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## The Changing Concept of Power in International Relations and Challenges of Iran's Cyber Strategies

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Received: 20 Nov 2019 ; Accepted: 10 March 2020

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### Abstract:

Among the most basic concepts in IR, power is one directly or indirectly associated with many others like security, national interests, diplomacy. National interests are already safeguarded with power, which has changed over time. Publicness, subjectivity, polarity, relativity and unquantifiability are among its features and parameters. Power also maintains the status quo structurally. The special task of a world power is to ensure international security and peace. Power can be defined through the framework of realism and liberalism. A shift from hard power to soft power and from real environment to cyber environment is the object of study in the discussion on the changing concept of power. In this study, the aim is to find the changes the concept of power has undergone. The point of departure for this concept in the present century is defined by a case study on the challenges of Iran's cyber strategies. This is the response to the question: what challenges pale Iran's cyber strategies with respect to the dynamics of power? It is believed that the main challenges Iran faces in the cyber space, considering the past trends and experiences of other status, include the difficulty and complexity in recognizing cyberspace, being a user in all areas, insufficient public trust in the government's cyber plans, lack of a comprehensive and efficient cyber strategy, is landing practices and not keeping pace with the revolution in the cyber space.

**Keywords:** Power, Classical period, Middle Transition, Modern Power, Postmodern Power, Cyber Power

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### Introduction

The concept of power has a pivotal role in politics especially international relations and in fact is the basis for any value and descrip-

tive analysis in this field. There is no essential, static and pure relationship between power as an implicational concept and its

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signified the origins of such concepts as power and their epistemological dimension's trace back to human history.

Power is not a fixed concept and has no objective implication since it is always widely contested. There is a wide gap between power and other similar concepts such as authority, influence, deception and force. The presence or lack of a combination of essential elements of power will define each concept.

Some political theorists consider politics as the knowledge of power and its acquisition and maintenance but others consider it as the crux of politics and in some cases as the paradigm of politics.

Morgenthau in his book politics among nations:

The struggle for power and peace (1948) believes that a true understanding of the struggle for power is the key to understanding political problems (Alam, 1994, p. 88).

Robert Gilpin in his view of power considers all three aspects. Hans Morgenthau sees power as an aim which can be achieved by means of foreign policy. Geoffrey Hart views it as control while Joseph Nye and Karl Deutsch consider a mixture of all three factors as power.

According to Keohane and Waltz, power as an aim was typically deemed to help achieve security. Like Dull, Kaplan, Lasswell and Ross consider power as an ability to control others and keep hold of the environment. Five indices of power are as following:

#### **(1) Publicness of power domain**

Effects of power may be manifested in any relationship including interpersonal, international and between groups. Such relations are not without reason since the rationale for any communication is either to take advantage or to repel harm (Madani, 1993, p. 103). Power

may find expression in military, political, scientific, technological, Cultural, Geographical, ... issues.

#### **(2) Subjectivity of Power**

Although the physical attributes of power help define the quantity, quality and domain of power, more often the psychological relationships between those who exercise it and those who are exposed to its exercise. Indeed, in this process, making the mental picture comes before the exercise of power. Hence, any nation's power is determined by other nation's view on it and its view on other's power (Khodadadi, 2003, p. 64).

#### **(3) Polarity of Power:**

Always power is exercised from a higher pole to a lower one: The relations between two blocs are also based upon the exercise of power in its different forms. It is likely that pole A with a stronger economic power seeks to put pressure on pole B while the latter with a stronger political power tries to respond the pressure from the former.

#### **(4) Relativity of Power:**

Power is not absolute but relative. If one is powerful, another has to be prepared to receive its exercise by the former. Power relations change over time (Alam, 1994, p. 91). For example, a state's power is considered and measured against time, an issue around power, the power of other states or one on which the power is exercised like England, which was during the world war I very powerful but lost much of its power because of the changes occurred in world war II (Madani, 1993, p. 104).

#### **(5) Unquantifiability of Power:**

In view of the qualitative parameters in building power and the delicate application of

power, the measurement of power is intensively difficult (Khodadadi, 2003, 66).

More specifically, there is no designated index or parameter for the measurement of power. However, some, such as Robert Dull, introduced options to quantify power. He sees the task of measuring power in the hands of good sense and intuition (Motaharnia, 1991, p. 79).

He believes that power may be described based on magnitude, distribution, comprehensiveness and field. He presents four methods to measure power:

(a) measuring power based on the official status of actor,

(b) evaluating actor's power by an independent group of brilliant and impartial experts,

(c) the right to involve in decision-making determines the limits of a certain power,

(d) actors' power can be quantified through a comparative analysis of their actions (Alam, 1994, p. 98).

### **1- Power in IR Theory**

IR theory has been developed to explain the processes existing in the international system.

In short two sets of theory are relevant in producing IR thinking:

(a) first order theorizing, and

(b) second order theorizing.

First order theorizing is concerned with content and theoretical aspects of International Relations. In other words, theories about the structure and dynamics of international system are put for these things.

Among them are those associated with realism, liberalism, neorealism and neoliberalism. However, second order theorizing is concerned with metatheoretical issues.

The most important emerging theories, under this category, include critical thinking,

feminism, postmodernism and constructivism. Meta theory explains the origins of theorizing and covers three areas: Epistemology, ontology and methodology (Moshirzadeh, 2006, p. 56). Within these two sets of theories, the concept of power is outlined through two generic lines.

### **1.1. The concept of Power in first order theorizing**

As noted earlier, realism, liberalism, neorealism and neoliberalism are among the most important ones in the first order. From the perspective of realism and liberalism, in this study, the concept of power is discussed.

#### **1.1.1. The concept of Power in Realism**

Realist theories are considered as a tradition in power politics (Qavam, 2005, p. 79).

Realists argue that national interests ought to be safeguarded and it is possible only with power.

Power brings security. The elements of realism are, in principle, deeply connected with power. In this tradition, keeping power, demonstrating power, and strategies to increase power are basically trending. They suggest that to provide security, power should be heightened, and in this regard military power is the major component.

In a realist view of nation-States, the main actors in a system are state – central, there is a clear distinction between foreign policy and domestic policy. International politics is a power conflict in an environment with no central authority.

In a decentralized international system consisting of states with equal rights or sovereignty, nation-states very based on their capabilities in the form of stronger powers and smaller states (Qavam, 2005, p. 80).

In a realist politics, power and national interests are two central elements in which a

rational actor consistently moves toward enhancing its interests. These interests are conceptually diverse and include both material and spiritual elements.

In other words, defending territories, keeping the honor and safeguarding the values are necessary. In this case, power and interests are horizontally related and could be concurrently and consistently improved through a rational behavior. To realists, a political action relies on the prudence of the national and international climate (Qavam, 2005, p. 81).

In realism, capabilities or power is not the same as the size of the military force in its real sense or rarely the same. Realists argue that power is a multidimensional phenomenon with both military and non-military components. They developed models and frameworks to categorize the components of national power.

Such capabilities cover not only the military force but technology, population, natural resources, geographical features, political system, political leadership, strategy, and ideology. In sum, power is composed of qualitative and quantitative elements (Dougherty & Pfaltzgraff, 1993, pp. 143-147).

Power is a word frequently seen in politics literature, particularly in international relations. The absence of efficient institutions and procedures to resolve international conflicts compared to the existing parallel procedures in domestic. Political systems make power a more visible element than one in national sphere (Seifzadeh, 2003, p. 97).

“Civilized life is totally centered upon power”, Nicholas Spikeman said. Power is the ability to mobilize humans individually or collectively toward an ideal point through persuasion, allurements, trade-offs, or coercion. Hans Morgenthau even defines international politics and in fact politics

in its broad sense as “struggle for power” (Dougherty & Pfaltzgraff, 1993, pp. 143-147).

Morgenthau believes that power refers to “an individual’s control over others” thoughts and actions. “The quest of power has control over international politics”, said Robert Strauss (Morgenthau, 2003, p. 25).

A true reviewer of political realism or realist politics, John Burton believes, “no more important proposition or common view within IR theorizing can be spotted than the view that the existence of a state depends on their power and their own acquisition of aims is still based on their power. The main problem, therefore, which remains to be solved, is the management and control of power.

While viewing power as an effective relationship and lobbying, K.J. Holsti sees it as a multi-facet concept composed of the following elements:

- 1) the efforts through which an actor influences another.
- 2) the capabilities used for the same purpose
- 3) the ideal or desired reaction of the influencer.

In short, Holsti defines power as “the general ability of a state to control the behavior of others” other realists also approach this topic from similar positions (Moradkhani, 2015, p. 6).

#### 2.1.1. the liberalist concept of power

Liberalists theorize to confine the limits of power, specially the exercise of military power. These scholars believe that a certain kind of economic relations growing out of world dynamics contributes to the economic interdependence of different states and prevents international actors from exercising military power or exerting force to end their conflicts. This view is often known as the pluralistic view of power (Lukes, 1996, p.

16) with its liberalist interpretation of political power and some assumptions about its subjective and causal nature introduced by pluralists and reflected in the works of some authors such as Hunter, Dahl, Polsby, etc. The pluralist political scientists whose thoughts were widely acknowledged during 1950s 1960s contended that there are multiple foci of political power in every pluralistic political system. Thus the distribution of power among many people and social groups leads to competition, bargaining and contestation. In pluralist model, the main argument is that power distribution among competing groups is adjusted based on the variations and multiplication of power sources (e.g. institutional, governmental, economic and political), leading to a contestation between competing groups and probably transition of political power (Nazari, 2005, p. 384).

The first view of power is based on an experiment elastic methodology in which the only noticeable reality is deemed as objective issues. The effect of this methodological approach is that visible and concrete behavior expressed in the form of potential give – and – takes and conflicts during making decision (as the most tangible expression of power) is emphasized.

In pluralistic tradition, Polsby argues, certain effects and outcomes are examined to identify those who act as the dominant figures in making decisions. Dahl views power relation as a canal relationship in which one side helps change the behavior of other side. In this study, power is considered as a relationship in which the others, behavior is successfully controlled and they are made to do what we want or desire.

Pluralists believe that in an analysis of political power (based on empirical and observable facts) the manner of adopting decisions in the course of policy making needs to be taken into account (Nazari, 2005, p. 385).

These theorists argue that power is not so much centralized as contended by elitists (e.g. Mills) and the exercise of power is not irresponsible (Hindess, 2001, p. 4).

In a liberalist perspective, it is only possible in the process of conflict and confrontation to say that holding power can be certain observed because in such cases those in a dominant position can dominate over others due to the fact that their power is greater than their rivals (Hindess, 2001, p. 5).

2) The concept of power in second order theorizing

In critical theory, one of the most prominent in second order theorizing, power is the product of discourse and thus makes its way through the crossing point between thought, venality, idealism and realism (Laclaw & Mouffe, 1985).

With an analysis of critical theories, it is possible to spot many commonalities and observe the radical view of power as introduced by Lukes. The most important commonality between Lukes and critical theorists that both, though looking at individual as one with an independent rationality, believe that people don't act based on an individualistic rationalization. However, this rationality is kept as the ideal and used as a standard to criticize the behavior of certain individuals or groups, or even almost more broadly, that of the current organization of society. Indeed, the true work of power may be seen through two subjective ideals, the ideal of individual self – determination and the ideal of civil society where the former can be found (Hindess, 2001, pp. 98-100).

Marcuse in his book one – dimensional Man (1964) argues that in advanced industrial societies, freedom is a powerful instrument for domination. In other words, free choices made by the individual members of such societies help stabilize a set for power relations

that enhance the interests of dominators. The believes that we act freely based on thoughts and needs imposed from the external environment, or even probably imposed explicitly upon us via mass media and advertisement (Hindess, 2001, pp. 100-101).

Regardless of public behavior and beliefs, he views home as the first place where individual consciousness and unconsciousness are conditioned and formed. However, the main problem is that what conditions should be present to achieve the ideal of self-determination introduced by Marcuse as his basis for evaluating power?

The early critical theory viewed Lock's fame and beliefs as leading to an ethical critique independent of military to an ethical critique independent of military power.

Nonetheless, the Marxist view of civil society as something grown out of social forces suggests that any that any ethical critique on the governing interests is not independent, thereby, Marcuse concludes that the only hope for the formation of a rational society consisting of independent members comes from "externals and excludes", namely, those taking no advantage of joining the entire system of domination.

The first to apply the critical approach to IR, Robert Cox always stresses on the factors contributing to a change in the existing order, believing that this order is not natural but historical. He also argues that such unfair order will be changed if certain conditions are met.

Another important topic within critical theory is international hegemony, meaning that the power of the dominant class is not merely by force but by consent as well because it enables them to make those images supporting certain interest's groups appear as generic and acceptable to everybody. Cox believes that this hegemon is originated in a

domestic hegemon that has been shaped by the dominant social class.

Thus this hegemon expands and affects the surrounding states which themselves in turn follow its technological, cultural and economic patterns, without adopting its political model (Moshirzadeh, 2005, p. 232).

Furthermore, these theorists seek to understand why and how have states as the main center of loyalty and as a territorial system excluding "others" from its coverage been formed and how likely are they to be changed? Link later says that it is possible to appropriate how have international existing order, identities and preferences as well as interests been formed through understanding and expanding this point.

Over many years the term power has changed to a great extent. To understand these changes, it is required to appreciate the temporal and spatial aspects of power and know the new emerging trolls for seeking and exercising power. Currently by finding the features of power, IR theorists can better define other terms like security, diplomacy and so on. For the same reason, the changing concept of power during classical and modern periods is addressed. There is a disagreement, among IR theorists, over the fact that what is really meant by classical or modern period?

In this study, however, the changes in this concept are addressed during classical, middle, modern and postmodern periods. In postmodern era, the role of soft power in shaping these conceptual changes is discussed.

### **(3) the changing concept of power**

The trajectory of this conceptual change may be explored in three classical, middle and modern eras.

### 3.1. The classical concept of power

In ancient Greece, Socrates is known as the leading philosopher in dealing with power and its role in establishing political thought.

To Socrates, wisdom is the first order topic but Plato in republic knows it as justice.

It is, however, necessary to view both as a response to the question of power because Socrates and Plato sought to resolve the situation after considering the multiple political changes during this period, particularly the common deception under the aegis of a democratic Athenian state governed by brilliant and eloquent orators.

Therefore, Arguably, Socrates, unlike Plato, do not offer a political model, although both similarly seek a solution to power and politics so that the masses are not impressed by promises and becomes stabilized (Barker, 1951, p. 98). Here power is portrayed notoriously as something harmful in the hands of the governing class for not having growth and development. Socrates, solution is knowledge. The highest goodness, said Socrates, is happiness and virtue that are achievable with knowledge.

In Socrates, mind, power as knowledge and knowledge as framed by ethics and politics is both a means without which no appropriate action is performed, and an aim by itself because it is the highest virtue and happiness without knowledge is not understandable and, above all, is probably always a dynamic, evolved and virtuous source of power.

Therefore, from Socrates' mindset, knowledge and power are interlinked and the path to the reformation of power goes through the channel of knowledge. Also Plato's political tradition which aims to reform a corrupt and chaotic society, is bound to power and any theory like his is to construct a stable and virtuous society as well (Rahbari, 2006, pp. 122-123).

Aristotle also explicitly argues for the difficulty in responding to the question of power but eventually with a special approach composed of normative and instrumental practices power as "the highest virtue". However, this view of power is due to the fact that it helps us perform a large part of best and most respected work so that virtue would not appear in the absence of power.

### 3.2. The concept of Power in the Middle Period

During the middle age, passing by the state and the credibility of church, power approached politics more closely. By means of Augustinian Canons, the philosophical dualism in spiritual religion becomes power dualism in politics. In the city of God, Augustine defines power as synonymous with sovereignty. Its meaning is totally as "the highest governor" which has been taken from the peon's elite in the city of God but in the earthly city it represents the celestial community and rules over the terrestrial society. It makes the terrestrial power in its entire eternity within the city of God move toward the center of all goods in the earthly city (i.e. the city of God) and prepares humans to enter this sacred place (Rahbari, 2006, p. 125).

Preceded by Augustine, St Thomas Aquinas, the most venerable philosopher in the middle-aged, influenced deeply the church and the relationship between power and faith.

In his book the Summa theological (1485), Aquinas confronts the problem with saint Paul's argument that "all powers belong to God". He believes that God only wants the formation of a state but the nature of that state or system remains to be determined by people. He says that the right to make laws belongs to the public or their representatives.

Since he himself is a supporter of monarchy, he regards the public satisfaction as

the guarantee of a healthy state and monarchy needs to be elected. He believes that there are two kinds of tyrant. One who seizes the power and the other who legally takes the power but later on abuses his power.

Distinguishing between church and state, he also regards the former as the place where mentalities are guided but the latter as one responsible for controlling bodies so that each one never trespasses one another's territory. In case of any conflict, the pope may become involved and state his views as he sits higher than the other two (Musca, 1984, p. 10).

Nonetheless, the dominant argument for power and its origin in the Middle Ages is concerned with "power theology", which is sacred, though wielded by Kings-after all, it is a means of administering justice and obeying God's orders. Therefore, it essentially holds a certain value. Power will transcend the terrestrial boundaries if it governs. It spreads everywhere and becomes globalized when it reaches the city of God (Brehieh, 199, p. 45). Perhaps this connection to theology did allow no more exploration into the field of power in the age of sacredness.

### 3.3. The concept of power in Modern Period

Since the early 16th century, a meta narrative came out of the ruins of Middle Ages or classical period, in Foucault's terms, under this narrative, human replaces "God" and "religion" is replaced by instrumental rationale. Here it articulates its truth-centered message to the whole world and introduces the metaphysics of its presence, as coined by Derrida, like a prophet. It spreads the universality of a "speech-oriented discourse" based on a paradoxical duality. In his book "frameworks of power" (1989), Stewart Clegg identifies two trajectories of continuity and discontinuity in the genealogy of power.

The first trajectory begins with Hobbs and ends with Lukes and outlines, not so accurately, the teachings of such theorists as Hegel, Marx, Russel, Weber, Parsons, Newton, Wrong, Giddens, Arendt, Dahl, Poulantzas, and so on (Clegg, 2000, pp. 9-10).

The first effect of this shift from theology to human was that power was more discussed in relation to human and human as its starting point, particularly those trying to expand their power through forming institutions.

Niccole Machiavelli, as a philosopher, conceptualized power from a postmodernist viewpoint by using such terms as "organization" and "strategy" in a pre-modern age.

His approach to power is typically characterized by a multifaceted view ranging from an emphasis on military terms like "the secondary nature of attempt" to "the role of interpreter" and the place of myths in political organization, practical advice, racial orientation, the preference of concrete power over abstract one, consideration of ethics-free roots in power theorizing, and the precedence of effective instruments over sacred aims. It is also widely acknowledged that the new approach to the concept of power in the light of modern thought begins with the ideas of Thomas Hobbes.

One of the greatest modern political philosophers, Hobbes was the first to theorize the concept of power, even though Machiavelli earlier, in Bauman's language, dealt with it via adopting such terms as organization and power (Mann, 1980, p.165).

However, it was this Hobbes' power discourse that shed, for a long time, its light on a range of approaches in this respect.

In this fashionable thinking, "Hobbes is introduced as the main developer of a modern political thinking on power, even more broadly as the English creator of philosophy" (Thomas, 1920, p. 101).



His because there was a limited body of literature on the technical aspect of philosophy including epistemology, ontology, physics and ethics before him. Indeed, these statements about Hobbes are truly right and the modernist interpretation of power explains above all why his thoughts and views are important. He develops, adopting a new scientific methodology, politics in its real sense and with his explanation on the concept of power in politics (as a central concept) develops his argument about how to understand the nature of power rather than how it should be, just like what the preceding political philosophers have put forth (Wrong, 1998).

With respect to the novelty of his thoughts, he is introduced, by C.B. Macpherson, as an excellent theorist not because it is difficult to understand his thought but because his theory, on the one hand, is clear and on the other comprehensive and wipes out all its preceding conventional thinking (Macpherson, 1962, p. 9).

A debating human constitutes a major part of his political theory. The Hobbesian human is greedy for power. This strong desire for power comes from his greedy instinct and a response to a panic that every person feels may come from another person who is himself thirsty for power. He believes that human's greed for power is not satisfiable and will be removed when he dies (Hobbes, 1962, p. 12).

Later, he was followed by other political scientists such as Locke, Jean Jacques Rousseau, and others in addressing power. However, specifically, it was Max Weber's theory of power that influenced heavily his succeeding theorists. His interpretation of power covers only its social and political forms and thus his interpretation may be regarded as a sociological etymology of power (Nabavi, 2000, p. 51).

He defines power as a chance that one or more people may have to impose their will even when other elements are concerned (Weber, 1995, p. 232).

In his famous definition, the state is a compulsory political establishment with its continuous system of administration. Only if and in as much as its executives successfully claim the monopoly of the legitimate use of physical force in order to advance their orders (Lukes, 1991, p. 61).

Based on this definition, Weber argues that power is linked to domination as power is built on two main pillars: imposition of will and resistance of another person. To Weber, domination is itself a distinct example of power. Broadly speaking, domination, means the possibility to impose one's will over others behavior.

He sees these two pillars as the types of domination. First, a kind of domination based on accumulation of interests [relying on properties and economic ownership] and, second, a domination based on authority (that is, the power to send orders and the duty to comply with orders).

As an ideal example of the first type of domination, Weber refers to a monopolistic form of domination in the marketplace and as the ideal example of the second type, he refers to the power of patriarch's patrimonialism and feudalism.

In this way, according to Weber, power takes a variety of forms in terms of social context, historical background and structural features. Therefore, he thinks, this fact that where power originally comes from is an experimental problem; thereby, in contrast to Marx, there is no solution to such problem if a single and certain origin of power is concerned. While the advent of world wars again made power as the leading object of study in international relations, it promoted the place

of military power or the arms to enforce power.

Bertrand Russel was the first in the 20th century to introduce power as an independent area in political philosophy. Political power, according to Russel, manifests itself into different forms and rises from multiple sources. His definition of power is: "power may be defined as generating ideal outcomes. Thus, it is a quantitative concept and it is easy to say that one approximately outweighs another in power (Russel, 1992, p. 55). Nikos Poulantzas (1978), a structuralist Marxist, gives a Marxist and class oriented interpretation of power (Poulantzas, 1973, pp. 104-111).

To clarify his theory, he outlines three concepts of social class, class interests and private interests. According to Poulantzas, power is directly related to class and class struggle is the point where power expresses itself (Poulantzas, 1991, p. 209). A wide array of views, over time, helped define the requirements of power. In the twenties century, particularly during the cold war, these efforts evolved and the building blocks of power included the following:

1. Area, geopolitical status, the nature of boundaries and borders, terrestrial and land features, climate and location of a country.

2. Military preparedness: Knowing that the entire power of a country is equal to its military power and all conflicts are resolved via war, any country that has a powerful military is powerful.

3. Population: believing that the great powers of the world are all populous, they promoted the axiom that the more populous, the powerful a country will be.

4. Mineral and Natural Resources: Developing self-reliance in order to supply food and raw materials.

5. The extent of racial homogeneity.

6. Ideology.

It, however, needs to be noted that there are many drawbacks of the conventional approach to power that have been addressed widely in the literature on power. Among them are the wars between Germany on the one extreme, and England and France on the other in 1940 and several wars between, the Arab states and Israel, specially in 1967, where high-quality factors power in small number and volume were observed.

Following the collapse of the Soviet, a transformation went through the concept of power. On the one extreme (the Soviet was divided), an important point was that the instruments at hand were not capable of establishing dominance or striking power balance; on the other extreme (us in a monopolar) The fact that the global management not the Soviet's is of significance naturally helped US adopt a new strategy to look for the new tools of managing power.

#### **(4) The changing concept power in the postmodern era [the twenty-first century]**

Undoubtedly, as human knowledge and analytical skills improve and tools become more developed, the concept of power experiences a change, which takes place in two directions: subjective-discourse and objective-instrument-promoting.

##### **4.1. The subjective change in power in postmodernist discursive context:**

Since the late 20th century, the scene of thinking was occupied by postmodernists. Such theorists as Foucault, Leotard, Derrida and Baudrillard, each with his own Avant-grade critique, challenged in a way the heritage of modernity.

They were each influenced in a way by the intellectual properties of such philosophers as Nietzsche, Heidegger, Weber, and

Simmel and critically approached modernity from different viewpoints.

Their critique provided a theoretical scene named the age of deconstruction.

It is an age when meta narratives collapse, “grand approaches”, “sublime discourses”, and “sublime centralities”, are “no longer present; in this age, gross and opaque identities”, “unstable and shaking boundaries”, “praise for distinctions”, “local rituals”, historical discontinuities”, pretensions”, “acute realities”, the end of history” and “the end of ideology” are all observed or experienced.

On the other extreme, “centralism, “social climbing”, “centrality of speech”, “universalism”, “simulation”, “linear evolution” and so on are embedded within the text and context of the approaches adopted by the political and military elites in the dominant powers of the world (Rahbari, 2006, pp. 134-135).

This age begins with the epistemological departure of Foucault and ends with the meta modernist, though taking on different types of signified and expressions (Clegg, 2000, pp. 9-10).

In this era, the concept of power is fiercely attacked by deconstructionists. Critique of power is central to post modernism, either in literary criticism, in philosophy or in political thinking. Nietzsche and Heidegger both addressed power philosophically.

Foucault and Leotard identified power in the context of history and society whereas Derrida and Baudrillard did it in culture and thinking. All these theorists consider modernity as something explaining anti-human power (Foucault, 1997, pp. 327-348).

Among postmodern philosophers, Michel Foucault has devoted his most philosophical attention to the nature and concept of power. His theory of power is so widespread that has put an end to the modern thoughts on the topic while covering other areas. In other words,

postmodern views on power are likely to be considered if reference is made only to Foucaultian thoughts and even such thoughts could be proven enough to this point.

In his discussion on genealogy, Foucault addressed three faces of power including “discursive power”, “disciplinary power”, and “nurturing power”.

According to Foucault, discursive or sovereign power is one that is exercised on the earth and its products rather than on the bodies and their actions.

This is a type of direct power which can persist through possessing the public properties without any action or reaction to the body of society which builds the nation and identifies itself with it. This power moves from one subject to another and constitutes a “subject-to-subject relationship”.

This attribute makes it different from disciplinary power, which makes its way into the material nature in an inclusive manner, it is persuasive without any repressive efforts which are put on emotions and behaviors. In this way, power creates the situation in which “permanent imprisonment” and “the universal techniques for submission” are present.

These circumstances allow it reproduce its body of society just like acceptable data or like a tradition (Dreyfus and Rabinow, 1997, pp. 19-26).

In his views on “nurturing power”, “it needs to be generally admitted that power acts more than that held by somebody. Power is not the acquired or reserved quality for the dominant class. Rather it is the effect of a set of their strategic positions (This effect expresses the positions of the dominated and sometimes redirects them).

Furthermore, this power does not act only as a limitation or coercion for those having no power, but it encloses them and passes by them or passes through them, relies on them,

exactly similar to a time when they, in a war against this power, rely on the means on which power is enforced" (Foucault, 1991, pp. 24-30). In contrast to the modern thinking, power is not, in the eyes of Foucault, deemed as something possessed by its enforcers.

In the book "Discipline and Punish" (1995), Foucault states that he wants to explain how power is exercised not how it is possessed. This suggests that power is not a property, wealth or privilege and it is not merely what the dominated do not have and what the dominated has not.

He prefers to say that power is a strategy and both dominators and dominated are equally a part of power relations and live in a particular social framework. Like a complicated strategy running throughout the entire social system, power is not expressed comprehensively and universally.

Instead, it manifests itself locally and as micro powers. Power is not embedded within the governing elite and is not symbolic but rather it influences society in a manner that dominating the system (by means of a revolution or a coup d'état) is not able to change the power network on its own (Foucault, 1991, pp. 26-27).

All the new conceptual changes in power, however, are not to be attributed to postmodern thinking. It is possible to move away from discourse toward objectivity without sticking firmly to classical explanations in order to address power in the new century.

#### **2.4. The objective change in power within cyberspace:**

##### **Cyberspace, the key to power in the 21st century**

Leotard thought on power is important because he addressed, on the one hand, the corporatization of information and knowledge,

and on the other the use of knowledge as an instrument in its relation to power. In his discussion about power, he raises the question: "who knows?" From the point of view of Leotard, there is a widespread disagreement over power in the contemporary field of knowledge, in particular in controlling infraction. As before, he maintains, nation-states struggled for raw materials, low-paid labor and geographical territories, now the main struggle is for controlling information (Manouchehri, 1997, p. 39).

What is exchanged, on the way publishing, managing or controlling data, beyond the boundaries of information finds its importance within real meetings or physical correspondence. The range of cyber data covers the entire network of radio, television and the Internet (including news, analysis, art and social websites).

The knowledge for using this space brings the skills and capabilities needed and such knowledge and ability is the power of products.

Nowadays the indispensable role social media play in shaping and directing public opinion and in shaping political, social, cultural and economic events is well known to everybody. Looking at the recent international and regional incidents from the point of view of media, it is clear that many changes and events have been found to be originated in social media as their ability to influence and enrich public mind in its regional and international on the basis of predefined goals is quite high (Ezzatzadeh & Hashemi, 2014, p. 97).

What matters more in the current age of IT and cyberspace is the elements of power developing in the form of the third and fourth types of power (Toffler, 1991, p. 54). Power changes in social media. Such changes occur through creating or demonstrating the reality

for the public in order to persuade, threaten or deceive them. Over the past few years, social media have grown increasingly within the modern hi-tech systems of communication and they have been remarkably received by the public.

Also they have unduly influenced modes of communication at different levels. Broadly speaking, the whole ecosystem of communication has been deeply changed by them, to the extent that even organizations and countries, in addition to individuals, are using this space to attain their own communicative goals (Harvard University, 2005).

During the years of 1984-1988, Hollywood practices and activities experienced a

225-percent increase and the total export output, by 1991, reached from 1.1 to \$2.2 billion. During the same decade, in addition, multilingual media have started their operations worldwide. In 1990, 10% of the American labor were working for foreign language broadcasting agencies, a 2000 percent increase compared to 1980 (Herman & Machesney, 2014, p. 57).

While the sphere of virtual communication is increasingly growing, the growth in the number of the internet users is faster and more noticeable. The latest world figures on the number of the internet users indicate that the total number of the internet users is estimated to be 2.95 billion (Internet world stats, 2013).

**Table 1:**  
*Ranking of the world regions based on their Internet users.*

No	Region	Internet users	Ranking
1	Asia	932,393,209	1 <sup>st</sup>
2	Europe	476,278,755	2 <sup>nd</sup>
3	North America	270,066,000	3 <sup>rd</sup>
4	Latin America & Caribbean's	212,401,030	4 <sup>th</sup>
5	Africa	118,842,060	5 <sup>th</sup>
6	The Middle East	72,497,466	6 <sup>th</sup>
7	Oceania	21,333,780	7 <sup>th</sup>

According to a 2011 report, more than 32.000 and 140.000 satellite channels as well as 138 scrambled channels (pay TVs) have broadcasted their programs via satellite operators (EUROCONSULT, 2012). If the billion rate of viewers is added to the number of cyberspace users, an extremely vast amount of data will be sent and received.

Because of such features as the low cost of using the Internet, anonymity and asymmetrical vulnerability, many countries currently focus their attention on this aspect of power, particularly the fact that the smaller actors in cyber scene are more likely to enforce both soft and hard power

compared to the more conventional areas of world politics.

However, these are not the only attributes of cyberspace because it is a new virtual and unpredictable environment in which power is always deeply influenced by the dynamics of information. Moreover, due to such attributes, some of the power gap between the actors is reduced ; thereby, it represents an appropriate example of power distribution as a feature of world politics in the 21<sup>st</sup> century.

Because of these factors, the great powers are never able to dominate and pursue their power in cyberspace as much as their land and

sea territories. Another important point to be remembered is that the distribution of power in cyberspace does not mean power equality or the role of states as the most powerful actors in the world politics.

According to its lexicographical definition. Power means the capacity to do something.

However, if you are interested in politics, certainly power is also the ability to control and influence people in order to pursue the intended goals.

Based on this definition, some regard this ability as “influence” and distinguish power from influence, though they are interchangeably used by others. Nonetheless, it needs to be noted that any statement about power depends on the context and cyberspace is a new and important area of power.

Joseph Nye believes that the three dimensions or faces of power sometimes sum up the modern definitions of social science on behavioral power.

The first dimension was introduced by Robert Dahl in the 1950s. He stressed that individuals are made to be something which would not otherwise do. This definition is today widely used, though constituting a tiny fraction of power behavior. In the 1960s, two political scientists, Peter Bachrach and Morton Baratz, argued against Dahl’s definition as it doesn’t represent the second dimension of power but sets the agenda in a way that never leads to compulsion (coercion) or imposition.

In the 1970s, the sociologist Steven Lukes argued that beliefs are also effective in shaping others’ preferences. A person can wield power by determining other persons’ needs and wants.

In 1990, Nye identified soft and hard power ranging from compulsory behavior to one based on choice. In Nye’s definition, cer-

tainly, the behavior of hard power is based on (coercion) and payment.

Themselves dividing the scene with the new actors and facing more difficult problems in controlling their cyber borders. Although cyberspace is not going to supplant the physical space and would not make state sovereignty outdated, we will, no doubt, witness the distribution of power in cyberspace and this in turn will complicate the exercise of power in all its dimensions (Nye, 2014: p. 125).

5) Requirements of formulating an efficient cyber strategy

There is no doubt that a country is required to develop an efficient and comprehensive cyber strategy in accordance with the special and dynamic nature of cyberspace if it is to combat the increasing cyber threats, to seize a variety of opportunities and to prevent from trapping in a cycle of cyber under development. For this reason, over the past few years, all the countries with much development in cyberspace have devised one or more cyber strategies – the US, for example, as the leading country in cyberspace, along with the other member state of NATO have two or three cyber strategies operationalizes so far. considering these requirements and the important role cyberspace plays in creating potentials and threats and also the significant role of cyber power for the status of any country with in the hierarchy of world power, the principal questions: what requirements and points need to be taken in to account in devising and evolving an efficient and comprehensive cyber strategy? To answer the question, it may be argued that, with respect to to the special content of cyber space, other countries’ experiences in formulating cyber strategy and the performance of NATO’s member states, cyber structure, cyber finance and scientism, widespread support for the

private sector in cyber space, having a comprehensive approach and the importance of making cyber laws for domestic purposes all seem to be necessary. Each of the above will be outlined in the following sections.

### 5.1 cyber knowledge

Concerning the formulation of an efficient and comprehensive cyber strategy capable of upholding cyber security, understanding precisely the need to have and devise a comprehensive cyber strategy on the basis of the threats to this space isn't the top of the agenda. In this respect, it should be pointed out that still some states are not adequately concerned about this need and the threats in cyber space – for instance, the case of Russian cyber-attacks on such countries as Estonia, Ukraine and Georgia indicate that these countries are relatively unprepared for cyber threats and essentially have no clear cyber strategy or policy. The same case maybe extends able to many other countries, in particular those in regions like the Middle East where security mainly takes its military form – on the other extreme countries such as the US, more or less since the 1970s, have employed specific policies for the cyber space while recognizing the need for having a comprehensive cyber strategy. In the 1990s, this need was captured also by Israel with the formulation of a working group tasked with attempting to recognize cyber space and offering intelligence and security solutions. After undertaking a wealth of research projects, this group advised the country's policymakers on the importance of devising a cyber-strategy and establishing institutions with the purpose of cyber wars and cyber defense. As a result, these policymakers took the research findings seriously made various efforts to put the group's suggestions in to action. Conse-

quently, to day this country is equipped with multiple and clear cyber strategies, infrastructure, professional task force and centers for cyber war. It is necessary to note that currently Israel is counted as one of the leading countries in cyber security.

In view of the similar practices in other countries, it is notable that the first step in formulating an efficient cyber strategy or re-designing the existing strategy is a precise and comprehensive appreciation of the conditions and features of cyber space.

Of these important features is ambiguity, complexity, constant change, vastness and realistic, it neither contributes to the formulation and enforcement of a successful cyber strategy nor avoids facing problems and major future vulnerabilities.

For example, while many countries concentrate on exclusively defensive efforts, in cyber respects, which are primarily based on reactive policies, the experiences gained over the past few years indicate how inefficient these policies are.

More importantly, how is it possible to have a precise and comprehensive understanding of cyber space? To answer this question based on the efforts made by other countries, it may be maintained that such understanding will occur only if a serious cooperation takes place preferably between both public and private sectors along with universities. In fact, because of the issue of cyber security and on the broader scale cyber space, the public sector, if not supported by the private sector, particularly universities and research institutes, is not able to achieve a precise and comprehensive appreciation of cyber space. For the same reason, cooperation among the different civil services and with such private institutions as well as setting up multidisciplinary and expert working groups is the first step in developing an efficient cyber strategy.

### 5.2 shaping an efficient cyber structure

Regarding an efficient cyber structure, it can be argued that in any country there needs to be an institution responsible for the broad management of cyber space. Assigning a central body for this purpose with an authority higher than all others is one of the major requirements in the formulation of an effective cyber strategy. The presence of this body acting predominantly as policy maker, planner, regulator and as mediator between public and private sectors will prevent and generally help organize all the talents and capacities around the promotion of cyber security. Therefore, in devising such structure, the first step is to set up an effective institution with the required authority over cyber space.

It is noteworthy that in almost every country with advanced cyber structures, such institution or any agency or department is under the supervision of the president or prime minister himself or any other independent body operating within the authority of the executive branch – In Israel, for example prime minister himself presides over cyber agencies. Following the establishment of this institution, the priority has to be given to the formation of a center or group responsible for cyber defense attacks and promotion of power. The key point is that the defensive operations, in some countries, are separated from the offensive so that both areas maybe simultaneously improved by means of a healthy competition. However, in others, a special task force has been tasked with these cyber defensive and offensive measures. Within this force, though, two separate teams, for example blue or red teams, are created with special titles so that one is responsible for defensive and the other for the offensive. Furthermore, in addition to a specific defensive and offensive cyber forces under the umbrella term like cyber Army, each of the

military, intelligence or security and secret services should have its own cyber force so that the cyber offensive and defensive operations would be integrated in to a network. For example, in the United States, the services, ministries such as the department of defense, the department of land security, security and intelligence services like CIA each has its own cyber task force. In Israel, in addition to a 8200 – member unit for cyber activities, each of the military, defense or intelligence services has its own cyber task force.

### 5.3. Cyber Scientism

Cyber knowledge is indubitably the most important factor of a national power and cyber security. In other words, this knowledge is identical to power. It is because there is an intense competition between, different nations, for many years, over cyber power and knowledge as it is well appreciated that a cyber-power arising from a cyber-knowledge will shape the varying degrees of world power.

In view of this point, in the developed countries, there is a high level of cyber expenditure for instance, in the united states as the most developed country in the world, a top priority has been given to its cyber space, thereby, currently it is much more developed than other advanced countries like Germany, France and England in cyber respects.

Also in its cyber strategy, Israel has set a vast spending on cyber measures as its top priority so that it can become a world cyber power. Thus in an efficient cyber strategy, the focus has to be on cyber research and investigation.

In this way, the capacity of cyber science in Iran will be heightened via large budget spent on all areas and sectors, leading probably to an expanded cyber knowledge. With regard to the experiences gained in other cyber developed countries, it should be argued that cyber knowledge is many-fold.



In this respect, the first step to take is that primary cyber courses need to be offered in elementary schools, high schools or all other programs before joining universities. Here the aim is to make the new generation more familiar with cyberspace and eventually make them interested in this area and identify those students talented in this respect for the future investment plans.

The second step is to offer cyber-related subjects in universities in order to attract cyber-talented students and help them become cyber prodigies who can, in the future, ensure national cyber security.

A good example is Israel, a country where with huge cyber budget and cyber courses taught from elementary to academic programs so that talents would be identified and provided with both national and international scholarships.

In this way, their wide range of cyber talents is going to be evolved. There is a variety of cyber, related subject in the Israel academic institutions. This country seeks to employ cyber knowledge and university lectures from other countries through connecting its academic community to others.

Another step is to establish cyber research institutes in which experts, professors and talented people are mainly involved in research and investigation ventures as supported by both public and private sectors. The main role of these cyber institutes is to act as an intermediary between the private and public sectors, universities and the industrial centers or even between the government and the public in general.

It enables them to make cyber knowledge a concrete cyber power. They also act as the research branch for the civil services and will be responsive to the president through their highest authority.

#### **5.4. Supporting the development of cyber industry**

It is obvious that cyber-advanced countries are characterized by an advanced cyber industry, efficient cyber enterprises and a private sector highly capable of safe guarding their cyber security.

In fact, a vigorous cyber sector is an outgrowth of cyber scientism and spending.

In this respect, undoubtedly, the most developed country is the US which is far beyond all other countries in terms of having the richest and most efficient cyber industry and cyber enterprises.

Another characteristic of a cyber-power is that the private sector is highly capable of defending its infrastructure and facilities. In the united states, for example, automakers have extensively spent their cyber expenditure in order to deter other countries from conducting cyber intelligence and safeguard against domestic and external cyber threats.

In a true cyber war, however, the industry is most likely to be targeted by cyber-attacks.

with this in mind, the top priority has to be given to an efficient cyber sector if an efficient cyber strategy is intended.

Extensive planning is required to make other industry, with no necessarily cyber undertakings, safe against cyber-attacks and industrial intelligence. Based on the cyber strategy of many countries including NATO's member states, one of their central principles is to develop close cooperation between industry and private and public sectors.

The aim of this cooperation is three-fold: strengthening a powerful cyber-private sector, keeping and increasing the cyber security of major industries and transferring the experiences of the private sector to the public sector.

### 5.5. Development of a Cyber Domestic Law

Cyber law is, not only in Iran but in other states, unfortunately one of the most significant legal gaps. All aspects of human life are in a way affected by cyber space. The resulting changes in the circumstances make it necessary to develop a cyber-law within domestic law.

For instance, with respect to the extremely increasing rate of cyber-crime in Iran and other countries including e-fraud, cyber defamation, disclosure of personal information and so on, it is expected that in the coming years, cyber-crime will develop far more quickly than other crimes across the world.

For this reason, developing cyber law is one of the priorities set by all countries in their cyber strategies. This is already hard to do because of the specific nature of cyber space.

This is again itself the result of the dynamics of such space, making it difficult for developing this type law as something essentially static. Therefore, the suggestion is that a responsive institution under the supervision of the Islamic Consultative Assembly [The Iranian Parliament] and with the support of other branches and sectors is established to identify the gaps within cyber law.

Arguably, the cyber strategies followed by other countries like the US, Israel or NATO member countries are notable in that the necessity of developing cyber law is an axiom truly recognized by all these countries and each has its own way of bridging this gap.

In many countries, for example, such crimes as e-fraud and cyber espionage have specified definitions and punishments.

### 5.6. Cyber cooperation with allies and others

Another important concern for an efficient and comprehensive cyber strategy is to coo-

perate with other countries in the face of self-reliance. It means that along with an emphasis on domestic strengths, a country should seek to cooperate with its allies and other states if it is to be successful in cyber space.

The reason for this tendency to cooperate is that few countries are able to sustain their security posture on their own and via national and unilateral practices. A case in point may be the US as the best leading and most active country in the world.

The cyber strategy of The American Defense Department clearly states that national efforts are not enough to deter cyber threats. Thus this department suggests that American "Cyber Deterrence" is mediated through the formation of an international coalition with the aim of developing a dominant cyber frontier so that no actor would be allowed to start cyber-attacks on the western countries and their allies or otherwise would have to incur devastating costs.

Indeed, the US's cooperation with other western states within the scope of NATO along with the development of NATO's cyber strategy makes sense.

Furthermore, the experiences in other countries will appropriately attest to the fact that a national defensive strategy against cyber threats is not merely effective.

For example, in many case of cyber-attacks on Iran, the practices used in the identification of viruses and malwares were the result of cooperation with other countries, particularly Russia.

In many of these attacks, the viruses were identified by foreign companies like Kaspersky.

Moreover, in addition to the requirement of a multinational cooperative effort to defend against potential external threats, currently this is true also for other cyber threats from other actors including terrorists, orga-

nized crime and hackers, either individuals or groups.

The fact is that cyber space is very important in shaping national power, security and status, to the extent that many states are developing their 4th or 5th cyber strategy. Meanwhile, many others either have no specific cyber strategy or if they have, it is not clear how its effectiveness, results, achievements and how its effectiveness, results, achievements and failures are measured. In this regard, it is required to account for the formulation of an effective, integrated and, most importantly, operational cyber strategy.

As noted earlier, such strategy needs to constitute, to a great extent, national cyber structure, the amount of release in spending and cyber scientism, how to support for a convergence between public and private sectors and the development of an efficient cyber law.

Also a regulatory body is to be established in order to measure the possible achievements or failures so that time may be saved through a constant observation. However, in the future, not so far, efforts to become a world, or regional, cyber power or super power shapes an international competition.

## 6. The challenges of Iran's cyber strategies

A strategy is successful when its formulator has command of three areas:

1) A deep knowledge of cyber space in terms of its nature, trend and future.

2) Being aware of national cyber vulnerabilities and attempting to identify and repair them.

3) Becoming familiar with different types of cyber threats and combining them with vulnerabilities and attempting to understand and implement ways of confronting them.

With respect to the past trends and events in other countries, the complexities and diffi-

culties in knowing cyber space, being an all-purpose user insufficient public trust in the government's cyber performance, lack of an efficient and comprehensive cyber strategy, islanding practices and lagging behind cyber dynamics are among the most significant cyber challenges the country faces.

### 6.1. Complexity cyber space and a traditional approach to security

Obviously this challenge is not limited to Iran and all the countries, in varying degrees, are exposed to. For instance, much emphasis has been focused on such challenge in the cyber strategy of the US department of Defense and some solutions have been offered.

This challenge is originally the result of the nature of cyber space and a government's traditional approach to security.

This space is ambiguous, complex, dynamic and unpredictable. Its control is not necessarily taken by governments and the borderline between threat and opportunity is not clear. It is not, for example, clear how to expand social media and manage their growing threats while making use of them. It is not, also, clear where it is exactly heading and what threats and opportunities will be resulted in the short and long term.

The next problem is, moreover, related to the development of software and malware products.

The problem is that every person, if he is competent, may develop whatever they want or intend. Billions of Dollar are annually spent on these malwares. The concern with this problem is to the extent that experts warn on the uncontrollability this space.

For example, a serious concern is recently raised over artificial intelligence (AI) as it might turn into a serious public security dilemma in the future, estimated roughly some experts.

Another problem with the comprehension of cyber space is the dominant status of traditional view of security in many countries. This approach has become extremely militarized, to the extent that its assessment of threats is largely based on governments and lacks the precision required for an understanding of the existing cyber threats.

The central focus in the traditional security model is on the eradication of threat while both threat and opportunity come together in cyber space.

A threat orientation toward the entire cyber space and attempting to not follow its trends or follow them through imposing some limitation such as low speed of the internet and widespread filtering practices represent this aspect.

The results for Iran include lagging behind the latest cyber knowledge, widespread deficiencies in terms of developing software and hardware products and, in short, becoming just a user in this space.

For the same reasons, Iran mainly depends on foreign software and hardware products, is the best scene where foreign social media play their part and is a country where the public trust in home software products is absent.

## 6.2. To be a user in cyber space

To be a user commonly means using software and hardware products and, generally, using the cyber space, however, this term, apparently, might be applicable to many other places where their people are mainly internet users.

In fact, many countries act in an environment for which they neither develop nor manage.

This kind of act, to them, is similar to playing in the opponent field based on the rules of which they have the least role in

making and developing. These countries are seriously concerned about the security issues in this space.

Even the western allies of the US are similarly concerned to the extent that they also tend to move or transfer a part of these servers to their own territories. The fact that some countries try to develop a national internet under different names like national information network makes sense within this approach.

Iran also expresses grave concerns about the same issues and pursues some practices such as filtering some foreign social networks and implementing its national information network.

However, such practices are not so much effective in reducing vulnerabilities while not preventing from the utilization of opportunities. In another sense, being a user means widespread use of foreign software and hardware products. In this respect, Iran is heavily dependent on such foreign productions. For example, almost all the mobile (Cellular) phones, computers, SD Cards, CDs & DVDs and all digital appliances for home purposes are imported from other countries.

These may have been infected with spywares and other malwares. Arguably, a report in the late 1994 was given by Kaspersky company. This report revealed that the American intelligence service found a way to embed and run intelligence and ransomware equipment's within computer networks of some countries including Iran, Russia and some other Asian countries. Furthermore, as states in Kasper sky's report, almost half of the Iranian user's cellphones are infected by malwares.

For this reason, being an Internet user in Iran is one of the most serious threats demanding multifaceted and long-term planning.

Protecting the private sector for inventive and creative purposes, protecting the Iranian start-ups currently acting successfully and teaching and training cyber prodigies in all areas are among the basic efforts to build a promising cyber future.

### **6.3. Insufficient public trust in Government's cyber performance**

Public trust deficiencies are among the challenges in this space that a country like Iran is exposed to. This challenge expresses itself mainly through the absence of public trust in home social media and widespread application of VPNs.

Using foreign social networks diversely, such as telegram, raises some concern for the cyber environment in Iran as it helps Iranian make their values, norms, beliefs and interests familiar to the countries as well as paving the way for observing domestic trends and events.

Nonetheless, social networks provide a good opportunity to know the dynamics of a nation's culture, religion, society, values and so on, particularly the Iranians. In this case, while opening up new horizons, the widespread presence of the Iranians in telegram, and other social media is likely to lead to national vulnerabilities as well.

For the same reason, the authorities decided to Filter Telegram a decision practically with no apparently intended results and it led to, based on the existing documented facts, a many-fold increase in using VPNs.

Currently many smart phones, in Iran, may be found with at least one VPN installed.

It is necessary to remind that using VPNs may result in potential observation of internal intelligence on the behalf of the foreign actors while affecting heavily the internet in terms of its speed and quality.

However, there needs to be a short cut between using favorably these social networks and their possible threats, leading to a utilization of opportunities and protecting against threats. The first prerequisite for this shortcut is to restore and boost public trust.

Indeed, as long as public distrust dominates the relations between people and politicians, cyber limiting practices would not only be futile but might also aggravate the problems.

### **6.4. Regulatory body's lack of comprehensive cyber strategy and Islanding practices**

Among the gravest cyber problems is the absence of an efficient and comprehensive cyber strategy. This, however, doesn't mean that Iran has no cyber documents but the main problem is with the lack of any provisions for formulating and, above all, enforcing an efficient and comprehensive cyber strategy.

The major fault is with Iran's late joining the internet in all its dimensions and levels and the lag behind the cyber boom both in the public and political spheres.

As with other new technologies, here again the exercise of rules in both spheres is not without problems.

As a result, this has led to islanding practices in the cyber sphere among different government and private institution and this is itself a serious challenge. Under such circumstances, the country needs an efficient and comprehensive strategy based on a long-term comprehensive planning.

Knowledge of cyber space, understanding threats and opportunities and designing a plan for both public and private sectors. The following points have to be covered in this strategy, threats and opportunities, introducing the main institution responsible for the national cyber management, establishing cy-

ber research institutes, training cyber professionals and experts, cyber education from elementary level to the academic, division of work among primary and secondary cyber centers, active cyber institutions working in concert, a close cooperation between the government and the universities as well as the industry and the private sector, an international cyber cooperation, formulation of cyber laws and rules, conducting annual cyber exercises and preparing operational programs.

### 6.5. Lagging behind the Cyber Boom

The next fault lies with a lag behind the cyber revolution within the executive and administrative service, the civil servants, the private sector and above all the military and defense forces.

The major problem here is associated with the national management structure, which is still based on the traditional style of management practiced long before. However, in the developed world, the security, military and political services have carried out fundamental reforms to pursue the cyber dynamics.

For example, some years ago, the US's Central Intelligence Agency set some major reforms as its top priorities in order to cope with the cyber threats and opportunities.

Notable among them were the establishment of cyber centers, each tasked with its own methods and responsibilities and specified cooperative and collaborative practices with other state and non-state actors, employing efficient cyber labor and providing basic and professional training courses for the full-time and permanent staff in order to not lag behind the dynamics of the cyber space.

In this respect, CIA has provided short-term and long term cyber training programmers annually.

Also, the best cyber professionals, either Americans or non-Americans, are invited to work for agency. Cooperation with cyber enterprises in the US is among other efforts taken by this organization.

For these reasons, in Iran, it is necessary to update the executive and administrative structures in line with the cyber dynamics and provide the civil servants, particularly those working for security, military and political institutions, with professional training courses in order to utilize the cyber space and work actively there.

### Conclusion

In this study, the conceptual dynamics of power in IR scholarship along with an explanation of the challenges for Iran's cyber strategies are addressed.

It is here stressed that power is characterized by such features as publicness, subjectivity, polarity, relativity and unquantifiability. Moreover, power is explained from the point of view of realism and liberalism.

From a realist standpoint, the concept and purpose of power is nothing but to meet national interests and many states consider it as their main instrument in achieving their national interests. From a liberalist perspective, however, the concept of power becomes pluralistic and the focus is on the distribution of power sources like institutional, governmental, economic and political sources.

In this respect, the fact is how political power is addressed on the basis of empirical and observable facts and how decision making should be incorporated in to the process of policy making.

Besides these two approaches, power might also be conceptualized within a post-modernist framework which is itself mainly based on critical theory. In this theory, the argument is that power may be attainable

through two ideals. One is subjective ideal and another is the ideal of civil society. What is here more noteworthy about power conceptualization is its conceptual dynamics worthy of consideration during three specific periods, that is, classical, Middle Ages and Modern time.

The concept of power, in classical terms, is interlinked with the philosophy of such thinkers as Plato and Aristotle, Thomas Aquinas, and finally in the modern time with Foucault, Leotard, Derrida and Baudrillard. Interestingly, power, conceptually, in post-modern model, takes distance slightly from its classical and Middle Age counterparts and this distance becomes more visible in terms of their meanings, to the extent that Nietzsche and Heidegger defines it philosophically, Foucault and Leotards from historical and social standpoints and Derrida and Baudrillard defines it in cultural and intellectual terms.

In the modern period, the other face of this conceptual change is associated with the cyber space. In this regard, what matters in the cyber interpretations of power is acknowledged as media power.

This kind of power conceptualization takes its life from the creation or representation reality for the public opinion with the aims of persuasion, threatening or deception.

In this way, arguably, the changes made to the information always have an important influence on power.

However, bear in mind that power distribution does not mean power equality or establishing the states as the most powerful actors in world politics. Given the fact that cyber space facilitates the crystallization of power discourse, the requirements for formulating an efficient cyber. Strategy have to be development for the same purpose.

In this respect, among these facilitators are cyber, knowledge, shaping an efficient cyber strategy, cyber scientism, support for the development of cyber industry, formulating and developing national cyber law and finally cyber cooperation with the allies and other states.

These could be incorporated into a process through which power discourse is strengthened. These factors help identify the challenges for Iran's cyber strategies as they helped to identify such challenges as the difficulty and complexity of understanding cyber space, being a user in all areas of cyber space, insufficient public trust in the government's cyber performance, the absence of an efficient and comprehensive cyber strategy, islanding practices and lagging behind cyber boom.

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