

信息安全： 威胁与战略

XINXI ANQUAN: WEIXIE YU ZHANLUE

张新华 \ 著

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中文前言

全球信息化的实质是正在形成跨国界的全球“信息空间”，其扩展模式是全球“网络化”。这个虚拟现实正在改变着国际政治过程和国家政治的许多方面，引起了国际关系范式的变化和超国家权力特别是信息权力的出现，对民族国家的主权和政治、经济、文化构成了新的威胁，并因此而破坏着社会的稳定、整合和发展。

2000年1月7日美国总统克林顿签署公布的《美国国家信息系统保护计划》向全体美国人民指出：“在不到一代人的时间里，信息革命以及计算机在社会几乎所有方面的应用，已经改变了我们的经济运行方式，改变了我们维护国家安全的思维，也改变了我们日常生活的结构。”^①美国政府在其2000年底编制的《2015年的全球趋势》中也明确宣称：信息技术是肇始于18世纪中叶工业革命以来最重大、最有意义的全球性变革。网络化的全球经济将在快速而几乎不受限制的信息、思想、文化价值观、资本和服务，以及人员流动的驱动下向前发展，也就是说，在全球化浪潮的推动下向前发展。这个全球化的经济将对2015年时的世界政治稳定作出贡献，使其更趋稳定，尽管稳定的扩展和

^① National Plan for Information Systems Protection. President's Message. White House press briefing released January 7, 2000.

利益的分配不会全球普同。与工业革命形成对照的是,全球化过程将更加受到压缩,其进展将是荆棘遍地,其间会发生周期性的金融动荡,也会使经济不平衡进一步扩大。^①

这种划时代的变迁正在重新构建和调整社会相互依赖的方式以及我们个人生活的各个方面,迫使我们重新思考和评价曾经是理所当然的思想、行为和制度,当然也包括指引我们各项行动的政策与战略。

这对于正在全面融入国际体系、全面推进信息化的中国来说,是一个十分残酷的现实,虽然其间也包含了许多历史性机遇。对与此相关的安全、监管和立法问题进行研究,可以帮助我们更清醒地认识所面临的机会与挑战,鉴别出宏观政策和战略需要,通过研究国内外环境和借鉴正反两面经验,更好地建立中国特色的信息战略和网络监管体系,维护国家安全和社会稳定;更好地参与国际信息合作,健康地发展中国的信息化和现代化事业。因而,对信息安全的威胁和战略以及相关问题进行研究,是中国成熟地走向新时代的具有重大战略意义的举措。

经全国哲学社会科学规划领导小组审批立项,我们承担了2001年国家社会科学基金重点项目“信息安全、网络监管与中国的信息立法研究”课题,从2001年6月至今,经过一年夜以继日的努力,终于按项目的设计和原定计划完成了课题的研究。呈献在读者案头的《信息安全:威胁与战略》这本书,就是这项课题研究成果的结晶。

本书在全球和国家层面上,运用跨学科的方法,探讨了信息时代战略环境的变化和信息大战略的兴起,从信息空间的结

① Lawrence K. Gershwin, National Intelligence Officer for Science and Technology, Testimony before Joint Economic Committee, 21, June, 2001.

构与特性入手,研究了网络环境下的信息安全,揭示了伴随国际信息化而来的对政治、经济、文化和社会安全的冲击,涉及到网络政治动员和网络政治行动,政治激进主义,信息恐怖主义,有组织网络经济犯罪,媒介和文化帝国主义与信息主权,金融和电子商务安全以及信息网络的安全攻击等宏观问题;在此基础上,通过分析网络世界的技术、结构特点与运作机制,结合国际信息网络环境的现状和国内外实践,着重研究了互联网的社会本质及其治理原则和监管机制;以以上研究为铺垫,结合国内外实证资料和典型案例的分析,概括论述了信息安全的特点和信息立法的基本目标、方向和途径,特别是虚拟信息空间与真实世界的法制关系以及信息立法的原则和跨国界司法管辖,提出了中国信息安全立法的体系、内容和框架;最后,采用跨国比较方法,分析比较了主要国家的信息安全政策和网络监管模式与方向,特别针对中国面临的信息安全形势和威胁,探讨了我国信息安全领域的欠缺、问题和当务之急,并以前述的理论原则为指导,提出了加强我国网络监管和治理的政策与措施,以及关于我国信息安全防范的战略建议。

全书共五编十八章,各部分的主要内容简介如下。

第一编“信息安全与国家战略导论”,共三章,集中研究了信息空间崛起和“信息安全”问题凸现带来的国际战略和国家安全环境的变化,讨论了网络时代国际关系范式的变化和以软权力为核心的信息大战略的含义,并深入探究了信息安全的概念体系、类型和特点。

第二编“信息安全威胁”,共五章,以第一编第三章中揭示的信息空间特点为背景,在上述关于信息安全范畴的概念框架内,分别具体剖析了各主要信息安全领域的安全威胁表现和各个维度的问题。这五个安全领域是:网络政治动员与政治行动的安

全威胁、政治激进主义与信息恐怖主义的安全威胁、信息空间的跨国有组织网络犯罪、金融电子商务安全与网络侵权以及信息网络安全威胁,基本涵盖了主要的信息安全领域,包括政治、经济、社会、文化和技术等各个主要方面,并反映了最前沿的国际现状和趋势。对于每一个具体的领域,都尽量多地引用国内外的最新素材,应用最先进的理论进行评析,并努力进行理论概括,从国家和社会层面对信息安全问题进行界定和演绎,结合微观、操作层面的具体表现,紧紧围绕信息和信息安全的动态内容进行剖析,并尽量使分析概括反映或落实在若干重要维度上,试图向人们提供一幅涉及许多领域的多维信息安全画卷,并努力呈现政策和战略导引。

第三编“网络与网络监管”,共三章,将研究的视角聚焦在网络上,专章讨论了全球网络发展和传播的现状以及网络的社会、政治和文化影响;结合互联网的历史、传统和机制,深入研究了互联网的社会本质、价值取向和社会功能;继而在总结概括的基础上,结合各国的实践和互联网的地理空间特点,研究了网络发展政策和对网络世界进行监管和治理的原则与方向,涉及到了互联网的跨国特性与国家主权,以及信息空间的国际监管和治理等热门、前沿话题。

第四编“信息立法”,共四章。信息立法是进行网络监管和信息安全保护的重要制度保障,是整个课题研究的重要内容之一。在这一部分中,首先深入探究了信息空间立法的特点和挑战,在此背景上讨论了信息空间立法的目标和方向,信息立法的主要原则和途径,紧紧围绕信息空间法律关系的特点和现实需要,探讨了新的立法要求、目标、原则和实践途径,最后专门以独立的一章论述了信息安全立法的内容、体系和框架,分析了在关键安全领域国际信息立法的实践和动向,并从国家信息安全基

本立法和信息安全管理两个层面,分别提出了可供参考和采纳的具体立法建议。

第五编“政策与战略”是本书的定音篇,也是总结性的一篇,共三章。其主题是结合对我国面临的信息安全威胁形势的分析,对我国的网络监管和信息安全提出了政策与战略建议。

以上就是本书的主要内容和基本观点。信息安全及其相关领域是一个综合性特别强的跨学科、前沿研究领域,笔者和他所领导的研究团体在这些相关领域耕耘了十数年。在此奉献的跨学科、多学科研究的肤浅见解和心得,希望对政治领袖和广大读者有所裨益。限于学识和才力,加之时间紧迫,定有谬误不周之处,祈请高明者原谅并赐教。

张新华

2002 年国庆日于上海社会科学院
政策与战略研究中心

Preface to Information Security: Threats and Strategies

The essence of the process of globalization is the rise of a trans-national. "information sphere" (or info-sphere for short) on a global scale. Its expansion model is global networking. This virtual reality is changing the many aspects of both national and international politics and thus bringing about the transformation of the paradigm of international relations and the prominence of information power, resulting in new challenges to national sovereignty as well as social, political, economic and cultural well-being of the nation states. The stability, integration and healthy development of the societies in general are being threatened.

In his message to the American people when he was signing the National Plan for Information Systems Protection on January 7, 2000, Bill Clinton, the then President of the United States, made the following remarks about the above mentioned global trend and its consequences: "In less than one generation, the information revolution and the introduction of the computer into virtually every dimension of our society has changed how our economy works, how we provide for our national security, and how we structure our every day lives." ① In its

① National Plan for Information Systems Protection. President's Message. White House press briefing released January 7, 2000.

report called *Global Trends 2015* published at the end of 2000, NIC presented the best judgments of major drivers and the trends that will shape the world of 2015: IT will be the major building blocks for international commerce and for empowering nonstate actors. Most experts agree that the IT revolution represents the most significant global transformation since the Industrial Revolution beginning in the mid-eighteenth century. The networked global economy will be driven by rapid and largely unrestricted flows of information, ideas, cultural values, capital, goods and services, and people: that is, globalization. This globalized economy will be a net contributor to increased political stability in the world in 2015, although its reach and benefits will not be universal. In contrast to the Industrial Revolution, the process of globalization will be more compressed. Its evolution will be rocky, marked by chronic financial volatility and a widening economic divide.^①

This epoch-making transformation and its accompanying catalysts, that is, the medium, or process, of our time-electronic technology-is reshaping and restructuring patterns of social interdependence and every aspect of our personal life. It is forcing us to reconsider and re-evaluate practically every thought, every action, and every institution formerly taken for granted.

For China, which is trying to integrate into the international system and promoting national informationization in an all-around way, this represents a tremendously severe reality, although historical opportunities and benefits are predicted with the unfolding of this transforma-

① Lawrence K. Gershwin, National Intelligence Officer for Science and Technology, Testimony before Joint Economic Committee, June 21, 2001.

tion. Therefore, the study of the security aspects of this informational transformation and the related issues of network governance and cyberspace legislation can help us better interpret the challenges and opportunities China is confronted with. It will help the Chinese decision makers to identify needs for macro policy and strategy formulation and establish sound information strategy and network governing system for the assurance of national security and social stability, so that China can better participate in international information cooperation and manage its cause of informationalization and modernization. From this perspective we believe that the endeavor to research information security, network governance and cyberspace legislation is a strategic move of great significance, which heralds China's maturity at the threshold of the new century.

Sponsored by the Chinese National Foundation for Social Sciences, the author was entrusted the responsibility for the national key project Study on Information Security, Network Governance and Cyberspace Legislation of China and started research from June 2001. After one year's hard work, the project has been successfully accomplished with expected achievements. This present book entitled Information Security: Threats and Strategies is just the crystallization of part of the research efforts.

By applying cross-disciplinary and multi-disciplinary approaches on the global and national levels, the book probes into changes of strategic environment and the rise of the grand information strategy in the information age, and by way of investigating into the structures and characteristics of the info-sphere, explores the problem of information security in the networked world. It identifies and reveals threats and

attacks on political, economic, cultural and social security accompanying the process of international informationization, including such macroscopical issues as network political mobilization and activism, cyberterrorism, organized cybercrimes, media and cultural imperialism, information sovereignty, financial and e-commercial security, and attacks on security of cyber-networks. On the basis of the above, the book focuses on the social nature of Internet and its governing principles and policing mechanism against the background of current situation in the international networking environment and the practices at home and abroad through analyzing the technological features, structural arrangements and operation mechanism of the cyberspace. By analyzing foreign and domestic empirical materials and representative cases, the book continues to discuss briefly about the special security features and demands for legislation in the networked environment and the rudimental objectives, directions and approaches of information legislation, especially the relationship of legal systems between the virtual cyberspace and the physical world, as well as principles of cyberspace legislation and transnational jurisdiction. It thus brings forward theoretical thinking and proposals for the system, content and framework of information security legislation of China. By analyzing policing models and governing principles of different nations, the book identifies vulnerabilities, problems and urgencies existing in the field of China's information security and puts forward policy recommendations and concrete countermeasures for network governance in China. Guided by the above conceptual and theoretical framework, the book finally develops policy and strategic proposals and initiatives for assuring information security in China.

The whole book is composed of five (5) parts, eighteen (18) chapters. Highlighted in the following are the main threads of thinking and key arguments.

Part One, Introduction to Information Security and Implications for National Strategy, focuses on changes of international strategic thinking and national security environments with the rise of info-sphere and the sudden emergence of issues of "information security". It also explores the change of international paradigm and implications of the grand information strategy, which has the concept of "soft power" as its core. A conceptual framework, types and characteristics of information security are also discussed in this part. It has three chapters.

Part Two, Threats to Information Security, is composed of five chapters. Against the background of cyberspace characteristics and development trends identified and with reference to the conceptual framework of categories of the third chapter, the five chapters respectively analyze in detail manifestations of security threats in major infospheres and problems with different dimensions, which include threats engendered by network political mobilization and net direct action, security issues caused by political activism and cyberterrorism, cybercrimes by transnational organized groups, financial and e-commercial security and network infringement acts, and safety threats to information networks. These fields primarily cover all the major info-security aspects involving politics, economics, society, culture and technology, and reflect status quo of international realities and trends. In each specific field, domestic and foreign materials as up to date as possible are cited, analyzed with advanced theories, and theoretically generalized for real world reference needs, attempting to offer a multidimensional info-security pic-

ture and valuable guidance for practical policy and strategy formulation in the concluding chapters.

Part Three, Net and Network Governance, also has three chapters. Focusing on networks, this part discusses in detail the history, tradition and operational mechanisms of the Internet, as well as its social nature, value orientation and functions. Present state of network development and diffusion of networking technology on the international level is summarized with a thorough exploration of the social, political and cultural consequences of the Internet. Based on these rather theoretical explorations, it further probes into the principles and directions of network governance by reviewing practices of the various countries and studying the geographical and spatial characteristics of the Internet, coming down to such popular and frontier topics as transnational features of the Internet, national sovereignty, and international supervision and jurisdiction of cyberspace.

Part Four, Cyberspace Legislation, is composed of four chapters. Needless to say, cyberspace legislation is an important institutional guarantee for network governance and information security protection and is therefore a major concern of the study. In this regard, Part Four starts with identification of the special requirements of cyberspace legislation and continues with the discussion of legislation orientation, approaches and principles. It concludes with the study of the system, content and framework of cyberspace legislation, and by summarizing legislation practices of the various countries, puts forward concrete proposals specifically for information security legislation.

Part Five, the last part, Policies and Strategies, is the concluding part with three chapters, the theme of which is policy and strategic rec-

ommendations for China to govern its network and assure information security on the premise of analysis and assessment of China's information security threats and unfolding challenges during the process of its integration into the globalizing international system.

The above are the main lines of thinking and key arguments of this book. Information security and the related fields are a frontier research area of cross-disciplinary nature, in which the author and the research team he leads have been involved for decade with impressive achievements. It is earnestly hoped that the ideas and insights incorporated in these chapters from cross-disciplinary and multi-disciplinary endeavors will prove interesting and useful to political leaders and general readers. Due to limited knowledge and capability and for short of time, errors and inadequacies are bound to appear, for which, we hope readers give us corrections and recommendations.

Xinhua Zhang

October 1, 2002

At the Center for Policy and Strategic Studies
Shanghai Academy of Social Sciences

谨献给
新世纪的政治领袖们

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