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Security

Security is the condition of being protected against danger or loss. In general usage, the word "security" is synonymous with safety, and, in fact, the basic underlying idea of both safety and security is to protect the assets (whether those of a person or an organization) by creating safe, secure, risk-free conditions. Technically speaking, however, these two concepts are not used synonymously.

Safety mainly refers to protection against unintended hazards such as accidents or mistakes, while security is protection against both real and perceived deliberate threats. In modern times, security is mainly a concept related to external factors. For example, a person safeguards himself/herself against burglary by installing surveillance equipment at home or at office and an organization utilizes the services of armed guards to safeguard its assets. The role of armed forces in a country is mainly to tackle threats to its security from external forces.

In specialized fields, the term security has the following meanings:

- A condition that results from the establishment and maintenance of protective measures that create a state of inviolability from hostile acts or influences.
- With respect to classified matter, the condition that prevents unauthorized persons from having access to official information that is safeguarded in the interests of national security.
- Measures taken by a military unit to protect itself against all acts designed to damage its effectiveness.

It is very often true that people's perception of security is not directly related to actual security. For example, a fear of flying is much more common than a fear of driving; however, driving is generally a much more dangerous form of transport.

Categorizing Security

There is a huge literature on the analysis and categorization of security. Part of the reason for this is that, in most security systems, the "weakest link in the chain" is the most important. The situation is asymmetric since the *defender* must cover all points of attack while the attacker can simply identify a single weak point upon which to concentrate his efforts.

International Security

International security consists of the measures taken by nations and international organizations, such as the United Nations, to ensure nations' survival and safety. These measures include military action and diplomatic agreements such as treaties and conventions. International and national security are linked.

The traditional security paradigm aimed to realize nation-centered security. The prevalence of this paradigm reached a peak during the Cold War. For almost half a century, major world powers' security measures were followed with the aim of creating a balance of power among states. In this sense, international stability relied on the principle that if state security is maintained, then the security of citizens will necessarily follow. Traditional security relied on a military build-up between the US and the Soviet Union (the two superpowers), and on the absolute sovereignty of the nation-state. Security was seen as protection from invasion and was ensured using technical and military capabilities.

As Cold War tensions decreased, it became clear that the security of citizens was threatened by hardships arising from internal state activities as well as external aggressors. Civil wars were increasingly common and poverty, disease, hunger, violence and human rights abuses prevailed and traditional security policies were not capable of solving these problems.

More recently, the traditional state-centered notion of security has been challenged by more holistic approaches to security which address all the basic threats to human safety. The human security paradigm is one of these approaches which includes comprehensive and collective measures, aimed to ensure security for the individual and resultantly for the state.

Human security is a school of thought about the practice of international security and a switch from the traditional conception of security to a focus on the individual. From this perspective, human security is the root of foreign policy and a strong commitment to multilateralism is the only way to keep the world a safe place. The proponents of this paradigm argue that the international system is too interconnected for the state to maintain an isolationist international policy. Therefore, it argues that a state can best maintain its security by ensuring the security of others.

National Security

National security refers to maintaining the survival of the nation-state through the use of economic, military and political power and the exercise of diplomacy.

Measures taken to ensure national security include:

- using diplomacy to cooperate with allies and confront threats;
- maintaining effective armed forces ;
- implementing civil defense and emergency preparedness measures;
- using intelligence services to detect and defeat or avoid threats and espionage, and to protect classified information;
- using counterintelligence services or secret police to protect the nation from internal threats.

History of National Security

The concept of security of a nation goes back to the beginning of nation-states themselves. Armies for domestic peacekeeping and maintaining national sovereignty have existed since the beginning of recorded history. Civil and national police forces have also existed for ages. Intelligence agencies and secret services of governments stretch back to the ancient times such as the age of Roman Empire. While the general concepts of keeping a nation secure are not new, the specific modern English term "national security" itself became common in the 20th century. Methodologies to achieve and maintain the highest possible rate of national security have been consistently developed over the modern period to this day.

The modern concept of national security was introduced in the United States after World War II and became an official guiding principle of foreign policy in the United States when the National Security Act of 1947 was signed on July 26, 1947 by U.S. President Harry S. Truman.

Together with its 1949 amendment, this act:

- created the National Military Establishment (NME) which became known later as the Department of Defense,
- created a separate Department of the Air Force from the existing United States Army Air Forces, and
- established the National Security Council (NSC) and the Central Intelligence Agency.

During the Cold War's bipolar system, states often relied heavily on the two superpowers and other aligned nations to assist their national security. This principle is referred to as collective security, a term which came into use after the World War I ceasefire.

Since the breakup of the Soviet Union and the end of the Cold War, and with the rise of terrorism, national security has had to shift its focus dramatically. Security sector reform and security sector management are needed in many nations for different reasons. Some are nations emerging from repressive regimes or recovering from civil wars. Others are developing nations with weak governments where national security sectors never existed or were never strong before. The United States started its own security sector reform with the establishment of the Department of Homeland Security following the 9/11 terrorist attacks.

National Security and Rights & Freedoms

The measures taken to maintain national security in the face of threats to society has led to ongoing discussions on the scale and role of authority in matters of civil and human rights.

Some kind of tension exists between the preservation of the state and sovereignty, on the one hand, and the rights and freedoms of individuals, on the other.

Although national security measures are taken to protect society as a whole, such measures will necessarily tend to restrict the rights and freedoms of individuals. The concern is that where the exercise of national security laws and powers is not subject to good governance, the rule of law, and strict checks and controls, there is a risk that "national security" may simply serve as a pretext for suppressing unfavorable political and social views.

In the United States, the controversial USA PATRIOT¹ Act and other government action has brought some of these issues to the citizen's attention, raising two main questions : To what extent, for the sake of national security, should individual rights and freedoms be restricted? *and* Can the restriction of civil rights for the sake of national security be justified?

¹. Uniting, Strengthening America by Appropriate Tools Required to Intercept and Obstruct Terrorism

National Security Strategy

National security strategy deals with the series of military threats that the nation must confront. Thus, the making and implementing of strategy are largely an exercise in risk management and risk reduction. The notion of risk requires definition at the outset. In a more or less traditional manner, risk is defined as the difference between the threats posed to a nation's security by adversaries and potential adversaries and their capabilities to counter those threats. In circumstances where adequate resources are available, risk can be reduced and security increased. When there is a gap between the amount of threat and capability to counter it, the difference is the risk one has to deal with.

To assess and manage risks, one simply needs to list all the existing and potential threats to national security and then allocate whatever resources were needed to remove those threats.

In the real world, it is impossible to remove risk altogether for at least two related reasons. The first is that there is always disagreements among those who make policy about what the threats are, how serious they are, and which are in need of being reduced and to what degree. Of course, about such problems as the physical survival or territorial integrity, there is agreement that the threat, however defined, must be countered. Even in such cases, defining the nature of the threat and determining the appropriate means to counter it is a matter of disagreement. In other areas, there is considerable disagreement about how much threat is posed by the different forces and thus what military capabilities we need to counter them.

The other constraint is on the resources available to counter the threat. The heart of this constraint is the existence of discrepancies between revenues and expenditures – the budget deficit. In many countries, the size of the deficit and the resultant constraint on military activities are not going to change easily or rapidly. The solution will require difficult decisions that will undoubtedly have unpopular outcomes.

Information Security

Information security is the process of protecting data from unauthorized access, use, disclosure, destruction, or modification. The terms information security and computer security are frequently used interchangeably. These fields are interrelated and share the common goals of protecting the confidentiality, integrity and availability of information; however, there are some subtle differences between them. Information security is mainly concerned with the confidentiality, integrity and availability of data regardless of the form the data may take: electronic, print, or other forms.

Heads of state and military commanders have long understood the importance and necessity of protecting information about their military capabilities, number of troops and troop movements. Such information falling into the hands of the enemy could be disastrous. Governments, military, financial institutions, hospitals, and private businesses collect a great deal of confidential information about their employees, customers, products, research, and financial status. Most of this information is now collected, processed and stored on electronic computers and transmitted across networks to other computers. If confidential information about a company's customers or finances or new product line fall into the hands of a competitor, such a breach of security could lead to business failure, law suits or even bankruptcy of the business. Protecting confidential information is a business requirement, and in many cases, it is also a legal requirement.

For the individual, information security has a significant effect on Privacy, which is viewed very differently in different cultures.

A Brief History of Information Security

Since the early days of writing, heads of states and military commanders understood that it was necessary to provide some mechanism to protect the confidentiality of written correspondence and to have some means of detecting tampering. Persons desiring secure communications have used wax seals and other sealing devices since the early days of writing to signify the authenticity of documents, prevent tampering, and ensure confidentiality of correspondence.

World War II brought about many advancements in information security and may mark the beginning of information security as a professional field. WWII saw advancements in the physical protection of information with armed guards

controlling access into information centers. It also saw the introduction of formalized classification of data based upon the sensitivity of the information and who could have access to the information. WWII also saw the development and use of automatic ciphering machines to encode and decode secret communications.

The end of the 20th century and early years of the 21st century saw rapid advancements in telecommunications, computing hardware and software, and data encryption. The availability of smaller, more powerful and less expensive computing equipment made electronic data processing possible for small businesses and home users. These computers quickly became interconnected through a network called the Internet or World Wide Web.

The rapid growth and wide spread use of electronic data processing and electronic business conducted through the Internet, along with numerous occurrences of international terrorism, fueled the need for better methods of protecting these computers and the information they store, process and transmit. The academic disciplines of computer security, and information security emerged along with numerous professional organizations all of which follow the common goals of insuring the security and reliability of information systems.

Basic Principles of Information Security

Confidentiality

It is virtually impossible to get a driving license, rent an apartment, or obtain medical care without disclosing a great deal of very personal information about ourselves, such as our name, address, telephone number, date of birth, marital status, number of children, income, place of employment, etc. This is all very personal and private information, yet we are often required to provide such information in order to do business. We generally assume that the person, or institution to whom we disclose such personal information has taken measures to ensure that our information will be protected from unauthorized disclosure.

Information that is considered to be confidential in nature must only be accessed, used, copied, or disclosed by persons who have been authorized to access, use, copy, or disclose the information, and this happens only when there is a genuine need to access, use, copy or disclose the information. A breach of confidentiality occurs when confidential information has been, or may have been, accessed, used,

copied, or disclosed to, or by, someone who was not authorized to have access to the information.

Integrity

In information security, integrity means that data cannot be created, changed, or deleted without authorization. It also means that data stored in one part of a database system is in agreement with other related data stored in another part of the database. For example, a loss of integrity can occur when a database system is not properly shut down before maintenance act is performed or the database server suddenly loses electrical power. A loss of integrity occurs when an employee accidentally, or with malicious intent, deletes important data files. A loss of integrity can occur if a computer virus is released onto the computer. A loss of integrity occurs when an on-line shopper is able to change the price of the product they are purchasing.

Availability

The concept of availability means that the information, the computing systems used to process the information, and the security controls used to protect the information are all available and functioning correctly when the information is needed. The opposite of availability is denial of service.

In early 2010, Donn Parker proposed an alternative model for information security. He called the six atomic elements of information. His alternative model includes confidentiality, possession or control, integrity, authenticity, availability, and utility. The merits of the Parkerian model are a subject of debate amongst security professionals.

Risks to National Security (2)

National Security can be threatened by natural disasters, man-made accidents and by malicious attacks both by states and by non-state actors, such as terrorists and organized criminals. These risks have different impacts if they occur and some of them are more likely to occur than others.

Nations must do all they can, within the resources available, to predict, prevent and mitigate the risks to their security. For those risks that can be predicted, they must act both to reduce the likelihood of their occurring, and develop the resilience to reduce their impact.

Most national security threats arise from actions by others: states or non-state actors. There is much nations can do to reduce the likelihood of such risks occurring. They can directly disrupt adversaries such as terrorists; they can promote cooperation to reduce the motivation of states to be hostile to them; they can build alliances that make hostile acts against them more risky to their offenders; and they can promote development and combat poverty to reduce the causes of potential hostility.

But they cannot prevent every risk as some risks are inherently unpredictable. To ensure they are able to recover quickly when risks turn into actual damage to their interests, nations have to promote resilience, both locally and nationally. Ensuring that the public is fully informed of the risks they face is a critical part of this approach.

National Security Risk Assessment

A truly strategic approach to national security requires going beyond just assessing domestic civil emergencies. In addition to looking at short-term domestic risks, all aspects of national security need to be considered. To assess and prioritize all major areas of national security risk – domestic and overseas – a comprehensive national security risk assessment must be conducted.

Subject-matter experts, analysts and intelligence specialists should be asked to identify the full range of existing and potential risks to national security which might materialize in the future. All potential risks of sufficient impact are assessed, based on their relative likelihood and relative impact.

A risk with both high impact and high likelihood is more significant than one that is low impact and low likelihood. Judgments have to be made about the relative significance of risks that are high impact but low likelihood, or low impact but high likelihood. In addition, it is necessary to consider vulnerabilities, or preparedness to handle risks, in judging priority.

The process of identifying, assessing and prioritizing risks is intended to give us strategic notice about future threats to enable us to plan our response and capabilities in advance. But there are limits. Not every risk can be predicted, as there is intrinsic uncertainty in human events.

Identifying Risks

Under the present conditions, the following groups of risks might be of high priority for many nations, considering both likelihood and impact:

- International terrorism, including a chemical, biological, radiological or nuclear attack by terrorists;
- Hostile cyber attacks by other states and large scale cyber crime;
- A major accident or natural hazard requiring a national response, such as severe floods, earthquakes, an influenza pandemic, etc.;
- An international military crisis involving a number of states as well as non-state actors;
- Major instability or insurgency in bordering countries;
- Severe disruption to information received, transmitted or collected by satellites, possibly as a result of a deliberate attacks;
- A large-scale conventional military attack on a nation by another state resulting in fatalities and damage to infrastructure;
- Disruption to oil or gas supplies and price instability, as a result of wars, accidents, or major political upheavals;
- A major release of radioactive material from a nuclear plants;
- Short to medium-term disruption to supplies of resources (e.g. food, minerals) to importing countries;
- Water shortage resulting in large-scale famine.

Together, they constitute the most substantial risks nations face at present. However, there is no order of priority among them. In fact, the actual conditions determine the priority of each risk.

Response: National Security Tasks

The process of analysis, assessment and prioritization provides the foundation for making decisions about the tasks required to protect nations' interests. The following are the tasks carried out by security bodies to achieve their objectives:

- Identifying and monitoring national security risks and opportunities;
- Tackling the causes of instability;
- Exerting influence to exploit opportunities and manage risks;
- Enforcing domestic law and helping to strengthen international norms to deal with those who threaten nations' interests;
- Protecting nations' interests at home, at borders, and internationally, in order to address physical and electronic threats from state and non-state sources;
- Making attempts to resolve conflicts and achieve stability;
- Cooperating with allies and partners wherever possible to generate stronger responses.

Human Security (3)

Human security is a concept that refers to the security of human lives as the central objective of national and international security policy. It contrasts with the state-centered concept of security as a conceptual framework for understanding human vulnerabilities in the contemporary world. Mary Kaldor (2007) says human vulnerability is threatened by 'new wars' where actors are no longer states and do not follow the rules of 'old wars'. Moreover, these new wars are linked with other global threats such as diseases, natural disasters, poverty and homelessness. It is said that human security is a new paradigm of security and the world is entering a new era in which the concept of security will change dramatically. Security will be interpreted as security of people, not just territory; security of individuals, not just nations; security through development, not through arms; and security of all the people everywhere – in their homes, in their jobs, in their streets, and in their communities.

The concept has become widely used since the mid 1990s. It was initially used with reference to state policies and the search for new international security framework after the end of the Cold War. Today, it is increasingly being used by civil society

groups and with regard to various contemporary issues such as civil war, migration and climate change (Gasper 2010).

Efforts to promote human security for foreign policy of states and institutionalize it at the UN have generated controversies. A large literature has emerged challenging, defending, or explaining the meaning and the value of the concept. Many actors in international arena, in both security and development fields, are skeptical of its practical usefulness and political significance.

However, we believe that in spite of the controversy, human security is an important concept and should not be ignored in contemporary debates about the world order. It opens up new lines of analysis, and gives voice to new actors. Its value added in the security field is that it focuses attention on human beings and integrates non-military mechanisms as means to security.

The Concept of Human Security

The central idea of human security is the primacy of human life as the objective of security policy. This is a claim that has major implications for almost all aspects of thinking and acting on security which had for decades been built around the primacy of the state. The concept of human security expands the scope of analysis and policy in multiple directions.

By focusing on the individual, the concept necessarily covers all aspects of human rights including the need for meeting basic needs and the demands of political and social freedom. According to the South African political leader, Frene Ginwala, thinking about security broadened from an exclusive concern with the security of the state to a concern with the security of people. Along with this shift came the notion that states ought not to be the sole or main axis of security. People's interests or the interests of humanity should be under focus. In this way, security becomes an all-encompassing condition in which individual citizens live in freedom, peace and safety and participate fully in the process of governance. They enjoy fundamental rights, have access to resources and the basic necessities of life, including health and education, and live an environment that is not hazardous to

their health and well-being. Eradication of poverty is thus central to ensuring the security of all people, as well as the security of the state.

This conceptual reframing of security has important policy implications. It brings new issues or vulnerabilities and measures as priorities for global security that were not on the international and collective security agendas:

- Vulnerability to oppression and physical violence due to deliberate action or negligence of the state to its own citizens, and the need to protect people in these situations;
- Vulnerability to poverty as a factor connected with threats of violence, and the need to recognize the inter-relationship between conflict and poverty;
- Ending poverty as an important means to achieve human security, and the need for international cooperation for development as a priority;
- Vulnerability to risks from multiple sources including natural disasters, economic downturns and climate change;

Contemporary Definitions and Standing of Human Security

Various actors (governments, international organizations, researchers, NGOs) use the term for different purposes (agenda setting, advocacy, analysis) and in diverse contexts (foreign policy, international diplomacy, as a field of study and research in international relations). There is no single consensus definition of human security. The existing definitions are broadly categorized into two groups: broad and narrow formulations.

The broad conception is concerned with overall human vulnerability, and therefore encompasses all forms of threats from all sources. This includes, in addition to organized political violence recognized in the narrow concept, other forms of violence, as well as threats of natural disasters, diseases, hunger, unemployment and economic downturn.

The broad formulation has been proposed by a number of authorities, including UN documents on human security, the European Council, the Commission on Human Security, Government of Japan, etc. This conception of security identifies seven important dimensions of human security: economic security, food security, health security, environmental security, personal security, community security and political security.

The narrow formulation focuses on threats of violence, particularly organized political violence, and is used by the Human Security Network at the UN and the annual *Human Security Reports*. The proponents of the narrow definition criticize the broad definition as being too broad to be useful and defend the narrow definition for the reverse reason.

Despite being frequently criticized in both academic and political debates, the use of human security is increasing. Also, it has considerably influenced the discourse and the discourse and practice of foreign policy. It is said that the emergence of human security has given rise to four conceptual innovations:

1. It has placed human beings at the core of security and the state is no longer privileged over the individual;
2. It has provided a vocabulary for understanding the human consequences of violent conflict;
3. Some state and regional organizations have incorporated human security concerns into their foreign policy;
4. Securitizing such issues as health and the environment has resulted in more policy attention and resources for these issues.

The foreign policy of Japan and Canada, the International Criminal Court, the International Campaign to Ban Land Mines, etc. are solid achievements indicating that since 1994, human security has played a significant role in foreign policy.