Cyberspace and its effect on cultural-political and social processes

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The invention of the computer in the middle of the 20th century has changed the daily life in most of the world, and its impact on economy, culture, and even war, is overwhelming. It has created a new dimension of human activity beyond the physical dimension—the cyberspace. Cyberspace has a new role in the political-cultural world by allowing social communication, which can be very meaningful in the context of political turmoil. Furthermore, it is also an important means to improve and create knowledge required for a social revolution. In this sense, the impact of the computing revolution is similar to the impact the print revolution had on the world in the middle of the 16th century.

This article presents two main arguments. The first is a philosophical argument that the revolutionary process in the Middle East (Arab Spring) did not occur because of change in interests, but because of a fundamental change in consciousness and perception of reality of the individuals in these societies (especially among the young). Therefore, they are inevitable and cannot be stopped.

The second argument is that activity in cyberspace creates trust between the demonstrators and allows the necessary cooperation to exercise the protest embedded in each of them. The result is a unified revolt against the ruling powers and militant organizations in these countries.

Dr. Assa analyzes the revolutionary dilemma using game theory, by a variation on the “Prisoner’s Dilemma” game, examining an iterative process of cooperative behavior. Dr. Assa’s original and unique observation is significant for understanding the current processes in the Middle East and being prepared for the future.
The changes occurring in the Middle East are tectonic, inevitable changes which bring with them a new era to the political world. In this world there is no place for dictators or despots in any shape or form. Cyberspace is a platform which enables implementation of the change – and the desire to make a change resides within all of us as human beings.

Cyberspace activity enables individuals living under repressive regimes to communicate with each other easily and to study their situation and the situation of others, and thereby to unite and bring their basic need for change to fruition. In this respect the cyberspace revolution has great political-social significance and the effect on human society can be compared to the effect of the Printing Revolution and the Industrial Revolution.

The essence of the power of the revolutionary wave is in the change to the consciousness of the “subject” (the individual), mostly the younger generation, as a result of a new experience into which it was born, the cyberspace experience. In the individual’s consciousness the (real) physical world, that is reality, merges with the virtual world conducted in cyberspace; this merger of the two worlds creates a cognitive dissonance for the individual as regards the disparity between the oppression that he experiences under the repressive regime in which he lives in the physical reality and the freedom which virtual life enables. This dissonance creates a deep shift in consciousness; the recognition of it and the direct contact with the other individuals found in similar circumstances made possible in the virtual world by means of various applications offered by cyberspace, drives the individual to make a personal and social change.
Introduction

A cultural-political process is based on the change of values amongst the masses. A change of values amongst the masses is possible only by distribution of knowledge. To date the event that has influenced the distribution of knowledge in the West more than anything is the invention of printing by Johannes Gutenberg in the 15th century. The Print Revolution created an information revolution in Europe which undermined the importance and the control of the cardinals and therefore harmed the foundation of their power, as it enabled a flow of information to the masses by means of books which were printed and distributed with greater ease.

The claim in this paper is that at present as a result of cyberspace we find ourselves on the threshold of a similar type of revolution however with many more assets. Our claim is that the development of cyberspace is creating tectonic changes in cultural and political contexts which have the power to influence the fate of regimes, states and nations. Therefore, there is a need, even a necessity, to understand this development in a cultural-political context.

As aforementioned, in both cases the basis of change is the ability to distribute knowledge to the masses. This process has a direct impact on the life of mankind as regards political, economic and cultural systems etc. Knowledge enables the individual (the subject) (a) to recognize the conditions of oppression in which he lives; (b) to realize his basic inherent impulses, that is to say,
his desire to take action and to give meaning to his life. As a
general definition this can be worded as “the aspiration of every
individual to realize his life – that is to say his principal activity – as
dependent on his consciousness and his free will; (c) knowledge
also enables the individual to share his feelings and his anger
with other people who share his situation and thereby creates a
basis of trust and collaboration between them. The combination
of the rage at the regime, desire for change and liberation from
the jaws of social alienation, together with establishment of trust
and cooperation – creates the potential for revolution whereby
any of the assortment of components noted above is critical in
the realization of the revolution. If one of the above elements is
lacking the chances of forming a revolution are slight.

As a result of the new options for distribution of knowledge
we stand at present on the threshold of a new phase or era in
the history of the political world. In this era, the political world
is undergoing an upheaval within the framework of which the
governmental hierarchy is being significantly diminished almost
to the extent of its disappearance and the social structure is
undergoing compression. As part of this phenomenon and
alongside it the age of charismatic leaders is gradually ending.
From hence forth the political leadership shall be in the hands
of the instigators of social change; promoters and executors
who are able to unite forces. This phase is made possible by
a new technological space, cyberspace, which constitutes an
electronic medium of computerized online networks.

An example of this can be seen in the uprisings we are witnessing
throughout the Arab world. The opinion stated in this paper is
that in each of those countries these uprisings will bring with
them a fundamental political change of regime. At a later stage
we anticipate that the process will expand to Iran which will
undergo a fundamental governmental transformation. This is a
kind of handover to the next generation in the political arena, in
societies-countries that did not undergo the Industrial Revolution
which brought with it waves of nationalism and democratization
experienced by the countries of the West in the 19th and 20th
centuries.

The estimation is that a governmental change is expected to
take place in many additional countries; in fact, in each country
in which there is significant oppression and discrimination mixed
with governmental corruption such as in the Arab world. This
paper focuses on the Arab subject in the Middle East as a citizen
of a country with a repressive regime. The basic claim of this
paper is that the revolutions in the Middle East are revolutions
which are instigated by the Arab subject – who is an oppressed
and alienated citizen himself. This observation is more basic
than the observation of power struggles in the Islamic or Arab
world as factors of change. Therefore this paper does not deal
with the classic “Middle East” issue, relating to power struggles
and governmental secrets in each of the Arab states, but rather
it focuses on the broader philosophical debate.

One can see the events currently unfolding before our eyes in
the Middle East as a type of experiment reinforcing the concept
presented in the paper. In this context we are of the opinion that
the intelligence organizations in the West should acknowledge
the origins of the change, and prepare themselves accordingly
in order to be able to identify and analyze similar events in the
future.

The paper is comprised of five chapters. The first chapter deals
with human nature- the essence and the desire for change
residing in each of us. This chapter draws from the philosophical
writings of the 19th century and attempts to correlate them with
the events we are witnessing at present. The principal claim of
this chapter is that the desire for change resides in all of us and
therefore it is a natural process and unavoidable.

The second chapter focuses on cyberspace, its unique
characteristics and its influence on international politics. The
claim here is that cyberspace supplies individuals with the tools
to realize their desire for change as it enables individuals to use
and create the knowledge required to acknowledge the need for
change. Furthermore, it enables almost direct communication
without any geographical restriction and in real time between
individuals, strengthening the trust between them and
strengthening their ability to instigate a revolutionary change
collectively. Moreover, the chapter presents the important role of
the new status of “educated paupers” (educated but unemployed
young people who have familiarity and access to cyberspace
technology) in the realization of the concept of revolution while
challenging the traditional sources of knowledge and as a result
compression of the social structure.
The third chapter presents the events in the Middle East in the light of the cyberspace revolution and the claims presented in this paper. The principal claim is that the revolutions in the Arab world are made possible as a result of activity in cyberspace which strengthens trust between individuals and encourages them to believe that if they take action they will secure the cooperation of their friends and partners in fate, with whom they are in contact in cyberspace and at the end of the day also on the street (reality).

In the fourth chapter we propose observation and analysis of the events and the issues of trust and mistrust by means of the game theory. For this purpose a new game is presented “The Revolutionary’s Dilemma” which is a variation of the familiar game “The Prisoner’s Dilemma”. This model is presented in two options: the revolutionary’s dilemma before cyberspace and the revolutionary’s dilemma in the cyberspace era. In this game the revolutionaries are in fact those same prisoners in a world without communication (whether prisoners or revolutionaries), there is a basic lack of trust between them which prevents them from cooperating and therefore they will choose “to betray” (defect) each other, each with the objective of improving his situation. However, with direct communication between them, as is possible under conditions of cyberspace, trust will be created between them which will enable them to cooperate. In reality, the trust between the players is built by recurring steps. The reality of the recurring steps which reinforce trust is represented by the iterative (recurring) model of several games (The Prisoner’s Dilemma or The Revolutionary’s Dilemma). According to the iterative model the preferred strategy for the players is cooperation.

In conclusion, in the fifth and final chapter there is a reference to the ramifications of the new situation on intelligence research and we will propose ways to cope with this issue.

Human nature and the disparity between human intelligence and reality

Physical opposition and desire for change are the natural essence of the human being. We claim that in the 21st century cyberspace is a new element which enables realization of human nature under repressive regimes. In order to substantiate and to present the analysis of “the subject’s perception” (or the individual’s), we present perceptions that were developed in the 19th century by Karl Marx (the young Karl Marx – in his early days) and others such as Ludwig Feurebach (“The Essence of Christianity”), and before him Wilhelm Hegel (The Phenomenology of Mind, published in 1807), which dealt with the essence of the individual. The comparison with the 19th century refers mostly to the perceptual revolution that can be defined as shunning the old value systems of the same period, and in the main shunning the religious system (headed by Catholicism).

In his “Early Writings” in the chapter headed “Alienated Labour” Marx referred to the concepts of Hegel and Feuerbach and defined the essence of the subject and his opinion as regards his perception of the subject. Many circles in that same period attempted to understand and define this issue. Hegel defined the “rational subject”, Feuerbach critiqued Hegel’s perception and defined the “sensual subject”, and the young Karl Marx (1843-1845) critiqued both of them and presented his perception which is in principle: “the real subject”.

The rationale of this suggestion or the employment of the perception of these circles in our matter is at the basis of the
The assumption of this paper, whereby we are in a similar era to that of the start of the 19th century of the Industrial Revolution which together with enlightenment brought about a change to human consciousness. In the 21st century cyberspace creates a fundamental change to the experience (of the physical world alongside the non-physical world) which leads to a shift in consciousness. Therefore, the direct use – as a kind of continuation – of the same philosophical debate from the 19th century which in the main part revolves around the issue of the nature of the bridge between physical reality and human reason and thereby the link to political revolutions in the cyberspace age – revolutions where the core component is the subject (individual, citizen).

The political revolutions which we are witnessing are instigated by young people whose spirits have sufficed of tyranny and in their consciousness they understand that there is no sense or understanding of the status of the oppression in which they find themselves. That is to say, this is not a process based on the interests of a certain group against a rival group but rather the most basic core of their existence as either oppressed or free individuals.

What differentiates, theoretically, between animal and man, is “the reason and consciousness” inherent in man. As a result of his intelligence an individual can create tools from raw components in nature (clothing, food, transportation etc); as a result of his consciousness and intelligence he can understand processes in nature – both simple and complex – again, theoretically, and in a limited fashion, thus he can teach his descendents about “nature” and society. Thus for instance man understands that in winter he will need to produce warm clothing and heat from fire or from another source. In summer he will need to create tools which will alleviate the heat, or for example to produce weapons of mass destruction to defend himself from enemies. Man’s intelligence and consciousness enables him, according to Marx, “to plan” his moves as he is an “active creature” whose activity is his essence. Activity can be defined as “labour” in the physical sense, that is to say, the activation of energy on an object in nature in order to transform it into a tool which serves his needs. To plan means – to consider the moves that he is required to make using reasonable considerations – from his viewpoint; as a rule based on crucial personal interests. The meaning of “planning” is that man intends to consciously achieve a result by his actions; that is he knows how to achieve it and focuses on it by his actions. His actions are intentioned actions.

Animals are limited theoretically in this ability and act by instinct. However within this essence of animals there are certain planning elements, for example, a wise bird will build its nest faster than a less wise bird.

As aforementioned man as opposed to an animal plans his steps and for this purpose he develops tools to assist him, which serve as means and not objectives. Reason is, therefore, a basic characteristic. He activates the tools with his reason and consciously, in a deliberate and intentional manner. Moreover, man may find himself in an unfamiliar situation although he has activated his intelligence and his consciousness; or a plan that he designed did not transpire as he had hoped and caused results which did not correlate with his expectations.

And there we have a disparity between reason and reality; a disparity which necessitates building various types of bridges, mainly religious or idealistic, and also new bridges in the form of Karl Marx’s perception of labour (praxis) as a bridge between reason and reality. In the social context social activity creates the awareness of relationships between man and man and between man and those who control his life – the repressive regime.

In order to illustrate Karl Marx’s position on the perception of the subject, we will present “the eleventh thesis” which Marx presented opposing Feuerbach.

The Eleventh Thesis (by Marx) on Ludwig Feuerbach: “Philosophers have hitherto only interpreted the world in various ways; the point is to change it.”

This thesis is in fact a summary of Marx’s perception of the real subject, as well as a summary of Marx’s critique of Ludwig Feuerbach in his paper “The Essence of Christianity” and of Hegel in his paper “The Phenomenology of Mind”.

Marx claims that the philosophy or the idealism (religion is a type
of idealism, and Hegel’s perception of the human subject as he creates his world by transforming objects which are determined-possessed by its reason and imagination – and not by “physical work”) does not create a new reality. Social endeavour is to change the world; that is to say to change existing human reality, to differentiate from the “passive understanding” or the philosophical interpretation of the world which is associated with the old and irrelevant materialism. In brief, Marx proposes change while Hegel proposes interpretation. In the words of Hegel: “to understand the extant is the function of philosophy, because the extant is the reason.”

The reality of bourgeois society is a reality in which there is a contradiction between the individual and society; between labour and its benefits; between the society and the state. These contradictions are the practical (empirical) proof that reality is not complete and rounded, that the laws of logic do not work therein, and therefore there is a gap. The disparity or the contradiction between the reason and reality is where the concept of change consolidates whereby it becomes the focus or the seal of every new social order. The transition that Marx proposes from interpretation to change is derived from the disparity and contradiction between reason and existing reality. The objective of change is to build a bridge over this disparity; that is to say, the change will bring reason closer to reality; will realize the philosophy within the existing reality. Marx tries to identify the power which instigates the new reality within the existing reality.

The main context in the transition from theoretical (idealistic) perception is that we will be released to the will; a will which opposes the surrounding reality. That is to say, that at the moment that the theoretical concept becomes the will it leaves the boundaries of theory. The masses are the bearer of the action, the driving force; they are the powers which execute the change from theory to praxis (the act) and they draw from that same theory. That is to say, the activity of the masses is the bridge over the disparity between reason and the actual historical act. However in order to generate an action which will lead to historical change, a need is required. That is to say, a theory is realized by the public only if it is realized for its own needs.

Capital and property – as a distinguishing element (in the eyes of Marx) between the impoverished middle class and the upper middle class

According to Marx “the praxis (the practical activity or the labour) creates the needs and it creates the means to supply them”. Therefore, the praxis is the transition between theory and actual reality. The term “the need” is not an intangible term. The need is a concept which existed only with the proletariat during the Marxist era; a status which exists in bourgeois society (the upper middle class which is not impoverished) on the one hand, but which ascribes to it as it has no property. Property and protection of the property are the essence of the bourgeois society. Therefore it can be stated that the proletariat (the impoverished middle class) is the bearer of social change leading up to the establishment of a revised human society; and thereby also the alienation of the subject and his activity and his products, to himself and to the society in which he lives.

Marx sees the bridging (of the abovementioned disparity) by means of “the change” and “the revolution”, as a practical-substantial action. Only by substantial action can a bridge be built as only by action can reality be acquired; this is the basic characteristic of the real subject, man.

Based on Marx’s claim, the desire for change in every individual is at the basis of the political revolutions that we have been witnessing over the past several months in the Arab world. As shall be detailed in due course, cyberspace enables them as it enables the exposure of the disparity between the reality in which the individual exists as compared to “the false ideal” (fetishism) in which he is required to believe, and in which his parents and the older generation believed. This exposure is the fuel required to bring the individual to take revolutionary action and to take action to realize the change. The discovery of this exposure also incorporates elements of a sense of humiliation and rage whereby words cannot be deleted or even amended by the regimes which created this falsehood. Only elimination of the regimes will bring about the release of the rage.
Cyberspace and international politics in the 21st century

**The comparison between Marx’s perception and the reality of the 21st century – cyberspace as a new phase after the Industrial Revolution**

William Gibson, the science fiction author, instituted the term Cyberspace in the mid-eighties. The first part of the term is based on the Greek word cybernetic, which means “navigation”, a term that was instituted initially by Norbert Wiener.

Today, the meaning of the term cyberspace refers to the virtual space of computer systems and computerized networks which incorporate the internet network, including search engines such as Google, social networks such as Facebook and Twitter and other networks. Furthermore it includes civilian teleprocessing systems such as cellular systems, and integration between cellular systems and the internet and social networks as well as the news systems much of which are television-based, and also for the most part online too, such as Reuters, Bloomberg etc. Cyberspace is characterized by numerous items of information that are stored on it and by interactive communication which it enables between the various users in real time, directly without dependence on geographical location (online) to exchange opinions and share knowledge for any objective whatsoever such as conducting business, art, social communication, political debate and so forth.

From the philosophical aspect cyberspace can be defined as a space which relates to the non-physical environment created by integrated activity of the computers on the network. The internet network is the largest cybernetic environment, and it incorporates sub-environments such as the World Wide Web, the Usenet which includes mainly news rooms and news systems, as well as sub-environments such as IRC – Internet Relay Chat.

There are those who call cyberspace and in particular the internet a space of virtual reality. However, this observation is inaccurate as cyberspace incorporates real objects and also enables activities in reality such as physical activation of people, their assembly, transfer of messages etc. Therefore, we propose referring to cyberspace as a kind of bridge connecting between physical reality and non-physical space.

If we adopt the philosophical perception of Marx (to differentiate from his political and economic perceptions), as a starting point for consideration of the world and European society at the start of the 19th century, that is to say in the heart of the enlightenment process and the Industrial Revolution, and from critical observation also of the other enlightened thinkers of that period (Hegel and Feuerbach) it was found, as aforementioned, that it is relevant to the central argument of the thesis presented in this paper. The need for change is the natural essence of the human subject. For the purpose of implementation of change (creation of a revolution) the individual requires a platform which will enable him to create trust between himself and the rest of the “elements of society”. Therefore revolution is based on the self alienation felt by a large collection of individuals, desiring to change their situation.

**The revolutions in the 21st century as an unstoppable process – cyberspace as a factor enabling change**

As aforementioned, cyberspace and all its features is not the essence of change, but rather an element enabling change. The desire for change is, as noted, human nature. The main inhibition for the individual (the subject) taking revolutionary action is the lack of confidence in cooperation from his peers, his colleagues who share his status. Here it is appropriate to emphasize that an isolated individual cannot make a revolution. A revolution
requires the cooperation of many individuals. Therefore, lack of confidence is a vital tool in the hands of the repressive regimes. By means of this tool the representatives of the repressive regime create a threat for every individual so that if he should attempt to take revolutionary action against the regime he would find himself betrayed by his “partners” in status. That is to say, those who should cooperate with him would betray him, not only due to the pleasures of power that would be offered to them by the representatives of the dictatorial regime, or the apprehension that the regime would harm them and their families. In the event that the individual instigates a revolutionary action, his punishment would be severe; the worry about this punishment together with the lack of hope of cooperation on the part of his partners in fate would thwart the revolution, as the individual is concerned that if he takes action he would lose his life and his contribution to change would be worthless. In this way the repressive regimes neutralize change and aspirations for revolution by the public.

The transition from an isolated individual to a trusting mob or a peer society is enabled as a result of the connectivity and communications supplied by the technology that characterizes cyberspace. In this way cyberspace enables the fundamental impulse in human nature to be realized and the revolution can be launched. From this the claim we derive that the process that we are currently witnessing cannot be stopped or prevented and it enables a change which is inescapable in those societies or states.

The change is not derived from the changing balance of power between tribes or parties; the change is derived from the perception and the necessity of the individual who is undergoing a fundamental change. Such an awakening among a critical mass of individuals cannot be stopped and constitutes a kind of “human tsunami”. Moreover, any attempt by the repressive regimes such as the regimes in Syria, Egypt and, in the not too distant future, Iran to curb this tidal wave will end in failure. This is the end of one era and the start of a new era when it is still difficult to foresee its outcome. Here the question arises of why this process is taking place specifically in these societies-states; the claim of this paper is that this is a global process, which in the future will fundamentally affect both China and Russia.

The Middle Class – the educated paupers as potential revolutionaries

The answer to this question is the fact of the existence of a new class in these societies-states – the middle class – where its people are, on the one hand, educated, and on the other hand paupers, disconnected from the political-economic activity of that same society. As a rule they are unemployed and idle and do not see any point to their lives. That is to say a social echelon of middle class paupers; an echelon which can be seen as replacing the proletarians, which constituted, in the twentieth century, the principal platform for revolutions leading to the creation of socialist and social-democratic states. In other words, if the proletarian was an action class in the revolutions of the 19th and 20th centuries, today the pauper-middle class fill the same role for the same reasons, ownership of capital and assets.

Members of the middle class in Egypt, those same educated paupers, find it difficult to find a place in Egypt’s political-economic system. They find themselves in an ever deepening inequality against a very thin layer of affluent people, the majority of whom made their fortunes as a result of their connections with the government, by a familial connection or other social connection. This inequality creates a feeling of profound discrimination, mostly amongst the middle class, and a sense of alienation of the individual from the government. These feelings cause the individual to demonstrate anger against the regime, showing a strong desire for change, which is revolution. The revolution that occurred just recently in Egypt was led by this new social class, the educated paupers. Thus, too, as regards the events in Libya, Syria and Tunisia as well as Iran, although the process in Iran is more complicated and complex, mainly due to the involvement and very strong control of the government of this population.

The subject, distribution of knowledge and the disparity between reason and reality

Cyberspace as a factor enabling huge distribution of knowledge, together with the ability of individuals to accumulate knowledge easily, on a level of high accessibility, enable the removal of
fetish-religious-patriarchal element from the consciousness of the masses and brings them to a new understanding of reality about themselves, as equal subjects amongst all. It establishes them and creates, due to the intimidating reality of inconceivable oppression, to the extent of slavery and humiliation, conditions that any intelligent person could not continue to exist with them. The change that we are witnessing in the Middle East is a fundamental change in the understanding of reality by the residents of the Middle East. For hundreds of years profound religious faith bridged the gap between the phenomena that reality presented such as death, exploitation, unmerciful oppression, death of innocent babes – and human intelligence based on logic and foundations which are not found in reality (such as that same logic). As a result of ignorance and recklessness of those same masses it was possible to create amongst them and in their consciousness a fictitious reality which enabled the oppression. For as long as the reality reflected and was determined according to the perception and through the eyes of the Imam, the government official, the military officer, or the local prosperous person, the oppression and the existence of the individual under these difficult conditions was enabled. However, from the instance of clear headedness an aggressive objection raises its head against which the repressive forces have no chance of protesting.

The members of the new middle class in Egypt, Syria and Iran are educated and have access to computerized and communication systems, to the immense quantity of information which flows through this space, which also includes television networks, information programs and information storage systems in which almost any topic can be identified. Their curiosity at a very young age floods a new light into the darkness in which their parents lived without being aware of it.

The members of this class are considered to be “knowledgeable”. They do not need opinion leaders and traditional mediators in order to learn about the world. Moreover, they themselves serve, for the older generation, as a mediating channel which has the power to supply an alternative to the dictator’s governmental officials, the imams, the cardinals and the police officers and the military. The ones who have studied carry the members of the lower classes and their families with them and the older generation - they open their eyes and create an impossible situation; a situation whereby a massive public understands the distortion in which it exists as a worthless victim, humiliated fortuitously until their eyes are opened – quite abruptly. Suddenly it becomes clear that they are under a dark, oppressive regime; not the son of God who did not care that he controlled the capital of the state, for his own good, his own welfare and of those close to him. This process is a kind of epiphany. At this point change is enabled or the revolution begins.

In summary, the abovementioned revolution is enabled by cyberspace however in essence it is not technological. Cyberspace creates the conditions in which the individual can doubt the extant. Firstly, he learns and understands that it is possible to live differently. Secondly, within the framework of cyberspace he can express ideas and thoughts that he cannot express in the real public space in which he lives as he is apprehensive of harm on the part of the oppressive regime; he cannot take action even among his friends as he must assume that some of them are collaborators with the regime.

The young generation and cyberspace – the birth of twins

The epiphany or the awareness of oppression in these countries characterizes the young generation of the middle class who make significant use of the technologies and applications offered by cyberspace. In fact, the young generation was born into this space and lives within it. It suddenly becomes clear to the members of this generation that the real world in which they live is a dark, dangerous and distorted world. The disparity between real life and the virtual world which offers the individual freedom opens their eyes and causes their rage; certainly in the light of the knowledge that they accumulate by means of cyberspace or more directly about life in other countries, as compared to the conditions of their lives in their own countries, in particular if they have the opportunity to visit or to study there (for instance the western democracies).

The rage that has currently broken out awoke only during recent years as a result of the development of this awareness among the young generation in these countries. The age of this generation correlates significantly with the age of cyberspace (however
the rage itself creates a disparity between reason and reality). Therefore, one can see the young generation and cyberspace as twins who were born together, embracing awareness. Older citizens are not aware of the strength of the embrace created between them. Therefore those who “should be preventing” the process – were not aware of its strength and perhaps even of its existence. Now when this awareness perhaps does exist, it is too late, and moreover, even if they had woken up earlier it would not have changed the situation. The members of this generation, whose average age is no more than 22, cannot live in the humiliating darkness in which their parents existed. As we can see they are ready to take action and even to sacrifice their lives in order to change the situation.

A flat world

The social-political structure that was familiar to us in the democratic-liberal world of the 19th and 20th centuries, was basically hierarchical and controlled by the elites who gained the support of the masses undergoing significant change. By the provision of life on the network, the strength of the command of isolated individuals in large systems incorporating and activating other individuals is significantly reduced, and is gradually disappearing.

The developing cyberspace constitutes a platform enabling the individual to find his essentiality, his desire to have an influence (in particular against despotic regimes) together with many millions of others who resemble him in their desire “to influence” and instigate a significant change. The activity carried out by an individual in cyberspace is a kind of initializing phase of a new cultural-political process, a process in which an opportunity is given to each participant to take a practical part in influencing the fate of regimes and policies by means of executing a practical political action – such as starting an ongoing demonstration together with the rest of his friends on the network. In the words of Karl Marx man “makes his life activity itself an object of his will and consciousness”. Already now it constitutes an organizational operative foundation which serves the mass in directly influencing the structure of the political regimes.

In other words, he creates a world in which individuals unifying together to take action have the power to destroy rigid configurations of political regimes and corporate institutions. Furthermore, there is also the ability to bring about significant change in the character of the political leadership. As a result of the abundance of information which cyberspace supplies and thereby enables every individual to enrich his knowledge and become knowledgeable in the areas in which he shows an interest, a flattening of the cultural hierarchies of all types is created (mainly due to the disappearance of the mediation professions). In this paper the intent is mainly political hierarchies.

The opportunities created by cyberspace for the purpose of knowledge for the individual blur and minimize the status and power of the traditional knowledgeable individuals who used the knowledge in their possession to apply their power on the public. As a result of the cyberspace platform the individual can accumulate significant knowledge about the world in general and the political arena in particular for example details about corruption, oppression, political news and information about democratic life in other countries. This information is very valuable for him and to a great extent opens his eyes and enables him to leave his comfort zone with a familiarity and closeness to “his new partners” (on a scale of millions of people).

The process of accumulating knowledge by the individual, together with a decline in prestige of “the experts”, significantly changes the social structure which we were familiar with until now. The erosion of the status of the knowledgeable individuals and their authority erodes in fact the social hierarchical structure and creates a new social structure which is flatter as compared to its predecessor. The flat space is a space in which there is no hierarchy, a space without managers, exclusive leaders, or directors. In a flat world everyone, theoretically, is equal.

The revolution of the masses in the era of cyberspace – revolution without leadership

Social revolutions which bring to power and depose regimes necessitate, for the most part, the existence of a strong and significant leadership which carries the masses along with it, directs their activities and in particular defines the values in the light of which and in the name of which the masses are called
to the streets. The social revolutions that occurred in the first half of the 20th century and which created the communist and fascist regimes (without revolutions as their representatives were elected firstly in democratic elections) – were accompanied by a strong leadership which directed the events and on their conclusion took control of the government and the mass that revolted in the name of the values that navigated it. In fact, the masses, without perhaps meaning or wanting to, moved from one type of oppression to another type of oppression under the leaders on whom they had put their hopes for freedom.

The social political flattening is expressed by the revolutions in the era of cyberspace characterized by a lack of strong and significant leadership to lead the revolution. Cyberspace enables the masses to take action simultaneously and with full coordination without clear leadership. Moreover, the existence of a revolution in cyberspace reinforces the power of the mass thus it enables the leaders of the revolution to gain control over the rest of the revolutionary mass which created it, in the name of the values that navigated it, while creating a repressive regime in another guise. The revolutions that we are witnessing today are not led by leaders or by opinion leaders of one kind or another, but rather they are created from the grassroots by the masses joining together and devoid of leadership.

A strong testimony to the power and significance of the revolution in the flat era, a revolution whereby its platform is the cyber network, devoid of hierarchy and leadership, can be seen in the revolution that took place in Egypt. There the lack of leadership at the head of the revolution enabled the change to the government without bloodshed in the first phase, and the removal of Mubarak from power. Consciously – every Egyptian received the signal to release the strong desire that burned inside him to instigate change by congregating in the public squares in various towns in Egypt. It can be assumed that if there were clear leaders of the revolutions in the Arab world, the representatives of the repressive regime would have come out openly against them and have tried to harm them directly. The next test of these new revolutionaries will be at the time of the planned elections in September in Egypt and during the following period which will necessitate construction of a balanced stable democratic structure, representing all the population groups.

The Print Revolution and the Cyber Revolution – knowledge as an instigator of revolutions

We claim that this new era in human history is comparable to the revolution that began with the invention of print by Johann Gutenberg in the middle of the 15th century. The printing press created the gateway through which theological knowledge flowed to the masses, and led to the cardinals of the Catholic Church falling from their lofty eminence. The difference between the two events is that cyberspace broadens this gateway to new dimensions which will have a direct effect on the life of mankind and on the political, economic and social systems etc, inter alia as a result of the faster rate of change as compared to the rate of cultural and political change in Europe after the invention of print which sometimes took tens and sometimes hundreds of years. For example, significant events in the past five hundred years which are customarily attributed to the print revolution are the birth of Protestant Christianity, the beginning of the enlightenment process and the Industrial Revolution.

Almost a hundred years after the appearance of the first printing press in the Western world, and after a great number of such printing presses were installed in various locations in Europe (Holland, England, Italy and other towns in Germany), the essay by Martin Luther, the father of Protestant Christianity, “95 Theses” was printed and distributed, which led eventually to the most important religious revolution followed by the secular conversion process of Europe. Later the distribution of the writings of Sir Isaac Newton (who presented the “Principia Mathematica” in 1687) and the great philosophers of the 18th and 19th centuries such as Emanuel Kant, David Hume, Wolfgang Hegel, Ludwig Feuerbach, Karl Marx, Arthur Schopenhauer, Friedrich Nietzsche, and later Karl Popper and more who were active in the 20th century, constituted an ethical foundation for the process of enlightenment and the Industrial Revolution, the outcomes of which are present in the West to this day.

At present, humanity is undergoing a similar process however accelerated several times over, due mainly to the rate of transfer of information and the rate of greater and faster technological changes. This difference has the greatest significance for the
individual – the subject of the 21st century. The cyber revolution has a number of features which differentiate it from the print revolution and offers an explanation as to its immense power. Firstly, by means of knowledge that crosses borders, nations and ethical systems (the Christian ethics systems is a system of ethics that differs from the Muslim Shia ethical system, and so forth). Secondly, it distributes knowledge by means of written text and visual text (video and pictures) in real time in dimensions that are thousands of times greater than the printed information. Thirdly, knowledge is transferred very quickly to millions of people who can share multi-directional communications between themselves.

By means of the tools of cyberspace (the internet including social networks, telephony systems and computers) but not only, the young Arab is exposed, from beneath the strict mantle of the Islamic systems and policies which try to maintain the existing structure with all its ethical, and it can be said also repressive elements, to the spirit of Western philosophy, which is expressed mainly by the lifestyles in the West and the democratic structure whether it is social-democratic or liberal. The Middle Eastern young person grows up with a huge disparity between these two worlds, and therefore the influence of cyberspace on the Arab world is so great.

**The exposure** of millions in the Arab world to democratic and secular values, the liberation from patriarchal values as well as the ability to communicate by means of the cyber world, enables millions to link up with other millions and create the power to translate the rage restrained in those same tens of millions in favour of a political act the objective of which is fundamental change to the regime. That is to say a shift from a dictatorial one-party regime or authoritative regime to democracy.

It can be assumed that due to this the uprisings throughout the Arab world could end with a fundamental change of the regime. That is to say Egypt, Tunisia, Syria, the Yemen and Jordan and at a later stage Iran will undergo a fundamental governmental transformation. This is a kind of transition to the next generation of the political space in the societies-states which did not go
through the Industrial Revolution as did the countries of the West.

It is appropriate to emphasize that there are a number of reasons for revolution and it will be difficult for us to identify the full complexity which caused the revolution in Egypt, or the one which is upcoming in Syria, and certainly to explain their precise timing. However we have no doubt that the economic-social factor, based mainly on the great inequality that has developed between a small capitalist group, close to the regime, and the rest of the classes of the Egyptian people including the middle class (which apparently instigated the revolution carrying with it the lower class) under a tyrannical repressive regime of many years, together with the human essence desiring change – joined together and caused the eruption of the masses. The factor enabling the realization of the fundamental change is the technological-social development known as cyberspace.

The existence of a communication platform (cyberspace) together with the fundamental desire (natural human yearning) amongst people under a repressive regime to carry out an existential change – constitutes a fundamental argument in this thesis that the civilian revolution in the Arab world was in fact inescapable. It is not dependent on the measure of power of one repressive regime or another, on its political wisdom or its ability to manoeuvre. Moreover this fundamental change is expected to take place in many other countries; that is to say in every country in which there is significant oppression and discrimination together with governmental corruption. This change will also not pass over Israel as regards the Palestinian population in the area.

However the social fabric of the Arab states such as Syria, Egypt and Libya is not identical in each country, for example: the division of powers between Shia and Sunni Islam, and in Syria also the Alawi together with the secular public, and more organized factors such as the Muslim Brotherhood, and international Islamic organizations. This paper focuses on the Middle Eastern Arab subject as a citizen of a country in which there is a repressive regime. We claim that the revolutions in the Middle East are revolutions that the Arab subject – as an oppressed and alienated citizen in himself – instigates and therefore we should focus in the first stage on observation of the essence of the subject’s perception which constitutes a more basic observation than the observation of power struggles in the Islamic or Arab world. In order to understand the dimension of the change in depth it is appropriate to focus on the philosophical debate and not on the classic “Middle Eastern” issue.
The fundamental change in the way the subject perceives himself under tyrannical regimes is a change of great significance that no dictator has the ability to contend with effectively and it will eventually lead to his elimination. The dawn of the revolution is when the individual within the mass understands and recognizes his strength and believes that he can implement the change as he is absolutely certain that others will join him. This process can be compared to the process of nuclear fission, as a great release of energy from that same nuclear atom which unifies with similar energies from other atoms (individuals), and as with every chain reaction, accelerates itself exponentially.

That is to say, there is a link between the measure of confidence of the lone subject and his peers. The confidence is created in two worlds, the virtual world which exists in cyberspace (for instance the social networks) and the physical real world (for instance congregation in unity in the town square). The connection between the two worlds creates the new experience in which the oppressed subject exists, and this experience reinforces his awareness for the creation of a revolutionary action.

“The Revolutionary’s Dilemma” in the era of cyberspace as a version of “The Prisoner’s Dilemma”

Two suspects of a crime are arrested by the police following a violent robbery. The police separate them and informs each of them separately that if both of them admit to perpetrating the robbery they will receive a lesser punishment for their admission; if each of them admits and also turns in his friend (an action known as defection) he will receive for this a light punishment while his friend (the one betrayed who did not admit), will receive a very severe punishment. In the event that neither of them admits and neither turns in his friend, that is to say both of them (in the strategic context the meaning is cooperation between two prisoners although there is no communication between them) are loyal to each other and believe that the other will not turn him in due to lack of evidence, the punishment for each of them will be minimal.

The game is presented in Figure 1 as a matrix which illustrates the punishment and the gain of each player for the strategy that he chooses.

![Figure 1](image-url) - a standard illustration of the Prisoner’s Dilemma game. The optimal strategy according to the MinMax approach is that each player chooses the betrayal of his friend strategy as the safest strategy, theoretically, as far as he is concerned. (*) marks the optimal strategy for both the players (defection by both of them).

The revolutionary’s dilemma in the old era

In the “Revolutionary’s Dilemma” game we propose seeing the millions of citizens in a repressive regime as “prisoners” in the Prisoner’s Dilemma. Cyberspace in this case breaks down the walls between the two “prisoners” or those arrested by the police of the repressive regime. The revolutionary’s dilemma is
whether to turn is his friend, to cooperate with the repressive regime, thereby ensuring he and his family are safe, or to revolt which could improve his situation and that of his friends.

Before the existence of cyberspace, each individual who was faced with this dilemma was warned by the representative of the regime that if any “friend” pointed him out as an objector or a “problematic person” he would be punished very severely, to the extent of disappearance and torture. In this case the risk that “any citizen” takes upon himself, when opposing the regime while remaining loyal to his friend, for a potential revolution is huge. Therefore the score of zero (0) presented in the Prisoner's Dilemma becomes a negative number (-5) while the score for defection (3); when the friends were loyal the score becomes significantly larger (10). However, if two friends “betray” each other, the expected punishment is very severe but less than in the extreme case in which one is betrayed by his friend while the other is loyal. The game in the era of oppression is presented in Figure 2.

We shall emphasize that each game represents two individuals of many “friends” in the same situation. The most cautious strategy, that is the optimal strategy in the MinMax context, is bilateral defection.

<table>
<thead>
<tr>
<th></th>
<th>Player B is loyal to his friend (Coop)</th>
<th>Player B betrays his friend (Defect)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Player A is loyal to his friend</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>-5</td>
<td>-3</td>
</tr>
</tbody>
</table>

\[\text{Figure 2} – \text{The Revolutionary's Dilemma during a period of oppression and in the absence of cyberspace. The mutual strategy of defection is the optimal strategy for both parties. As regards the optimal strategy for each player – according to the MinMax approach – see the previous sections.}\]

The Revolutionary's Dilemma with the existence of cyberspace

Given the Revolutionary's Dilemma in an oppressive regime in the cyberspace era, the citizens are players represented by two “prisoners” with one fundamental difference; that is the existence of non-mediated communications between them. That is to say, the regime demands that each of them cooperate with it and betray his friend and tries to threaten each of the players in the old way; if one does not betray his friend, his friend will betray him and his punishment will be severe (see the previous model in Figure 2). However direct communication between citizens enables free transfer of knowledge and messages between them. Thus the game changes fundamentally.

Fundamental change is not the desire to instigate change at any price but rather the measure of trust that each of the players has in his friend as a result of the non-mediated communication in real time between them. The communication, which is not based solely on words, but rather also on video pictures in real time, inspires confidence in each player/citizen/prisoner that he will not be abandoned by his friend. Moreover, this time, the cooperation between the individuals could have a significant benefit due to the existing probability of overcoming the regime and of totally changing the lives of all the individuals.

The “Revolutionary's Dilemma” game presented here is based on a model developed by Robert Axelrod in which he presents a serious of iterative games of the Prisoner's Dilemma. According to Axelrod's model a model can be produced according to which the prisoner's trust (revolutionaries in our matter) increases with each iteration. Axelrod performed a serious of computerized experiments. The experiments were based on the decision-making models of fourteen experts. The winning model was the Tit for Tat Model developed by Anatol Rappaport. According to these experiments it became clear that the optimal strategy of each prisoner in a series of (recurring) iterative games was cooperation. Therefore the research team put together by Axelrod reached the conclusion that cooperation was preferable to defection. From game to game or from experiment to experiment the trust between the prisoners/revolutionaries increases and thus they “break down the wall” which isolates them. The change that occurred in the model that Axelrod conducted
based on the original model of the Prisoner's Dilemma is that each player already knew the game, that is to say the results and the strategy chosen by his friend.

At this point we shall note that there is a link between the iterative Prisoner's Dilemma game, the Tit for Tat model and the Reciprocal Altruism (RA) model developed by Trivers in 1971. Trivers developed the RA theory as an attempt to explain cases of altruism between organisms which have no contact between them. Altruism should be perceived as “cooperation”, with the emphasis on cooperation of a certain player with another player although he is aware that he could pay the price for this. This issue is not developed in this paper however it is the tip of the iceberg for another study observing the political revolutions which we are experiencing this year.

As a result of breaking down the walls and the increase in trust between the players the scores change significantly and with them also the reasonable chance for success in instigation of a revolution. See the Model in the New Era in Figure 3.

<table>
<thead>
<tr>
<th>Player A is loyal to his friend (COOP)</th>
<th>Player B is loyal to his friend (Coop)</th>
<th>Player B betrays his friend (Defect)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Player A is loyal to his friend (COOP)</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>*</td>
<td>5</td>
</tr>
<tr>
<td>Player A betrays his friend (Defect)</td>
<td>5</td>
<td>-2</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>-2</td>
</tr>
</tbody>
</table>

Figure 3 – According to the MinMax approach which dictates the most cautious strategy (guaranteeing a less painful loss) the optimal strategy is the loyalty of the players to each other and the cooperation between them and not with the police-regime. In practice, the scores presented in the Payoff matrix represented the peak of a series of iterative (recurring) games

Breaking down walls of “distrust” by cyberspace and congregation in town squares

When the level of trust between the players intensifies they will prefer to cooperate with each other. As soon as the players understand that they have the power in their hands to make a change they will congregate on the streets; initially in small numbers however gradually following each day of “demonstrations and demands for change” the numbers will increase. One can see each such day as an experiment or operation of a game which increases trust in such a way that indeed there is someone with whom it is possible to take action and there is a possibility of realizing the revolution. In fact, after a critical mass of games and participating players the probability that the revolution will stop is minimal. That is to say this is exponential process which accelerates itself increasingly with each step taken.

A series of iterative games – as a trust building process in revolutions in the Middle East

According to Robert Axelrod's model, every Friday in the Middle East, the day of prayer in mosques, the level of trust of the players in each other increases. One can see as time passes in the Middle East, from week to week, or from one Friday's prayers to the next, as another game in the series of iterative games. Every week or every Friday all the players/revolutionaries know the results of the previous game, as well as the strategies used by each of them. In this process the intensity of the trust increases and reaches its peak in the game presented in Figure No. 3 above. This game represents the payoff which justifies the cooperation of each of the relevant players (all the peers of the same status/class who have the potential to instigate the revolution – the pauper-middle class).

On conclusion, the objective of the game models that were presented above is to describe “breaking down of walls” as a platform which enables the creation of trust between the players in realizing the desire for change. For the purpose of creating political change a large public of individuals in required to rise up against the regime and demand the change. In order for such a public to be large enough trust is required between the individuals belonging to the same class or public. Lack of trust silences the masses and prevents their participation in the action for change.
The action for change is not complex however it entails congregating in town squares, non-retreat from the threats of the representatives of the regime, and continually calling for implementation of change. The strength of the revolution is dependent on two elements: the dimensions of human energy; that is the number of people implementing the action for change by congregating in the town squares and the measure of access of each of the individuals to each other. The more that these two parameters increase, the lower the probability of the survival of the regime.

The ability to create trust – in the iterative process of steps – is to a large extent as a result of the communication platform supplied by cyberspace, which blocks the regimes from operating with a firm hand contrary to the spirit of the values of the mass. Thus, in fact, the road is paved for the “soft power” of leadership or a regime as almost the only option for continued tenure or suppression of the government.

Professor Joseph Nye introduced the term “soft power” as regards the leadership and political and state guidance based on ethical identification and attraction and not by capital or repression by force. Nye referred in his book to the power that countries instigate on each other. In this paper we wish to borrow the term for the relationship between the individual and the regime within the state. Support of the regime will be enabled as a result of the creation of identification between the regime and the citizens. Therefore a “comprehensive agreement” is required for the most part ethical which is attraction to the leadership for ethical identification and not due to aggressiveness, repression or capital. Here the question is raised as to what will be nature of the leadership in the new world to be created following the revolutions in place of the old-world leadership, which gained control for the most part by intrigues and actions through the darkest and deepest channels of regimes. It seems that we can anticipate a new type of leadership the nature of which at the present time is difficult to foresee.

Conclusions and the significance as regards intelligence, the deficient civilian aspect – or the (inherent) failure of the military intelligence systems and the internal intelligence systems

The military intelligence systems in democratic countries, as well as the internal intelligence systems in repressive counties, are not aware of political-cultural processes amongst the marginal classes as they focus on the groups which traditionally influence political life, control governmental institutions and centres of power including centres of financial power.

With the new era the intelligence systems will be required to have new abilities – mainly the ability to recognize political-social or cultural processes in the general public which are outside of the decision-making circles and the institutions which run that country. Such processes are conducted or evolve under the surface and it is difficult to identify them at the higher level of governments using a strategy of counter observation. These processes are also not reflected in the news programs and in the news rooms. Early identification, analysis and understanding of these processes necessitate a different strategy and new tools.

An understanding of these underground processes is required; the gist of them is conscious change of the subjects in a status used to repression. For this purpose reviews and investigations are required of a type that does not exist in the intelligence systems in the West. Therefore designated intelligence investigators of a type which are not found in abundance must be trained.

To date the intelligence systems (both in the West and the East) see “political and cultural leaders” as central anchors around
which the intelligence deployment takes place. The change brought about by cyberspace obligates observation in much wider perspectives and on issues that are not military and are not related to state affairs but rather matters of administering life within the country. Only thus will it be possible, perhaps, to recognize a process which carries on its back political change – of the type that we are witnessing of late.

Furthermore, an ability to analyze and predict the influence of the new technologies on the political processes described above is required. For example, observation of cyberspace not only in the context of offensive and defensive technology but rather the possible effect on the various populations should be examined.

For this purpose technological systems should also be developed which have the power to help in understanding the mood of the population. These systems require the ability “to ingest and digest” huge quantities of information, for the most part futile information which prima facie has no “glowing”, suspicious or interest garnering element and they must identify possible developments from this flow of information.

In the second stage, after the leads have been created for understanding the processes, a directing human hand is required in order to navigate the technological systems to a more focussed analysis. Thus by the process of feedback between research teams and technological systems, and continual work over many years it will be possible to define and identify potential trends, and perhaps even to filter their results or their ramifications when the objective is to help the decision makers create relevant policies which will enable optimal preparation.

To date the western intelligence systems have failed in identifying the revolution in Iran, in indentifying the tectonic political change in the Soviet Union – which has changed the global strategic map unfathomably with a direct impact on the Middle East, in identifying the processes among the Palestinians (for example the success of the Hamas in the elections in Gaza), in identifying the revolution in Egypt, and so forth.

In order to succeed focussing is required in the civilian arena and on political economic scrutiny, mainly for the purpose of studying the stability of large populations. A civilian scrutiny untainted by military or strategic observations could lead to success in this area. Israel should develop this ability as the changes of the type described in this paper have significant ramifications on the security of the State of Israel.

At present there are technologies which enable automatic digestion of huge quantities of information, their analysis and have the ability of make deductions from this information. These systems, as aforementioned, do not “do the job” but rather support research activity directed by designated research teams. The “semantic web” technologies enable fusion of information from various sources, in various languages and of various types. It is desirable that the development and implementation of such adopted technologies will become national projects in the West.

The said systems do not constitute the brain or the eyes for “big brother” but rather enable understanding of the mood, the atmosphere amongst these large populations, the identification of which can bring about a change to the policies of one regime or another, and thereby could lead to preventing bloodshed or internal wars.

**Conclusion and ramification on Israel**

Israel is perceived in the eyes of millions of Arabs in the Middle East as a country that creates amongst the Palestinians a significant element of self-alienation. Particularly high levels of alienation give direct rise to “rage” and the desire for change. Israel's attitude to the Palestinian leadership, whether Hamas or the PLO, does not assist or lead to an understanding of the situation. Only by focussing on understanding the mood of the young Palestinians can insights be produced as regards the future. That is to say determination of Israel's strategy towards the Palestinians is not dependent on the statement of one Palestinian leader or another. The new era has created a new leader – the mass, the general public, which has become a dominant player, mainly amongst the young. Therefore, it is appropriate that the State of Israel shall be very attentive to the mood of the young of this group and prepare itself accordingly; if not we could find ourselves surprised.