 1997, Barkawi & Laffey 2006, Behnke 1999, Booth 2005, Büger & Stritzel 2005, Burke 2002, Buzan et al. 1998, Constantinou 2000, Corry 2010, Hentz & Bøås 2003, Jones 1999, McInnes & Lee 2006a, Nissenbaum 2005, Rasmussen 2001, Roland 2001, Rothschild 1995, Tickner 1995, Wæver 2000, Walker 1990, Williams 1998). This disagreement is apparent in both academic and public debate. There are immense differences of opinion between the various sectors and actors directly concerned with security. Social scientists who study security as a social phenomenon, engineers and technicians working to develop new security technologies, product designers within the security industry, politicians, lawmakers and ground-level security providers all have such widely divergent understandings of security and insecurity that they verge on being unrecognisable to each other. Communication and collaboration between these sectors is imperfect at best. These divergences weaken the overall impact of the security measures taken, as well as cause inefficiency and redundancy.

1.1 Changing historical contexts for security research

1.1.1 Historical conjunctures

These debates stem from rapid changes on two interrelated fronts. Both can, to a certain degree, be traced back to the late 1980s and the end of the Cold War. The Cold War (roughly 1947-1991) had a decisive impact on Western understandings of security. While the concept of security had some currency before the end of World War II, it was, in the West, thrust centre stage through the Truman Doctrine and the rise of *national security*. Throughout the Cold War, the notion of security was largely dominated by the national dimension and by the East-West arms race. When the Berlin Wall fell in 1989, the concept of security was liberated from the clutches of the Cold War paradigm. A remarkable expansion of the concept followed. As a result, since 1989 one can speak of security across a range of new *thematic* areas (health security, food security, climate security, IT security, etc.) while also beginning to identify different levels of security from individual, to community, to region and on to sub-state and supra-state entities, and finally global security. The process was punctuated by the publication in 1994 of the annual UN Human Development Report, which launched the politically influential concept of *human security*, to which we shall return.

1.1.2 The mutation of geopolitical security studies

Geopolitics remains important for national governments and regional organisations. The traditional 20th century analytical tools developed within the field of International Relations under the aegis 'security studies' will remain relevant for certain types of armed and other conflicts. However, nation-states are less and less often understood as reference points for security. The threats that seize political attention, marshal action and mobilise resources increasingly overshadow the geopolitical threats of two decades ago. Whereas US-led coalitions are active in Iraq, Afghanistan, Libya, for example, these can no longer be credibly con-

ceptualised or legitimated through discourses of geopolitical or international security of the kind that have dominated since the early 20th century. The insecurities that correlate with these and many other violent conflicts are increasingly estranged from classical (early 20th century) doctrines of 'security and defence'. These doctrines contributed to a large degree to both the invention and legitimation of the social sciences at the turn of the 20th century. The fact that 'security and defence' thinking now finds itself in decline will likely have consequences for the future of the social and human sciences. The way that security is understood is inseparable from the way that the social and human sciences understand themselves and the world they intend to study. If security is about facts, then research takes on a documentary function; when it is about understanding or interpreting facts, then the social and human sciences play their most crucial role. Today this role increasingly concerns how we are to understand the unknown. The security threats that are and continue to be evoked in the name of a range of new trans-border mobilisations and which provoke the unrest, fear and insecurity of citizens all over the world will be linked to the non-national threats, intra-national threats cast in terms of domestic terrorism, criminality, identity, culture, religion, etc., and global threats, such as global terrorism, climate change, cyber threats, pandemic, food, pollution, etc. Popular perceptions confirm this trend: Europeans support 'external action', but its focus is on civil issues, not 'international security' (European Commission 2012). By the same token, 'security studies', such as emerged from the field of International Relations in the 20th century, is perceived as declining in relevance. Indeed, it is not dealt with at all in the European Security Research Programme (cf. section 1.3.2 below).

1.1.3 Responsibility for providing security

The idea that security of society is a core aim and responsibility of the modern state has faded since the end of the Cold War (Abrahamsen & Williams 2009, Yeatman & Zókos 2010). This is in part due to the changing landscape of threats that are faced and partly to the way approaches to such threats are organised.

Unlike traditional pre-1989 security threats, contemporary threats do not respect national borders, nor do they respond to traditional state security approaches. Threats like climate change, pandemics, pollution, cybercrime and terrorism obey a new logic, one that defies security understood as a simple extension of the institutions and border-based mentality of the nation-state (Beck 2002). The question, for both scholars of security and policy makers, is no longer 'how does one keep threats out?', but rather 'how does one manage threats that are already among us?'. Security as a concept has evolved to become less a question of the threatening *other*, and

more one of society itself, about the threats that are particular to a given society, threats that vary from society to society, and from one societal sector and institution to another. In short, security has become a question of society's *resilience* to security threats. Security, far more than ever before, has become a challenge for society itself.

1.1.4 Security in European society

A state's security traditionally means that state's ability to preserve and protect itself. Security at the state level is in this sense existential. Similarly, security in society means the self-preservation of society. In contrast to traditional national security, which focuses on the preservation of the state's sovereignty, societal security focuses on the preservation of society. But what is society, and how can one best contribute to preserving it? By society we mean not only the physical gathering of individuals, but also the organic, dynamic and collective life of a community. Society is a set of values, of customs, traditions, shared experiences, languages, legal and artistic traditions, economic institutions, implying a certain shared sense of place and of history. A threat to the security of society, in Europe or elsewhere, is not a threat to buildings and bridges, railways and motorways, but rather to the intangible things that make them important. In other words, societal security extends beyond material aspects of life such as physical protection, shelter, food and subsistence to address the actual resilience of social structures, organisations and institutions large and small, formal and informal. In short, societal security concerns not only the material aspects of life but also complex moral and social considerations such as confidence, trust, belonging and loyalty. All of these contribute in an increasingly prominent way to the well-being of people in a wide range of different social settings. Thus, while ensuring societal security means protecting against crises caused by intentional and unintentional human acts, natural hazards and technical failures, this protection depends heavily on the social, cultural and even moral stance of people in the street.

1.1.5 The rise and fall of 'human security'

The concept of 'human security' has seen both a rise and a certain decline in the post-Cold War period. Most analytical and conceptual considerations of human security take the 1994 United Nations *Human Development Report* as their starting point (UNDP, 1994). Though the report demonstrably does not represent the first use of the concept in general, its impact on the global debate is undeniable (Belsky 1993, Heraclides 1993, Hjort af Ornäs 1992, Kavass & Granier 1982, Mastny & Zielonka 1991, Westing 1989). As noted above, since the fall of the Iron Curtain it has become clear that, for the developing world, maintaining 'security' entails an entirely different set of priorities from those that characterised superpower-based 'mutually assured destruction' of the Cold War.

The UNDP report takes as its point of departure the problem of the veil drawn over the rest of the globe by the Cold War focus on security at transcontinental scale. The UNDP report is both provocative, in the sense that it argues that the long-standing tradition of using the term 'security' to refer to geopolitical issues is entirely misguided, and reconciliatory in the sense that it proposes viewing human security as complementing Cold War security. According to the UNDP report, the rapid expansion of the concept of international security through the Cold War period was of little relevance for improving security of most people on the planet, and indeed had a detrimental impact on it. The report notes that, in the developing world, the important questions of security were not geopolitical, nor even related to issues of balance of military power. Instead, insecurity arose from disease, hunger, unemployment, social conflicts, crime, political repression and so forth. Questions of security and insecurity are also to be found at personal, sub-group or interpersonal levels. The well-known UNDP report slogan defines security as *freedom from fear, freedom from want*. It is strongly reiterated in Kofi Annan's *Millennium Report* (Annan 2000), where the notions of 'fear' and 'want' mark the transition from one kind of security understanding and analysis to another. The 'fear' to which the UNDP refers is widely construed as fear of physical violence or of attack by a physical aggressor, whether individual or collective. In this sense the notion of security as protection from physical violence is designed to include the traditional notion of security as understood in relation to other nation states. Thus it offers a degree of continuity with other traditional notions of security. However, the concept of absence of want tends to include various issues that are more traditionally the concern of developmental studies and politics, extending to poverty and its correlates: lack of food, water and shelter. The agenda of human development is thus reflected in its most simple terms. In this way continuity and novelty are embraced by the new concept of human security, being on the one hand tightly linked to development-based discourse (cf. for example, Clay et al. 2000, Dharam 1997, Griffin 1995, Kay 1997, Manalo 1999, Maskay 1996, Moore 1994, Nef 1995; 1999, Petitat-Côté & European

Association of Development Research and Training Institutes General conference 1998, Pratt 1999, Thomas 2000), while on the other hand also the object of attempts to give the matter a theoretical gloss (Bajpai 2000, Boyd & Boutin 2001, Fouinat 2004, Jagerskog 2004, Newman 2001, Oberleitner 2005b, Othman 2004, Owen & Slaymaker 2005, Tadjbakhsh 2005, Thomas & Tow 2002). By the late 2000s many academic treatments became increasingly critical toward traditional understandings of security and security practices (cf. for example, Ayob 2002, Erickson 2010, Eriksen et al. 2010, Ferreira & Henk 2009, MacFarlane & Khong 2006, Mythen & Walklate 2006, Newman 2010, O'Brien 2006, Shani et al. 2007, Sindjoun 2002, Tadjbakhsh & M. A Chenoy 2007, Varughese 2007, Von Tigerstrom 2007, Williams et al. 2008).

1.1.6 From prophylactic to reflexive security

The post-1989 shift in Europe from a notion of security oriented towards external threats to one of security focusing more on internal or societal matters should be mapped onto changes in approaches to addressing these threats and in turn to the underlying security research needed to achieve these. This shift, which has been described as one from prophylactic to reflexive security, is relatively dramatic. It is a shift from understanding threats as discrete, identifiable and above all external, to understanding threats as a part of society itself, less distinct, emerging not from what is different, but from the very fabric that makes society what it is (Burgess 2011: 1-19). This shift corresponds to a move from a notion of security understood as a discourse of war, with all its correlates such as sovereignty, state, territoriality, national borders, military forces and the logic of friend and enemy, to security understood as societal, as a web of power relations at the heart of society's very functioning. Threats such as foreign aggression or even invasion have little or no place in this world-view. Perceived security threats such as climate change, disease, pollution, migration, and terrorism have far greater political significance.

1.1.7 Risk, uncertainty and precaution

The shift from viewing security threats as something external to society and its functions to an internal matter has had significant consequences for political and social policy. The threats and dangers that are and should remain the central focus of social and political mechanisms for ensuring security turn away from external threats to social threats. Society, in a nutshell, is viewed as a threat to itself. Threats are part of society, in society, flowing through society. This thesis, already widely circulated in the discourse of globalisation of environmental hazards around Beck's concept of risk society, has expanded to provide an understanding of the relationship between society and the wide-ranging threats it confronts (Beck 1992; 1999; 2002; 2006; 2009, Beck et al. 2000). While Beck's notion of risk society is somewhat dated, requiring careful consideration and critique, it flags an important change in our relation to threat and danger. Its most important innovation lies in the fact that it marks a shift from understanding threat as something to be eliminated or prevented to something to be *managed*. Managing threats is far less a question of whether conceivable or imagined dangers will become a reality and much more a question of when they will become a reality and how. The function of security management is thus to deal with uncertainty, the knowledge of a constant but ill-defined possibility of catastrophe. Social engineers and managers of societal well-being must depend more on a rationale of precaution, taking decisions and acting on the basis of more or less inadequate knowledge. The aim of research in this context is not to generate more knowledge in order to make better decisions, but rather to generate knowledge about how to understand the world and make better decisions despite a deficit of knowledge (Aradau 2004, Aradau et al. 2008a, Aradau & Van Munster 2006, Aradau et al. 2008b, Campbell 2004, Ericson & Haggerty 1997, Ewald 1991, Furedi 2002; 2006, Gardner 2008, Garland 2001, Kessler 2010, Lentzos 2006, Lupton 1999a; 1999b, Meyer 2003, Murphy 2000, O'Malley 2004, Pidgeon et al. 2003, Punch 1999, Rasmussen 2001; 2006, Salter 2002, Spence 2005, Stenson & Sullivan 2001, Szerszynski 1999, Tierney 1999, Tulloch & Lupton 2003, Watson & Moran 2005). The rise of risk as the core theme of security studies has generated new challenges for understanding security in society and a new wave of analysis of crime, policing and law, whereby the legal, philosophical and ethical dilemmas of contemporary security policy and the problems associated with increasing pressure to take pre-emptive or precautionary action relate above all to the prevention of terrorism (Carmola 2010, Gould & Lazarus 2007, Schwarcz 2012a, Sheptycki 1998b, Zedner 2009).

1.2 The evolving concept of security

1.2.1 Security as technology

In their most primary sense, technological approaches to security, approaches that take security as an entirely material problem with only primarily material solutions (from weapons systems of one kind or another, detectors, alarms, barriers, to surveillance systems, databases and tracking systems, etc.) assume threats to be external to those who are threatened. From this technological perspective threats are clear and factual, empirically observable, and indeed security technology largely involves the observation and/or verification of threats. Technological perspectives take the individual, the subject, and the community or society as essentially uninvolved either in the creation of insecurity or with its reduction or elimination. Taking as their point of departure this understanding of the relationship between people and threats to personal security, technological approaches tend to envisage dealing with security threats by using tools that either render the threat innocuous, eliminate it or put in place some arrangement that keeps the threat at a distance from the people involved. Security technologies are thus instruments that only function at their most efficient when the human is bracketed off (cf. among many others, Bertsch & McIntyre 1983, Foulon & Padilla 2007, Golumbic 2008, Rappert 2007, Zhao 2003).

1.2.2 Security as governance

There has been a shift to a perception that the most significant threats to society come from within rather than without. To an increasing degree, maintaining security no longer entails keeping at bay dangers involving foreign enemies or other kinds of territorial threat. Rather, security today has become far more a question of governing the insecurity in which citizens live and which they in some sense produce (Drache 2001, Keohane 2002, Renn 2008). Security has thus become the management of the fears that surround us, a way of organising society, enterprise, private and public activities in order to remain aware that threats are never far away and that responsibility for them is more ambiguous than it once was (cf. for example, 2007, Howarth et al. 2005, Kirchner & Sperling 2007, Krahmann 2003, Lavenex 2004, Marden 2003, Rudrappan 2004, Webber 2004; 2007, Whitman 2005).

1.2.3 Security as ethics

This new social reality also entails a growing awareness of the decline of the 'us and them' dichotomy in security thinking. It in this sense also involves the advent of a kind of social consciousness and social responsibility. On the one hand, society must increasingly deal with the threats that confront it, but on the other hand, society is also becoming the origin of the threats it faces. This is clear enough in the cases of climate and health issues. But it is also increasingly apparent that the most serious kinds of

terrorism facing Europe today are planned and carried out by Europeans. Other kinds of threat are the by-products of the way of life of modern European societies: cyber threats stem from our insistence on interconnectivity, certain kinds of criminality are products of our liberal society, financial insecurity is a consequence of our wealth, health issues arise from late-industrial pollution problems, etc. This kind of security threat stems from decisions that are taken, the outcomes of which are in some sense chosen by society. In this sphere, the security of Europe is in the hands of Europeans and constitutes an ethics of security in the most fundamental sense (Berque 2005, Browning & McDonald 2011, Burgess 2002, 2007; 2008c; 2010b; 2011, Burgess & Rodin 2008, Carmola 2010, Dauphinée 2007, Gasper 2004, Hamelink 2000, Hancock 2003; 2004, Irwin 2001, Thomas 2001).

1.2.4 Security as values

A threat is not simply an unknown danger lying in wait, ready to be launched upon us in some unknown way at some unspecified time. Nor is the effect of a threat independent from those targeted by it. Threat is not determined by others alone. It is co-determined by those who perceive themselves to be under threat. This is why one can say that it is the existence of infrastructures which creates threats by virtue of creating value. Threat is implicitly linked to what has value for society. It is linked to the possibility that what is held to be valuable could disappear, be removed or destroyed. Objects of no value cannot be threatened in the same sense as those that do have value. The key to understanding threat therefore lies in understanding the systems which link human interests, values and things. Insecurity often has its origins in other contexts and in other times. It is born and grows in the hearts and minds of all of us. It stems from both past events and current vulnerabilities. It is caused both by the real, objective presence of threat and by the very efforts made by our authorities to protect us from threat. Value, threat and fear are linked. There are many different theories of value. For our purposes we wish to simply differentiate between a technical economically-based notion of value and a culturally- or socially-based notion of value (cf. for example, Burgess 2008a; 2008b, Cahill 2003, Emma 2003, Little 2002, Tusicisny 2007).

1.2.5 Societal security

This new approach to security has clear consequences for society and its functioning, for social institutions, civil society and, not least, for democracy itself. There is a long tradition of awareness, in the literature of social criticism and elsewhere, that the ebb and flow of technology shapes and forms the discourse of democracy in Western societies, that is the set of available concepts, ideas, languages, practices and even the range of outcomes available to us as a basis for understanding our security, and for shaping the tools and policies for our security. A key notion for understanding and analysing this new situation is 'societal security'. This concept, coined in the early 1990s – and not to be confused with 'social security' – describes the set of considerations necessary to permit society to retain and nurture its identity and core values, whatever these may be. The resilience a society needs to ensure its self-preservation as a society is closely linked to cultural and social traditions and other intangible binding forces such as community, religion, ethnic bonds and so forth (Bailes 2008, Boin et al. 2007, Herd & Löfgren 2001, Parthasarathi 2004, Patra 2005, Theiler 2003). These, in addition to the more conventionally understood material aspects of societal security, make up the broad and growing field of societal security studies.

1.3 Shifts in the production of security knowledge

1.3.1 Knowledge, security, society

Knowledge, and thus the research that generates it, plays a crucial and complex role in the configuration of societal security. Security has the unique property that it is changed significantly by the knowledge one has of it. A classical principle of hermeneutics states that the known object is changed and is dependent upon the fact of being known. Knowledge of security in society serves to multiply this effect. Indeed, knowledge of threats, whether potential or real, imaginary or concrete, tends to a greater or lesser extent to increase our insecurity. Security measures, in other words, have a remarkable epistemological status. Not only facts but also knowledge about facts have a significant impact on security. Accordingly research and the various forms of knowledge dissemination and mediation play an exceptionally important role. Emerging research on societal security, including an appraisal of media outlets, will gradually reinforce our knowledge in this area (c.a.s.e. collective 2007, Rueschemeyer & Skocpol 1996, Stephen 2011).

1.3.2 Shift in the organisation of security research

The organisation of security research in Europe has been significantly challenged by the new security reality and by the newly politicised reactions to it.

Indeed, the needs and aims of security research have undergone major transformation in the last two decades alone. Traditionally, the institutionalised study of security grew out of the field of international relations. It began, according to most accounts, during the inter-war period, and was associated to some degree with the politics surrounding the formation of the League of Nations. Security studies as a subject emerged from this field after World War II as a central organising concept for research on Cold War international relations. It met the research needs created by Cold War assumptions about the nature of security, the world, and world politics. This understanding and the general research principles and assumptions at the heart of international relations formed the basis for the institutionalisation of security research throughout the Cold War. This research continues to take place primarily in universities, research institutes and think tanks. It takes as its starting point the dynamics of international politics, relationships between states and the dynamics of international organisations. Security research in this paradigm essentially takes states, society, cultural bodies and sub-state entities and so forth as givens. For a variety of reasons, this paradigm was disturbed by the end of the Cold War and the rapid emergence of wide-ranging discourse on security, arguably led by the publication of the 1994 UNDP report which popularised the concept of human security. The concept of security was broadened out to a number of different levels, from the global to the individual, and across a range of empirical fields. The study of security was immediately adopted by a variety of other research fields, such as anthropology, psychology, sociology, gender studies and the like.

1.3.3 Transformations of 'internal security'

All Western states have institutional arrangements for ensuring internal security, that is security as a challenge to the citizens, institutions, and infrastructure. In most cases, these arrangements take the form of police and intelligence services which function, with some variations, within the bounds of state constitutions and the rule of law. In the United States and Europe these arrangements have evolved in response to domestic security events including terrorism, health, climate, industrial disasters and other scenarios (Bigo 2006; 2007, Friis 1998, Kruger 1994). Criminology, or the study of policing and its impact on society, has traditionally played an important role in this area (cf. below). However, the terrorist attacks of 11 September 2001 were decisive in transforming internal state security into a far more politicised, well-financed and thus influential issue. Throughout the West the centre of gravity of security as a concept, as a set of practices and as a policy platform, changed in response to new and perceived threats. A new generation of secu-

rity research also evolved to meet the informational needs of homeland security, following the formation of the Department of Homeland Security in the USA in 2002. The need for research into homeland security and adjacent fields has led to the development of a non-university security research sector which is partially privatised and funded in part through the redirection of research funding from public research institutions. This transformation has had similar consequences for the traditional distinction between warfare and policing. The distribution of tasks between policing and the armed forces constitutes a key task for nation states, and changes in this distribution have become a key indicator of globalisation (Aas 2007, Andreas & Nadelmann 2008, Foley 2009, 2013).

1.3.4 The rise of privatised security research

The rise of a new concept of security after the end of the Cold War has led to a flourishing of security needs coupled with and related to security research into a widely differentiated set of security issues (International Alert 1999, Krahmann 2003, Lilly 2000, Musah 2002). Most prominent among these issues are those connected with information technologies, the Internet, and financial information services. These have expanded quickly in recent years without having solved the problem of their dependence on the vulnerabilities of the Internet and other information platforms, with all their attendant vulnerabilities. The result has been the expansion of specialised security research, financed by private concerns and carried out through a growing sector of private security research experts. As well as benefiting private interests, this specialisation and its privatisation has also had led to the growth of a highly robust sector of privately financed security research for the benefit of private interests, but with considerable knock-on benefits for citizens and the public sector.

1.3.5 The security research divide

In parallel with the growth of privatised security research, the foundations for the Seventh Framework Programme were also being laid in Europe on the basis of the recommendations published in 2004 in the report of the *Group of Personalities in the field of Security Research*, entitled *Research for a Secure Europe*, already by its composition firmly embedded in the Directorate General for Enterprise and Industry, with technology industry representation. The Group of Personalities unsurprisingly recommended that the response to Europe's security needs should be the industrial development of technology. The Group's recommendations, followed up by the European Security Research Advisory Board's work, resulted in the comprehensive development of a new line of security research that embraced technology as the answer to security challenges and made the development of the private security industry one of its primary goals. This funding and research orientation has had important knock-on effects for European Member States, which have been encouraged to mirror the structure and organisation of the European Security Research Programme. As a result, there is little or no contact between the international relations-based security research that once dominated in Europe and the security research firmly anchored in the profit-making motives of the European security industry. The former remains academic in its primary orientation and continues to be confined to the university, research institute, and think tank sector, funded either by internal, structural research funding arrangements or by grants and other arrangements in the field of the social sciences. (It should be noted that a subsidiary field of research linked to the development of the welfare state emerged and evolved from the 1970s onwards, also supported by arrangements within the social sciences). There is at present little or no synergy or mutual understanding between the two primary fields of the security research carried out under European Union security research programmes and in some European Member states (most notably Germany) under the aegis of security. To some degree, the divide between these two conceptions of security research runs along the traditional fault line between theoretical and applied research, where theoretical research is regarded as being curiosity or researcher-driven and unfettered by financial interests, profit or societal relevance.

1.3.6 Funding divide in security research

The funding situation for European security research follows naturally from the way security has been organised institutionally. The subfield of security studies located within university social science faculties and research institutes has commonly sought funding either from free research allowances allocated to academics in university settings and/or via public grants from social science and humanities research funding arrangements in national research funding organisations, the European Union, European Science Foundation, and independent grant-making foundations. The research objectives and methods supported by these bodies are for the most part anchored in the traditional methods of the social sciences and humanities, and limited to independent themes of international

politics. The funding available for security research through the Seventh Framework Programme is considerable. The rules, procedures and expectations for acquiring such funding also differ considerably from academically-based funding arrangements. Though the final decision has not yet been made, there are grounds for believing that the upcoming framework programme, Horizon 2020, will feature a similar structure. Considerable criticism has emanated from academic quarters concerning the lack of scientific quality control in the European Security Research Programme, given that little specific scientific expertise goes into the project selection process and that project management is carried out by officials who often do not possess the relevant knowledge. This has also led to criticism from private sources and the European Parliament. Even though it is by many measures far less expensive than technologically-oriented research and, according to some, more effective with respect to the security needs of society, the funding available for research into the political sciences is considerably less than that available for industrial research and development.

1.3.7 The decline of security as a foreign policy tool

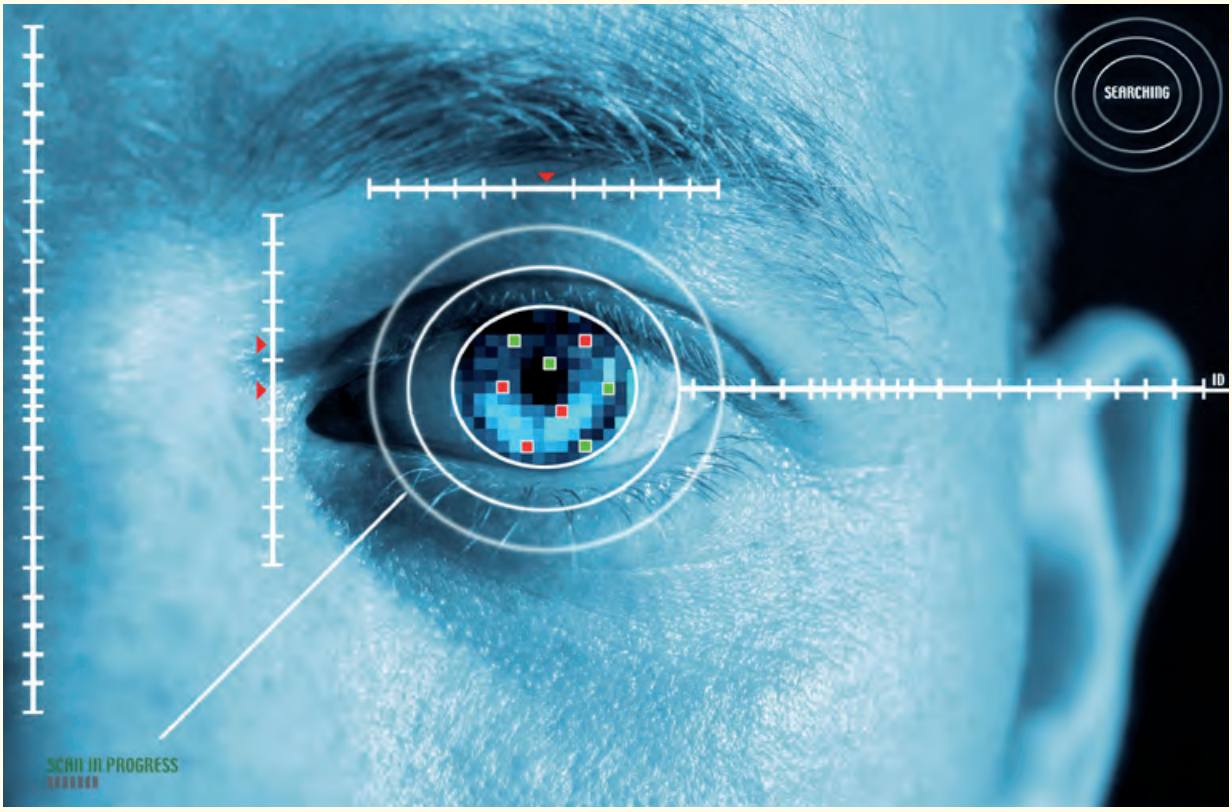
The notion of security as a conceptual foreign policy tool has changed considerably. There are several reasons for this. Firstly, external circumstances give the notion of international security a unique character for the European Union. Security as foreign policy is traditionally regarded as a matter for sovereign nation states. The evolution of EU foreign and security policy is a complex subject which cannot be addressed here. It is clear though that the nature of the European project does not prioritise traditional security research. Or putting it another way, the debate about the nature of European governance, its politics and needs is more interesting. Secondly, the shifts in the security situation outlined above have had a distinct impact in shaping security thinking in Europe. Not only are state sovereignty issues less relevant to the management of security at European level, the tasks that are important have also changed, expressing an orientation that is both more societal, more internal, more concerned with the citizen and more concerned with non-state entities. At the same time, the Lisbon Treaty's creation of the European External Action Service and High Representative for external affairs means that the foreign policy dimension of European identity is considerably more concrete, albeit without a common security identity and security policy. This development has had two direct consequences for the question of security research in Europe. On the one hand, instead of the customary state-based security operations that also form the basis for security research within the social sciences, external security under Article 42 of the Treaty of Lisbon involves more social tasks (predominantly, but not exclusively, the Petersburg tasks, which focus on civilian policing, humanitarian operations, peacekeeping and crisis management) (European Union 2007, Western European Union 1992). On the other hand, external security measures have become increasingly intertwined with internal security, particularly in the areas of migration, climate-based threats, health, cybercrime, cross-border issues and terrorism.

1.4 New conceptual frameworks for research

The most general challenge to security research based on social and human science methodologies is the wide-ranging evolution and transformation of the concepts on which they were traditionally founded. Because of this, the initial innovations that will be needed to ensure the relevance and utility of the social and human sciences are conceptual in nature. The inertia and inherent conservatism of research institutions, from funding bodies to university-based and independent research bodies and publishers, means that the default structure revolves around continuity and lack of change. The salience of research is linked directly to its precision in observation and data gathering and the subsequent analysis of that data.

1.4.1 Evolution of the knowledge base

The historical confluence that characterises the present security landscape is tightly interwoven with changes in the institutional organisation of research on security in Europe and elsewhere. The long process of institutional development that saw the birth of security studies as a subset of the field of international relations has taken new and sometimes unexpected turns. As we have indicated, both the character and pragmatic function of geopolitics have been changed significantly by evolution of perceived geopolitical threats, policing technologies, military practices and everyday security (Aradau & Munster 2009, Browning & McDonald 2011, Burgess 2010a, 2010c, Buzan & Hansen 2009, Collins 2010, Wæver 2010, Williams & Dawson 2008). However, the security landscape has also been significantly shaped by the evolution of science, by endeavours to apply scientific methods to the prevention of danger, in forms as diverse as



the intensification of crime-fighting through biometric technologies and methods in the post-Cold War period, starting with fingerprinting and wiretapping, to the digitalisation of warfare, including automated weapons, laying of mines and mapping. Security has in this sense always been, and will increasingly be, linked to the theory of knowledge, to means and methods for knowing with certainty what the threat is and, in tandem, for knowing how to deal with it. The academic world has responded, albeit slowly, to rapidly changing forms of security knowledge, with the political sciences gradually relinquishing their monopoly of security studies and security as a field of enquiry, leaving its mark across various spheres of study, both traditional and new, within the social sciences and humanities.

1.4.2 New security concepts

New security concepts can be understood as ways of coupling ideas or principles of security with the empirical basis that supports them. They refer to the combinatorial possibilities for linking the perspectives from which security and insecurity are experienced and rendered operational with new empirical objects or areas of study. The basis of any comprehensive review of security research needs to work from this level, exploring the way in which security concepts, both old and new, make sense of the world, mobilise worldwide research and also legitimate politicised action throughout the world. This will be key for the transition to new forms of research and new types of research funding geared towards understanding security by making sense of how it is conceptualised and linked to actors, institutions, and associated ideas, as well as understanding how they participate in conflicts between ideas and the world, between high politics and field work.

1.4.3 New security subjects

New security subjects concern a range of subjective positions relative to the empirical world of security and insecurity. Evoking the subject of security encompasses not only the perspective of the subject, but also its value premises, interests, political values and other discourses that contribute to its validity. The new security subjects set out in this section attempt to account for changes in the viewpoints from which security is assessed and discussed. To this end we shall focus on such themes as biopolitics, gender, identity, ethics, financial security, law and security.

1.4.4 New security objects

Further research will be required to adapt to the emergence of new security objects and explore the character of emerging security threats to things that were not traditionally considered to be at risk. Foremost among these is undoubtedly the expansion of technology and its products, the opportunities

it holds out and its attendant drawbacks and dangers. Security technology has already been proven a double-edged sword, alleviating threats to security but also exacerbating security concerns or even creating new ones. The report will explore and draw conclusions on the general hypothesis that security technologies presuppose social and human foundations that they do not entirely understand or control. Changes in society will also generate new objects of security, new empirical challenges and exposure to new experiences. Despite the awareness that security challenges come from outside any given situation, the social fabric in which they function and make themselves felt are distinct drivers of changes in security and insecurity. Future research on security will need to understand not only changes in European societies, but also changes in the way that the social interrelates with security.

1.4.5 New security practices

The future of security research will intensify our encounters with new security practices and with changes in how security governs a set of actions and behaviour relevant for security research. These will include such practices as surveillance, urban policing, privatisation, migration and new forms of mobile crime. Chapter 2 will examine how security research itself is currently done. It will reconstruct the traditional continuity within the political science approaches that initially formulated and then promoted and fostered the notion of security from 1947 to 1989. It will chronicle the way in which the concept and study of security evolved until the end of the Cold War, after when it changed significantly. The study will outline the emergence of new human and social sciences and their contribution to the study of security through sociology, development studies, anthropology, philosophy, law and so forth. Then, in the first stage of the foresight exercise, the report will address the technology-driven research that can be observed today in order to arrive at an understanding of the structure of future security research and the premises on which it will be based. Future security will remain highly political, and yet the make-up of security politics, the relationship between social policies, national and European politics is likely to be substantially different from today. Future security research will need to address changes in the political nature of societies and of human interactions, while also considering the politics of technology, as all these factors will determine how security is understood. Ensuring security in Europe and elsewhere also involves a complex set of economic relations at both micro and macro levels. Understanding economic drivers will in all likelihood continue to be central to understanding security in future research. Any such future research will have to bear in mind the social economics of security as well as the traditional costs of technological approaches to security.

2. European Security Research Today

2.1 Institutional arrangements for security research in Europe

2.1.1 Nationally administrated security research

A survey published by the Swedish funding agency VINNOVA examined current security research in a core group of European member states (namely Austria, the Czech Republic, Estonia, Finland, France, Germany, Poland, the Netherlands, and the United Kingdom) with the objectives of understanding (1) how research policy is structured and implemented at national level and (2) how the European Security Research Programme of the EU Seventh Framework Programme is implemented and what effects it has (Kirsten 2004). The survey clearly confirms the dominance of the technological, defence-oriented approach in European security research programmes, though institutionally there is some diversity among groups using the arrangement, some being government-sponsored while others are organised at the level of independent research institutes. Security research at national level is often organised and structured according to policy needs and orientations and often functions as an extension of interior or foreign ministries. The organisation of funding for security research often takes the form of ministry sub-structures, political agendas and institutional dynamics. The survey does not cast new light on the role of the European security industry.

In contrast to the fundamental principle of the European Framework Programme, which explicitly prohibits the use of public European research funding for military ends, the civil-military opposition in European member states is much less clear, and the blurring of the boundary between the civil and the military appears far less problematic at member state level than at European level. While both the European Security Research Advisory Board (2003-2004) and the European Security Research and Innovation Forum (2007-2009) recommended that civil security should remain a basic principle of European security research, in the basic principles of Horizon 2020 it figures as a relatively autonomous research area. This will in all likelihood support a more militarised understanding of security which most European and indeed global thinking has left behind (Liem et al. 2011: 22-3). A comparison of German, Dutch, Russian and Slovakian national security research programmes yields similar findings (Breant & Karock 2011).

2.1.2 Ideological background to the European Security Research Programme

Security Research within the Seventh Framework Programme (2007-2013) is based on a political principle that effective security management in Europe will henceforth depend on the establishment and advancement of a robust security defence procurement market. This principle has its origins in a long-standing conviction among certain member states that European participation in the enhancement of global security will depend on strengthening the ability of the European security industry to invest competitively in the global defence procurement market (EC 2011). This long-standing position led to the extraordinary 2007 formal decision to place security research not in DG RTD, but in the Directorate General for Enterprise and Industry. By all measures, this one institutional decision has had considerable consequences for the way that security is conceptualised, researched and implemented. As a result of this decision, the notion of public-private dialogue quickly became the central tenet of secu-

rity research in Europe (Jeandesboz & Ragazzi 2010). This distinct orientation structured the make-up and activities of the various consultation activities, in particular the *Group of Personalities on Security Research* (2003-2004), the *Security Research and Advisory Board* (2005-2006), and the *European Security Research and Innovation Forum* (2008-2010). The work of these expert groups, primarily made up of highly connected actors in a small number of very large industrial security companies based in a very small number of European Union member states, formed and promoted the public-private research principles that have had an enormous influence on how security in Europe is understood and practiced today (Hayes 2006; 2010, Jeandesboz & Ragazzi 2010). These principles of privatisation, industrialisation and commercialisation form the foundations for the *Preparatory Action on Security Research* (PASR) and the subsequent European Security Research Programme under the Seventh Framework Programme. The PASR provided total funding of €44.5 million for 39 projects (Hayes 2006). A third of these projects were coordinated by a very small number of defence and security companies, most of which had been directly involved in the three consultation activities that led to the formation of PASR, and a similar pattern can be observed among subsequent applications for funding under the Framework Programme security research section. Given the background, ideological foundations and financial interests of the parties that have set the premises for European security research, benefited from procurement and determined the conceptual shape and industrial orientation of its implementation, it comes as no surprise that its focus is on developing industrial-technological approaches to security revolving around material preventive measures, with little interest in security as a social, cultural, political, legal or ethical matter (Jeandesboz & Ragazzi 2010: 12).

2.1.3 NATO's security research programmes

An overview of on-going and recent research funded by and carried out under the auspices of the NATO Emerging Security Challenges Division's Science for Peace programme shows that both traditional approaches to security and societal or human-oriented ones are being applied in NATO-supported security research. The Science for Peace programme, which has operated since 1997, funded 51 projects in its 2010 round, most of which have direct or indirect relevance for security (SPP 2010). The programme is organised into three sub-groups, namely 'Defence against terrorist threats', 'Defence against chemical, biological, radiological and nuclear (CBRN) agents' and 'Other threats to security'. The projects that generate research on terrorist threats focus on such matters as explosives detection, cyber security and human factors in terrorism, for instance modes and means of radicalisation. The CBRN projects are oriented primarily around problems of detection, the challenges of decontamination in the aftermath of a CBRN attack and approaches to risk management with the aim of minimising subsequent damage to society. By other threats to security, the NATO Science for Peace programme means energy security, advanced technology for security (comprising the development of x-ray generators and nanotech-

nology or new materials and their applications), a variety of approaches to civilian protection relating to water management and disposal of pesticides, and natural disasters, including earthquakes, landslides, floods, sinkholes, etc. One group of projects covers regional questions of security. Of particular interest, the portfolio includes projects on the human and societal dynamics of security ('New challenges for global security, risk studies, science policy'), addressing issues such as post-catastrophe management, water management, management of epidemics and post-catastrophe food poisoning.

2.2 Approaches to security research

2.2.1 Current technological approaches to security research

The bulk of the security research carried out in the world today is done by private enterprise for commercial profit. Security, for the reasons outlined above, is widely viewed as a commercial product, available in a variety of different forms, with different specifications, for different customers and with varying price ranges. Thus the market for security products and services plays a greater role than anything else in shaping the concept of security. This market is fragmented, involving various types of security product, many of which do not complement each other or even address the same type of perceived threat. There are five main areas of research into technological approaches to security: surveillance, biometrics and identification, information exchange, critical infrastructure protection and crisis management. Accordingly, a primary aim of the European Commission's European Security Research Programme is the harmonisation of related but increasingly dissimilar security services in order to reduce redundancy and improve competitiveness in markets outside Europe (ECORYS 2009). In the following sections we outline some of the principal strands of security research.

IT security

The large and growing literature on security-related information technology spans a number of fields, from corporate management to software programming. Security is viewed as an essential element of these different levels. It is most often regarded as a set of protective measures, as techniques and methods for preventing attacks that could harm a technical or software system and impair its functioning, thus causing extra expense to the owner or operator. IT security chiefly relates to malevolent threats, though publications in this area also address accidental threats to the well-being of any given system. IT security generally involves a set of organisational methodologies, as well as studies of best practices for setting up and integrating IT systems and improving their robustness (Alberts & Dorofee 2002, Cassim 2009, Gritzalis 2003, Hayden 2005, Lipman & Lipman 2006, Tiller 2011, Vielhauer 2005). This also concerns various branches of network theory and decision making theory, including research on technology-intensive security challenges related to communication and information dissemination, both at the level of material components of systems and of social interaction with the systems. Issues such as corporate risk analysis and risk planning in organisations are often linked to these technological questions (Neumann 1995, Whittaker & Thompson 2003). The IT literature also covers the more everyday, low-intensity, threats to information systems and people's access to them posed by hacking and security breaches (Schneier 1996). Social and cultural issues are occasionally addressed in passing in this highly technological approach to the politics of cyber security (Denning 1998, Garfinkel & Spafford 1996, Schneier 2000). Treatments of corporate espionage also open the door to more politically or socially oriented analysis (Winkler 1997).

CBRN security

Research on chemical, biological, radiological and nuclear security has been prioritised within the European Security Research Programme, just as the methods and principles driving this research have prioritised technological systems for detecting chemicals and equipment that could be combined or used to create an explosive device with the potential for mass destruction. Based on the assumption that potential terrorists and organised criminals are currently, or will in the near future, be gathering the resources needed to build and deploy CBRN weapons, technological approaches aim to develop instruments that can detect, measure and track actual and potential bombs of this kind. A range of CBRN detection projects are being funded under the ESRP.[1] They all share the general aim of reducing the potential danger of CBRN violence or attack. More importantly, they all share the con-

1. Road-mapping study of CBRNE demonstrator (CBRNEmap); Cooperation across Europe for Cd(Zn)Te based security (COCAE); Development of a common sensor platform for the detection of IED 'bomb factors' (CommonSense); Location of threat substances in urban society (LOTUS); Precursors or explosives: Additives to inhibit their use including liquids (PREVAIL); Rapid deployable gas generator assisted inflatable mobile security kits for ballistic protection of European citizens against crime and terrorist attacks (RAPTOR); Two-stage rapid biological surveillance and alarm system for airborne threats (TWOBIAS).

viction that this aim can be met by tracking the objects and materials necessary to make the devices. CBRN security is thus object-based security, with little or no attention given to the lives and intentions of those who might wish to use them. The same approach is taken towards the malevolent use of more conventional explosive weapons.[2]

Biosecurity, pharmaceutical security and control

The counterfeiting of bona fide pharmaceutical products has increasingly plagued the pharmaceutical industry, reducing profits and productivity and endangering the health of consumers. The latest security research products have approached this challenge by developing a variety of technological drug-detector solutions.[3] Similar research initiatives seek to address the problem of drug trafficking and drug abuse as a technological one, developing sensor systems to detect illicit drugs, both in baggage in transit and on people. Applications to customs and border-entry control are clear.[4]

Knowledge and data exchange and storage

The treatment and storage of data has long been a central component in the array of tools deployed to support democratic governance of European society. Over the past decade data analysis has assumed a central role in policing, crime-fighting and counter-terrorism. This is particularly evident in the complex politics of pooling and harmonising databases nominally designed for governing citizens (cf. Bigo 1996, Goede & Amoore 2008). Migration and gradually increasing pressure on European asylum systems have in turn created additional challenges for the security professionals who use information as their primary tools.[5] Others develop information and data-mining algorithms that move people out of the police work in the field of identification, and tracking.[6] Recent projects address and contribute directly to this linkage through the control and tracking of migrants.[7]

Surveillance

A range of projects funded under the European Security Research Programme are concerned with developing new systems for identifying and track-

2. Optical technologies for identification of explosives (OPTIX) or Precursors of explosives: Additives to inhibit their use including liquids (PREVAIL).
3. Counterfeit pharmaceuticals interception using radiofrequency methods in real time (CONPHIRMER).
4. Drugs and precursor sensing by complement low cast multiple techniques (CUSTOM); Rapid screening and identification of illegal drugs by IR absorption spectroscopy and gas chromatography. (DIRAC); Two stage rapid biological surveillance and alarm system of airborne threats (TWOBIAS)

5. Cf. Collaborative information, acquisition, processing, exploitation and reporting for the prevention of organised crime (CAPER).
6. Optical technologies for identification of explosives (OPTIX); Strategic crime and immigration information management system (SCIIMS).
7. Strategic crime and immigration information management system (SCIIMS).

ing individual citizens, and for using the data thus obtained as an aid for policing and counter-terrorism work.[8] This includes behaviour detection systems to assist in anti-terrorism policing and crime-fighting.[9] Here, a broad range of surveillance is carried out in collaboration with member state border control agencies and FRONTEX.[10] New detection technologies for domestic, corporate and personal security also focus on developing purely technological detection instruments which do not rely on human perception and judgment.[11] Similar projects are directed at the surveillance of public spaces through purely technological observation and tracking tools.[12] Several research projects approach money smuggling and laundering as a problem of scanning and detection. Applications will have relevance both for policing counterfeiters as well as protecting commerce from laundered or counterfeit money.[13] The identification of both suspect criminals and their victims is addressed through the development of new and innovative types of analytical device that can read and identify forensic information relevant for both criminal and non-criminal investigations.[14]

Critical infrastructure security

Urban development projects and infrastructure are regarded as a primary area of vulnerability to terrorist threats. Newly funded approaches to this threat are technological in nature, building on the development of databases and systems-of-systems for the harmonisation of research needs.[15] Similar emphasis is put on the technological instruments and systems designed to protect cyber or other IT infrastructure.[16] A variety of technology projects seek to lay the foundations for improved crisis management in terms of infrastructure security.

2.2.2 Security research in the social sciences

The most general difference between technologically oriented security research centred in the industrial sector and academically-based social and human scientific research lies in differing perceptions about the purpose of the research. Whereas the goal of technologically oriented security research is to contribute to short-term or long-term product development which addresses the needs of a dynamic market, security research in the social and human sciences is far more often regarded either as an end in itself, where the generation of knowledge is the primary aim regardless of application, or as a matter of social importance. This general distinction between technology and SSH research is not absolute, and many hybrid and cross-over research models can be found, including collaborative ones.

Political science

Among the social and human sciences the most natural home for the concept of security is political science. This field embraces various subfields and a very wide range of methodologies, which themselves correspond to a variety of scientific aims. Security is broadly present as a central theme in all of these. Comparative politics, one of the main pillars of political science, analyses political structures and institutions, including their security arrangements and measures (cf. for example, Chilcote 1994, Cowhey & McCubbins 1995, Cox 1994, Franzosi 1995, Gavrilis 2008, Goldman 2009, Janoski & Hicks 1994, Kahl 2008, Katzenstein et al. 1999, Roller & Bendix 2005, Thakur 1995). International relations and IR theory address an array of security issues from the theoretical to the purely empirical (wide-ranging examples include Buzan 1987, Decker & United States. General Accounting Office. 2001, Gries et al. 2012, Lawson 2003, Reichard 2006, Schoenbaum 2006, Seiple & Hoover 2004, Tickner 1992). Public administration and institutionalism studies play a significant role in understanding security in political science (for example, Baker & Little 2006, Banks & Raven-Hansen 1994, Cox 2008, Geisler & De Sousa 2001, Jreisat 2002, Lewis 2005). Finally, public law is often viewed as a core dimension of security studies within political science. This field covers a range of topics from procedural issues surrounding the United Nations to national legal issues and matters of international law (cf. among others, Abeyratne 2010, Alperen

8. Intelligent information system supporting observation, searching and detection for security of citizens in urban environment (INDECT).
9. Automatic detection of abnormal behaviour and threats in crowded spaces (ADABTS).
10. Underwater coastal sea surveyor (UNCOSS).
11. Novel intruder detection and authentication optical sensing technology (iDetectT4ALL).
12. Multi-modal situation assessment and analytics platform (MOSAIC); Underwater coastal sea surveyor (UNCOSS)
13. Hybrid enhanced money laundering intelligence, investigation, incrimination and alerts (HEMOLIA).
14. Novel intruder detection and authentication optical sensing technology (iDetcT 4ALL) and The development and validation of a rapid millifluidic DNA analysis system for forensic casework samples MiDAS are examples of this movement.
15. Demo for mass transportation security: road-mapping study (DEMASST); Designing safer urban spaces (DESURBS); Emergency management in large infrastructures (EMILI); European risk assessment and contingency planning methodologies for interconnected networks (EURACOM); Integrated system for transport infrastructure surveillance and monitoring by electromagnetic sensing (ISTIMES).
16. Strategic Crime and Immigration Information Management System (SCIIMS) and EMILI / Emergency management in large infrastructures.

2011, Basaran 2010, Carmola 2010, Connors et al. 2007, Dauvergne 2007, Matwyshyn & ebrary Inc. 2009, Mukasey 2008, Schneier 2007, Schoenfeld 2010, Sparks et al. 2006).

Sociology

Security as a social concept has always accompanied traditional sociology, ever since its origins in the late 19th century in the work of Marx, Comte, Durkheim and many others. The common ground for the vastly differing perspectives and methodologies that characterise the evolution of sociology is the commitment to applying scientific methods to the study of social relations. Security in a broad sense is ever present in this endeavour, predominantly through various incarnations of social security, understood as one form or another of social insurance linked to national social policy. Institutionally it can be traced back to the founding of the International Labour Organisation in Brussels in 1927, and it continues to inspire vast amounts of academic research (Falk et al. 2003, Isham et al. 2002, Johnston & Kay 2007, Last et al. 2004, Marden 2003, Marshall 2001, Muffels 2002, Standing 2009). Sociological issues relating to security policy, for example in the European Union, have also played a major role in the expansion and development of the concept of security in the field of sociology (Beck 2006; 2009, Carter et al. 2008, Cassano et al. 2010, Evrigenis 2008, Farrar 2008, Favell 2009, Hassenteufel 2008, Herzog 2008, Kriesi 2008, Leander 2010, Malešević 2008, Nardulli 2008, Nash & Scott 2008, Prechel 2008, Sarat 2008, Spread 2008). As with political science, a subfield of sociology is concerned with questions of law enforcement and justice (cf. for example, Berki 1986, Bigo 2007, Bigo et al. 2008, Cunningham et al. 1985, de Hert 2005, Johnston & Shearing 2003, Kessler 2009, Reyes 2007, Sarat 2008). Sociological interest in security also covers demographics and electoral politics (such as, for example, Caplan 2007, Prechel 2008, Simon et al. 2008). It also embraces a broader historical critique of European social models (such as, Amineh et al. 2005, Carter et al. 2008, Gill & Sahni 2001, Spohn 2010, Zuiderhoek 2008) and the question of state security as a socially determined issue (in works such as, Enloe 1980, Feaver et al. 2001, Käkönen et al. 2005, Rosen 1996, Rueschemeyer & Skocpol 1996, Sarkesian et al. 1995, Sutton et al. 2008, Ulmer et al. 2000). Finally, newer sociological approaches include the challenge of urbanism, security and society (such as, Newman & Jennings 2008, O'Neill & Thomas 2011, Oblet 2008, Rieker & Ali 2008, Shapiro 2010).

International political sociology

Recent years have seen the growth of several schools of thought, the founding of a prominent academic journal, *International Political Sociology* (Bigo & Walker 2008) and the expansion of an influential body of academic literature in what is known as political sociology (Nash & Scott 2008). Drawing on a variety of theoretical traditions, political sociology studies the social relations behind and associated with political processes and governance. In general terms, political sociology focuses on how power plays out across society, social groups and social institutions. It analyses the complexity of social networks and movements that are neither aligned with states nor subject to traditional state-based mechanisms of power (cf. Bartelson 2009, Della Porta 2009, Georgakakis & Weisbein 2010, Walder 2009). More concretely, it focuses on power relations, culture, politics of knowledge and social interaction. It has spawned a wide-ranging academic literature covering questions of governance (cf. Dean 1999, Fassin 2011, Larner et al. 2004, Smandych 1999) and insecurity studies (cf. Albrecht 2002, Bigo 2000; 2002a; 2002b; 2008, Burgess 2008b, Choucri 2002, Eadie 2005, Huysmans 2006; 2008, Sheptycki 1998a, Stern 2006, Walker 2006). Contemporary political sociology takes these questions seriously, but it is concerned with the interplay of power and politics across societies, which includes, but is not restricted to, relations between the state and society (Philo 2012). In part, this is a product of the growing complexity of social relations, the impact of social movements and the relative weakening of the state as a result of globalisation.

Economics

The concept of securitisation, while relatively new and innovative in the field of international relations, has been commonplace in the financial sector for decades. Financial securitisation is the practice of pooling different kinds of debt and then selling that debt to various investors as 'security'. Securitisation in this sense can involve a wide range of functions and strategies. Its primary aim is to diversify, balance or otherwise structure debt for various purposes (cf. Bhuyan 2011, Ferguson 2010, Fuchita et al. 2009, Fuchita & Litan 2007, Gregoriou et al. 2007, Harvey 2010, Phillips 2008, Retsinas & Belsky 2011, Schwarcz 2012b). Others adopt more historical or intellectual approaches to the subject of securitisation (Bhuyan 2011, Ferguson 2010, Fuchita et al. 2009, Fuchita & Litan 2007, Gregoriou et al. 2007, Harvey 2010, Phillips 2008, Retsinas & Belsky 2011). A major portion of the financial securitisation literature deals with contract law and litigation. The

key issue here is the legality of combining different types of debt with differing legal status (Schwarcz 2012a). Naturally enough, quantitative approaches to the meaning and impact of this understanding of securitisation abound, and links with other sectors of finance and investment economics are common (cf. for example, Coval et al. 2009, Keys et al. 2010, Loutskina & Strahan 2009). Finally, the sub-prime crisis over the past ten years has also spawned a body of literature featuring both critical and non-critical analysis (cf. for example, Ashcraft & Schuerman 2008, Fligstein & Goldstein 2010, Tavakoli 2008).

Geography

Much recent research in the field of human geography, revolving around questions common to the study of human security (Liotta 2003, Najam 2003, Redclift & Page 2002, Sparke 2006) in terms of the characteristics and contours of earth, inevitably leads us back to the local or regional level. Transnational security challenges are often addressed in a more sophisticated manner by applying geographical methods (for example, Bohle 1993, Brons 2001, International Boundaries Research Unit. 1993, Lele et al. 2009, Mojtahed-Zadeh 1999, Porter 2006, Weiner & Russell 2001), and new computer-based geolocation systems of reference and correlation have opened up new lines of enquiry for quantitative security research.

Anthropology

A distinct and important body of academic literature has grown up which has adopted a critical approach to security studies, while other anthropological traditions view the security-development nexus from an anthropological angle (Amineh et al. 2005, Eriksen et al. 2010, Goldstein 2010, Ocholla-Ayayo et al. 1985, Pottier 1999). Religious perspectives on security are often integrated into anthropological methodologies tailored for security (Salemink 2005). Police and military security is often addressed using anthropological perspectives (Norwitz & Naval War College (U.S.) 2008, Rhodes 2004, Sperling et al. 1998, Yeatman & Zókos 2010).

International law

As noted above, the academic study of law, particularly in relation to public law and public administration, plays a certain role in defining the boundaries of political science. However, a body of literature more squarely centred within the bounds of international legal studies and human rights law has also become a cornerstone of security studies. During the Cold War, international law scholarship primarily regarded security matters in the context of intra-state arms control and disarmament efforts (Sandvik 2010). During the 1990s, mainstream international law scholarship viewed the globalisation of legal liberalism, the emphasis on achieving social change through law-making, as a clear ideological indicator of progress: rule of law and good governance agendas were seen as having legitimate and largely benevolent popular effects (Kashmeri 2011, Oberleitner 2005a, Von Tigerstrom 2007). Three major trends connecting security and international law can be identified (Sandvik 2010, Shaw 2003). Firstly, there are the legal instruments developed in the name of global governance, including the emergence of non-state players in international law, the growing prominence of international organisations as standard setters, and the increased significance of soft law (Karns & Mingst 2004). The institutional structures and practices of international organisations have gradually become more formalised in law and administrative practices relating to questions of international security (Alvarez 2005, Goldmann 2008, Smrkolj 2008) as a consequence of these organisations' need to regulate their own internal activities (Goldmann 2008). Subsequent scholarship has analysed and criticised this movement (Barnett & Finnemore 2004, Kennedy 2005, Venzke 2008). Secondly, there is the rise of a new generation of institutionalised humanitarian law. One of the most important advances in international law and security is the evolution of humanitarian law, principally through the emergence of international human rights courts (Barnett & Finnemore 2004, Douzinas 2007, Evans 2008, Focarelli 2008, Kretzmer et al. 2007, Meron 2000, Teitel 2002, Thies 1999). Finally, there is the rise of the individual in international law, including the question of collective identities in international refugee management, while the inception and recognition of collective rights at international level has led to the emergence of a branch of international law directly related to security issues, in particular relating to women (Colvin 2004, Dudai 2008, Ewald 2002, Gioia 2007, Goodwin-Gill 1996, Kneebone 2005, McLagan 2005, Segall 2002, Slyomovics 2005, Wilson 2001).

Psychology

As security research has flourished, as the whole concept of security has broadened and increased in scope, a certain kind of psychology of fear has also become more prevalent (Hinds et al. 2010). As the theories concerning the nature of threat grow, the importance of experience, perception and the psychological dimensions of security and insecurity increases. By extension, and related to the

global 'wars' on terror, the psychological effects of terrorism and terrorist threats gain significance and suggest a need for their broader and deeper analysis (Gillath & Hart 2010, Hinds et al. 2010, McDoom 2011, Noxolo & Huysmans 2009, Richards 2011). Human security and global security have received academic treatments from a psychological perspective (Erickson 2010, MacFarlane & Khong 2006, Osborne & Kriese 2008, Rathbun 2012). The overall broadening of the concept of security can also be correlated with a more comprehensive use of non-military and apolitical psychologies of security, including societal security (Ransome 1995), spiritual security (Kropf 1990), prison security, refugee security (Lemmers 1999), family security (Davies & Society for Research in Child Development. 2002), psychotherapy (Parker & ebrary Inc. 2007, Pfäfflin et al. 2004), social anxiety (Caldwell & Williams 2006, Rosen 2004, Sagarin & Taylor 2008, Seijdel 2004) and gender (Lindner 2010).

2.2.3 Security research in the humanities

By security research in the humanities we mean an ensemble of concepts, modes of discourse and scientific methods that focus on the irreducibly human in the phenomena under investigation. This way of defining humanities research results in significant overlap and grey areas in terms of both institutionalisation and methods. From a methodological point of view the general focus is on ascertaining meaning, interpretation, analysing texts in the broadest sense of the term, and thus on various methods of interpreting meaning, hermeneutics, philology, archival studies and so forth. Four such general exemples are given below.

Media studies

The overwhelming and spectacular character of international terrorism has put the media in the peculiar position of being both purveyors of information and largely unwitting instruments of the terrorist acts themselves. Since the televised terrorist attacks of 2001 the study of media and their relation to political violence and fear has undergone a renaissance (cf. for example, Banisar 2008, Cram 2006, Martin & Petro 2006, Nacos 2005, Nohrstedt et al. 2004, Ribeiro et al. 2004, Schibley 2004, Schoenfeld 2010). The growing awareness and political value of violent events, media-generated perceptions and public fear have led to new subfields of media studies and given rise to new research challenges and questions. Academic literature on the correlation between risk perception and risk management has also expanded, nourishing a field of risk studies and subfields which forge links with security and terrorism studies (Aas 2006). These subfields have also supported the re-emergence of more culturally oriented media studies, which have contributed to the analysis of religion, the politics of identity, national identity, imaginary communities, etc. (Badsey 2000, Hotchkiss 2010, Johnson 1994a, Oliveri 2005). This generalised focus on the image and on perceptions of threat has also led associated discussions of danger, crime and criminality towards a media-oriented understanding of images of crime (Hotchkiss 2010, Wall 2008).

Cultural studies

For similar reasons, the academic field of cultural studies, once situated within or close to departments of anthropology or sociology, has also taken on new life. Cultural studies is both a controversial concept and a disputed academic field. Whereas more empirically oriented social scientific studies of culture continue to exist within the fields of social and cultural anthropology, cultural studies involves an interpretative approach to the study of culture, often associated with literary studies. Though controversial, the field of cultural studies has been crucial for the study of security in relation to its meaning in culture and society, rather than its measurement by largely technological means. It can be linked in a variety of ways to the activities already going on within associated fields of study (cf. for example, Chalk et al. 2004, Chebel d'Appollonia & Reich 2010, Doran 2010, Feldstein 1998, Hunter & McIntosh 2010, International Labour Office. 2010, Kampfner 2010, Lansford et al. 2006, Pickering et al. 2008). Cultural studies can be broadly sub-divided into international politics (Johnson 1994b, Johnston 1995, Krain et al. 2000, Sick & Potter 2002), information technology (Lawrence 1996), rights (Toda Berezin 2009, Kay & Johnston 2007, Krain et al. 2000, Oliveri 2005, 2003, Russell & Chapman 2002, Tazreiter 2004, The Toda Institute for Global Peace and Policy Research 2004, Wilkin 2001), identity (Aggestam & Hyde-Price 2000, Cederman 2001, Conteh-Morgan 2004, Doran 2010, Hajer & Fischer 1999, Holloway & Beck 2005, Kotkin & Evtuhov 2003, Krain et al. 2000, Lawrence 1996, Petito & Hatzopoulos 2003, Tazreiter 2004), history (Johnson 1994b, Johnston 1995, Kotkin & Evtuhov 2003, Krabbendam et al. 2003, Nelles 2003, Petito & Hatzopoulos 2003) and gender (Alison 2004, Berezin 2009, Leeuwen 2010, Lemmers 1999, Tickner 1992)

Religious studies

The diplomacy, pragmatics and politics of international relations have changed significantly. The paradigm shift that accompanied the end of the Cold

War and the opening up of a range of possibilities for multilateral relations also generated awareness of the complex drivers of international relations. Clearly, national values and their religious sources play a key role in international relations and security. The need for expertise in understanding and analysing religious doctrine, culture and ethical orientations has generated research that brings together international politics and religious studies and addresses security problems in religious terms (cf. Bailey & Redden 2011, Barkun 2006, Byrnes et al. 2006, Cassano et al. 2010, Conroy 2006, Deegan 2009, Foran et al. 2008, Keister 2011, Leitich 2005, Meyer 2008, Seiple & Hoover 2004, Shaw 2011, Sheikh 2011, Sick & Potter 1997, Tongeren 2006, Volpi 2010, Warikoo 2011). In parallel with this general entrée of the study of international relations into religious studies, there is growing interest among anthropologists specialising in religious practice in the religious dimensions of international relations (cf. Deegan 2009, Meyer 2008, Sick & Potter 1997, Warikoo 2011). Finally, the events of 11 September 2001 in the USA, 11 March 2004 in Madrid and 7 July 2005 in London, among others, have clearly put religion, and in particular Islam, at the centre of discussions of security, generating a diverse body of academic and popular literature (cf. Barkun 2006, Shaw 2011, Tongeren 2006).

Ethics

In complex and sometimes subtle ways, ethical questions are central to questions of security (Burke 2002; 2010). In a sense all security issues include an ethical dimension. Every conception of threat entails a vision of the values that are under threat, about society, social preferences, international order and so forth. Debates on security usually also address the values that lie at the heart of claims about danger and threat (Burgess 2008c; 2010b). Other critical postures simply involve assessments of the impact on societal norms and the value of the security measures themselves (Ashby & Wilson 2005, Barnett & Duvall 2005, Berque 2005, Caparini 2004, Carmola 2010, Clarke & Edwards 2004, Dauphinée 2007). The most common and straightforward mode of ethical discourse in relation to security is the one adopted by the ethics of international relations. A basic principle of political realism is that politics takes the place of ethics. The realist standpoint in the analysis of international relations adopts the stance that the politics of security and national interests on the international playing field has no moral dimension and is in fact amoral (Campbell & Shapiro 1999, Donnelly 1992, Hutchings 1992, McElroy 1992). Academic research on the history and meaning of Just War theory inevitably makes claims about ethical arguments (Bellamy 2006, Elshtain 2004, Walzer 1992). The debates about human security, which we have discussed in a variety of ways, also involve or assume a parallel discourse about ethics (Gasper 2004, Hancock 2003, Hayden 2005, Nardin et al. 2006, UNESCO 2004; 2005a; 2005b, Ward 2005, Wilson 2005). More recent critical literature has opened the door to an exploration of the relationship between the human, the subjectivity that supports it, political power and power as a field of influence (Agamben 1998, Burke 2007, Dillon 1996, Foucault 2007, Huysmans 2006, Neocleous 2008). Finally, the somatic dimension of security, the vulnerability of the body, has taken on increasing importance in the determination of security (Butler 2004; 2007; 2009, Campbell 2002, Campbell & Shapiro 1999; 2007, Dauphinée 2007).

2.2.4 Interdisciplinary approaches to security

The shortcomings of the demarcation between social science and humanities have long been apparent in theoretical and methodological debate. The challenges emerging from the new security landscape only complicate and further exacerbate the contentiousness of these categories. Here below we discuss just four examples of interdisciplinary research on security. However, there is a virtually endless number of such examples.

Food security

The term security is increasingly applied in relation to the quality, supply, price, deliverability and politics of food. Like other newer uses of the term security in development studies, it is often correlated with or dependent upon other security issues, such as health, climate and human security. Accordingly, studies of food security are often produced by policy agencies with specific policy aims, and much of the recent academic literature in this field has this clear policy orientation (Koc et al. 1999, McIntyre 2003, Olson 1997, Tarasuk 2001). A good deal of the recent research on food security is policy-oriented research linked to health at community or family level (typical examples are McInytre et al. 2002, Restrepo 2000, Travers 1996). Another strand of food security research links the stability of food supply with environmental and climatic concerns (Travers 1996). Finally, the link between food supply and stability and economic conditions is intuitive, but complex, forming the basis for a growing literature discussing economics and food security (cf. Brewster 1993, Community Food Security Coalition 2002; 1996,

Vorely 2003). A noteworthy aspect of this literature is that the poverty issues of the North tend to make North America and Europe particular interesting subjects for food security studies (Borron 2003, Borton et al. 2010).

Health security and bio-security

The concept of health security has come to embrace many aspects of health and well-being, crossing over to address political challenges in relation to delivering health-care services to those living in situations of socio-economic hardship, political strife or violence. In this sense it is often used as a supplement to human security (see 'The Homeland', page 33) in cases where that concept has become weakened in policy terms (Maclean 2006, Paris 2001). The political dimension of the notion of health security likewise links it with considerations of governance in the sense of the ways in which non-state institutions steer group processes. In this literature disease control and health care are viewed as one mode of organising the lives of groups and individuals through non-state means (Camdessu 2001, Lee & Dodgson 2000). The study of health security can also touch upon more basic questions of interpersonal violence. In this perspective, uncertainty and basic needs translate into acts of violence that engage both in obvious physical ways and in more complex interpersonal, social and political ways (Brunetti & Weder 1997, Cukier et al. 1999, Krug 1999). Health security can also involve the issue of illicit drug use, which also plays out at the crossroads of physical and social health, particularly in relation to the global HIV/AIDS pandemic (Atlani et al. 2000, Barnett et al. 2001). Research on communicable diseases and epidemiology often applies the notion of security in its analysis. In this portion of the literature, the political organisation of both research and treatment regimes requires a wider understanding and a wider frame of reference than can be found if the investigation of disease control is limited to natural scientific bounds (CDCP 2002, Henretig 2001, McMichael et al. 1996).

Financial security

On one level, finance and security have an instrumental relationship that forms the basis of a straightforward research agenda: finance in service of security and security in service of finance (de Goede 2010). This type of relationship has thrown up a vast body of literature focusing on the methods and tools of either security or finance (for example, Derson & World Institute for Development Economics Research. 2005, Munnell & Sass 2006, O'Neill 2008, Rezendes & United States. General Accounting Office. 1989, Thiele 2003). More recent research has begun to disentangle the more deeply rooted conceptual relationship between security and finance (Boy et al. 2011, de Goede & Randalls 2009, Goede 2005; 2009). Historical and genealogical approaches to the development of the concepts of security and finance in the modern era have opened up new possibilities for both concepts (Campbell 1992, Germain 1997), while recent advances in the study of risk and uncertainty have also extended the reach of these new concepts (Aradau et al. 2008a, Dillon 1990, Dillon 2010, Dillon & Lobo-Guerrero 2008, Larner et al. 2004). Studies on the history of science and technology also contribute to the field (Der Derian 2001, Martin 2007, Taylor 2004).

Pandemic security

A long tradition of linking politics and health has coalesced around the notion of pandemic security. The most influential aspects of this academic tradition have stemmed from research into several real pandemics and how the political class, the media and the public at large has reacted to them (Elbe 2005a; 2005b; 2006a; 2006b; 2010, Feldbaum et al. 2006, Ingram 2005, King 2002, McInnes 2006, McInnes & Lee 2006b, Prins 1998, Sandell 2006, Youde 2005). This field of research is differentiated according to the type of insecurity it concerns (Eberstadt 2002, Elbe 2002, ICG 2001, ICG 2004, Ostergard 2002, Singer 2002, Stackelberg 2002, Yeager & Kingma 2001). There is also a significant body of research on the relationship between nation-building, state stability and health security (CBACI 2000, UNAIDS 2001). This research explores the role pandemics play not only as threats to the state but also as determinants of the resilience of a state or society at large (de Waal 2006, Elbe 2009). A small number of pandemics have recently acquired particular salience in world politics. These pandemics have increasingly been treated as security issues. The concept of securitisation is often applied to a field that has already been much researched by sociologists of medicine and epidemiology. In other words, the concept and application of the concept of security is undergoing an interdisciplinary transformation in the direction of a medicalised notion of social well-being. Finally, the work of Elbe and others has explored the dynamic impact of HIV/AIDS and other pandemics on the operational capacity of the security forces (Brower & Chalk 2003, Ingram 2005, King 2002, Ostergard 2005, Price-Smith 2001; 2002, 2003).

2.3 Research on future security needs

Like security research in general, technological-industrial security research, social scientific and humanistic research are all interested in the future. However, the premises, politics and indeed metaphysics of their visions for the future differ considerably.

2.3.1 Technological-industrial security foresighting research

Three sources of technological-industrial foresighting

In the area of technological and industrial research, significant resources continue to be applied to foresighting the future. There are three reasons for strategic foresighting. Firstly, the armed forces naturally regard knowledge of the future as an important strategic resource for defeating an enemy whose plans, capabilities and resources are either unknown or only partially known (some examples include Bartholomees 2006, Beyerchen 1992, Clarke & Knake 2010, Cowen Karp 1992, Elhefnawy 2004, Kaldor & Salmon 2006, Lonergan 1999, Moore & Turner 2005, Strausz-Hupé 1955). Secondly, and directly linked to our first point, there is the increasing importance attached to the assessment of risk by European social and political institutions. Risk management, risk assessment, insurance and reinsurance are no longer instruments for marginal, risky enterprises, rather being fundamental to virtually all institutional planning (Banks & Element Re Capital Products Inc. 2002, Bollig 2006, Dempster 2002, Durodie 2005, Ice et al. 2002, Linnerooth-Bayer et al. 2001). Thirdly, the close connection between security and commerce, which lies at the heart of technological and industrial security research, brings the tools and methodologies of financial planning into close contact with those for ensuring security (cf. Booth 1973, Esping-Andersen 1999, European Commission 2004).

Premises and aims of security foresighting

One of the most noteworthy trends in modern security research is the rise of various methods of security foresighting, by which we mean research into the forms that security threats and security needs are likely to take, generally over the next ten to 20 years. Research is currently being carried out at both national and European level on future security threats and, more importantly, future industrial and commercial strategic needs in relation to future threats. Security foresighting in Europe, in contrast to other forms of future-oriented research, takes the form of commercial market forecasts applied to business models. The purpose of most security foresighting at European level is to provide public and private actors with the tools necessary to make the most appropriate financial decisions in the face of an uncertain future. On the political plane this entails preparing Europe to deal with threats by readying the European security industry to use the kind of industrial products that will be available to the security technology market of the future.

Security foresighting research in the EU Seventh Framework Programme

Security foresighting accounts for a significant proportion of the security research funding provided by the Seventh Framework Programme. Current research projects involve an element of foresighting on themes such as security threats to the environment as a result of accidents[17] and security threats arising from the uncontrolled or unintentional use of technology.[18] Other projects focus on potential security concerns that should or will become objects for European foreign policy and external action,[19] while others again are more open-ended, seeking to understand the changing nature of future notions of security in order to translate these into technologically oriented investment strategies.[20] This development has been supported by research and industrial policy, in particular through the conclusions of the European Security Research and Innovation Forum. This Forum's final report, published in 2009, containing an entire chapter on the problem of foresighting and future scenarios, identified the goal of developing a security foresighting methodology as one of the guiding principles of its work (ESRIF 2011: 117-34).

Security foresighting research in the SSH

There is little cross-over research bridging the gap between social and human sciences on one hand and technologically oriented industrial security research on the other. A notable exception is the European Foresight Platform launched in 2009, a network-building programme funded under the Social and Economic Sciences and Humanities Programme of the Seventh Framework Programme. Using organisational sciences and theories of decision making

17. Assessment of environmental accidents from a security perspective (SECURENV). Summaries of EU funded research within the Security Research and Development Programme may be found in European Commission (2011).
18. Foresight of evolving security threats posed by emerging technologies (FESTOS).
19. Foresight Security Scenarios: Mapping Research to a Comprehensive Approach to Exogenous EU Roles (FOCUS).
20. Europe's evolving security: drivers, trends and scenarios (FORESEC).

and innovation, the platform collects a variety of foresighting studies and organises research and networking with the aim of identifying future trends. Security is a central concern and the platform takes a broad approach to it. So far the platform has published work on IT security, energy security, food security and foreign security policy.[21]

2.3.2 Premises and consequences of security foresighting

Paradoxes of foresighting

There are various justifications for this interest and the associated expenditure. Security foresighting has overlapping, sometimes paradoxical functions. It both seeks insights into what the future will bring and endeavours to shape or guide future developments. Foresighting is also structured around overlapping or contradictory interests. For public authorities it is a matter of responding in the best possible way to the future social challenges and requirements of European society, whereas the private sector is more concerned with creating options for successful investment and for continuity and gain at the private corporate level. Foresighting aims simultaneously to meet both these needs.

Foresighting and market forces

Given the dominance of the technology and innovation-driven European security industry, it should come as no surprise that the need to forecast future economic events in order to invest wisely and avoid financial risk is very much to the fore. In short, the rapid transformation of security research into a commercial field dominated by a very small number of actors in the industrial market has begun to change our very understanding of what security is, what it means to be secure and insecure, what the available measures are, and what global, societal and individual values come into play in the process. Security foresighting has become a central element in all security research. Thus, while it is already clear that funding security research now requires a certain adherence to commercial models of research and development (the pre-eminence of the end-user as customer, etc.), it is safe to say that the way the social sciences and humanities will need to view security in the coming decades is already beginning to evolve in the direction of sociology and the politics of market liberalism.

Investment and security decision making

The free market orientation of current security research and development goes hand in hand with a newly emerging science and methodology of security investment. The development of security thinking in Europe and elsewhere has long ceased to be driven by curiosity or pure innovation. The paths to the tools, mechanisms and strategies of future security are determined by investment-based decision making. The rationality of investment and the sciences of security decision making will not be confined to the technology sectors. Social and

21. http://www.foresighting-platform.eu/category/brief/fp7-themes/security/

human sciences will not remain untouched by this new gravitational field of innovation and progress. On the one hand, the social and human sciences are increasingly called upon to contribute to the new sciences of security decision making, bringing insights on social life, human behaviour, values and cultures to bear on the challenge of taking the most financially rational decisions on any given security investment option. On the other hand, the social and human sciences, previously regarded as more or less autonomous, also find their premises and aims affected by market forces founded on investment, growth, return and profitability.

Social forces and technological forces

Technology-driven, market-based forces have not only become central to planning, development and investment in the security sector. The acceleration of security thinking, the future-oriented and future-based approach to the present day generates economic and financial winds that blow over other sectors. When the planning arrangements of public and private economies look to the future, these forces have an impact on other public and private social institutions that ordinarily have little direct link with security technology. There has been a general change in the quality measures, value assessments, traditions, expectations and life cycles at European, national, regional and local levels, as well as social and cultural dynamics and the like, that inevitably shifts their orientations and priorities toward a different future time-frame. The technological forces of the future-oriented investment and decision making economy thus become social forces.

The security time warp

The growing trend of security foresighting has the overall effect of increasingly displacing security concerns toward the future. Present security concerns become less important relative to current conditions, events, values, priorities, etc. Present security matters derive their importance from the degree to which they carry meaning for the future. The issue of security, in terms of how it is justified and how responses to it are financed, is an experience in the future. In its extreme form, security happens in the future. Security becomes less a matter of *what is* and is increasingly preoccupied with *what will be*. Social and human responses to this evolution are likely to follow suit. The present is increasingly a referent for the future. Understanding this scientific time warp in social, political, legal and ethical terms will become a priority.

Future histories

The most significant and overlooked background question for the new foresighting methodologies is their social and political situation, and the implication this has for the way social and human sciences are carried out in the present. The historical confluence that brings together social, cultural, economic, and technological changes is poorly understood, even though it has considerable consequences for how European security is to be studied by European researchers and ensured as part of the social function of European institutions.

3.
Security Research Tomorrow

This reconstruction of security research, its premises and logic, past and present, provides the basic elements of a conceptual and empirical map of the recent evolution of both perceptions and understandings of security of our time. These perceptions and understandings form the background for an extensive range of social, economic, cultural, educational, and research policies formulated in the name of security. They also shape the scope of the science itself, defining the horizons of what scientific research about security can achieve. Scientific research does not consist of boundless thought. Rather, it is guided and shaped, encouraged and limited, driven by the forces that flow from the social, political, cultural, and economic discourses within which it is practiced. Just as importantly, this framing also determines the future of security research. It forms the background for defining the scope and limitations of security in the future.

The aim of this chapter is to stimulate a range of likely developments in thought and science of relevance for the social sciences and humanities, based on the scientific and political framework set out in the first two chapters. The question of what role the social sciences and humanities will play in future security research is by its nature a double one: *descriptive* and *normative*. The following chapter attempts to provide a basic account for both orientations.

It is *descriptive*, in the sense that it invokes a diagnosis of the past and present evolution of the social sciences and humanities as research fields, taking account of the various forms these fields take, conceptually, methodologically, and in terms of the social and institutional practices that support it, in order to clarify how they might evolve in the future. This involves an extrapolation from the past to the present, and on to the future, analysing the robustness of certain trends, their situation in changing social, cultural, political and institutional settings and, not least, the associated political dimension of research.

It is *normative*, in the sense that it draws a certain number of politically or ethically motivated conclusions, about the future need for the social sciences and humanities research relative to any number of value-based assumptions and speculations about the future of society. This involves assessment of the role of institutions, knowledge, and political forces in that future society.

The descriptive dimension of the analysis thus makes a number of claims about what future the social sciences and humanities are likely to have, while the normative dimension suggests what role they should have in security. There are of course limits to this classical distinction between the normative and the descriptive. Any perspective on the facts of future security is determined by cultural and political values.

Section 3.1, Function of the social sciences and humanities in future security research, gives an account of the changes and emerging ideas and scientific norms that are likely to have an impact on future research. It attempts to describe the future role of the social sciences and humanities in security research. *Section 3.2, Strategies for a future security research agenda,* builds upon both the review of the current state of security research in earlier chapters and the forward-looking descriptive focus of Section 3.1, in order to generate a number of *normative* recommendations for orienting social sciences and humanities research in the future.

3.1 Function of the social sciences and humanities in future security research

The analysis in this sub-section is structured around two more or less distinct functions of social sciences and humanities research and the role they will likely play in future security research. The first role of security research will be a pragmatic assessment of the social and human dimensions of security. The second role of security research will involve a critical focus on the underlying assumptions and consequences of the security measures.

The opposition between the pragmatic and the critical is somewhat fluid. 'Pragmatic' research contributing to or advancing security can in many cases be critical; and critique is implicitly pragmatic. Nonetheless, these two basic functions are likely to remain crucial. As noted above, the potential contribution of perspectives derived from the social sciences and humanities is at present increasingly clear. And the social function of critique, though its conditions are changing, does not appear to be waning.

3.1.1 Contributions of social science and humanities research to security

Despite current priorities in research funding and administration, which tend to reward technologically oriented research, security remains a profoundly social and cultural phenomenon and practice. For this reason, the social sciences and humanities have considerable potential to enhance security in its concrete, on-going practices, and to re-direct research in support of it. This section makes a set of prognoses about where the focus of social science and humanities research will likely be most intensely mobilised. A range of current security issues engage in different ways, the methods and analytical strategies of these fields. Social and ethically relevant challenges like climate change, energy, food scarcity, demographic change, social unrest – to name but a few – are best approached through toolkits of one social science methodology or another. There is reason to believe that many of these themes will be absorbed by other epistemologies, other scientific models and reconfigured for more explicitly political aims, be they geopolitical, social policy or domestic policy. We have given priority in this report to terms and categories that will challenge current paradigms, requiring new and innovative scientific thinking.

Borders and mobility

In the coming decades the meaning of mobility will change in ways that challenge both how conventional border regimes are understood (beyond the physical or geopolitical border and towards cultural, social, and conceptual borders) and what kind of security effects are created through borders in all their forms. It will be increasingly necessary to think about and study the notion of borders, demarcations, delimitations, etc. as having meaning and political and social effects beyond their physical form. Borders are the organising structure of any

group or concept. They generate inclusion and exclusion. The processes that link practices of inclusion and exclusion, and that give them meaning, can be generally understood as *mobility*. The movement between states, groups and categories will not only be valued in the future as the essential liberty of our time, but it will be seen and understood as the essential principle at the heart of societies. Social groups will seek security within their groups and at the same time individuals will seek security in their ability to move from one group to the next across group borders. Mobility understood as freedom will increasingly stand as a key component of security.

Mobility technology

The emerging notion of mobility as freedom has distinct consequences for the societal and economic value of the technologies that enable this movement. Whereas conventional understandings of the liberal notion of mobility rest upon the premise that a certain utilitarian value is enabled by assuring free movement of goods, services, labour and capital, there are signs of an evolution, or perhaps radicalisation, of this idea. In the future, mobility in and for itself will be a virtue and a value. Societies will encompass change and mobility as valuable aims in their own rights. Mobility will be dependent by its nature upon one or another form of technology.

Citizenship

The core building block of the nation state – and the European Union – is the notion of citizenship. Citizenship will continue to be the basis for rights and privileges, a point of reference for belonging and exclusion. It will also remain a fundamental reference point for security. And it is quite apparent that new practices of citizenship are emerging and will continue to emerge, new ways of mediating between the state (or the Union) and the citizen. Citizenship has never been a straightforward way of mediating rights and security. It is a particular means of transmitting power from one part of the state structure to another. It also includes very distinct kinds of legitimised violence. Citizenship not only channels the traditionally recognised state monopoly on legitimate violence. It also stores and transmits power at different levels and in different places. This power and the way it moves from one part of society to another, from one function of the state to another, and from one citizen to another, is poorly understood, but will be key to future concepts of security. The securities and insecurities it mediates are equally in need of future research in the social and human sciences. What, in effect, is presumed by the security of citizenship? Similarly, the dynamics by which citizenship is acquired and lost has security implications on a variety of levels. The future of security research on citizenship will see changes and challenges that go far beyond what has been experienced to date. Citizenship will continue to develop in the direction of a kind of management of the self or of one's identity in relation to the institutions that set the rules and guidelines, limitations and possibilities for the self. Individuality, a notion that has a clear historical origin, will itself undergo distinct changes in future. These will emerge as reactions to the way that the individual will be required to manage multiple loyalties and multiple authorities, both public, private, state-based, community-based, local and international. Citizenship will resemble increasingly a kind of self-entrepreneurship requiring new concepts and research methodologies as well as new analyses of our empirical reality. The well-being of citizens and the choices made by citizens about their own well-being is inseparable from the states themselves that 'design' the safety and security of citizens by implicitly determining people's protection against external threats, foreign enemies, etc. Citizenship will increasingly be generated by the state in order not only to secure its people, but also secure itself (Weber 2008; 2011).

Cultural geographies

Despite the effects of what is commonly called the forces of 'globalisation', European cultural and ethnic geographies will continue to play a significant role in determining Europe's political geography. The 'others' of Europe, its neighbours, collaborators and interlocutors, are spread across the globe and generate a number of security concerns. Religion, ethnicity, language and a variety of other elements help create a complex of fear and insecurity that makes itself felt through many levels of European security policy (Bigo 2002a, Burke 2007, Joo 2004, Neumann 1992; 1999, Osborne & Kriese 2008). In an age where military threats are less salient, a surprisingly rich and forceful threat landscape continues to impose itself not at the level of European politics, but on the experience of the individual European in his or her local setting.

The Homeland

The United States created in 2004 the first Department of Homeland Security (DHS). A variety of analogous state forms have appeared in various European states and, most notably, in the European Union where the recently minted Area of Freedom, Security and Justice (AFSJ) is the primary concern under the Directorate General for Home Affairs. The US DHS, like the European DG Home, builds

in complex ways on a political linkage between justice and security, as well as security and freedom, itself reaching beyond the political space of state territory. Internally, homeland security breaks down barriers between agencies and institutions, zones of authority, traditional power relations, military, police and social matters. This network of power, security and insecurity is complex and poorly understood. By all indications it will continue to grow and develop, and exert an impact at a range of levels and in many ways, with unclear political and social implications for the way that citizenship is shaped and populations governed in the name of security.

Human security

The 2011 completed NATO-led campaign in Libya is a stark reminder that the normative principles of human security and the *Responsibility to Protect* remain with us and are as important and unresolved as ever. The security vacuum from which they emerged is not yet resolved, and the norms and values they represent remain ambivalent and will require continued analysis and documentation. The declaration of the Libya intervention in general was made in the name of a set of principles that are by no means universally accepted and which were experienced on Libyan soil as different from securing the rights of the citizens. Also crucial is the way that the human security issues abroad, such as those in Libya, link in complex ways with the discourse of internal or homeland security. The internal/external security nexus plays out in the name of the security of citizens in distant lands.

The digital subject

Research in the social and human sciences has begun to explore the relationship between people and the digital reality that surrounds or contains them. As digital technologies continue to grow and mutate, the social, cultural, political and human consequences will require fresh consideration. The digitalisation of the human subject will only accelerate and intensify. Identity, experience, intentionality, and instrumentality will increasingly have a digital dimension. The portability of this knowledge, the ability to translate it, or apply it, in an increasing number of contexts, will have significant consequences for the way the individual, individual privacy, rights, etc. are understood. The newly developed technologies and notions of 'data clones', 'body doubles', 'bio-doubles', together with current biometric identities, already in place in many security systems, weaken and transform the classical notions of humanity and the individual.

Critique of the actor

The distinction between actor and structure is a traditional one in the social sciences. New research surrounding the notion of security 'assemblages' have both challenged and advanced this classical analytical tool. The notion of the security assemblage is about how different elements at various social, technological and human levels come together to channel power and meaning in order to provide security. The assemblage recognises that governing security involves a complex interaction between institutions, technologies and activities. This type of research will shed new light on the complex interaction between participants in European security practice, and will likely have significant consequences for the way that responses to security challenges are formed.

Cyber security and information terrorism

As noted above, the vulnerability of Western societies to both cyber attacks and to cyber failures is widely discussed and has begun to be researched. The breadth and reach of cyber insecurity has however only begun to be understood. As society begins to respond to the changing cyber reality and evolving perception of cyber insecurity, this challenge will expand considerably. Cyber security is not only a set of measures that may increase or even decrease the security of information systems. Cyber security also creates vulnerability itself. It generates an incessant need to continuously enhance technologies, and accelerate changes in information systems, which, in turn, produces new and enhanced needs for security. The systems that house, exchange and shape the basic components of that knowledge will become more vulnerable in more complex and unexpected ways.

Sexuality and security

The politics of security and insecurity have increasingly turned toward the individual, both in terms of people's experiences, needs, and fears, and in the recognition of the individual as the central component of security. The focus on the individual continues to reveal security as a fundamental component of human experience. Gender research will in the coming decades become more politically prominent and more developed in terms of contribution to our understanding of security and insecurity. Gender research on security will be needed in several ways. Sexuality presents a discourse for a range of insecurities, not solely but perhaps most visibly structured around the presumed opposition between masculinity and femininity, associated with tensions between aggression and passivity, war and peace, technology and nature, surface and depth, etc. Research in this

area will address a large number of social, psychological and political challenges that can be linked to under-researched questions of power. Gender research will also be mobilised to understand sexuality as a threat, a source of social anxiety, and incitement to violence. Finally, research will need to investigate the subjective threats to sexuality, and its role in articulations of security (Puar 2001; 2007, Rao 2010, Weber 1999).

Care

Security can in one sense be understood as intimately related to practices of care and caring, in ways that humanity can be applied to enhance certain forms of personal and societal security. Modes and manners of care form the ultimate alternative to technological forms of security. Care is a critique of the instrumental, means-to-ends, thinking that is central to current security thought and which faces considerable challenges in the near future. Growing interest in the ethics of care will increasingly point to ethical principles that understand care as being non-utilitarian, opening up toward a new generation of security ethics. It will combine a philosophy of care with a methodology that focuses on processes and practices of security as an alternative to those understood by the state. At the same time, vigilance is required to ensure that care does not legitimise non-caring practices. Any ethics of care calls simultaneously for a critique of the practice of care.

Biomedical practices and biosecurity

The most basic philosophical perspectives on security relate it directly to classical questions of life and death. Conventional definitions of security focus on the existential, as a conjunction between insecure life exposed to death, and the security that can prevail during the lifetime. The rapid advance of medical practices will put this opposition, like many others, into question. Questions of the availability and use of medical knowledge growing from the expansion of Internet practices such as data-mining will have significant consequences for the kind of security they are ultimately capable of providing. On the one hand, medical practice will be increasingly perceived as protecting from threats, such as the prospect of death. On the other hand, medicine will become increasingly part of security practices. Where biomedical advances, robotics and cyborgs will unceasingly blur the line between security technologies and medical practices couched in Hippocratic principles of 'do no harm', they will also bring changes in the very notion of the human, and the terms of intervention in the life it 'possesses' and the value of that life. By the same token, the notion of mortality as the horizon of life will take new turns with philosophical and theological consequences. While certain branches of ethics have explored this link in some detail, the social and human consequences and premises of this relationship will require significant research.

Covertness and invisibility

Technological change will bring about an evolution in the way that individuals actually see the world. The traditional primacy of the visible over the invisible will continue to erode, and their very notions will gain a new and different kind of character, with considerable consequences for the way the research is understood and organised. The visible and the invisible are concepts related to belief, linked to the known and the unknown, to the knowable and the unknowable. This evolution will in turn have consequences for the way trust, faith, confidence, resilience and security itself are conceived, applied and studied. It will also change the role of government, of authority, and of agency. Demarcations between what is real and unreal, valid and invalid, understandable and not understandable, will have consequences for the security of people and for the research carried out about them.

Genetics and recombinants

The immense advances in genetic sciences, in particular the successful mapping of the human genome, obviously open the door for a considerable range of innovative research. In addition to the notable scientific advances made in the field of genetics, the private funding-public interest nexus represented by genome research has taken on great importance. This will lead the way to even more industrial support and exploitation of scientific research, and will set the standard for such collaboration. A new range of security and insecurity issues will arise from the genomic revolution. Most of these stem from the knowledge base of genetic research. Genomics is in many ways a matter of a code, which in human history has until now been entirely invisible. The potential misuses are many, and the insecurities generated by this alone are inadequately understood. These issues and many more will generate a broad set of research questions in the coming decades.

3.1.2 Critical functions of the social sciences and humanities toward security measures

The primary function of the social sciences and humanities relative to security remains its classical critical one: critical to security measures taken and critical to modes and forms of 'security research'.

This critical function will continue to be a core task of the social sciences and humanities in security research.

The politics of security studies

On the one hand, politics plays a part in debates over what security research is, what kind of discipline it belongs to, and thus which 'faculty' it should be part of. On a second level, security is an object of contention in relation to the institutional arrangements that provide support, organise and deploy it. Which department or ministry will name the security threat? Which will hold the authority to organise responses to it? Who decides what response the threat warrants, across a vast range of possible threats, with different origins, modes of function and consequences? Should the police be involved? The military? A crisis management team specialised in health? Or should it be a team specialised in climate catastrophes? Computer specialists? The 'inner' politics of security begins long before the 'outer' politics of actor against actor. The human and social sciences have the tools that can both make these cross-discourse issues understandable, and also permit them to be organised in a rational and functional way.

Critical review

For a century, critical review has been a central function of the humanities and the social sciences. This developed with the emergence of the distinction between natural, social and human sciences. The history of democracy as a rational discipline goes hand in hand with the critical thrust of social and human sciences. The application of critical thinking derived from the humanities and social sciences will become more significant and important.

Liberty studies

Security research has evolved as a domain of international relations. But since 2001 it has been carried away by ideological concerns. What today is called 'threats to security' could better, from the perspective of future research, be called 'threats to liberty'. By the same reasoning, security research should in future be concerned with the study of liberty, its costs and benefits, and, not least, its relationship with rights regimes and the rule of law. Liberty, far more than 'security', stems from deep-seated roots of intellectual history. Security, on the other hand, has never, in the last century when it has become mainstream, been inseparable from deeply entrenched power struggles, both in international politics and conceptual history.

Destabilising the social-technical opposition

Security research has been built upon a simple opposition between social and human sciences on one hand and technology on the other. By this token, any proposition about the future of security must take account of the opposition between technology and society, not by attempting to create, on the one hand, social mechanisms to overcome it nor, on the other hand, to invent technological add-ons to accommodate it, but rather by analysing the conflict between the two. In other words, future security research must always take account of the close interaction between society and technology.

Security as nature

There is good reason to consider the underlying natural basis of security. One can ask whether security is natural, or conversely opposed to natural instincts. Where and how does it emerge from individual and collective fears, which have arguably always been in place? When and why does the notion of security emerge as the term for the collective need of society to articulate, institutionalise and claim (or re-claim) its entitlement to, or right to, 'security'?

The danger of security

New activities in foresighting security, not least in the second half of the European Commission's Seventh Framework Programme, as discussed above, have been dedicated less to exploring the benefits of future security technologies, but more their dangers. The basic conclusion to which all such research investigations lead is that technology has no moral meaning, that not only does it not perform a positive function in society, but that it is more frequently associated with negative effects on society. In future security research will therefore tend to focus on immediate and direct dangers to society. As a consequence, the social and ethical issues relating to security research will be increased. There will be an expanded need for assessing not only the societal value of security research and security measures, but also the commercial value. These will change the way in which security is interpreted for research in social and human sciences. The concept of 'dual use', that is the fragile line between security technologies that have civilian applications and those that have military applications, will become more or less completely eroded. It is not unthinkable that the image of 'security' will become even more negative over time than it is today.

Transversality

Security measures and the research that supports them will become more diverse. It only takes a quick

look at the threats today to see that security has become cross-sectoral, cross-disciplinary, international, sub-national, traversing different authorities, institutions and political bodies. One might even go so far as to suggest that security approaches, measures and research that do not accommodate the stretch across borders and boundaries, concepts and perceptions, will ultimately fail to work. At present though security is still divided into different faculties and sectors, and there seems little motivation for changing this attitude. This is because at a basic level, security research is working. At the level of basic protection and anticipation of threats before they occur, there is today little motivation for change. The question for future social and human sciences is how well these boundaries between areas of security will hold, at which stage research will become more interdisciplinary, requiring new forms of enquiry.

The regulation and justification of rights

We started this report by noting the presumption of a right to security, as a fundament principle of modern societies, embedded in complex ways in rights. While it is important to underscore that the original notions of security of person as a human right were closely linked to notions of legal rights, habeas corpus, and rule of law, these are somewhat different from what lies at the heart of today's security understanding. Today's vision has swung from a sense of entitlement to security to the point of indifference, most prominently in the area of Internet security. This is because the concern that accompanied the emergence and expansion of the social media in the West has not been borne out. The willingness of societies and individuals to absorb and adapt to the significant violations of privacy represented by the new social media is important.

Security as science

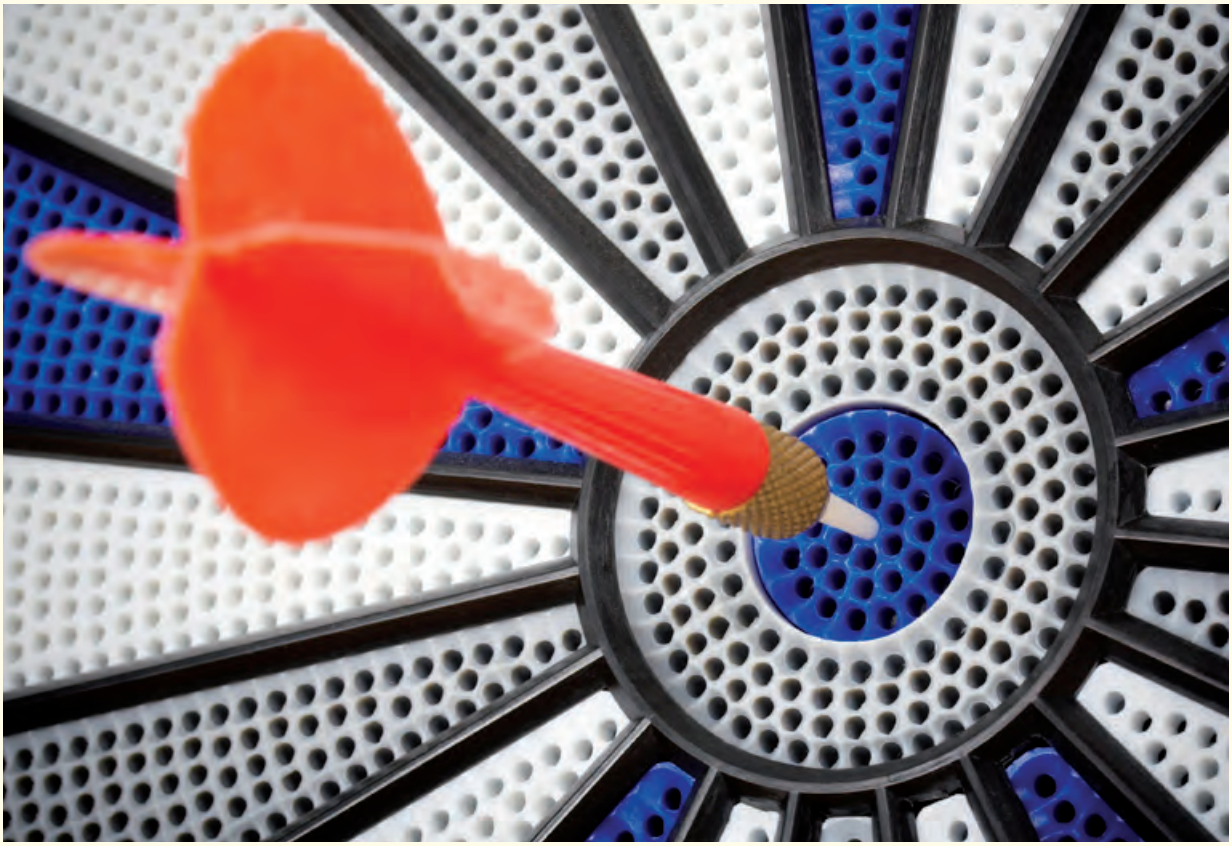
The technological aspect of security today has received greatest attention. Security policy makers and funders, end users of research, and even observers of civil society, almost take for granted the primacy of the technical and scientific aspects when it comes to assuring security. This is in part a remnant of the utopian belief in the capability of high technology to solve societal problems. The question of the side effects of this confidence in science, on the one hand, or the actual imperfection, inefficiency or, on occasion, incapacity of security technologies to solve society's security challenges on the other, are both inadequately understood and poorly accounted for. The penetration of security into the history of science poses important questions for future research. Is there science without security? Is scientific knowledge the product of the search for security? Will knowledge lead to security? Is security the primary aim of knowledge? Will the evolution of the science necessarily and forcibly follow the evolution of security thinking, security measures, security production, security economics, etc. (Lacy & Weber 2010)?

3.2 Recommendations: Strategies for a future security research agenda

The following recommendations or 'strategies' seek to respond to the wide range of issues raised in the preceding sections. The challenge of formulating strategies for a future agenda for security research lies to a great extent in forming a vision of how the ideas will evolve and what forms of research policy are appropriate to realise them, and reflecting on the future forces and influences that are likely to shape the politics of scientific research.

These forces and influences include not only the crucial question of what public and private financial arrangements will be in place in order to support research, including the criteria for selection, valorisation, accountability to funders, review, reward, etc. They also include consideration of the possibilities and constraints, both formal and informal, that will present themselves to research policy makers, researchers and the public at large. Unique to the field of security research is its situation in the politically charged field of security policy where discourses of politicised security and insecurity intersect discourses of institutional policy, procurement policy, legal and ethical issues. Security is many things to many actors and the discourses that build upon it are often at odds with each other, sometimes contradicting each other. This tension at the heart of security is a constant, and will likely intensify in the coming years and decades. In short, the future of security research will involve a multidimensional negotiation between both material and conceptual challenges within and outside the research laboratory.

This section attempts to deal with this range of discourses by locating the paths of communication or interaction between them. It formulates 'strategies' for orienting approaches to future security research by seeking to clarify the range of variable geometries along which 'security' itself is approached. The section is structured in five types of strategy, which map on to five key discourses – conceptual, institutional, industrial, legal and ethical, political – those likely to be most relevant



for future security research. These strategies aim to map, clarify, and develop understandings of the role and relevance of the social sciences and humanities for the coming field of security policy, economics, law and political organisation. It presents recommendations for bringing together the reality of future security, i.e. future threat perceptions, fears, dangers, insecurities and securities, and the political options. The conundrum that lies at the heart of formulating such strategies is that their scope and limitations are themselves determined by security considerations. Security, in effect, sets the premises for thinking about strategies for meeting the needs of security understood as a social phenomenon and security research as a scientific and industrial one. The need to understand what security is, is inseparable from the need to understand what security research is needed. There is, in other words, no clear place from which to start, no point of departure beyond the question of what citizens understand as security, how policy makers seek to deliver security, how a growing security industry profits from insecurity, and how social science and humanities research trace, document and analyse security. Security knowledge, security production, security practice and security research are closely entwined and determine each other.

The section is divided into five general types of recommendations corresponding to the five strategic categories where security knowledge, production, practice and research will meet in the most significant ways. *Conceptual strategies* (3.2.1) will suggest ways in which new concepts of security will generate new research needs, and where security research itself will have the most distinct impact on security practices. *Institutional strategies* (3.2.2) focuses on options for institutional arrangements whose traditional function is to support, disseminate and implement security research. *Industrial strategies* (3.2.3) examines the social and human dimensions of security in industrial security research. *Normative and legal strategies* (3.2.4) presents recommendations for changes in regulatory practices relevant to the relationship between security research and society. *Political strategies* (3.2.5) examines popular political possibilities for intervening in and advancing the relationship between social sciences and humanities-oriented security research.

3.2.1 Conceptual strategies

Revision of concepts

Given that the basic concept of security in our time is subject to wide variation, even ambivalence, the main focus of social science and humanities research on security will lie in tracking the evolution in scope and reach of security, and in better understanding the way it links threat perceptions

to security policy and conceivable security technologies. The most effective strategy for guiding future agendas for knowledge production, regardless of the field involved, is through continuous analysis and revision of the basic concepts at its heart, through revisiting the underlying premises, assumptions, genealogies, political backgrounds and history. A wide-ranging analysis of the ideas that support security thinking, but which are uncritically accepted (such as 'threat', 'danger', 'crisis', 'terror', 'prevention', 'protection', etc.) should be at the core of a new generation of security research in the social sciences and humanities. A research strategy built upon a conceptual revision and critique will not only refresh and renew existing concepts, but also create the tools for new thought. It will also provide new structures, guidelines and references for empirical work.

Values analysis

The notion of security is inextricably linked to society's values. A core dimension of security research will revolve around understanding the values that link security to social concerns, politics, morality and legal issues. The value that a society ascribes to things, shares with other societies, and uses as the basis for formulating and executing policy in the field of international politics, contributes to determining that society's security or insecurity. A clearer understanding of the society's changing values will provide the basis for developing new concepts, feeding political discussions, and reformulating research priorities and plans. As a research strategy, value-analysis asks primarily three questions. First, it enquires into the values in the name of which a given security measure is undertaken, argued for, financed, mobilised, authorised, and rewarded. Second, it asks which values security measures aim to protect, at what cost, and with what sacrifice, etc. Third, it analyses the values not directly involved but affected by the security measures taken. Security research today is based on fundamental and uncritical assumptions about the security values of society, its priorities and privileges. A revision of these by itself will start changing the approach to security.

Security technologies

The evolution of technology in general and security technologies in particular will play a decisive role in the course of security thinking and the need for security research. Clearly technologies are evolving rapidly. A strategic approach to researching security and insecurity in society will investigate the changing meaning and scope of technologies and their relation to life, death, fear, and hope, among others. By widening the basic notion of technology from the application of physical machinery to the manipulation of reality itself from one form into another, a strategy of technological analysis as security research will provide considerable added value. Today the agenda for security research is dominated by technological innovation in the narrow sense. The critical tools of social scientific and humanities research, applied to a more rigorous and radical critique of mainstream security concepts and practices underlying security technology, will be a future starting point for important security research in the social sciences and humanities.

3.2.2 Institutional strategies

Research faculties

The institutions that support and advance security in the West will change rapidly and significantly in the coming years. In many cases they will struggle to adapt to the accompanying technological and economic changes. Critical research on security will need to study these issues carefully. Those actors with power to influence the evolution of research institutions, both public and private, will need to be ready to make radical course changes. Hybrid arrangements will be the most likely form for institutionalisation of security research. Such arrangements will implicitly challenge the autonomy of the research faculties, but also the independence of research institutions from non-research interests and forces, most notably, but not exclusively, market forces. At the faculty level, in university-based research institutes, or those that mirror such structures, attention should be paid to the division of faculties, the categorisation of research, the presumed or prescribed aims of research, its justification and principles. The way conflicts between faculties effectively govern the input and output of all research activities will be of particular interest.

Institutional organisation

These changes will also challenge the structure and organisation of security research. Re-structuring will inhibit some traditional research, while at the same time opening doors to new forms of research. Institutional collaboration, in particular between security researchers, authors of security policy, the security industry and security providers, will be of particular interest. Access to the most relevant sources of security knowledge will become more direct and natural, while at the same time the basic research principles of non-intervention will be increasingly difficult to uphold. The structure of any organisation will for this reason have a core role to play in determining the nature of research. Focus on

the organisational structure of research institutions, the distribution of internal funding, the prioritisation of research and the structuring of expertise all play a part in shaping the understanding of security that will guide future research.

Funding practices

Funding strategies will follow naturally from the division of research effort, in the organisation of faculties or elsewhere. The same structures and organisational templates inevitably appear at the heart of the agencies that fund the research of these institutions. They are steered by political interests and by political circuits of power. By examining the justification for funding strategies and decisions, knowledge of security itself will be gained, as well as a better understanding of what research is carried out in the name of security, its politics, social legitimacy and legitimation. Most prominently, the European Security Research Programme is massively influenced by a small number of very significant security firms. Thus, on the one hand, a clear and pressing need for documentation and analysis is felt as a means to improve the practice of research funding. Yet, on the other hand, the very nature of these funding arrangements, big and small, has much to tell research about the nature of security itself. If, in other words, security research lends itself naturally to these kinds of large-scale financial arrangements, then much can be deduced about security itself.

Knowledge production

The production of knowledge will, by the same token, increasingly need to be determined by an analysis of institutional possibilities and limitations. Security knowledge is to a large degree subject to the conditions of production of security knowledge. From this perspective the study of the production of knowledge about security will be a significant strategic step towards establishing the framework for security research in Europe. In short, entirely new forms of knowledge production in general will appear, and this will be the case just as much for security knowledge. The hybrid forms of knowledge production – critical knowledge from outside the security industry, and practical knowledge from inside – will generate new innovations linked to new modes of security research. The security researcher will be increasingly involved in the production of security (and insecurity), and in the production of security knowledge.

3.2.3 Industrial strategies

Industry

The European security industry has a major role to play in the development of security research. It is without doubt the most influential actor associated with the European Security Research Programme. The first Work Programme of Horizon 2020 (2014-2015) confirms the continued dominance of industrial perspectives through the 'societal challenge' 'Secure Societies' (European Commission 2013). It both sets the premises, and follows up on the premises, for the evolution of security through the application of technological research and development. It provides the infrastructural materials that are more or less uncritically assumed to provide security, while at the same time creating the demand for more technological solutions to security challenges. Security research in Europe is at present technologically driven, and the response to this ingrained situation will need to involve some kind of infiltration of the security industry by the social sciences and humanities. This is based on the hypothesis, increasingly well-founded, that these actors represent significantly under-researched social, cultural, ethical and political dimensions. It will not be, in other words, a matter of providing a social science or humanities *alternative.* It will be a matter of demonstrating in what sense and to what degree the industry is, on the one hand, an interesting object of study itself and, on the other hand, an actor that could potentially provide better and more human and socially orientated security by integrating social science and humanities research. At the same time, it is perhaps the least understood of the present actors on the security stage. A priority of future security research in Europe should be to reflect on the security industry, exploring the technological aspects of its research. It should suggest sociological, anthropological and macro-economic approaches to understanding the relationship between the security industry and security itself.

Security economics

There is a clear need for a thorough analysis of the economics of European security R & D. Security has, in its modern incarnation, been characterised as an economy, as a set of value assertions, linked through certain kinds of transactions. Yet despite significant research on the economics of investing in security, it is worth investigating, for the sake of accountability to democracy and to the taxpayer. There are several ways social sciences and humanities research can interact with industrial approaches to the economics

of security. The dominant paradigm regards economics itself as an extension of security: economics as security technology. Economic measures taken in the name of security become the security measures themselves, providing security to the markets and to consumers who give high priority to having access to the market, the free movement of money, goods and services, and the liberty to buy, sell and trade assured by the ideologies of market liberalism. Freedom to buy is deemed the highest aim of security. Critique and examination of these basic axioms will reveal a vast field of social, political and cultural questions, topics for both extensive enquiry and for influencing the norms of economic and security governance.

Commercial security models

Closely linked to the industrial economy of security and its extension into technologies of security, is the general commercialisation of security. The on-going shift from public to private security has immense implications for the role of the state and its ability to preserve itself through the traditional function of protecting the citizen. The decay of this traditional role coupled with the privatisation and professionalisation of the functions leaves the state as such scrambling for insight and self-knowledge, of the kind that social sciences and humanities research should be in a position to provide. A strategic approach to investigating security in future research would focus on some type of commercial model of security. Research should enquire into what the concept and practice of commercial security provision should be, paying attention to the duality between the commerce of security and the insecurity of commerce. Such research could productively reveal significant shifts in the paradigms of economics, the free market, and the state's relation to both.

3.2.4 Normative and legal strategies

Rights

As noted above, security is frequently linked to a certain idea about rights. It is implicitly regarded as a human right, as one or another form of social entitlement. This notion often forms the basis for justifying what should or must be carried out in the name of security. But the relationship between state, society, community and, not least, the individual, is changing with regard to security. These different levels of society are increasingly being constrained by security itself. Thus, in future the citizen will have less control over certain expectations of security, but rather, security will define and limit citizenship. By the same token, and as we have already seen to a large degree in our time, the very notion of the individual is no longer sacrosanct, endowed with natural and human rights. Rather it is increasingly seen as the product or even symptom of measures taken for security. Social science and humanities research, and in particular legal research, should be conducted to investigate this new power and function of security. The translation of security into action is a complex one that traverses many social and political layers. It needs to be understood more completely.

Regulatory issues

In a related way the evolution of laws and regulations will both mark and determine the way that society, economic and financial actors deal with and respond to threats. Security will in the future be less an object of regulation than today. Indeed, security as practice, security as a norm will increasingly shape and regulate us. This is not an alarmist message but rather the statement of a need to examine the processes and procedures that help form expectations that themselves are translated into regulations and regulatory ambitions. The research needed from the social science and humanities will help us to understand this inversion of traditional power.

Criminology and justice

In the new era of security technologies, the notion of justice has acquired a new orientation. To a large degree it has become introverted. Justice as a universal category linked to one form or another of universal rights will continue to become less prominent, and justice as a social category will still be present in most discussions about security. Additionally the crises of our time will most likely be continued, leading in effect to permanent states of emergency, if only in the miniature. The idea of social issues being independent from security concerns, while valuing them, belongs to the past. Security will increasingly determine society, instead of the contrary. Criminology will in new and original ways need to embrace different areas from the politics of war, such as immigration, and also social issues such as identity and exclusion. New forms of research are needed for this.

Ethics

There is an increasing call within European security research for the development and application of an ethics for security. What will the future basis of such an ethics be? If such an ethics is possible, if security has a moral dimension, then knowledge is needed about the way it emerges and recedes. A number of intellectual traditions will be relevant to

support this effort: democratic theory and political-anthropological foundations, present diagnosis of security thinking, in addition to the basic legal issues linked to security regimes such as data protection issues, implementation and acceptance of security technologies, evaluation research, and other forms of political intervention.

3.2.5 Political strategies

Security policy

The study of politics will, in future, be entirely reconfigured, and the need for new types of research on security politics and security policy will be essential. The security challenges of tomorrow will put into question the very notion of Europe as a community, as a set of common values, as a people, and as a project. Social science and humanities research have traditionally taken these common values as their starting points, developing a range of tools to analyse the social and cultural elements of any given phenomenon. In future these tools will be needed to analyse and critique the increasingly intimate relation between these cultural elements and the security technologies that shape them and the scientific discourses about them. The umbrella claim that Europe is under threat redraws the cultural, social and political maps of the continent. The required response is to rearrange and intensify social, cultural and political scientific interventions in this emerging structure. The way politics both results from and mobilises any future security scenario should be a high research priority. The security-politics link is ever present in security thinking and is likely to remain so.

Power

Security in all its forms is inseparable from the flow of power, its movement and exchange. Power implies a need for security, and security can always provide power. This dialectic is largely under-researched and should be studied at a variety of levels and societal sectors. The industrial-technological dominance over security will only complicate this picture and increase the need for a power-critical approach to security research. The primary insight will be that security 'provided' by power can be mapped and studied along the lines of conventional social research as inputs, outputs, and impacts. However, this insight must also be critically applied to the dialectic of security and power. Not only does power provide security, but the discourse about *insecurity* generates and sustains power in complex ways that require investigation through the tools and terms of the social science and humanities research.

Societal resilience

The concept of societal resilience takes its starting point in the increasing unpredictability of threats. As the speed of events accelerates and dangers become closer, the need to prepare for a crisis becomes more pressing. There is a widespread perception that it is today more necessary than ever to be prepared for the crisis before it comes, in a sense to live in a society that is constantly prepared, whose robustness will make it capable of withstanding any threat. Resilience is a term often used by engineers to describe the strength of material or electronic systems. Economists use the term to describe the ability of economic systems to tolerate stress. Military analysts use it to describe the ability of armed forces or military equipment to carry on after damage or injury. The key to societal resilience is the insight that neither technological approaches to security nor purely social institutions are enough on their own to assure long-term well-being and security. Society must be prepared not only through superficial measures to anticipate threats, but through intrinsic measures in the fabric that binds its members together. A deep and thorough integration of security technology within the core of society is the only way to assure this resilience. Society must link to available security technologies, and security technologies must in turn deepen and strengthen their roots in society. In this sense resilience refers to a kind of cohesiveness, but one that is assured only through the fusion of social and technical aspects. Threats and crises touch all levels of society and have transversal knock-on effects that reach into the most distant corners of social life. Limiting these effects is possible only through a combination of technological and social measures, combined in well-considered preparedness.

Trust

Whereas societal resilience grows from a technological perspective toward a social role and meaning, trust has its origins in the social sphere, rediscovering itself, through the field of security research in the link to technological systems. Trust is traditionally a concept that defines the relationship between individuals and groups at a deep or implicit level. It is a kind of knowing without knowing, dependability without proof, reliance without verification. Trust can neither be supported nor guaranteed by technical or even rational means. It is, just like societal resilience, a way of dealing with the unknown, carrying on social relations without full knowledge of a person, carrying on professional collaborations in recognition that some doubt is possible, and using technical systems without having first-hand knowledge of them or being able to assess them or

control them directly. Social science and humanities research on trust should thus address the special kind of dependency common to both technical and social systems. One can never know enough about our interlocutors, nor understand enough about the complex devices one might use to provide security against, in order to make fully rational decisions about policy or action. This dependency grows out of a shared experience, shared values, shared culture or traditions, but above all out of a sense of shared humanity. This shared experience is the crux of security and insecurity, and the key to social, cultural and technological interoperability, and will require core social science and humanities research. Without trust, it is impossible to make use of a critical instrument or part manufactured by someone else, impossible to have full confidence in the interpretation of sensitive security-relevant data, and impossible to regard a security professional from the far corner of Europe as belonging to the common project of European security. All political systems involve an essential link between security, individuals and institutions: trust. Trust functions as a bond, a promise between actors, one that provides security, but which is also the most fragile link in the security chain. The future of trust is the essential strategic question when considering the very future of society. It forms the core of the baseline support for the resilience of society, for its ability to bounce back from or absorb shocks. This will be the strategic starting point for the most socially effective future research, which will require the most nuanced social and human scientific tools.

4.
Annexes

4.1 Background of the report

The present report takes as its starting point the work done in an earlier ESF Forward Look project entitled *Security: Advancing a Framework for Enquiry (SAFE)* directed by Professor François Géré of the Institut Français d'Analyse Stratégique (IFAS). The project gathered competence and experience from a variety of fields: political science, political sociology, history, pedagogy, and ethics.[22]

The aim of that initiative was to identify new perspectives for inputs of human and social science research into security research. The institutional framework was an inter-organisational cooperation and co-sponsorship between the ESF Standing Committee for the Humanities (SCH) and NATO's 'Science for Peace and Security' Programme (SPS). The alliance sought to connect different research networks and approaches, while developing the perspective of a more direct link into relevant policy discussions. The SAFE forward look sought to develop new perspectives for integrated research, to inform long-term understandings of models of security, of contingent cognitive, cultural, ideological and legal frameworks, and of relevant management issues. The objective was to address scientifically complex issues such as critical thresholds and systemic imbalances. Through comparative studies, the project sought to reflect the different approaches to the topic in the ESF constituencies (cf. Géré & Sharpe 2011).

The initiative, which concluded with an international conference in Brussels in February 2009, gathered material through four international workshops, *Modelling Security, Addressing global security challenges*. 18-20 June 2007, Sarajevo, Bosnia-Herzegovina; *Identity, Loyalty and Security*, 19-21 October 2007, Casablanca, Morocco; *The Role of Law, Ethics and Justice in Security*, 10-11 March 2008, Oslo, Norway; and *Management of Security: Success and Failures*, 21-23 May 2008, Istanbul, Turkey.

While the present report builds on distinctly different material, using different methods and with far more modest aims, it is indebted to the meetings and discussions of the SAFE project.

22. The steering committee for the Forward Look included Professor J. Peter Burgess, Peace Research Institute Oslo (PRIO), Dr Rachelle Hollander, National Science Foundation, Directorate for Social, Behavioral and Economic Sciences (SBE), Arlington, United States, Professor David Rodin, University of Oxford, Department of Politics and International Relations/Oxford Uehiro Centre for Practical Ethics, Professor Bruce Seely, Michigan Technological University College of Sciences and Arts, Houghton, United States, Mrs Mary Sharpe, Cambridge University, The Cambridge-MIT Institute, Cambridge, United Kingdom.

4.2 Methodology and process

The bulk of the project ran from September 2010 until August 2011, with a number of subsequent editing rounds following on to the initial work and investigation.

The report builds on two kinds of input: desk research and expert consultations. The desk research was primarily focussed on a literature review of the quite extensive scholarly research in the area of security and social sciences and humanities. The core resource for the project was the Scientific Advisory Board. Extended interviews were held with most members of the group in early 2011.[23] The interviews were free and only slightly structured by a set of open questions about the future of security research.

The first draft of the report was circulated to the Advisory Board at the end of March 2012, then subjected to peer review, administrated by the ESF. The final draft was revised based on comments from the Advisory Group and the peer reviewers.

4.3 Scientific Advisory Board

- Katja Franko Aas, *University of Oslo*
- Didier Bigo, *King's College London, Institute for Political Studies, Paris*
- Stefan Elbe, *Sussex University*
- Marieke de Goede, *University of Amsterdam*
- Angela Liberatore, *European Commission*
- Bruce Seeley, *Michigan Technological University*
- Cynthia Weber, *Sussex University*

23. Angela Liberatore, Brussels, 11.01.2011; Stefan Elbe and Cynthia Weber, Sussex, 17.01.2011; Bruce Seeley, Houghton, 15.12.2010, Ann Arbor ; Didier Bigo, Paris, 20.09.2011; Marieke de Goede, Amsterdam, 03.05.2011; Fernando Carvalho-Rodriguez, Brussels, 04.04.2012.

Bibliography

Aas, K.F. (2006) 'The body does not lie': Identity, risk and trust in technoculture, *Crime Media Culture,* 2, 143-58.

Aas, K.F. (2007) *Globalization and Crime,* London, Sage.

Abeyratne, R.I.R. (2010) *Aviation Security Law,* Heidelberg/New York, Springer.

Abrahamsen, R. & M.C. Williams (2009) Security beyond the state: global security assemblages in international politics, *International Political Sociology,* 3(1), 1-17.

Agamben, G. (1998) *Homo Sacer: Sovereign Power and Bare Life,* Stanford, Stanford University Press.

Aggestam, L. & A. Hyde-Price (2000) *Security and Identity in Europe: Exploring the New Agenda,* Basingstoke, Macmillan Press.

Alberts, C.J. & A.J. Dorofee (2002) *Managing Information Security Risks: The OCTAVESM Approach,* Boston, Addison-Wesley.

Albrecht, H.-J. (2002) Immigration, crime, unsafety. in Crawford, A. (Ed.) *Crime and Insecurity: The Governance of Safety in Europe*, Devon, William Publishing.

Alison, M. (2004) Women as agents of political violence: Gendering security, *Security Dialogue,* 35(4), 447–63.

Alperen, M.J. (2011) *Foundations of Homeland Security Law and Policy*, Hoboken, N.J., John Wiley.

Alvarez, J. (2005) *International Organizations as Law-makers,* Oxford, Oxford University Press.

Amineh, M.P., H. Houweling (2005) *Central Eurasia in Global Politics: Conflict, Security, and Development,* Leiden/Boston, Brill.

Andreas, P. & E. Nadelmann (2008) *Policing the Globe. Criminalization and Crime Control in International Relations,* Oxford, Oxford University Press.

Annan, K. (2000) *'We the peoples': The Role of the United Nations in the 21st Century*, New York, United Nations.

Aradau, C. (2004) The perverse politics of four-letter words: Risk and pity in the securitisation of human trafficking, *Millennium: Journal of International Studies,* 33(2), 251–77.

Aradau, C. (2006) Limitis of security, limits of politics? A response, *Journal of International Relations and Development,* 9, 81–90.

Aradau, C. & R. van Munster (2006) Governing terrorism through risk: Taking precautions, (un)knowing the future *European Journal of International Relations,* 13, 89-115.

Aradau, C. & R. van Munster (2009) Poststructuralism, continental philosophy, and the remaking of security studies in Mauer, V. & Cavelty, M.D. (Eds.) *The Routledge Handbook of Security Studies.* London, Routledge.

Aradau, C., L. Lobo-Guerrero & R. Van Muster (2008) Security, technologies of risk and the political: Guest editor's introduction, *Security Dialogue,* 39, 147-54.

Aradau, C., R. Van Munster & L. Lobo-Guerrero (Eds.) (2008) *Security Dialogue: Special issue on security, technologies of risk, and the political,* London, Sage.

Ashby, R. & R. Wilson (2005) *Human Rights in the 'War on Terror',* New York, Cambridge University Press.

Ashcraft, A.B. & T. Schuerman (2008) *Understanding the Securitization of Subprime Mortgage Credit,* Hanover, Now Publishers Inc.

Atlani, L., M. Carael, J.B. Brunet, T. Frasca & N. Chaika (2000) Social change and HIV in the former USSR: The making of a new epidemic, *Social Science & Medicine*, 50, 1547–56.

Ayob, M (2002) Inequality and theorizing in International Relations: The case for subaltern realism, *International Studies Review* 4(3), 27-48.

Badsey, S. (2000) *The Media and International Security,* London/Portland, F. Cass.

Bailes, A. (2008) Overview of policy and practices on societal security in Nordic countries, contribution to the conference *Is there a Nordic Model for Societal Security and Safety?* Oslo 1-2 September.

Bailey, M. & G. Redden (2011) *Mediating Faiths: Religion and Socio-Cultural Change in the Twenty-First Century,* Burlington, Ashgate.

Bajpai, K. (2000) Human security: Concept and measurement, *Kroc Institute Occasional Paper*, 19, 1, Notre Dame.

Baker, G.H. & R.G. Little (2006) Enhancing homeland security: Development of a course on critical infrastructure systems. *Journal of Homeland Security and Emergency Management,* 3(4).

Baldwin, D.A. (1995) Security Studies and the End of the Cold War, *World Politics,* 48, 117–41.

Baldwin, D.A. (1997) The concept of security. *Review of International Studies,* 23(1), 23, 5–26.

Banisar, D. (2008) *Speaking of Terror: A Survey of the Effects of Counter-Terrorism Legislation on Freedom of the Media in Europe*, Council of Europe.

Banks, E. (2002) *Weather Risk Management: Markets, Products, and Applications,* Houndmills, Basingstoke, Hampshire/New York, Palgrave.

Banks, W.C. & P. Raven-Hansen (1994) *National Security Law and the Power of the Purse,* New York, Oxford University Press.

Barkawi, T. & M. Laffey (2006) The postcolonial moment in security studies, *Review of International Studies,* 32, 329–52.

Barkun, M. (2006) Religion and secrecy after September 11, *Journal of the American Academy of Religion,* 74, 275-301.

Barnett, M. & M. Finnemore (2004) *Rules for the World: International Organizations in Global Politics,* Ithaca, Cornell University Press.

Barnett, M. & R. Duvall (2005) Power in international politics, *International Organization,* 59, 39-75.
Barnett, T., A. Whiteside, L. Khodakevich, Y. Kruglov & V. Steshenko (2001) The HIV/AIDS epidemic in Ukraine: Its potential social and economic impact, *Social Science and Medicine,* 51, 1387-403.
Bartelson, J. (2009) Is there a global society? *International Political Sociology,* 3, 112-5.
Bartholomees, J.B. (2006) *U.S. Army War College Guide to National Security Policy and Strategy,* Carlisle, U.S. Army War College.
Basaran, T. (2010) *Security, Law, and Borders: At the Limits of Liberties,* New York, Routledge.
Beck, U. (1992) *Risk society: Towards a New Modernity,* London, Sage Publications.
Beck, U. (1999) *World Risk Society,* Cambridge/ Malden, MA, Blackwell.
Beck, U. (2002) The terrorist threat: World risk society revisited, *Theory, Culture and Society,* 19, 39–55.
Beck, U. (2006) Living in the world risk society. *Economy and Society*, 35, 329-45.
Beck, U. (2009) *World at Risk*, London, Polity.
Beck, U., B. Adam & J.v. Loon (2000) *The Risk Society and Beyond: Critical Issues for Social Theory,* London, Sage.
Behnke, A. (1999) 'Postmodernising' security. *ECPR Joint session of workshops.* Mannheim.
Bellamy, A. (2006) *Just Wars: From Cicero to Iraq,* Cambridge, Polity.
Belsky, J.M. (1993) Household food security, farm trees, and agroforestry: A comparative study in Indonesia and the Philippines, *Human Organization*, 52(2), 130-41.
Berezin, M. (2009) *Illiberal Politics in Neoliberal Times: Culture, Security and Populism in the New Europe,* Cambridge, Cambridge University Press.
Berki, R.N. (1986) *Security and Society: Reflections on Law, Order, and Politics,* London, J.M. Dent & Sons.
Berque, A. (2005) A basis for environmental ethics, *Diogenes,* 52(3), 3-12.
Bertsch, G.K. & J.R. McIntyre (1983) *National Security and Technology Transfer: The Strategic Dimensions of East-West Trade,* Boulder, Westview Press.
Beyerchen, A. (1992) Clausewitz, nonlinearity, and the unpredictability of war, *International* Security, 17(3), 59-90.
Bhuyan, V.B. (2011) *Reverse Mortgages and Linked Securities: The Complete Guide to Risk, Pricing, and Regulation,* Hoboken, Wiley.
Bigo, D. (1996) *Polices en réseaux. L'expérience européenne,* Paris, Presses de Sciences Po.
Bigo, D. (2000) When two become one. Internal and external securitisations in Europe, in Kelstrup, M. & Williams, M. (Eds.) *International Relations Theory and the Politics of European Integration. Power, security and sommunity*, London, Routledge.
Bigo, D. (2002a) Security and immigration: Toward a critique of the governmentality of unease, *Alternatives,* 27.
Bigo, D. (2002b) To reassure and protect, after September 11, *Social Science Research Council*.
Bigo, D. (2006) *Policing Insecurity Today: Defense and Internal Security,* London, Palgrave Macmillan.
Bigo, D. (2007) *The Field of the EU Internal Security Agencies,* Paris, Harmattan.
Bigo, D. (2008) International Political Sociology, in Williams, P. (Ed.) *Security Studies: An Introduction.* London, Routlege.
Bigo, D. & R. Walker (2008-2012) *International Political Sociology,* London, Blackwell.
Bigo, D., and A. Tsoukala (Paris France) (2008) *Controlling Security,* Paris, Harmattan.
Bohle, H.-G. (1993) *Worlds of pain and hunger: Geographical Perspectives on Disaster Vulnerability and Food Security,* Saarbrücken, Breitenbach.
Boin, A., M. Ekengren, Missiroli A., M. Rhinard & B. Sundelius (2007) *Building Societal Security in Europe: The EU's Role in Managing Emergencies*, EPC Working Paper, No.27.
Bollig, M. (2006) *Risk Management in a Hazardous Environment: A Comparative Study of two Pastoral Societies,* New York, Springer.
Booth, K. (2005) *Critical Security Studies and World Politics,* Boulder, Colo., Lynne Rienner Publishers.
Booth, P. (1973) *Social Security in America: Policy Papers in Human Eesources and Industrial Eelations*, Ann Arbor, Institute of Labor and Industrial Relations, University of Michigan.
Borron, S.M. (2003) *Food Policy Councils: Practice and Possibility,* Washington, Congressional Hunger Centre.
Borton, M., S. Liles & S. Liles (2010) *Cyberwar Policy*, 27, The John Marshall Journal of Computer & Information Law.
Boy, N., J.P. Burgess & A. Leander (2011) The global governance of finance and security: Introduction to the special issue, *Security Dialogue* 42, 115–22.
Boyd, R. & S. Boutin (2001) Gender and issues in human security: Designing a research-action program, *Revue canadienne d'*études du developpement-Canadian Journal of Development Studies, 22, 925-33.
Breant, C. & U. Karock (2011) Defence and security research coexistence, coherence, and convergence, in Thomas, K. (Ed.) *European Perspectives on Security Research*, Berlin, Springer Verlag.
Brewster, K. (1993) *From Land to Mouth: Understanding the food system,* Toronto, NC Press.
Brons, M. (2001) *Society, Security, Sovereignty and the State in Somalia: From Statelessness to Statelessness?,* Utrecht, International Books.
Brower, J. & P. Chalk (2003) *The Global Threat of New and Reemerging Infectious Diseases: Reconciling U.S. National Security and Public Health Policy,* Santa Monica, Calif., Rand.
Browning, C.S. & M. McDonald (2011) The future of critical security studies: Ethics and the politics of security. *European Journal of International Relations,* 17, 1-21.

Brunetti, A. & B. Weder (1997) *Investment and Institutional Uncertainty. A Comparative Study of Different Uncertainty Measures*, Washington, D.C., World Bank.

Büger, C. & H. Stritzel (2005) New European Security Theory: Zur Emergenz eines neuen europäischen Forschungsprogramms, *Zeitschrift für Internationale Beziehungen,* 12**,** 437–46.

Burgess, J.P. (2002) Ethics of humanitarian intervention: The circle closes, *Security Dialogue,* 33**,** 261-4.

Burgess, J.P. (2007) *Promoting Human Security: Ethical, Normative and Educational Frameworks in Western Europe,* Paris, UNESCO.

Burgess, J.P. (2008a) Human values and security technologies, Oslo, Peace Research Institute Oslo (PRIO).

Burgess, J.P. (2008b) Insecurity of the European community of values, *Paper presented at the International Studies Association*, San Diego, March 28.

Burgess, J.P. (2008c) Security as ethics, Oslo, International Peace Research Institute, Oslo (PRIO).

Burgess, J.P. (2010a) Introduction, in Burgess, J.P. (Ed.) *Routledge Handbook of New Security Studies.* London, Routledge.

Burgess, J.P. (2010b) Security and the ethics of uncertainty, *Paper presented at VALDOR annual conference.* Stockholm, September 1.

Burgess, J.P. (2010c) Special section on the evolution of international security studies, *Security Dialogue* 41(6).

Burgess, J.P. (2011) *The Ethical Subject of Security: Geopolitical Reason and the Threat against Europe,* London, Routledge.

Burgess, J.P. & D. Rodin (2008) The role of law, ethics and justice in security practices, security: Advancing a framework for enquiry, *(SAFE) Conference Report.* Oslo, Peace Research Institute, Oslo (PRIO).

Burke, A. (2002) Aporias of security, *Alternatives,* 27**,** 1–28.

Burke, A. (2007) *Beyond Security Ethics and Violence: War against the Other,* London, Routledge.

Burke, A. (2010) Security ethics, in Burgess, J.P. (Ed.) *Routledge Handbook of New Security Studies.* London, Routledge.

Butler, J. (2004) *Precarious Life. The Power of Mourning and Violence,* London, Verso.

Butler, J. (2007) Torture and the ethics of photography, *Environment and Planning D*, *Society and Space***,** 25(6), 951-66.

Butler, J. (2009) *Frames of War. When is Life Grievable?,* New York/London, Verso.

Buzan, B. (1987) *An Introduction to Strategic Studies: Military Technology and International relations,* Basingstoke, Macmillan.

Buzan, B. & L. Hansen (2009) *The Evolution of International Security Studies*, Cambridge, Cambridge University Press.

Buzan, B., O. Wæver & J. de Wilde (1998) *Security: A New Framework for Analysis,* Boulder, Co, Lynne Rienner.

Byrnes, T.A., P.J. Katzenstein (2006) *Religion in an Expanding Europe,* Cambridge/New York, Cambridge University Press.

c.a.s.e. collective (2007) Europe, knowledge, politics: Engaging with the limits. The c.a.s.e. collective responds, *Security Dialogue,* 38**,** 558-74.

Cahill, K.M. (2003) *Traditions, Values, and Humanitarian Action,* New York, Fordham University Press.

Caldwell, D. & R.E. Williams (2006) *Seeking Security in an Insecure World,* Lanham, Md., Rowman & Littlefield Publishers.

Camdessu, M. (2001) The IMF at the beginning of the Twenty-first century: Can we establish a humanized globalization? *Global Governance,* 7**,** 363-70.

Campbell, D. (1992) *Writing Security: United States Foreign Policy and the Politics of Identity,* Manchester, Manchester University Press.

Campbell, D. (2002) Atrocity, memory, photography: Imagining the concentration camps of Bosnia – The case of ITN versus living marxism, *Journal of Human Rights* 1**,** 1-33.

Campbell, D. & M.J. Shapiro (1999) *Moral Spaces: Rethinking Ethics and World Politics,* Minneapolis, University of Minnesota Press.

Campbell, D. & M.J. Shapiro (2007) Guest editors' introduction, *Security Dialogue,* 38**,** 131-7.

Campbell, E. (2004) Police narrativity in the risk society, *British Journal of Criminology,* 44**,** 695-714.

Caparini, M. (2004) *Media in Security and Governance: The Role of the News Media in Security Oversight and Accountability,* Baden-Baden, Nomos.

Caplan, B.D. (2007) *The Myth of the Rational Voter: Why Democracies Choose Bad Policies,* Princeton, Princeton University Press.

Carmola, K. (2010) *Private Security Contractors and New Wars: Risk, Law, and Ethics,* London/New York, Routledge.

Carter, S., T. Jordan and S. Watson (2008) *Security: Sociology and Social Worlds,* Manchester, Manchester University Press.

Cassano, G. and R.A. Dello Buono (2010) Crisis, politics and critical sociology, *Studies in Critical Social Sciences,* Leiden/Boston, Brill.

Cassim, F. (2009) Formulating specialised legislation to address the growing spectre of cybercrime: A comparative study, *Potchefstroom Electronic Law Journal,* 12.

CBACI (2000) Contagion and conflict: Health as a global security challenge; Washington, D.C, Chemical and Biological Arms Control Institute.

Cederman, L.-E. (2001) *Constructing Europe's Identity: The External Dimension,* Boulder, Colo., Lynne Rienner.

Centers for Disease Control and Prevention (CDCP) (2002) *Terrorism Preparedness: One Year Later,* Washington, U.S. Department of Health and Human Services.
Chalk, P., W. Rosenau & Rand Corporation. (2004) Confronting 'the enemy within': Security intelligence, the police, and counterterrorism in four democracies, Santa Monica, RAND.
Chebel d'Appollonia, A. & S. Reich (2010) *Managing Ethnic Diversity after 9/11: Integration, Security, and Civil Liberties in Transatlantic Perspective,* New Brunswick, N.J., Rutgers University Press.
Chilcote, R.H. (1994) *Theories of Comparative Politics: The Search for a Paradigm Reconsidered,* Boulder, Westview Press.
Choucri, N. (2002) Migration and security: Some key linkages, *Journal of International Affairs,* 56.
Clarke, J.N. & G. Edwards (2004) *Global Governance in the Twenty-First Century,* Basingstoke, Hampshire England/New York, Palgrave Macmillan.
Clarke, R.A. & R. Knake (2010) *Cyber war: The Next Threat to National Security and what to do about it*, New York, Ecco.
Clay, E.J., O. Stokke & European Association of Development Research and Training Institutes. (2000) *Food Aid and Human Security,* London/ Portland, Frank Cass.
Collins, A. (2010) What is security studies? in Collins, A. (Ed.) *Contemporary Security Studies.* Oxford, Oxford University Press.
Colvin, C.J. (2004) Ambivalent narrations: Pursuing the political through traumatic story telling, *Political and Legal Anthropology Review,* 27**,** 72-89.
Community Food Security Coalition (2002) *Weaving the Food Web: Community Food Security in California,* San Diego.
Connors, E.F. (2007) Planning and managing security for major special events guidelines for law enforcement, Washington, D.C., U.S. Dept. of Justice, Office of Community Oriented Policing Services.
Conroy, T. (2006) Religion and security: The new nexus in international relations, *Review of Religious Research,* 47**,** 430-2.
Constantinou, C.M. (2000) Poetics of security, *Alternatives,* 25**,** 287–306.
Conteh-Morgan, E. (2004) *Collective Political Violence: An Introduction to the Theories and Cases of Violent Conflicts,* New York, Routledge.
Corry, O. (2012) 'Securitisation and 'Riskification': Second-order Security and the Politics of Climate Change', *Millennium: Journal of International Studies* 40(2), 235-258.
Coval, J., J. Jurek & E. Stafford (2009) The Economics of Structured Finance, *The Journal of Economic Perspectives,* 23**,** 3-26.
Cowen Karp, R. (1992) *Security without Nuclear Weapons?: Different Perspectives on Non-nuclear Security,* Oxford/New York, Oxford University Press.
Cowhey, P.F. & M.D. McCubbins (1995) *Structure and Policy in Japan and the United States,* New York/ Cambridge University Press.
Cox, M. (2008) *State of Corruption, State of Chaos. The Terror of Political Malfeasance,* Lanham, Lexington Books.
Cox, R.W. (1994) *Power and Profits: U.S. Policy in Central America,* Lexington, University Press of Kentucky.
Cram, I. (2006) Regulating the media: Some neglected freedom of expression issues in the United Kingdom's counter-terrorism strategy, *Terrorism and Political Violence,* 18.
Cukier, W., A. Chapdelaine & C. Collins (1999) Globalization and small/firearms: A public health perspective, *Development*, *Journal of the Society for International Development,* 42.
Cunningham, W.C., T.H. Taylor, D. Ford, National Institute of Justice (U.S.) & Hallcrest Systems Inc. (1985) *Crime and Protection in America: A Study of Private Security and Law Enforcement Resources and Relationships,* Washington, D.C., U.S. Dept. of Justice, National Institute of Justice.
Dauphinée, E. (2007) The politics of the body in pain: Reading the ethics of imagery, *Security Dialogue,* 38**,** 139-55.
Dauvergne, C. (2007) Security and migration law in the less brave new world, *Social and Legal Studies,* 16**,** 533-49.
Davies, P. (2002) *Child Emotional Security and Interparental Conflict,* Boston, Blackwell Pub.
de Goede, M. (2010) Financial security, in Burgess, J.P. (Ed.) *The Routledge handbook of new security studies*, London, Routledge.
de Goede, M. & S. Randalls (2009) Precaution, preemption: Arts and technologies of the actionable Future, *Society and Space,* 27**,** 859-78.
de Hert, P. (2005) Balancing security and liberty within the European human rights framework: A Critical reading of the Court's case law in the light of surveillance and criminal law enforcement strategies after 9/11, *Utrecht Law Review,* 1**,** 68-96.
de Waal, A. (2006) *AIDS and Power: Why there is no Political Crisis – yet,* London, Zed Books.
Dean, M. (1999) *Governmentality: Power and Rule in Modern Society,* Thousand Oaks/London, SAGE.
Decker, R.J. (2001) Homeland security: Key elements of a risk management approach, Washington D.C., House Committee on Government Reform.
Deegan, H. (2009) *Africa Today: Culture, Economics, Religion, Security,* London/New York, Routledge.
Della Porta, D. (2009) *Another Europe: Conceptions and practices of democrocay in the Euorpean social forums,* London, Routledge.
Dempster, M.A.H. (2002) *Risk management: Value at risk and beyond,* Cambridge/New York, Cambridge University Press.
Denning, D. (1998) *Information Warfare and Security,* Reading, MA, Addison-Wesley.

Der Derian, J. (2001) *Virtuous war: Mapping the military-industrial-media-entertainment network,* Boulder/Oxford, Westview Press.

Derson, S. (2005) *Insurance against Poverty,* Oxford/ New York, Oxford University Press.

Dharam, G. (1997) Economic globalization, institutional change and human security, Geneva, United Nations Research Institute for Social Development (UNRISD).

Dillon, G. (1990) The alliance of security and subjectivity, in Joenniemi, P. (Ed.) *Beyond the Blocs. Current Eesearch on Peace and Violence*, Tampere, Tampere Peace Research Insitute.

Dillon, M. (1996) *Politics of security: Towards a political philosophy of continental thought,* London/ New York, Routledge.

Dillon, M. (2010) Biopolitics of security, in Burgess, J.P. (Ed.) *Routledge handbook of new security studies.* London, Routledge.

Dillon, M. & L. Lobo-Guerrero (2008) Biopolitics of security in the 21st century: An introduction, *Review of International Studies,* 34**,** 265-92.

Donnelly, J. (1992) Twentieth-Century realism, in Nardin, T. & Mapel, D.R. (Eds.) *Traditions of International Ethics.*

Doran, R. (2010) *Cultural Theory after 9/11: Terror, Religion, Media,* Madison, WI, University of Wisconsin Press.

Douzinas, C. (2007) *Human Rights and Empire, the Political Philosophy of Cosmopolitanism,* Abingdon/ New York, Routledge-Cavendish.

Drache, D. (2001) *The Market or the Public Domain? Global Governance and the Asymmetry of Power,* London/New York, Routledge.

Dudai, R. (2008) 'Can you describe this?' Human rights reports and what they tell us about the human rights movement, in Brown, R.D. & Wilson, R.A. (Eds.) *Humanitarianism and Suffering: The Mobilization of Empathy*, Cambridge/New York, Cambridge University Press.

Durodie, B. (2005) The limitations of risk management, *Tidsskriftet Politik,* 8**,** 14–21.

Eadie, P. (2005) *Poverty and the Critical Security Agenda,* Aldershot/ Burlington, Ashgate.

Eberstadt, N. (2002) The Future of AIDS, *Foreign Affairs,* 81**,** 22-45.

ECORYS (2009) Study on the competitiveness of the EU security industry within the framework contract for sectoral competitiveness studies, Brussels, European Commission.

Elbe, S. (2002) HIV/AIDS and the Changing Landscape of War in Africa, *International Security,* 27**,** 159-77.

Elbe, S. (2005a) AIDS, security, biopolitics, *International Relations,* 19**,** 403–19.

Elbe, S. (2005b) HIV/AIDS: The international security dimensions, in Krahmann, E. (Ed.) *New Actors and New Issues in International Security*, London, Palgrave.

Elbe, S. (2006a) HIV/AIDS: A human security challenge for the 21st Century, *The Whitehead Journal of Diplomacy and International Relations,* VI**,** 1–12.

Elbe, S. (2006b) Should HIV/AIDS be securitized? The ethical dilemmas of linking HIV/AIDS and security, *International Studies Quarterly,* 50**,** 119–44.

Elbe, S. (2009) *Virus Alert: Security, Governmentality and the AIDS Pandemic,* New York, Columbia University Press.

Elbe, S. (2010) Pandemic security, in Burgess, J.P. (Ed.) *Routledge Handbook of New Security Studies*, London, Routledge.

Elhefnawy, N. (2004) Societal complexity and diminishing returns in security, *International Security,* 29**,** 152-74.

Elshtain, J.B. (2004) *Just war against terror,* New York, Basic Books.

Emma, H. (2003) Refugee protection: a clash of values, *The International Journal of Human Rights,* 7**,** 1-26.

Enloe, C.H. (1980) *Ethnic soldiers: State security in divided societies,* Athens, University of Georgia Press.

Erickson, C. (2010) *The poetics of fear: A human response to human security,* New York, Continuum.

Ericson, R.V. & K.D. Haggerty (1997) *Policing the risk society,* Toronto/Buffalo, University of Toronto Press.

Eriksen, T.H., E. Bal & O. Salemink (2010) *A world of insecurity: Anthropological perspectives on human security,* London/New York, Pluto Press.

Esping-Andersen, G. (1999) *Social foundations of postindustrial economies,* London, Routledge.

European Commission (2004) Commission Communication on the implementation of the Preparatory Action on the Enhancement of the European Industrial Potential in the Field of Security Research. Towards a programme to advance European security through research and technology.

European Commission (2011) Investing into security research for the benefits of European citizens. Security research projects under the 7th Framework Programme for Research. Brussels, European Commission.

European Commission (2012) Eurobarometer survey shows strong support for coordinated EU action in dealing with disasters. (Memo/12/424) Brussels: European Commission.

European Commission (2013) European Commission Decision C (2013)8631 of 10 December 2013. Brussels, European Commission.

European Security Research and Innovation Forum (2011) Final Report, Brussels, European Commission.

European Union (2007) Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community OJ C306/01.

Evans, G. (2008) *The responsibility to protect: Ending mass atrocity crimes once and for all,* Washington, D.C., Brookings Institution Press.
Evrigenis, I.D. (2008) *Fear of enemies and collective action,* Cambridge, Cambridge University Press.
Ewald, F. (1991) Insruance and Risk, in Burchell, G., Gordon, C. & Miller, P. (Eds.) *The Foucault Effect. Studies in Governmentality with Two Lectures by and an Interview with Michel Foucault,* London, Harvester Wheatsheaf.
Ewald, U. (2002) Victimization in the context of war – Some aspects of a macro-victimological research project, *European Journal of Crime, Criminal Law and Criminal Justice,* 10, 90–7.
Falk, W.W., M.D. Schulman & A.R. Tickamyer (2003) *Communities of work: Rural restructuring in local and global contexts,* Athens, Ohio University Press.
Farrar, M.E. (2008) *Building the body politic: Power and urban space in Washington, D.C,* Urbana, University of Illinois Press.
Fassin, D. (2011) Policing borders, producing boundaries, The governmentality of immigration in dark times. *Annual Review of Anthropology,* 40, 213-26.
Favell, A. (2009) The sociology of the European Union. *European Union Politics,* 10, 550-76.
Feaver, P., R.H. Kohn & Triangle Institute for Security Studies (2001) *Soldiers and civilians: The civil-military gap and American national security,* Cambridge, Mass., MIT Press.
Feldbaum, H., P. Patel, E. Sondorp & K. Lee (2006) Global health and national security: The need for critical engagement, *Medicine, Conflict and Survival,* 22, 192–8.
Feldstein, M.S. (1998) *Privatizing social security,* Chicago, University of Chicago Press.
Ferguson, N. (2010) *The shock of the global: The 1970s in perspective,* Cambridge, Harvard University Press.
Ferreira, R. & D. Henk (2009) 'Operationalizing' Human Security in South Africa, *Armed Forces & Society,* 35, 501-25.
Fligstein, N. & A. Goldstein (2010) The anatomy of the mortgage securitization crisis, in Lounsbury, M. & Hirsch, P.M. (Eds.) *Markets on Trial: The Economic Sociology of the U.S. Financial Crisis*, Boston, Emerald Group Publishing Limited.
Focarelli, C. (2008) The responsibility to protect doctrine and humanitarian intervention: Too many ambiguities for a working doctrine, *Journal of Conflict & Security Law,* 13, 191–213.
Foley, F. (2009) Reforming Counterterrorism: Institutions and Organizational Routines in Britain and France, *Security Studies* 18(3), 435-478.
Foley, F. (2013) *Countering terrorism in France and Britain: Institutions, norms and the shadow of the past*, Cambridge: Cambridge University Press.
Foran, J., D.S. Lane, A. Zivkovic & MyiLibrary (2008) *Revolution in the making of the modern world: social identities, globalization, and modernity,* Milton Park, Routledge.
Foucault, M. (2007) *Security, territory, population: Lectures at the Collège de France 1977-1978,* New York, Picador.
Fouinat, F. (2004) A comprehensive framework for human security, *Conflict, Security and Development,* 4, 289-97.
Foulon, M. & C.A. Padilla (2007) In pursuit of security and prosperity: Technology controls for a new era, *Washington Quarterly,* 30, 83-90.
Franzosi, R. (1995) *The puzzle of strikes: Class and state strategies in postwar Italy,* Cambridge England/New York, Cambridge University Press.
Friis, L. (1998) *Eastern enlargement, Schengen, JHA and all that ... tracing EU's 'internal security policy' towards Central and Eastern Europe,* København, Dansk Udenrigspolitisk Institut.
Fuchita, Y. & R.E. Litan (2007) *New financial instruments and institutions: Opportunities and policy challenges,* Tokyo/Washington, D.C., Nomura Institute of Capital Markets Research/Brookings Institution Press.
Fuchita, Y., R. Herring & R.E. Litan (2009) *Prudent lending restored: Securitization after the mortgage meltdown,* Tokyo/Washington, D.C., Nomura Institute of Capital Markets Research/Brookings Institution Press.
Furedi, F. (2002) *Culture of fear: Risk-taking and the morality of low expectation,* London/New York, Continuum.
Furedi, F. (2006) *Culture of fear revisited: risk-taking and the morality of low expectation,* London, Continuum.
Gardner, D. (2008) *Risk: The science and politics of fear,* Toronto, McClelland & Stewart.
Garfinkel, S. & G. Spafford (1996) *Practical UNIX and internet security,* Sebastopol, CA, O'Reilly.
Garland, D. (2001) The rise of risk, in Ericson, R.V. & Doyle, A. (Eds.) *Risk and Morality*, Toronto, University of Toronto Press.
Gasper, D. (2004) *The ethics of development:From economism to human development,* Edinburgh, Edinburgh University Press.
Gavrilis, G. (2008) *The dynamics of interstate boundaries,* Cambridge/New York, Cambridge University Press.
Geisler, C. & R. De Sousa (2001) From refuge to refugee: The African case, *Public Administration and Development,* 21, 159-70.
Georgakakis, D. & J. Weisbein (2010) From above and from below: A political sociology of European actors, *Comparative European Politics,* 8, 93-109.
Géré, F. & M. Sharpe (2011) *Global Security: A Vision for the Future - Addressing the Challenges and Opportunities for Research in the Information Age* Brussels, Nato Science for Peace and Security Series – E, Human and Societal Dynamics.
Germain, R.D. (1997) *The international organisation of credit: States and global finance in the world-economy,* Cambridge, Cambridge University Press.

Gill, K.P.S. & A. Sahni (2001) *Terror and containment: Perspectives of India's internal security,* New Delhi, Gyan Pub. House.

Gillath, O. & J.J. Hart (2010) The effects of psychological security and insecurity on political attitudes and leadership preferences, *European Journal of Social Psychology,* 40**,** 122-34.

Gioia, G. (2007) Victims' rights overview under the ICC legal framework: A jurisprudential analysis. *International Criminal Law Review***,** 531–47.

Goede, M.d. (2005) *Virtue, fortune, and faith: A genealogy of finance,* Minneapolis, University of Minnesota Press.

Goede, M.d. (2009) Finance and the excess: The politics of visibility in the credit crisis. *Zeitschrift für Internationale Beziehungen*, 16**,** 295-306.

Goede, M.d. & L. Amoore (2008) Transactions after 9/11: The banal face of the preemptive strike, *Transactions of the Institute of British Geographers,* 33**,** 173-85.

Goldman, M.F. (2009) *Rivalry in Eurasia: Russia, the United States, and the war on terror,* Santa Barbara, Praeger Security International.

Goldmann, M. (2008) Inside relative normativity: From sources to standard instruments for the exercise of International Public uthority, Part II. *German Law Journal,* 9**,** 1865-908.

Goldstein, D.M. (2010) Security and the culture expert: Dilemmas of an engaged anthropology. *Political and Legal Anthropology Review,* 33.

Golumbic, M.C. (2008) Fighting terror online the convergence of security, technology, and the law. New York, Springer.

Goodwin-Gill, G.S. (1996) *The refugee in international law,* Oxford, Clarendon Press.

Gould, B. & L. Lazarus (Eds.) (2007) *Security and human rights,* Portland, Hart Publishing.

Gregoriou, G.N., M. Kooli & R. Kräussl (2007) *Venture capital in Europe,* Oxford/Burlington, Butterworth-Heinemann.

Gries, P., K. Peng & H.M. Crowson (2012) Determinants of security and insecurity in international relations: A cross-national experimental analysis of symbolic and material gains and losses, in Shannon, V. & Kowert, P. (Eds.) *Psychology and Constructivism in International Relations: An Ideational Alliance.* Ann Arbor, University of Michigan Press.

Griffin, K. (1995) Global prospects for development and human security, *Revue Canadienne d'*études du developpement-Canadian Journal of Development Studies, 16**,** 359-70.

Gritzalis, D. (2003) *Security and privacy in the age of uncertainty,* Boston, Kluwer Academic Publishers.

Hajer, M.A. & F. Fischer (1999) *Living with nature: Environmental politics as cultural discourse,* New York, Oxford University Press.

Hamelink, C.J. (2000) *The ethics of cyberspace,* London, SAGE.

Hancock, J. (2004) *Environmental human rights power, ethics and law,* Aldershot, Ashgate.

Harvey, D. (2010) *The enigma of capital and the crises of capitalism,* London, Profile.

Hassenteufel, P. (2008) *Sociologie politique: L'action publique,* Paris, A. Colin.

Hayden, P. (2005) *Cosmopolitan global politics,* Aldershot/Burlington, Ashgate.

Hayes, B. (2006) Arming Big Brother. The EU's Security Research Programme, Amsterdam, Transnational Institute.

Hayes, B. (2010) NeoConOpticon. The EU security-industrial complex, Amsterdam, Transnational Institute.

Henretig, F. (2001) Biological and chemical terrorism defense: A view from the 'front lines' of public health, *American Journal of Public Health,* American Journal of Public Health**,** 718-20.

Hentz, J.J. & M. Børås (2003) *New and critical security and regionalism: Beyond the nation state,* Aldershot/ Burlington, Ashgate.

Heraclides, A. (1993) *Security and co-operation in Europe: The human dimension, 1972-1992,* London/ Portland, F. Cass.

Herd, G.P. & J. Löfgren (2001) 'Societal security', the Baltic States and EU integration, *Cooperation and Conflict,* 36**,** 273-96.

Herzog, R. (2008) *Das Dilemma der Demokratien: Staat und Gesellschaft im 21. Jahrhundert,* Stuttgart, Hohenheim.

Hinds, A., E. Woody, A. Drandic & L. Schmidt (2010) The psychology of potential threat: Properties of the security motivation system. *Biological Psychology,* 85**,** 331-7.

Hjort af Ornäs, A. (1992) *Security in African drylands research, development and policy,* Uppsala, Departments of Human and Physical Geography.

Holloway, D. & J. Beck (2005) *American visual cultures,* London, Continuum.

Hotchkiss, N. (2010) Globalizing security? Media framing of national security in France and the United States from the Cold War through 11 September, *International Journal of Comparative Sociology,* 51**,** 366-86.

Howarth, D.R. & J. Torfing (2005) Discourse theory in European politics identity, policy, and governance. Houndmills/New York, Palgrave Macmillan.

Hunter, A. & M. McIntosh (2010) *New perspectives on human security,* Sheffield, Greenleaf Publishing.

Hutchings, K. (1992) The Possibility of Judgment: Moralizing and Theorizing in Interanational Relations, *Review of International Studies,* 18**,** 51-62.

Huysmans, J. (2006) *The politics of insecurity: Fear, migration and asylum in the EU,* London/New York, Routledge.

Huysmans, J. (2008) The jargon of exception. On Schmitt, Agamben and the absence of political society. *International Political Sociology,* 2**,** 165-83.

Ice, J.E. & D. Petersen (2002) Considerations in risk communication: A digest of risk communication as a risk management tool. Cincinnati: U.S. Environmental Protection Agency.
Ingram, A. (2005) The new geopolitics of disease: Between global health and global security. *Geopolitics,* 10**,** 522–45.
International Alert (1999) The privatization of security: Framing a conflict prevention and peacebuilding policy agenda. Wilton Park, International Alert.
International Boundaries Research Unit (1993) Boundary and security bulletin, University of Durham.
International Crisis Group (2001) *HIV/AIDS as a Security Issue,* Brussels, International Crisis Group.
International Crisis Group (2004) *HIV/AIDS as a Security Issue in Africa: Lessons from Uganda, Kampala, Uganda and Brussels,* Brussels, International Crisis Group.
International Labour Office (2010) World Social Security report 2010/11 providing coverage in times of crisis and beyond, Geneva, ILO.
Irwin, R. (2001) *Ethics and security in Canadian foreign policy,* Vancouver, UBC Press.
Isham, J., T. Kelly & S. Ramaswamy (2002) *Social capital and economic development: Well-being in developing countries,* Northampton, Edward Elgar Pub.
Jagerskog, A. (2004) Applying the human security concept, *Conflict, Security and Development,* 4**,** 309-12.
Janoski, T. & A. Hicks (1994) *The comparative political economy of the welfare state,* Cambridge/New York, Cambridge University Press.
Jeandesboz, J. & F. Ragazzi (2010) Review of security measures in the Research Framework Programme, Brussels, European Parliament.
Johnson, D.V. (1994a) The impact of the media on national security policy decision making, Carlisle Barracks, PA, Strategic Studies Institute, U.S. Army War College.
Johnson, P. (1994b) *Twentieth-century Britain: Economic, social and cultural change,* London, Longman.
Johnston, A.I. (1995) *Cultural realism: Strategic culture and grand strategy in Chinese history,* Princeton, N.J., Princeton University Press.
Johnston, L. & C.D. Shearing (2003) *Governing security: Explorations in policing and justice,* New York, Routledge.
Johnston, R. & F. Kay (2007) *Social capital, diversity, and the welfare state,* Vancouver, UBC Press.
Jones, R.W. (1999) *Security, strategy and Critical Theory,* Boulder, CO, Lynne Rienner.
Joo, E. (2004) Under the gaze of the American other. *Korea Journal,* 44**,** 199-220.
Jreisat, J.E. (2002) *Governance and developing countries,* Leiden/Boston, Brill.
Kahl, C.M. (2008) *International relations, international security, and comparative politics: A guide to reference and information sources,* Westport, Conn., Libraries Unlimited.
Käkönen, J. & S. Chaturvedi (Tampereen yliopisto) & Panjab University. Centre for the Study of Geopolitics. (2005) *Globalization: Spaces, identities and (in)securities,* New Delhi, South Asian Publishers.
Kaldor, M. & A. Salmon (2006) Military force and European strategy. *Survival,* 48(1)**,** 19-34.
Kampfner, J. (2010) *Freedom for sale: Why the world is trading democracy for security,* New York, Basic Books.
Karns, M.P. & K.A. Mingst (2004) *International organizations: The politics and processes of global governance,* Boulder, Lynne Rienner Publishers.
Kashmeri, S.A. (2011) *The North Atlantic Treaty Organization and the European Union's common security and defense policy: Intersecting trajectories,* Carlisle, U.S. Army War College.
Katzenstein, P.J., R.O. Keohane & S.D. Krasner (1999) *Exploration and contestation in the study of world politics,* Cambridge, MIT Press.
Kavass, I.I. & J.P. Granier (1982) *Human rights, the Helsinki Accords, and the United States: Selected executive and Congressional documents,* Buffalo., W.S. Hein.
Kay, C. (1997) *Globalisation, competitiveness, and human security,* London/Portland, F. Cass.
Kay, F. & R. Johnston (2007) *Social capital, diversity, and the welfare state,* Vancouver, UBC Press.
Keister, L.A. (2011) *Faith and money: how religion contributes to wealth and poverty,* New York, Cambridge University Press.
Kennedy, D. (2005) Challenging expert rule: The politics of global governance, *Sydney Journal of International Law,* 27**,** 5-28.
Kent, R (2007) The governance of global security and development: convergence, divergence and coherence, *Conflict, security and development* 7(1)**,** 125-66.
Keohane, R.O. (2002) *Power and governance in a partially globalized world,* London/New York, Routledge.
Kessler, G. (2009) *El sentimiento de inseguridad: Sociología del temor al delito,* Buenos Aires, Siglo Veintiuno Editores.
Kessler, O. (2010) Risk, in Burgess, J.P. (Ed.) *The Routledge Handbook of New Security Studies.* London, Routledge.
Keys, B.J., T. Mukherjee, A. Seru & V. Vig (2010) Did Securitization Lead to Lax Screening? Evidence from Subprime Loans, *The Quarterly Journal of Economics,* 125**,** 307-62.
King, N.B. (2002) Security, disease, commerce: Ideologies of postcolonial global health, *Social Studies of Science,* 32**,** 763–89.

Kirchner, E.J. & J. Sperling (2007) *Global security governance: Competing perceptions of security in the 21st century,* London/New York, Routledge.

Kirsten, M. (2004) Security Research in selected EU member states. How Austria, the Czech Republic, Estonia, Finland, France, Germany, Poland, The Netherlands, and the United Kingdom are preparing for the European Security Research Programmes, Stockholm, VINNOVA.

Kneebone, S. (2005) Women within the refugee construct, exclusionary Inclusion in policy and practice, the Australian experience, *The International Journal of Refugee Law,* 17**,** 7-42.

Koc, M., R. MacRea, L.J.A. Mougeot & J. Welsh (Eds.) (1999) *For Hunger-proof Cities: Sustainable Urban Food Systems,* Ottawa, International Development Research Centre.

Kotkin, S. & C. Evtuhov (2003) *The Cultural Gradient: The Transmission of Ideas in Europe, 1789-1991,* Lanham, Rowman & Littlefield.

Krabbendam, H., G. Scott-Smith, The Roosevelt Study Center & Nederlands Instituut voor Oorlogsdocumentatie (2003) *The Cultural Cold War in Western Europe, 1945-1960,* London, F. Cass.

Krahmann, E. (2003) Conceptualizing security governance, *Cooperation and Conflict,* 38**,** 5-26.

Krain, M., P. O,Meara & H.D. Mehlinger (2000) *Globalization and the challenges of a new century: A reader,* Bloomington, Ind., Indiana University Press.

Kretzmer, D., R. Giladi & Y. Shany (2007) Introduction: International humanitarian law and international human rights law: Exploring parallel application, *Israel Law Review,* 40.

Kriesi, H. (2008) *West European Politics in the Age of Globalization,* Cambridge/New York, Cambridge University Press.

Kropf, R.W. (1990) *Faith--security and risk: The Dynamics of Spiritual Growth,* New York, Paulist Press.

Krug, E. (1999) Injury: A Leading Cause of the Global Burden of Disease. Geneva, World Health Organization.

Kruger, R. (1994) Internal security for Europe - Schengen and Maastricht - stations of the police on the road to Europe, *Kriminalistik,* 48**,** 773-9.

Lacy, M. & C. Weber (2010) Designing security, in Burgess, J.P. (Ed.) *Routledge Handbook of New Security Studies.* London, Routledge.

Lansford, T., R.J. Pauly & J. Covarrubias (2006) *To protect and defend: US homeland security policy,* Aldershot,/Burlington, Ashgate.

Larner, W., W. Walters & B. Dawson (2004) *Global Governmentality: Governing International Spaces,* London, Routledge.

Last, D.M. (2004) *Social and Cultural Change,* Montreal, McGill-Queen's University Press.

Lavenex, S. (2004) EU external governance in 'wider Europe', *Journal of European Public Policy,* 11**,** 680-700.

Lawrence, P.K. (1996) *Knowledge and Power: The Changing Role of European Intellectuals,* Aldershot, Avebury.

Lawson, S. (2003) *International Relations,* Cambridge/Malden, Polity Press.

Leander, A. (2010) Commercial security practices, in Burgess, J.P. (Ed.) *Handbook of New Security Studies.* London, Routledge.

Lee, K. & R.D. R. Dodgson(2000) Globalisation and cholera: implications for global governance, *Global Governance,* 6**,** 213–36.

Leeuwen, F.v. (2010) *Women's Rights are Human Rights: The Practice of the United Nations Human Rights Committee and the Committee on Economic, Social and Cultural Rights,* Antwerp, Intersentia.

Leitich, K.A. (2005) Religion and security: The new nexus in international relations, *Journal of Church and State,* 47**,** 430-2.

Lele, A., G. Singh (2009) *Space Security and Global Cooperation,* New Delhi, Institute for Defence Studies and Analyses (IDSA).

Lemmers, E. (1999) *Refugees, Gender and Human Security: A Theoretical Introduction and Annotated Bibliography,* Utrecht, International Books.

Lentzos, F. (2006) Rationality, risk and response. A research agenda for biosecurity. *BioSocieties,* 1**,** 453-64.

Lewis, C.W. (2005) The clash between security and liberty in the US response to terror, *Public Administration Review,* 65**,** 18-30.

Liem, K., D. Hiller & C. Casex (2011) A European perspective on security research, in Thoma, K. (Ed.) *European Perspectives on Security Research* Berlin, Springer Verlag.

Lilly, D. (2000) The privatization of security and peacebuilding: A framework for action, London, International Alert.

Lindner, E. (2010) *Gender, Humiliation, and Global security: Dignifying Relationships from Love, Sex, and Parenthood to World Affairs,* Santa Barbara, Praeger.

Linnerooth-Bayer, J., R.E. Lèofstedt & G. Sjèostedt (2001) *Transboundary Risk Management,* London/Sterling, Earthscan Publications.

Liotta, P.H. (2003) *The Uncertain Certainty: Human Security, Environmental Change, and the Future Euro-Mediterranean,* Lanham/Oxford, Lexington.

Lipman, F.D. & L.K. Lipman (2006) *Corporate Governance best Practices: Strategies for Public, Private, and Not-for-profit Organizations,* Hoboken, Wiley.

Little, J.M. (2002) Humanistic medicine or values-based medicine...what's in a name? *Medical Journal of Australia,* 177**,** 319-21.

Lonergan, S.C. (1999) *Environmental Change, Adaptation, and Security,* Dordrecht/Boston, Kluwer Academic.

Loutskina, E. & P.E. Strahan (2009) Securitization and the declining impact of bank finance on loan supply: Evidence from mortgate acceptance rates, *The Journal of Finance,* 64**,** 861–89.

Lupton, D. (1999a) *Risk,* London/New York, Routledge.
Lupton, D. (1999b) *Risk and Sociocultural Theory: New directions and perspectives,* Cambridge/New York, Cambridge University Press.
MacFarlane, S.N. & Y.F. Khong (2006) *Human Security and the UN: A Critical History,* Bloomington, Indiana University Press.
Maclean, G. (2006) Instituting and projecting human security: A Canadian perspective. *The Australian Journal of International Affairs,* 54**,** 269-76.
Malešević, S. (2008) The sociology of new wars? Assessing the causes and objectives of contemporary violent conflicts, *Internatioanl Political Sociology,* 2**,** 97-112.
Manalo, R.G. (1999) *Peace through Human Security and Development: A Collection of Essays,* Pasay City, Foreign Service Institute, Dept. of Foreign Affairs.
Marden, P. (2003) *The Decline of Politics: Governance, Globalization, and the Public Sphere,* Aldershot, Hants, England; Burlington, VT, Ashgate.
Marshall, V.W. (2001) *Restructuring Work and the Life Course,* Toronto, University of Toronto Press.
Martin, A. & P. Petro (2006) *Rethinking Global Security: Media, Popular Culture, and the 'War on terror',* New Brunswick, N.J., Rutgers University Press.
Martin, R. (2007) *An Empire of Indifference: American War and the FInancial Logic of Risk Management,* Durham, Duke University Press.
Maskay, B.K. (1996) *Global Human Security: Nepalese Perspective,* Nepal/Malaysia, Society for International Development/Association of Development Research and Training Institutes of Asia and the Pacific.
Mastny, V. & J. Zielonka (1991) *Human Rights and Security: Europe on the Eve of a New Era,* Boulder, Westview Press.
Matwyshyn, A.M. & ebrary Inc. (2009) *Harboring Data Information Security, Law, and the Corporation*, Stanford, Stanford Law Books,.
McDoom, O. (2011) The psychology of security threats in ethnic warfare: evidence from Rwanda's genocide. *PSPE working papers*, London, London School of Economics and Political Science.
McElroy, R.W. (1992) *Morality and American Foreign Policy: The Role of Ethics in International Affairs,* Princeton, Princeton University Press.
McInnes, C. (2006) HIV/AIDS and security, *International Affairs,* 82**,** 315–26.
McInnes, C. & K. Lee (2006a) Health, security & foreign policy, *Review of International Studies,* 32**,** 5–23.
McIntyre, L. (2003) Food security: More than a determinant of health, *Policy Options,* March**,** 46-51.
McInytre, L., T. Glanville, S. Officer, B. Anderson, K. Raine & J. Dayle (2002) Food insecurity of low income mothers and their children, *Canadian Journal of Public Health,* 93 411-5.
McLagan, M. (2005) Circuits of suffering, *Political and Legal Anthropology Review,* 28**,** 223–39.
McMichael, A.J., A. Haines, R. Slooff & S. Kovats (1996) Climate Change and Human Health: Risks and Responses Geneva, World Health Organisation.
Meron, T. (2000) The Humanization of humanitarian law, *American Journal of International Law,* 94**,** 239–78.
Meyer, D.J. (2003) *The Economics of Risk,* KalamazooW.E. Upjohn Institute for Employment Research.
Meyer, S.E. (2008) Religion and security in the modern world, *Review of Faith and International Affairs,* 6**,** 3-7.
Mojtahed-Zadeh, P. (1999) *Security and Territoriality in the Persian Gulf: A Maritime Political Geography,* Richmond, Surrey, Curzon.
Moore, F.A. (1994) *Beyond Development Cooperation: Toward a New Era of Global and Human Security,* Ottawa, International Development Research Centre.
Moore, J.N. & R.F. Turner (2005) *National Security Law,* Durham, N.C., Carolina Academic Press.
Muffels, R.J.A. (2002) *Social Exclusion in European Welfare States,* Cheltenham/Northampton, Edward Elgar Pub.
Mukasey, M.B. (2008) National Security and The Rule of Law, *Harvard Journal of Law and Public Policy,* 32**,** 831-42.
Munnell, A.H. & S.A. Sass (2006) *Social Security and the Stock Market: How the Pursuit of Market Magic Shapes the System,* Kalamazoo/ W.E. Upjohn Institute for Employment Research.
Murphy, C. (2000) Policing the risk society, *Canadian Journal of Sociology-Cahiers Canadiens de Sociologie,* 25**,** 111-4.
Musah, A.F. (2002) Privatization of security, arms proliferation and the process of state collapse in Africa, *Development and Change,* 33**,** 911-33.
Mythen, G. & S. Walklate (2006) *Beyond the Risk Society: Critical Reflections on Risk and Human Security,* New York, Open University Press.
Nacos, B. (2005) The portrayal of female terrorists in the media: Similar framing patterns in the news coverage of women in politics and in terrorism, *Studies in Conflict and Terrorism,* 28**,** 435–51.
Najam, A. (2003) The human dimensions of environmental insecurity: Some insights from South Asia, *ECSP Report***,** 59–73.
Nardin, T., & M.S. Williams (2006) *Humanitarian Intervention,* New York, New York University Press.
Nardulli, P.F. (2008) *Domestic Perspectives on Contemporary Democracy,* Urbana, University of Illinois Press.
Nash, K. & A. Scott (2008) *The Blackwell Companion to Political Sociology,* Malden, Blackwell Publishing.
Nef, J. (1995) *Human Security and Mutual Vulnerability: An Exploration into the Global Political Economy of Development and Underdevelopment,* Ottawa, Centro Internacional de Investigaciones para el Desarrollo.

Nef, J. (1999) *Human Security and Mutual Vulnerability: The Global Political Economy of Development and Underdevelopment,* Ottawa, Centro Internacional de Investigaciones para el Desarrollo.

Nelles, W. (2003) *Comparative Education, Terrorism and Human Security: From Critical Pedagogy to Peacebuilding?,* New York, Palgrave Macmillan.

Neocleous, M. (2008) *Critique of Security,* Montreal/Ithaca, McGill-Queen's University Press.

Neumann, I.B. (1992) Identity and security, *Journal of Peace Research,* 29, 221-6.

Neumann, I.B. (1999) *Uses of the Other: 'The East' in European Identity Formation,* Minneapolis, University of Minnesota Press.

Neumann, P. (1995) *Computer-related Risks,* Reading, Addison-Wesley.

Newman, E. (2001) Human security and constructivism, *International Studies Perspectives,* 2, 239–51.

Newman, E. (2010) Critical human security studies, *Review of International Studies,* 36, 77-94.

Newman, P. & I. Jennings (2008) *Cities as Sustainable Ecosystems: Principles and Practices,* Washington, D.C., Island Press.

Nissenbaum, H. (2005) Where computer security meets national security, *Ethics & Information Technology,* 7, 61–73.

Nohrstedt, S.A., R. Ottosen & Nordicom. (2004) *U.S. and the others: Global Media Images on 'The War on Terror',* Gothenburg, Sweden, NORDICOM.

Norwitz, J.H. & Naval War College (U.S.) (2008) *Armed Groups: Studies in National Security, Counterterrorism, and Counterinsurgency,* Newport/Washington, D.C., U.S. Naval War College.

Noxolo, P. & J. Huysmans (2009) *Community, Citizenship and the 'War on terror': Security and Insecurity,* Basingstoke, Palgrave Macmillan.

O'Brien, K. (2006) Are we missing the point? Global environmental change as an issue of human security, *Global Environmental Change-Human and Policy Dimensions,* 16, 1-3.

O'Malley, P. (2004) *Risk, Uncertainty and Government,* London/Portland, GlassHouse.

O'Neill, K.L. & K. Thomas (2011) *Securing the City: Neoliberalism, Space, and Insecurity in Postwar Guatemala,* Durham, Duke University Press.

O'Neill, P.D. (2008) *National Security and the Legal Process,* New York, Oceana.

Oberleitner, G. (2005a) Human Security: A Challenge to International Law?, *Global Governance,* 11, 185–220.

Oberleitner, G. (2005b) Human Security: A Challenge to International Law? *Global Governance,* 11, 185–203.

Oblet, T. (2008) *Défendre la Ville,* Paris, Presses universitaires de France.

Ocholla-Ayayo, A.B.C. (1985) *Consanguinal and affinal relationships and the national social security,* Nairobi, University of Nairobi.

Oliveri, F. (2005) *Security and social cohesion: Deconstructing fear (of others) by going beyond stereotypes,* Strasbourg, Council of Europe Publishing.

Olson, C.M. (1997) Food insecurity and hunger: Poverty policy issues for the 1990s and beyond. *Focus,* 18, 6-14.

Osborne, R.E. & P. Kriese (2008) *Global community: Global security,* Amsterdam, Rodopi.

Ostergard, R.L., Jr. (2002) Politics in the Hot Zone: AIDS and national security in Africa, *Third World Quarterly,* 23, 333-50.

Ostergard, R.L., Jr. (2005) *HIV, AIDS and the Threat to National and International Security,* London, Palgrave.

Othman, Z. (2004) Human Security Concepts, Approaches and Debates in Southeast Asia, *Fifth Pan-European International Relations Conference.* The Hague.

Owen, T. & O. Slaymaker (2005) Toward modeling regionally specific human security using GIS: Case study Cambodia, *Ambio,* 34, 445-9.

Paris, R. (2001) Human Security: Paradigm Shift or Hot Air? *International Security,* 26, 87–102.

Parker, M (2007) Dynamic security the democratic therapeutic community in prison, London/Philadelphia, Jessica Kingsley Publishers.

Parthasarathi, A. (2004) Science and its applications to societal security, *Current Science,* 87, 1174-5.

Patra, J. (2005) Building process of science for societal security, *Current Science,* 88, 7-.

Petitat-Côté, E. (1998) *Globalisation, Competitiveness and Human Security Challenges for Development Policy and Institutional Change*, Vienna, 11-14 september 1996.

Petito, F. & P. Hatzopoulos (2003) *Religion in International Relations the Return from exile*, New York, Palgrave Macmillan.

Pfäfflin, F. & G. Adshead (2004) A matter of security the application of attachment theory to forensic psychiatry and psychotherapy, *Forensic focus 25*, London, Jessica Kingsley.

Phillips, K.P. (2008) *Bad Money: Reckless Finance, Failed Politics, and the Global Crisis of American Capitalism,* New York, Viking.

Philo, C. (2012) Security of geography/geography of security, *Transactions of the Institute of British Geographers,* 37, 1-7.

Pickering, S., J. McCulloch & D.P. Wright-Neville (2008) *Counter-terrorism Policing: Community, Cohesion and Security*, New York, Springer.

Pidgeon, N.F., R.E. Kasperson & P. Slovic (2003) *The Social Amplification of Risk,* Cambridge, Cambridge University Press.

Porter, P.W. (2006) *Challenging Nature: Local Knowledge, Agroscience, and Food Security in Tanga Region, Tanzania,* Chicago, University of Chicago Press.

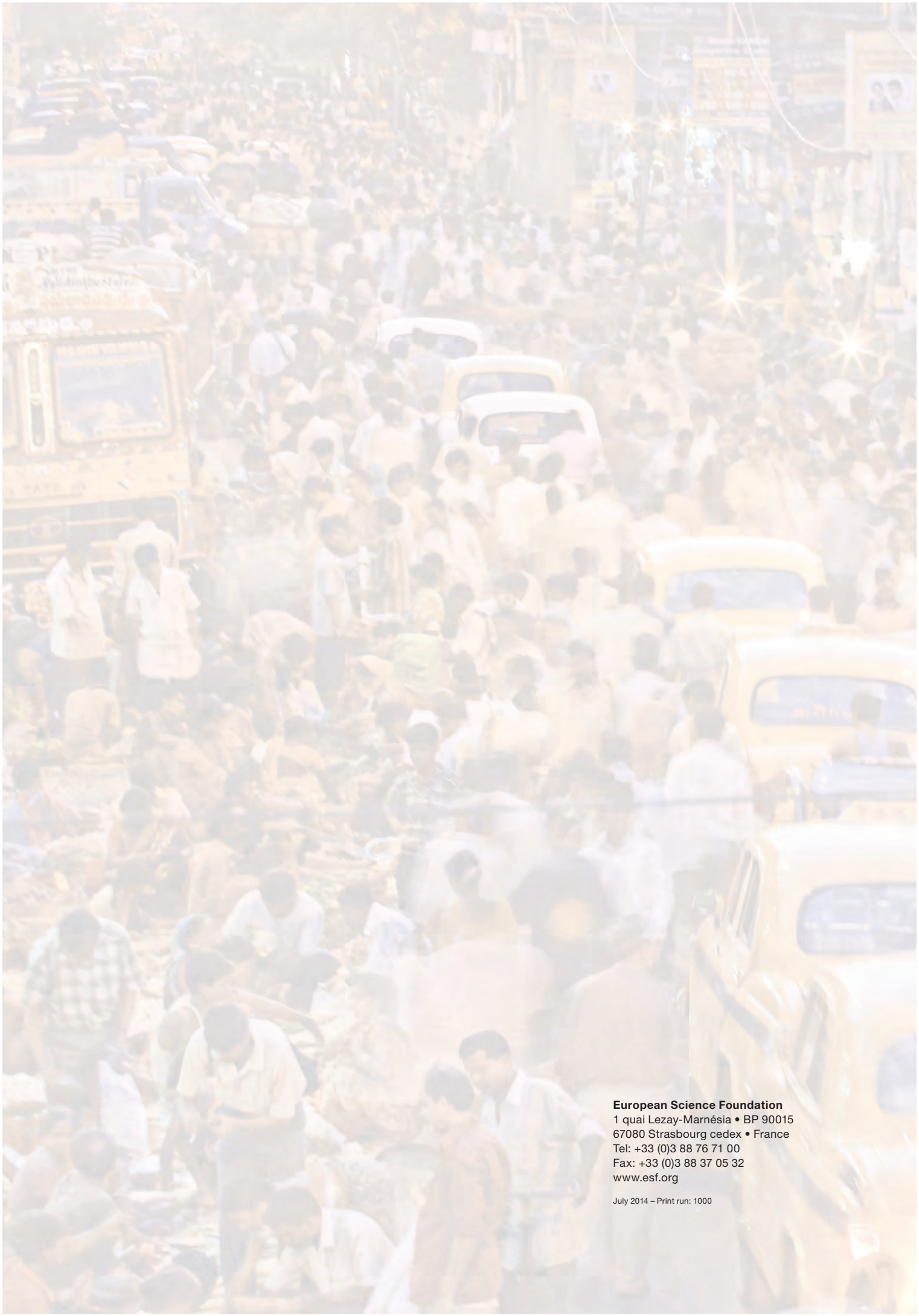
Pottier, J. (1999) *Anthropology of Food: The Social Dynamics of Food Security,* Cambridge/Oxford/Malden, Polity Press/Blackwell Publishers.

Pratt, C. (1999) Competing rationales for Canadian development assistance: Reducing global poverty, enhancing Canadian prosperity and security, or advancing global human security, *International Journal (Toronto),* 54, 306–24.
Prechel, H.N. (2008) *Politics and Public Policy,* Bingley, JAI.
Price-Smith, A.T. (2001) *Plagues and Politics: Infectious Disease and International Policy,* Houndmills, Basinstoke, Hampshire/New York, Palgrave.
Price-Smith, A.T. (2002) *The Health of Nations: Infectious Disease, Environmental Change, and their Effects on National Security and Development,* Cambridge, Massachusetts and London, The MIT Press.
Prins, G. (1998) The four-stroke cycle in security studies, *International Affairs,* 74, 781–808.
Puar, J.K. (2007) Terrorist assemblages: Homonationalism in queer times, *Next Wave*, Durham, Duke University Press.
Puar, J.K. (Ed.) (2001) *Queer Tourism: Geographies of Globalization,* Durham, Duke University Press.
Punch, M. (1999) Policing the risk society, *Administrative Science Quarterly,* 44, 199-201.
Ransome, P. (1995) *Job Security and Social Stability: The Impact of Mass Unemployment on Expectations of Work,* Aldershot, Brookfield Avebury.
Rao, R. (2010) *Third World Protest: Between Home and the World,* Oxford/New York, Oxford University Press.
Rappert, B. (Ed.) (2007) *Technology and Security. Governing Threats in the New Millennium,* London, Palgrave Macmillan.
Rasmussen, M.V. (2001) Refelxive security: NATO and international risk society, *Millennium: Journal of International Studies,* 30, 285–309.
Rasmussen, M.V. (2006) *The Risk Society at War. Terror, Technology and Strategy in the Twenty-First Century,* Cambridge, Cambridge University Press.
Rathbun, B.C. (2012) *Trust in International Cooperation: International Security Institutions, Domestic Politics and American Multilateralism,* Cambridge, Cambridge University Press.
Redclift, M.R. & E. Page (2002) *Human Security and the Environment: International Comparisons,* Cheltenham/Northampton, Edward Elgar.
Reichard, M. (2006) *The EU-NATO Relationship: A Legal and Political Perspective,* Aldershot/ Burlington, VT, Ashgate.
Renn, O. (2008) *Risk Governance. Coping with Uncertainty in a Complex World,* London, Earthscan.
Restrepo, H. (2000) *Global Conference on Health Promotion: Increasing Community Capacity and Empowering Communities for Promoting Health*, Mexico City, Global Conference on Health Promotion.
Retsinas, N.P. & E.S. Belsky (2011) *Moving Forward: The Future of Consumer Credit and Mortgage Finance,* Cambridge/Washington, D.C., Joint Center for Housing Studies/Brookings Institution Press.
Reyes, A. (2007) *Cyber Crime Investigations Bridging the Gaps between Security Professionals, Law Enforcement, and Prosecutors*, Rockland, Syngress Publishing.
Rezendes, V.S. & United States. General Accounting Office (1989) *Energy Security and the World Oil Market,* Washington, D.C., U.S. General Accounting Office.
Rhodes, L.A. (2004) *Total Confinement: Madness and Reason in the Maximum Security Prison,* Berkeley, Calif., University of California Press.
Ribeiro, M.M.T., R.d. La Brosse & I. Horga (2004) *International and European Security versus the Explosion of Global Media,* Bruxelles, International Institute of Administrative Sciences.
Richards, A. (2011) Countering the psychological impact of terrorism challenges for homeland security, in Silke, A. (Ed.) *The Psychology of Counter-Terrorism*, New York, Routledge.
Rieker, M. & K.A. Ali (2008) *Gendering Urban Space in the Middle East, South Asia, and Africa,* New York/Houndmills, Palgrave Macmillan.
Roland, P. (2001) Human security: Paradigm shift or hot air? *International Security,* 26, 87–102.
Roller, E. & J. Bendix (2005) *The Performance of Democracies Political Institutions and Public Policy*, New York/Oxford University Press, Incorporated.
Rosen, J. (2004) *The Naked Crowd: Reclaiming Security and Freedom in an Anxious Age,* New York, Random House.
Rosen, S.P. (1996) *Societies and Military Power: India and its Armies,* Ithaca, Cornell University Press.
Rothschild, E. (1995) What is Security? *Daedalus,* 124, 53-98.
Rudrappan, D. (2004) Good governance of water resources, *Wastelands News,* 19, 44–7.
Rueschemeyer, D. & T. Skocpol (1996) *States, Social Knowledge, and the Origins of Modern Social Policies,* Princeton/New York, Princeton University Press.
Russell, S. & A.R. Chapman (2002) *Core Obligations: Building a Framework for Economic, Social and Cultural Rights,* Antwerpen, Intersentia.
Sagarin, R.D. & T. Taylor (2008) *Natural Security: A Darwinian Approach to a Dangerous World,* Berkeley, University of California Press.
Salemink, O. (2005) seeking spiritual security in Contemporary Vietnam, presentation to *The Anthropology of Human Security*, August 29-30, 2007, Vrije Universiteit, Amsterdam.
Salter, F.K. (2002) *Risky Transactions: Trust, Kinship, and Ethnicity,* New York, Berghahn Books.
Sandell, R. (2006) *Pandemics: A Security Risk?* Madrid, Real Instituto Elcano.

Sandvik, K.B. (2010) Security and international law, in Burgess, J.P. (Ed.) *The Routledge Handbook of New Security Studies.* New York, Routledge.
Sarat, A. (2008) *Studies in Law, Politics, and Society,* Bingley, Emerald JAI.
Sarkesian, S.C., J.A. Williams & F.B. Bryant (1995) *Soldiers, Society, and National Security,* Boulder, L. Rienner Publishers.
Schibley, A. (2004) Religious terrorism, the media, and international islamization terrorism: Justifying the unjustifiable, *Studies in Conflict and Terrorism,* 27, 201–33.
Schneier, B. (1996) *Applied Cryptography,* New York, John Wiley & Sons.
Schneier, B. (2000) *Secrets and Lies,* New York, NY, John Wiley & Sons.
Schoenbaum, T.J. (2006) *International Relations: The Path not Taken: Using International Law to Promote World Peace and Security,* Cambridge/New York, Cambridge University Press.
Schoenfeld, G. (2010) *Necessary Secrets: National Security, the Media, and the Rule of Law,* New York, W. W. Norton & Co.
Schwarcz, S.L. (2012a) Marginalizing risk, *Washington University Law Review*, 487-518.
Schwarcz, S.L. (2012b) What is Securitization? And for What Purpose? *Southern California Law Review.*
Science for Peace Programme (2010) *Overview of Ongoing Science for Peace Projects*, Brussels, NATO.
Segall, K.W. (2002) Postcolonial performatives of victimization, *Public Culture,* 14, 617–9.
Seijdel, J. (2004) *Angst: (In) security,* Rotterdam, Netherlands, NAi.
Seiple, R.A. & D.R. Hoover (2004) *Religion and Security: The New Nexus in International Relations,* London, Sheed & Ward.
Shani, G., M. Sato & M.K. Pasha (2007) *Protecting Human Security in a post-9/11 World: Critical and Global Insights,* Basingstoke/New York, Palgrave Macmillan.
Shapiro, M.J. (2010) *The Time of the City: Politics, Philosophy and Genre,* New York, Routledge.
Shaw, J.E. (2011) The role of religion in national security policy since September 11, 2001, *Carlisle paper*, Carlisle, Strategic Studies Institute, U.S. Army War College.
Shaw, M. (2003) *International Law,* Cambridge, Cambridge University Press.
Sheikh, M.K. (2011) How does religion matter? Pathways to religion in International Relations, *Review of International Studies*, 1-28.
Sheptycki, J. (1998a) Policing, postmodernism and transnationalization, *British Journal of Criminology,* 38, 485-503.
Sheptycki, J.W.E. (1998b) Policing the risk society, *British Journal of Criminology,* 38, 521-5.
Sick, G. & L.G. Potter (1997) *The Persian Gulf at the Millennium: Essays in Politics, Economy, Security, and Religion,* New York, St. Martin's Press.
Sick, G. & L.G. Potter (2002) *Security in the Persian Gulf: Origins, Obstacles, and the Search for Consensus,* New York, N.Y., Palgrave.
Simon, J. (2008) NATO's uncertain future is demography destiny? *Strategic forum no 236.* Washington, D.C., Institute for National Strategic Studies, National Defense University.
Sindjourn, L (2002) *Sociologie des Relations Internationales Africaines*, Paris, Karthala.
Singer, P. (2002) AIDS and International Security, *Survival,* 44, 145-58.
Slyomovics, S. (2005) *The Performance of Human Rights in Morocco,* Philadelphia, University of Pennsylvania Press.
Smandych, R.C. (1999) *Governable Places: Readings on Governmentality and Crime Control,* Aldershot, Ashgate.
Smrkolj, M. (2008) International institutions and individualized decision-making: An example of UNHCRs refuge status determination, *German Law Journal,* 9, 1779-804.
Sparke, M.B. (2006) A neoliberal nexus: Economy, security and the biopolitics of citizenship on the border, *Political Geography,* 25, 151-80.
Sparks, T.M., G.M. Sulmasy & Naval War College (U.S.) (2006) International law challenges homeland security and combating terrorism, *International Law Studies v 81.* Newport, Naval War College.
Spence, K. (2005) World risk society and war against terror, *Political Studies,* 53, 284–302.
Sperling, J., Y.K. Malik & D.J. Louscher (1998) *Zones of Amity, Zones of Enmity: The Prospects for Economic and Military Security in Asia,* Leiden/Boston, Brill.
Spohn, W. (2010) Political sociology: Between civilizations and modernities. A multiple modernities perspective, *European Journal of Social Theory,* 13, 49-66.
Spread, P. (2008) *Support-Bargaining: The Mechanics of Democracy Revealed,* Sussex, Book Guild.
Stackelberg, R. (2002) The enemy: An intellectual portrait of Carl Schmitt, *American Historical Review,* 107, 1654-6.
Standing, G. (2009) *Work after globalization: Building occupational citizenship,* Cheltenham/ Northampton, Edward Elgar.
Stenson, K. & R.R. Sullivan (2001) *Crime, Risk and Justice: The Politics of Crime Control in Liberal Democracies,* Cullompton, Willan.
Stephen, J. (2011) Security, knowledge and well-being, *Journal of Moral Philosophy* 8, 68-91.
Stern, M. (2006) 'We' the subject: The power and failure of (in)security, *Security Dialogue,* 37, 187-205.
Strausz-Hupé, R. (1955) *Air Power and National Security,* American Academy of Political and Social Science, Philadelphia.
Sutton, B., S. Morgen & J. Novkov (2008) *Security Disarmed: Critical Perspectives on Gender, Race, and Militarization,* New Brunswick, Rutgers University Press.

Szerszynski, B. (1999) Risk and trust: The performative dimension, *Environmental Values,* 8, 239-52.
Tadjbakhsh, S. (2005) Human Security: Concepts and Implications – with an Application to Post-Interventions Challenges in Afghanistan, *The CERIS Series.* Paris, Centre de Recherches Internationales.
Tadjbakhsh, S. & M. A Chenoy (2007) *Human Security: Concepts and Implications,* London, Routledge.
Tarasuk, V. (2001) Discussion paper on household and individual food insecurity, Ottawa, Office of Nutrition Policy, Health Canada.
Tavakoli, J.M. (2008) *Structured Finance and Collateralized Debt Obligations: New Developments in Cash and Synthetic Securitization,* Boston, Wiley.
Taylor, M.C. (2004) *Confidence Games: Money and Markets in a World without Redemption,* Chicago, University of Chicago Press.
Tazreiter, C. (2004) *Asylum Seekers and the State: The Politics of Protection in a Security-Conscious World,* Aldershot, Ashgate.
Teitel, R. (2002) Humanity's law: Rule of law for the new global politics, *Cornell International Law Journal*, 355-87.
Thakur, R.C. (1995) *The Government and Politics of India,* New York, St. Martin's Press.
The Toda Institute for Global Peace and Policy Research (2004) *Worlds on the Move: Globalization, Migration, and Cultural Security,* London, I.B. Tauris.
Theiler, T. (2003) Societal security and social psychology, *Review of International Studies,* 29, 249-68.
Thiele, A.C.F.G. (2003) *Collective Security Arrangements: A Comparative Study of Dutch, English and German Law,* Deventer, Kluwer Legal Publishers.
Thies, C.G. (1999) *A Survival Theory of International Relations: Testing the Neorealist-Neoliberal Divide,* Washington, DC.
Thomas, C. (2000) *Global Governance, Development and Human Security: The Challenge of Poverty and Inequality,* London and Sterling, Pluto Press.
Thomas, N. & W.T. Tow (2002) The utility of human security: Sovereignty and humanitarian intervention, *Security Dialogue,* 33, 177-92.
Thomas, W. (2001) *The Ethics of Destruction: Norms and Force in International Relations,* Ithaca, Cornell University Press.
Tickner, J.A. (1992) *Gender in international Relations: A Feminist Perspective on Achieving Global Security,* New York, Columbia University Press.
Tickner, J.A. (1995) Re-visioning ecurity, in Booth, K. & Smith, S. (Eds.) *International Relations Theory Today*, Oxford, Oxford University Press.
Tierney, K.J. (1999) Toward a critical sociology of risk, *Sociological Forum,* 14, 215–42.
Tiller, J.S. (2011) *Adaptive Security Management Architecture,* Boca Raton, Auerbach Publications.
Tongeren, P.v. (2006) Religion without security, Tijdschrift voor filosofi, 68, 838-9.
Travers, K.D. (1996) The social organization of nutritional inequities, *Social Science & Medicine,* 43, 543-443.
Tulloch, J. & D. Lupton (2003) *Risk and Everyday Life,* London/Thousand Oaks, SAGE.
Tusicisny, A. (2007) Security communities and their values: Taking masses seriously, *International Political Science Review/ Revue internationale de science polique,* 28, 425-49.
U.S. Institute of Medicine (2003) *Informing the Future: Critical Issues in Health,* Washington, D.C., Institute of Medicine of the National Academies.
Ulmer, W.F., J.J. Collins & T.O. Jacobs (2000) *American Military Culture in the Twenty-First Century: A report of the CSIS International Security Program,* Washington, D.C., CSIS.
UNAIDS (2001) AIDS Epidemic Update, New York, United Nations.
UNESCO (2004) *Promoting Human Security: Ethical, Normative and Educational Frameworks in East Asia*, Lee, S.-W. (Ed.) Paris, UNESCO.
UNESCO (2005a) *Promoting Human Security: Ethical, Normative and Educational Frameworks in East Asia*, Paris, UNESCO.
UNESCO (2005b) *Promoting Human Security: Ethical, Normative and Educational Frameworks in the Arab States*, Paris, UNESCO.
Varughese, G. (2007) *State Building, Political Progress, and Human Security in Afghanistan: Reflections on a Survey of the Afghan People,* Kabul, Afghanistan, The Asia Foundation.
Venzke, I. (2008) International Bureaucracies from a Political Science Perspective – Agency, Authority and International Institutional Law, *German Law Journal,* 9, 1401-28.
Vielhauer, C. (2005) *Biometric User Authentication for IT Security: From Fundamentals to Handwriting, advances in Information Security,* New York, Springer.
Volpi, F. (2010) *Political Islam observed,* London, C. Hurst.
Von Tigerstrom, B. (2007) *Human Security and International Law: Prospects and Problems,* London, Hart Publishing.
Vorely, B. (2003) *Food, Inc. Corporate Concentration from Farm to Consumer,* London, International Institute for Environment and Development
Wæver, O. (2000) What is Security? The Securityness of Security, in Hansen, B. (Ed.) *European Security Identities--2000.* Copenhagen, Copenhagen Political Studies Press.
Wæver, O. (2010) Towards a political sociology of security studies, *Security Dialogue* 41, 649-58.
Walder, A.G. (2009) Political sociology of social movements, *Annual Review of Sociology,* 35, 393-412.

Walker, R.B.J. (1990) Security, sovereignty, and the challenge of world politics, *Alternatives,* 15**,** 3–27.
Walker, R.B.J. (2006) Lines of insecurity: International, imperial, exceptional, *Security Dialogue,* 37**,** 65-82.
Wall, D.S. (2008) Cybercrime, Media and Insecurity: The Shaping of Public Perceptions of Cybercrime, *International Review of Law, Computers and Technology,* 22**,** 45-63.
Walzer, M. (1992) *Just and Unjust Wars: A Moral Argument with Historical Illustrations,* New York, Basic Books.
Ward, T.J. (2005) *Development, Social Justice, and Civil Society: An Introduction to the Political Economy of NGOs,* St. Paul, Paragon House.
Warikoo, K. (2011) *Religion and Security in South and Central Asia,* New York, Routledge.
Watson, S. & A. Moran (2005) *Trust, Risk, and Uncertainty,* Basingstoke/New York, Palgrave Macmillan.
Webber, M. (2004) The Governance of European Security, *Review of International Studies,* 30.
Webber, M. (2007) *Inclusion, Exclusion and the Governance of European Security,* Manchester, Manchester University Press.
Weber, C. (1999) *Faking it: U.S. Hegemony in a 'post-Phallic' Era,* Minneapolis, University of Minnesota Press.
Weber, C. (2008) Designing safe citizens, *Citizenship Studies,* 12**,** 125-42.
Weber, C. (2011) *'I am an American': Filming the Fear of Difference,* Chicago, Intellect Books and University of Chicago Press.
Weiner, M. & S.S. Russell (2001) *Demography and National Security,* New York, Berghahn Books.
Western European Union (WEU) (1992) Petersberg Declaration, Ministerial Council of the Western European Union, Bonn.
Westing, A.H. (1989) Comprehensive human security and ecological realities, *Environmental Conservation,* 16(4).
Whitman, J. (2005) Human systems and global governance, *Systems Research and Behavioral Science,* 22**,** 311-7.
Whittaker, J. & H. Thompson (2003) *How to Break Software Security,* Boston, Addison-Wesley.
Wilkin, P. (2001) *The Political Economy of Global Communication: An Introduction,* London, Pluto Press.
Williams, J., S.D. Goose & M. Wareham (2008) *Banning Landmines: Disarmament, Citizen Diplomacy, and Human Security,* Lanham, Rowman & Littlefield.
Williams, M.C. (1998) Identity and the politics of security, *Alternatives,* 4**,** 204–55.
Williams, P. & B. Dawson (2008) *Security Studies: An Introduction,* London, Routledge.
Wilson, R. (2001) *The Politics of Truth and Reconciliation in South Africa,* Cambridge, Cambridge University Press.
Wilson, R. (2005) *Human Rights in the 'War on Terror',* Cambridge/New York, Cambridge University Press.
Winkler, I. (1997) *Corporate Espionage,* New York, Prima Publishing.
Yeager, R. & S. Kingma (2001) HIV/AIDS: Destabilizing National Security and the Multi-National Response. *International Review of the Armed Forces Medical Services,* 74**,** 3-12.
Yeatman, A. & M. Zókos (2010) *State, Security, and Subject Formation,* New York, Continuum.
Youde, J. (2005) Enter the fourth horseman: Health security and international relations theory; *The Whitehead Journal of Diplomacy and International Relations***,** 193–208.
Zedner, L. (2009) *Security,* London, Routledge.
Zhao, Y.Z. (2003) Information technology: New dimensions of government and citizen interaction, and human security in mainland China, and the Taiwan experience, *Pacific Affairs,* 76**,** 288-9.
Zuiderhoek, A. (2008) On the political sociology of the imperial Greek city, *Greek, Roman and Byzantine Studies,* 48**,** 417-45.



European Science Foundation
1 quai Lezay-Marnésia • BP 90015
67080 Strasbourg cedex • France
Tel: +33 (0)3 88 76 71 00
Fax: +33 (0)3 88 37 05 32
www.esf.org

July 2014 – Print run: 1000