

## **Global System Analysis and the Changing World: World in 2040**

by

**Javed Ahmad**

**Assistance Professor, Indus University**

**e-mail: samojaved@live.com**

### **Abstract**

The only thing permanent in the universe is the change. The balance with which the universe was created has continued to be disturbed. The world we live in today has continued to be evolutionary and revolutionary. Such changes are often associated with aggressive application of violence in the form of wars which have determined the future course of action between nation states. World over, scholars and scientist have extensively made academic research and debate on the subject of International affairs and its articulation with globalization phenomena. The scope and dimensions of the subject have gone so enormous that it is not possible to discuss all the contours in a single book let alone an article. This paper therefore, is limited to the geopolitical and security domains only. Descriptive method was used to define the global system analysis, followed by explanatory method for establishing the current geostrategic environment within the global system and possible black swan events. Towards end adopting exploratory method, conclusions drawn from global system analysis and geostrategic environment forecasted up to 20 to 30 years from now. The paper concludes that the study of international relations and global system analysis is highly debatable. The results of research on these highly complex and dynamic aspects of human society, are never liner. Instead they are multi-dimensional, divergent and often contradictory. The study becomes further complicated when viewed form a security perspective, whereby interest of nations states takes precedence over every other issue. In an age of exploding and imploding international relations, it may not be possible to make an accurate description of forecast even in near future.

**Keywords:** Global System Analysis, Changing World, World in 2040,

### **Introduction:**

The only thing permanent in the universe is the change. The balance with which the universe was created has continued to be disturbed. The world we live in today has continued to be evolutionary and revolutionary. Such changes are often associated with aggressive application of violence in the form of wars which have determined the future course of action between nation states.<sup>1</sup>

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<sup>1</sup> Westphalia after 30 years war in Europe, League of Nations after World War I and United Nations after World War II.

Historically, the study of international relations has largely concerned the study of states and the effects of anarchy on their foreign policies, the patterns of their interactions, and the organization of world politics. However, over the last several decades, the discipline has moved from the study of 'international relations' and toward the study of 'global society'. International relations or affairs is a complex subject and there is no crystal ball available through which the future of world could be seen. Scientifically, the international structure has multiple variables, therefore, it may not be accurately possible to make a scientific prediction based on a mathematical or a predictive model to forecast the changing world in near and far futures. However, scholars of international relations can make "estimate" of future based on analysis of existing global system and the structure, behavior and interest of Global Powers and Geostrategic environment. Of course, all these estimates can be offset by a sudden Black Swan event as the world witnessed in the form of 9/11 Attack.

World over, scholars and scientist have extensively made academic research and debate on the subject of International affairs and its articulation with globalization phenomena. The scope and dimensions of the subject have gone so enormous that it is not possible to discuss all the contours in a single book let alone an article. This paper will, therefore, be limited to the geopolitical and security domains only. Descriptive method will be used to define the global system analysis, followed by explanatory method for establishing the current geostrategic environment within the global system and possible black swan events. Towards end adopting exploratory method, conclusions will be drawn from global system analysis and geostrategic environment forecasted up to 20 to 30 years from now.

### **Global System Analysis:**

#### **Historical Perspective of Global System:**

An assemblage of units, objects, or parts is called a system if it is united by a form of regular interaction. These units of a system may differ in size, capacity, potentials and wealth. These units may be of different positions when it comes to decision-making procedures and powers (Moore, 2000). These units constantly interact with each other, either from horizontal or vertical perspectives. Therefore it is quite natural that in the case of a change in one unit the reactions to such change are expected by other units. From historical perspective, following fundamental types of international systems or relations between the states are crucial actors in global politics even in present times:

- a. **Independent State System** is composed by the states as political actors and entities. Each of these states claim to be independent and this claim means that they are autonomous and sovereign. Basically this type of state has right and possibility to make its own foreign and domestic policies and for that it is not under any kind of outer influence or dependence.
- b. The **Hegemonic State System** is based on an idea of a hegemon and hegemony imposed by a hegemon. There are three possible types of HSS in global politics:
  - i. **Unipolar<sup>2</sup>** hegemony, when a single state is dominant as it was the case with the US immediately after the WWII.

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<sup>2</sup> Or single

- ii. **Bipolar**<sup>3</sup> hegemony, when two dominant states exist in global politics as it was a case during the time of the Cold War.<sup>4</sup>
- iii. **Multipolar.** It is also called 'Collective' where several states dominate international relations. For example, during the time after the Vienna Congress in 1815, Russia, Austria, Great Britain, France and Prussia dominated collectively.
- c. **Imperial State System.** It is a system which is composed of separate societal, ethnic, national, linguistic or/and confessional parts, associated with one another through regular interaction. However, one unit dominates over others by imposing over the rest its own political supremacy by force or by interest. The fundamental difference between Imperial State System and Hegemonic state system is that a dominant unit of an empire is much more able to manage other subjects of the state system in comparison to Hegemon. Mostly, in case of empires, it is the military conquest which creates and enlarges the empires (Sotirovic, 2017) .

### Approaches to Global System Analysis:

The modern European system of International Relations can be traced back up to 1648 Westphalian Peace Treaty, while the process of globalization of international systems of inter-states relations started to work from the first half of the 19th century. Popular approaches to global systems analysis have been could be identified as follows:

- a. **Marxism.** The economic and social system Marxism is based upon the political and economic theories of Karl Marx and Friedrich Engels. In Marxism, class struggle is a central element in the analysis of social change in Western societies. It is the antithesis of capitalism which means an economic system based on the private ownership of production means and goods distribution, characterized by a free competitive market and motivation by profit. Marxism's dominant feature is public ownership of the means of production, distribution, and exchange. The **Marxist theory of modernization** theorized that as nations developed, adopting a communist approach to governing, such as eradicating private property, would end conflict, exploitation, and inequality. Economic development and social change would lead developing nations to develop into a society much like that of the Soviet Union (O' Laughlin, 1975).
- b. **Modernization Theory.** **Modernization theory** is a theory used to explain the process of modernization that a nation goes through as it transitions from a traditional society to a modern one. Main elements which proved favorable to the inception of the modernization theory of development after the Second World War are as under:
  - i. United States rose as a superpower.
  - ii. A united world communist movement was spread.
  - iii. European colonial empires in Asia, Africa and Latin America were disintegrated and gave birth to many states in the Third World.

Although there are many versions of modernization theory, at its core modernization theory suggests that advanced industrial technology produces not

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<sup>3</sup> Or Dual

<sup>4</sup> the USA and the USSR.

only economic growth in developing societies but also other structural and cultural changes. In the political realm, the society becomes more participatory in decision-making processes, and typical institutions include universal suffrage, political parties, a civil service bureaucracy, and parliaments. Traditional sources of authority are weaker as bureaucratic institutions assume responsibility and power. In the economic realm, there is more industrialization, technical upgrading of production, replacement of exchange economies with extensive money markets, increased division of labor, growth of infrastructure and commercial facilities, and the development of large-scale markets (McMichael, 1990).

- c. **Dependency Theory.** Dependency theory of development is an international relations theory that examines the relationships and interactions often between Global North and Global South states, where the Global South states are often reliant on the Global North for trade, economic aid, etc. First proposed in the late 1950s which gained prominence in the 1960s and '70s. According to dependency theory, underdevelopment is mainly caused by the peripheral position of affected countries in the world economy. Typically, underdeveloped countries offer cheap labor and raw materials on the world market. These resources are sold to advanced economies, which have the means to transform them into finished goods. Underdeveloped countries end up purchasing the finished products at high prices, depleting the capital they might otherwise devote to upgrading their own productive capacity. The result is a vicious cycle that perpetuates the division of the world economy between a rich core and a poor periphery (József, 1992; Arrighi & Silver, 1984).
- d. **World System Theory.** World Systems Theory which recognizes that the states are and will remain the dominant actor of International relations. Theoreticians of World System Theory suggest international cooperation and order will replace international conflicts and anarchy, thus advocating a system of Capitalist World-Economy. Accordingly, the whole world is divided into:
- i. Core-states<sup>5</sup>
  - ii. Periphery-states<sup>6</sup>
  - iii. Semi periphery-states<sup>7</sup>

### **How Globalization has changed the International System:**

Before the age of globalization, states were looking to promote their national interests. They were concerned more with their own safety than global security and they were looking for ways to deal with problems at a domestic rather than international level. Nowadays, since the issues and difficulties which states have to face are becoming more global than national (Panitch, 1996). Therefore, states are no longer able to protect their citizens and deal with problems by their own means, unless they take collective action together with other states in Intergovernmental Organizations. This joint sovereignty had not existed before and it sometimes implies that states have to comply with the majority decision and are thus affected by it, even though it might not

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<sup>5</sup> the Western developed mature economies

<sup>6</sup> mainly ex-colonies from Africa with still underdeveloped economies

<sup>7</sup> mainly East-European ex-socialist states and Middle-East oil-rich states with rising economies and growing infrastructure

have been the initial desire of the individual state. Hence, they are dependent on the other countries who participate in the decision-making process in order to reach their goal (Raffer, 1993).

This can be demonstrated by the example of the UN Security Council, where the member-states wanting the resolution to be passed are dependent on the five permanent members. As these hold veto-powers, they are sometimes able to stop an entire resolution, even if all other members voted in favor. Another example of how a small number of states can have a notable impact on the whole world is the Organization of Petroleum Exporting Countries,<sup>8</sup> set up in 1960. OPEC, in the 1970s, considerably raised the oil price which had a drastic affect for many countries in the world. Thus, OPEC at the time only had 12 member-states, their decision was had in impact on many more states. Even more directly, states have become more interdependent through the opening of national borders and the implementation of free-trade. Due to globalization it is now easier for companies to set up branches or production sites in other countries where the conditions for the company are better. This has also increased competition between countries because they want the companies to establish themselves in each of them. Since states now no longer have sole control over their economies, they rely and depend on the collective governance of bodies like the International Monetary Fund<sup>9</sup> or the World Bank in order to regulate the international financial market. On the one hand, this new dependence provides the member-states with some sort of protection in case their economy gets into financial difficulties, but on the other hand this interconnectedness can also have negative effects as could be observed recently in the Economic Crisis (Raffer, 1993).

Overall, it has been demonstrated, that globalization has changed the international system quite significantly in so far as it made states far more interdependent and interconnected. The world is not a place of many different and separate countries anymore, but these states form almost one entity on many different levels (Panitch, 1996). Problems do not arise isolated anymore and thus the solutions for these now also have to be found in collective action rather than individual responses.

### **Security Dilemma And Global Security Models:**

States in order to achieve their security goals had been striving for more and more power for the reason to escape the impact of the power and foreign policy of other states especially of the neighbors. However, such practice in turn makes the other states or other actors in International relations to feel themselves more insecure and therefore it encourages them to be prepared for the worst scenario.<sup>10</sup> As any state cannot ever feel entirely secure, the security competition among the states is endless process that is resulting in constant power rising. In other words, the security dilemma provokes a policy to firm security of a state which has a direct effect of threatening other states or actors in International relations and, thereby, provoking power<sup>11</sup> counter actions. This endless process is in fact decreasing security for all states. In this context three security models exist:

- a. The **Unipolar Security Model** gives the most security guarantees as in this case there is simply one power<sup>12</sup> to be in a position of a dominant actor in global politics having a role of a global hegemon or world policemen. In International relations,

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<sup>8</sup> OPEC

<sup>9</sup> IMF

<sup>10</sup> conflict, aggression, war

<sup>11</sup> usually military

<sup>12</sup> state

notion of a “hegemon” is used as a synonym for “leader” or “leading state” within the system<sup>13</sup> composed by at least two or several states. The USA today is the most powerful and imperialistic state that ever existed in the history of world. USA is using the NATO as a justification of its global hegemonic designs after World War II (Sassen, 1996).

- b. The theorists of the **Bi-polar Security Model**, however, believe that a bipolarity of global politics could bring a long-time peace and world security instead of Uni-polar Security Model. In the case of Bipolar Security Model, the two crucial powers in the world are monitoring each other’s behavior on global arena and therefore removing a big part of the security uncertainty in world politics, international relations and foreign affairs associated with the possibility of the beginning of war between the Great Powers.
- c. A **Multipolar Security Model** looks like as the best option dealing with the prevention of war and protecting global security as a distribution of power is as much as “multi” there are lesser chances for outbreak of the war between the Great Powers. In essence, Multipolar Security Model can moderate hostility among the Great Powers as they are forced to create shifting alliances in which there are no permanent enemies. Nevertheless, for many researchers, Multipolar Security Model is in fact creating a dangerous uncertainty for the very reason as there is a bigger number of the Great Powers or other powerful actors in world politics.

### **Geo-Strategic Security Environment:**

The 20th century has been the most violent and destructive period that humankind has experienced. Within one generation, it was subjected to two World Wars and a ‘Cold War’. The sudden collapse of the erstwhile Soviet Union in the early 1990s, had in reality shattered a political equilibrium in the aftermath of World War II. Under the shadow of the disintegration of the Soviet Union, the Russian Federation had taken on the contours of the Germany that surfaced from the Versailles Treaty following World War I. Concurrent with the resurgence of the Russian Federation, has been the thrust towards a polycentric world order comprising the large and medium powers. The Asian continent is beginning to take its place in the global arena. Managing this shift in the centre of gravity from Europe to Asia will be the challenge, not only for the rising powers of Asia, but also for the USA and the European Union, which have a major stake in the region. Asia accounts for seven of the ten most populous countries in the world, and some of the largest standing armies; five declared nuclear weapon states, an undeclared one in Israel, and Iran emerging as a nuclear capable state; the presence of nuclear fleets of non-Asian countries in Asian waters; and a large number of missiles producing and exporting countries. Asia also accounts for the world’s greatest energy resources, on which depends the prosperity, not only of the Asian countries, but also the rest of the world.

Changing regional and global politico-economic circumstances and emerging security concerns have been reshaping the relationship between/among nations. The replica of Cold War lingo is indicating the revival of strategic competition between the Russian Federation and United States. The revival of great power competition, definitely, necessitates realignment in the regional and international strategic environment. The United States is confronting competitors at the global political landscape. Therefore, President Donald Trump announced that his National Security

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<sup>13</sup> bloc

Strategy “is a strategy of principled realism that is guided by outcomes, not ideology.” The recurrence of Balance of Power at the global strategic landscape is posing a challenge to the existing power structure. It is exposing United States ‘sole super power’ role to structure and administer a ‘new world order’. The ascendancy of China and assertive Russian policies oblige Washington to constitute new alliances such as US-Japan-India; adopt Asia Pivot strategy; and endorse Indo-Pacific strategy.

The European Union will also continue to be a significant player, both economically and militarily; in military terms, as the complementary component of NATO to the USA. The role that Russia plays will largely depend on the extent to which it is able to sustain its resurgence. Japan’s economic role will continue to be significant; whether it will militarize must remain a speculative issue, very much dependent on what the Chinese do in the East Asian region, including the South China Sea, and North Korea’s nuclear ambitions; the new political dispensation in Japan appears to be moving towards release from the tight embrace of the USA. The People’s Republic of China<sup>14</sup> will, without doubt, play a very significant role on the global stage. It is already a power of considerable stature, developing at a fast pace economically, and modernizing its military, including its naval capability, at a frenetic pace. With its ever-growing energy needs China has embarked on an ambitious One Belt One Road project which would include many countries to mutually benefit each other.

In the years immediately following the end of the Cold War, the West was generally able to pursue its agenda through UN without much opposition. However, since late 1990s’ both Russia and China have since stood up to the West at the United Nations and on other occasions were joined by countries like France and Germany. Most recently, in the case of Syria, where Russia has taken a very significant stance. These developments at the international level over the last decade and a half exposed deep divisions within the membership of the United Nations.

### **Black Swans:**

Black Swan is an event or occurrence, extremely difficult to predict, and beyond normal expectation. Major events or unexpected concurrences of factors that can change the global geopolitical or macroeconomic balance over the next 20 to 30 years could be:

- a. **Drastic American retreat from the international scene:** due to a domestic lack of interest in international affairs and reduced energy dependence. This retreat would transform the geopolitical landscape of Asia-Pacific and the Middle East completely.
- b. **Collapse of China:** would seriously affect exporters of raw materials, make financing American debt difficult, and threaten global stability.
- c. **Breakup of the Eurozone:** would trigger a widespread suspension of payments and general chaos in the global financial system. European Single Market would be suspended and the credibility of the EU would be undermined. Any EU member country following in footsteps of UK<sup>15</sup> will have catastrophic implications for EU specifically and rest of the world in general.
- d. **Massive technological failure:** as was expected in case of Year 2000 bug or Millennium Bug, a problem in the coding of computerized systems that was projected to create havoc in computers and computer networks around the world at

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<sup>14</sup> PRC

<sup>15</sup> BREXIT

the beginning of the year 2000 could affect the management systems of essential infrastructure causing major disasters.

- e. **Disintegrations of Middle East and North Africa regions:** The fragmentation of oil and gas-rich states<sup>16</sup> into states that cannot control their territories and/or the emergence of terrorist sanctuaries with global agendas may create large-scale conflicts, rising energy prices, geopolitical disorder and global economic turmoil.
- f. **Rapid Climatic change:** Global temperature has risen by 1.1 to 1.5 degrees above pre-industrial temperatures. If earth warms up to 2 degrees Celsius full wrath of climate change: droughts, flooding, rising sea levels will be felt.

### Conclusions From Global System Analysis And Geostrategic Environment:

Broadly, the era out to 2040 will be a time of transition; this is likely to be characterized by instability, both in the relations between states, and in the relations between groups within states. During this timeframe the world is likely to face the reality of a changing climate, rapid population growth, resource scarcity, resurgence in ideology, and shifts in global power from West to East. No state, group or individual can meet these challenges in isolation, only collective responses will be sufficient. Hence, the struggle to establish an effective system of global governance, capable of responding to these challenges, will be a central theme of the era. Globalization, global inequality, climate change and technological innovation will affect the lives of everyone on the planet. There will be constant tension between greater interdependence between states, groups and individuals and intensifying competition between them. Dependence on complex global systems, such as global supply chains for resources, is likely to increase the risk of systemic failures. In specific relation to international relations<sup>17</sup> some important conclusions would be:

- a. International relations will be based on new dynamics born of the **multipolarity** and **high diversity of players**. The new power centers<sup>18</sup> will structure the geopolitical world with the United States, Russia and the EU. The emergence of this multipolarity will result in increased geographic equilibrium of trade. The Pacific, Indian Ocean and South Atlantic areas will assert themselves as major trade routes. The “Western” influence will likely diminish in all fields.<sup>19</sup>
- b. A pragmatic **international system** will be based on a higher diversity of players, bonds and concepts. It will also face the coexistence of several power centers,<sup>20</sup> non-state players, various transnational networks and states which should remain the “elementary building block” of international relations. The latter will be based on a wider corpus of **regulations**, in particular in the face of major challenges.<sup>21</sup> International law will be based on universal texts complemented, in a pragmatic way, by bi- or multilateral agreements, but without challenging the UN’s legitimacy.

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<sup>16</sup> and transit countries

<sup>17</sup> geo-politics and geo-strategic

<sup>18</sup> China in particular, but also India, even Brazil and South Africa

<sup>19</sup> cultural, economic, media, etc.

<sup>20</sup> international institutions, regional or thematic organizations

<sup>21</sup> environment, natural resources, etc.



- c. **Political fragmentation** should continue and take on various forms: at the international level: increased influence of regional organizations around common interests; at the local level: an increasing number of new states under pressure from ethnic or religious communities and irredentism, favored by the coveting of natural resources or the existence of borders that don't associate territory and culture.
- c. **Interstate conflicts should not be ruled out.** In spite of the numerous regulation tools of the international system and economic interdependency, it is possible that the rise in power of new players may result in rivalry, or that strong needs of supplying in strategic resources may cause an irreversible degradation of relations between states.
- d. The **United States** will maintain their prominence in all fields: military, economic and technological. The United States account for 20% to 25% of global wealth. This instrument of power is enough to differentiate it from past great empires and to ensure, at least in the medium term, the durability of its domination. It would also retain a strong international cultural influence. In matters of foreign policy, USA will remain interventionist, due to the interdependency of its economic and security requirements.
- e. The relative weight of the **EU** in the world will weaken due to the rise in power of other players and internal factors<sup>22</sup>

### Conclusion:

The study of international relations and global system analysis is highly debatable. The results of research on these highly complex and dynamic aspects of human society, are never linear. Instead they are multi-dimensional, divergent and often contradictory. The study becomes further complicated when viewed from a security perspective, whereby interest of nations states takes precedence over every other issue. In an age of exploding and imploding international relations, it may not be possible to make an accurate description of forecast even in near future.

### World 2040 - General.

**Geopolitics.** The distribution of global power will change. Out to 2040, the locus of global power will move away from the United States and Europe towards Asia, as the global system shifts from a unipolar towards a multi-polar distribution of power. The hegemonic dominance of the US will fade. She is likely to remain the pre-eminent military power, although, in political, economic and military terms, she is likely to be increasingly constrained as others grow in influence and confidence. However, the rise of individual states, such as China, should not be considered a certainty given the nature and magnitude of the challenges they face, nor should their eventual influence be over-estimated. Instead there will be several states and institutions competing for regional and global influence, cooperating and competing within the international community.

**Globalization.** Globalization is likely to continue, underpinned by the rapid development of global telecommunications, and resulting in a pervasive information environment in which much of the global population will be capable of being online all the

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<sup>22</sup> low economic growth and population increase, etc.

time. Politically, globalization is likely to raise the level of interdependence between states and individuals within the globalized economy. Economically, globalization is likely to generate winners and losers, especially in the labor market. As a result, everyday life is likely to be competitive, dynamic and fluid, leading to the possibility that political decisions may limit globalization in order to protect reluctant populations from its negative effects. The physical manifestations of globalization are likely to be most apparent in the globalized core. Instability within the globalized core is likely to adversely affect the national interests of major powers. Resources, trade, capital and intellectual property are likely to flow through this core, and rely on complex networks of physical and virtual infrastructure that are likely to be vulnerable to physical disruption or cyber-attack by multiple actors.

**Climate Change.** Climate change will amplify existing social, political and resource stresses, shifting the tipping point at which conflict ignites, rather than directly causing it. Extant greenhouse gas emissions will result in global temperature increases out to 2040, which are likely to be unevenly distributed, irrespective of any agreement to limit future emissions. These temperature increases are likely to lead to significant environmental change. The frequency and intensity of extreme weather events will change, possibly with severe impact on low-lying coastal regions.

**Resource Availability.** Sufficient energy, food and freshwater resources are likely to be available to sustain the growing global population and the global economy. However, distribution and access to resources will be uneven, and local and regional shortages will occur, increasing the likelihood of societal instability and of disagreement between states, and providing the triggers that may ignite conflict. Poorer states will often be unable to access the necessary resources to allow their economies to develop and their populations to prosper. The frequency, scale and duration of humanitarian crises are likely to increase. A shift in agricultural patterns and the distribution of grain growing areas, coupled with the rise in animal and plant diseases, is likely to disrupt food production, resulting in increased migration. However, improvements and efficiencies in agricultural production are likely to meet much of the increased demand, given likely scientific advances that develop high-yield, disease resistant crop strains, combined with better land usage and improved irrigation. The oceans will be further exploited for protein, raising the demand for fishing rights in previously inaccessible areas, such as the Polar Regions.

**Poverty.** The proportion of the global population living in absolute poverty is likely to decline. However, inequality of opportunity will be more apparent due to globalization and increased access to more readily and cheaply available telecommunications. Global inequality is likely to be a significant source of grievance, possibly resulting in an increased incidence of conflict. Youth bulges are likely to provide a reservoir of disaffected young people. In particular, young males with limited economic prospects may be susceptible to radicalization.

**Demography.** By 2040, around 65%, or 6 billion, of the world's population will live in urban areas, attracted by access to jobs, resources and security. The greatest increases in urbanization will occur in Africa and Asia. Slums residents may be increased up to 2

billion. Many large urban areas, especially in regions of the world suffering from poor governance, are likely to become centers of criminality and disaffection and may also be focal points for extremist ideologies.

**Ideologies.** New ideologies will emerge, driven by religion, ethnic differences, nationalism, inequality or a combination of these factors. Ideological conflicts are likely to occur and extremist groups may use violence to achieve political objectives. Diaspora communities are likely to increase in size and influence and many will bring economic benefits to their host states. However, those that fail to integrate are likely to remain reservoirs for resentment. Some of these groups are likely to become involved in ideologically driven conflicts, and may act as proxies for other states.

**Proliferation.** The proliferation of modern weapons' technologies, and probably Weapons of Mass Destruction,<sup>23</sup> will generate instability and shift the military balance of power in various regions. Counter-proliferation initiatives are unlikely to be wholly successful, and nuclear weapons are likely to proliferate. Terrorist groups are likely to acquire and use chemical, biological and radiological weapons possibly through organized crime groups.

**Technology.** Innovation and technology will continue to facilitate change. Energy efficient technologies will become available, although a breakthrough in alternative forms of energy that reduces dependency on hydrocarbons is unlikely. The most significant innovations are likely to involve sensors, electro-optics and materials. Application of nano-technologies, whether through materials or devices, will become pervasive and diverse, particularly in synthetic reproduction, novel power sources, and health care. Improvements in health care, for those who can afford it, are likely to significantly enhance longevity and quality of life.

**Conflicts.** States and non-state actors will exist in a condition of persistent competition. The fundamental nature of conflict will endure. It will remain an inherently human endeavor, with all the uncertainty that this implies. However, the character of conflict will continue to evolve, remaining innately volatile. State and non-state actors will seek to combine conventional, irregular and high-end asymmetric methods concurrently, often in the same time and space and across the combined domains of the air, land, sea, space and cyberspace. Conflict is likely to involve a range of transnational, state, group and individual participants who will operate at global and local levels. In some conflicts, there is likely to be concurrent inter-communal violence, terrorism, insurgency, pervasive criminality and widespread disorder. Tactics, techniques and technologies will continue to converge as adversaries rapidly adapt to seek advantage and influence, including through economic, financial, legal and diplomatic means. These forms of conflict will transcend conventional understanding of what equates to irregular and regular military activity. Adaptive adversaries will seek to utilize the media and the opponent's political system to their advantage. States will increasingly sponsor proxies, seeking to exploit gaps in the international system while minimizing state-on-state risks.

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<sup>23</sup> WMD

**Balance of Power.** The strategic balance of military power is likely to change as Asian states close the technological gap with the West in some areas, develop and maintain strong military forces, and produce and export advanced military equipment to allied states and proxies. The majority of the technological breakthroughs are likely to be driven by the commercial sector, although technological adaptation in defense will continue at a rapid pace. Nonlethal, Directed Energy Weapons,<sup>24</sup> space and cyber technologies will be available to a wide variety of actors, both state and non-state.

Out to 2040, there are few convincing reasons to suggest that the world will become more peaceful. Pressure on resources, climate change, population increases and the changing distribution of power are likely to result in increased instability and likelihood of armed conflict. Total war, harnessing the full power of industrial states, war between major Western powers, and war between liberal democracies, are all unlikely. However, disagreements between major powers over borders, influence and resources are probable. Such disagreements may lead to confrontation, including limited wars, where adversaries deliberately exercise restraint in the methods of warfare, their level of commitment or the objectives sought. Intra-state conflict will remain the most common type of conflict. The use of proxies is likely and conflict involving the proxies and partners of major powers is possible. Western militaries may become involved in coalition action against adversaries possessing significant military capabilities, with Western forces possibly fighting from a position of near-parity or even relative disadvantage. Apparently unsophisticated adversaries will have ready access to cheap, yet highly effective, technologies.

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<sup>24</sup> DEW

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