

# Whither 21st century urban civilization: Dystopia or utopia?

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## Introduction

I would like to share with you some thoughts on the future of human settlements – the basic theme of our Society – following the recent New York terrorist attack though limiting myself to only two themes:

- Urbanization and counter-civilization; and,
- Whither 21st century urban civilization

with special reference to C.A. Doxiadis' concept of Ecumenopolis and the prospects of human settlements in the era of a world population of 10 billion.

## Urbanization and counter-civilization

There has never been an incident that has shaken the world as much as this year's multiple terrorist attacks that directly hit targets in the metropolises of New York and Washington, that are the pride of the United States of America.

Even among the group of skyscrapers that stand together on New York's Manhattan Island, the 110-storey twin towers of the World Trade Center stood out above the others. In the eyes of the world they were pioneers of the image of the modern metropolis.

They were a showcase of New York's urban landscape, epitomizing American Dreams like the Statue of Liberty. One could even say they were the very symbol of modern American civilization.

On the 11th September, at around eight o'clock in the morning in New York, it was already night in Tokyo, and I was at home watching television when I saw on the screen the familiar outline of the World Trade Center Building, with smoke billowing above the North Tower. While still pondering this phenomenon, a jet aircraft flew straight into the South Tower, exploding and causing red flames to flare out of the building. Several hundred million people watched this live on the worldwide information networks, seeing the real-time image. The suicide bombers who hijacked private commercial aircraft also attacked the Pentagon in Washington. As I sat

glued to the TV, before long the towers of the Trade Center could be seen crumbling perpendicularly, from the top down. The steel columns that held up the skyscrapers seemed to melt, the floors caved in with intensity, and soon there was total collapse.

In the face not of a natural disaster but of a man-made (terrorist) one, how weak this building that was the quintessence of modern architectural technology proved to be. As the days went by, it was reported that 50 tons of rubble from the collapsed main tower was scattered around the blocks within a 500 m periphery, and 20 adjacent buildings had suffered damage. The fact that the contiguous blocks were connected below ground seemed to be a primary factor in the chain reaction of the damage. The wreckage of the fallen buildings became a mountain of fragments and building debris. The death toll from this tragic disaster is estimated in the thousands, causing confusion in the rescue operations.

The two elegant towers of the World Trade Center Building sharply rising to a height of 400 m were, in the way they were conceived and designed, a straight expression of American capitalism. This building contained the heart of the key node of the world's economic and monetary system networks, which wrap the globe like veins on the skin of a muskmelon. The blasting of this key node of the global economy especially affected American economic activity, but also reverberated throughout the world. The world was struck by a foreboding of worldwide recession.

The irony is that it was with one stroke of the terrorist's knife, with one old-fashioned tool, that such an unpredictable blow was struck to contemporary mechanized civilization. It is a civilization of skyscrapers, super jet aircraft, IT, high-tech information systems, huge economic and financial systems and the high-rise high-density cities that are swallowing them up. The terrorist stronghold is thought to be in an arid land of scattered traditional settlements and remote highlands. Seen from the perspective of the civilization of the modern city, mechanized and tailored in every corner, it is a backward area. It could be called a counter-civilization world. It is a region of human settlements where poverty is the norm, due to continuous wars and the droughts and famines of recent years.

The 20th century was a period of continuous war. Following the First World War, there was the Second World War accompanied by a massive death toll from atomic bombs, and the latter half of the century saw the Korean War, the Vietnam War and the Gulf War in the Middle East.

What sort of an age was this 20th century? During the latter part of it, the high-density urban agglomeration came to be the typical form of human settlement – metropolises of a

million people, huge urban complexes of 10 million people. A new urban lifestyle made its appearance.

The era of the classical static city co-mingling with natural ecology gave way to the era of dynapolis, the embodiment of modern civilization with its gay and lively urban life. On the other hand, modern urban civilization brought with it a new neurosis. There was a dramatic increase in problems such as drug abuse, violence, homicides and other atrocities in cities like Moscow, Rio de Janeiro, Warsaw, Bogotá, London, Paris, Rome, Athens, Johannesburg, Delhi, Karachi, New York, Shanghai and Tokyo.

Added to the fatalities due to accidents and human crime, cities also encountered a large death toll from natural disasters such as earthquakes. Recently in Japan the Kobe earthquake crushed 6,000 people to death. It is forecast that the 30 million Tokyo Metropolitan Area is likely to experience a large-scale earthquake in the near future. If it is a direct hit, fatalities could number a million, two million or even more.

Modern cities are vulnerable to all sorts of potential causes of disaster, large and small, and now this huge tragedy of the simultaneous attack on New York and Washington has been brought about. People from 80 countries happened to be in the World Trade Center Building that collapsed in minutes. The dimensions of this incident have a worldwide impact in a variety of aspects, and their root causes are deep.

The static and stable mosaic of past human settlement patterns has been stirred up globally by various agents of modern civilization. Culturally diverse civilizations have mingled with each other. Boundary conditions have become unstable. It can be taken that the negative phenomena of dynapolis have begun to express themselves.

What sort of a century will the 21st one be for the people of the earth? Will it be Dystopia or will it be Utopia?

## Whither 21st century urban civilization?

C.A. Doxiadis used the concept of "Ecumenopolis" to describe the image of the inevitable form that human settlements on this earth will take in the future. Arnold Toynbee used the term "World City," having as a background, among other considerations, the continuous growth of world population and the limits of the earth's resources, especially habitable land. Although restrictions on habitability continue to be overcome, it is estimated that the optimum world population is around 20 billion (15-25 billion). It is predicted that people will live in a more or less continuous belt at the global scale, quite unlike the scattered towns and isolated villages of the pre-mechanization era – even completely different from the metropolises and megalopolises evident at present. According to Doxiadis and his research associates, in the Ecumenopolis era this wildly different pattern of global settlements will emerge around the year 2100 and is predicted to reach maturity around the year 2200. If this is just left to happen, there will be utter confusion on this earth. The way to avoid this is to confront the situation by developing appropriate policies and intentionally showing the way towards a healthy balance between the main ekistic elements – Nature, Anthropolos (Man), Society, Shells and Networks – and essential prerequisites for livable human settlements.

Doxiadis emphasized the particular importance of taking a clear stance towards Nature. He proposed 12 global land use zones with varying degrees of human intervention, ranging from wildlife areas and natural cultivation to the high-density city. He even submitted an estimate of the relative area for each zone.

Furthermore, Doxiadis stressed that balance must be maintained between the respective achievements of economic,

political, government, technological and cultural systems, as well as an appropriate balance for each scale in the community hierarchy of human settlements, from the house, the neighborhood, the city to megalopolis, eperopolis (a 5 billion continent-wide community) and Ecumenopolis. There may be some societies where the social balance resembles that of George Orwell's *1984*, but hopefully by the year 2084, Ecumenopolis with its one world system will have conquered this problem. However, we cannot be so optimistic about the question of man's mobility. On the one hand there will continue to be short-term globetrotters, but there will also be a tendency for society to become unstable. Because of living in a World City, individuals will have the choice of moving if they so wish, and it will be an age with plenty of leisure and the possibility of second and third careers. However, Doxiadis makes the proviso that due consideration be given to the consequences.

One of the more difficult aspects to imagine is that of political balance. Who will organize it and how; whether World Government can really be achieved; what sort of administrative authority could be appropriate for reaching the rank and file in a community of such mobility, or even whether it will be done by man or by God is not discussed.

Besides the confusion as to the nature of the administrative organization that will deal with the problems of this New World Order, there is the question of the decline in the significance of the small community, the family and the neighborhood, within this mega-community. Another difficult question is how to treat the process of decline in regional culture as the world becomes more unitary.

When the world becomes one interacting body, in a sense it will have entered the phase of the complete globalization of the earth. When it reaches this point, the realistic future of the globe is more likely to resemble Orwell's *1984*. Doxiadis, by projecting current world problems into a global perspective, provided us with many suggestions, but even he sometimes lost heart. However one of the conclusions that Doxiadis quoted seriously shortly before he died was that there may be a season of passing through anthills, but a breakthrough can be made by bravely stepping forward.

## Human settlements in the era of 10 billion world population

While C.A. Doxiadis has given us an image of the ultimate form that human settlements will take on this earth, we can borrow Buckminster Fuller's image of "Spaceship Earth" to focus on the root causes, the limits to the earth's resources, population increase and population migration.

Besides the absolute (natural) increase in population, there is the factor of its world geographical distribution. This means that spheres of civilization have been established in certain habitable areas, and population movements within each sphere will have a direct impact on the make-up of Ecumenopolis. Furthermore, there will be movement of people between the spheres of civilization and the problem of population migration beyond modern man-made national boundaries. Modern capital cities and other main cities also face the complications incumbent in having a multi-national multi-cultural population structure.

According to United Nations population projections, some time after the year 2050 world population will have reached 10 billion. Regionally, North America, Central and South America, Africa, Europe, the former Soviet Union, Asia and Oceania have their own unique and distinct human groups. The recent international state of affairs also showed the great variation between countries that still existed as they passed through the 2000-year line. Current world population is over

5 billion and has reached 6 billion. In less than 50 years it will have reached 10 billion. The world's system for accommodating human beings will in one way or another have to adjust to double the current capacity.

In speculating about this point, it is possible to be both pessimistic and optimistic. Even in the current world of 6 billion, humankind is shouldering all sorts of environmental and globalization problems. Food, energy and resource problems, air and water pollution problems, lack of habitable land, conflicts in an increasingly crowded world, the seeds of headaches of problems with no apparent solution are piling up. If one imagines these seeds of headaches blowing around and growing larger as the population increases to 10 billion, then the mid-21st century can be portrayed as a picture of hell.

In order to imagine the contrary, a picture closer to paradise, that somehow or other the 10 billion people manage to live together peacefully, the people of the 21st century will need to have a particular sort of intelligence, and to discover and invent new styles of living.

The opportunities of the 19th century Industrial Revolution – Energy Revolution – led to a population explosion so that over a span of 200 years it doubled to reach 5 billion.

The Industrial Revolution brought into play the huge power potential of energy resources. Materials (inanimate Nature) that lay sleeping deep underground were dug up. Methods were evolved for land reformation works. It can be said to have brought forth human settlements shaped by mechanization. Typical manifestations are large metropolises of over 1 million and the invention of huge mega-cities of over 10 million. On top of this, these days there is the Information Revolution.

In a matter of only 50 years, it is said the population will reach 10 billion. Put in an extreme way, the equivalent to the population achieved over 2 million years of human history will be brought forth into this world within another 50 years.

If the near-future period from now until the middle of the 21st century were to be described as a revolutionary era of human history, following the Agricultural Revolution and the Energy Revolution, it would be called the era of the Information Revolution.

The Information Revolution and the Information Tech-

nology Revolution are penetrating human settlements in network fashion at many levels. The world is connected in seconds by an information network, the Internet. Above it is an economic network. The density of the globalization of human settlements is intensifying. This suggests that the recent development of the Information Society will inevitably lead to the world's population living linked together. Certainly the conditions of a mega-scale human society of 10 billion people with its incumbent environmental problems and need to ascertain the truths of the international situation moment by moment and sensitively, would seem to indicate it.

How will the world's 10 billion people be distributed regionally?

If one takes a look at the world's population distribution by region (table 1), the Asian element of the total is enormous. According to United Nations estimates, Asia's population will have reached 6 billion by the year 2050 (fig. 1). The megapopulation energy of this Asian component will define the trends of world human settlements in the 21st century. Second to Asia, the fast population growth in Africa is likely to be problematic for the conditions of human existence.

If countries are placed in order of population size (for 2000), China has 1,280 million, India 1,010 million, United States of America 280 million, Indonesia 210 million, Brazil and Pakistan each 170 million, Japan 130 million and Russia 120 million.

Among these, Japan's future population growth curve is likely to peak around the year 2011, reaching around 130,440,000, and it is predicted that it will then begin to decline. Incidentally, the population of Afghanistan is around 20 million.

World population distribution is likely to be discontinuous and uneven, as it has been in the past. The world's areas of possible habitation – habitable lands – are limited by physical factors (Nature).

So far, mankind has adapted to population growth by inventing a framework for various forms of habitation, the house, village, town, city, country, modern metropolis and modern nation.

When imagining the trend in the era of 10 billion, simultaneously there will be dynamic settlements and migration across national borders. It can be imagined that border-less settlements will be very vibrant. Among the various borders

**Table 1**  
**Long-term population estimates for the major regions of the world: 1950-2150 (in millions)**

Area	Year								
	1950	1995	2000	2025	2050	2075	2100	2125	2150
<b>World Total</b>	<b>2,524</b>	<b>5,687</b>	<b>6,091</b>	<b>8,039</b>	<b>9,367</b>	<b>10,066</b>	<b>10,414</b>	<b>10,614</b>	<b>10,806</b>
<b>Group 1</b>	<b>732</b>	<b>1,053</b>	<b>1,068</b>	<b>1,111</b>	<b>1,067</b>	<b>1,030</b>	<b>1,029</b>	<b>1,043</b>	<b>1,061</b>
Europe	547	728	729	701	638	589	579	585	595
North America	172	297	309	369	384	393	401	407	414
Oceania	13	28	30	41	46	48	49	50	51
<b>Group 2</b>	<b>1,792</b>	<b>4,634</b>	<b>5,023</b>	<b>6,928</b>	<b>8,299</b>	<b>9,036</b>	<b>9,385</b>	<b>9,572</b>	<b>9,745</b>
Africa	224	719	820	1,454	2,046	2,457	2,646	2,715	2,770
Latin America & Caribbean	166	477	515	690	810	864	889	903	916
China	555	1,220	1,276	1,480	1,517	1,509	1,535	1,565	1,596
India	358	929	1,007	1,330	1,533	1,595	1,617	1,641	1,669
Rest of Asia	490	1,289	1,405	1,974	2,393	2,611	2,698	2,747	2,795

(Source: United Nations, *World Population Projections to 2150*).

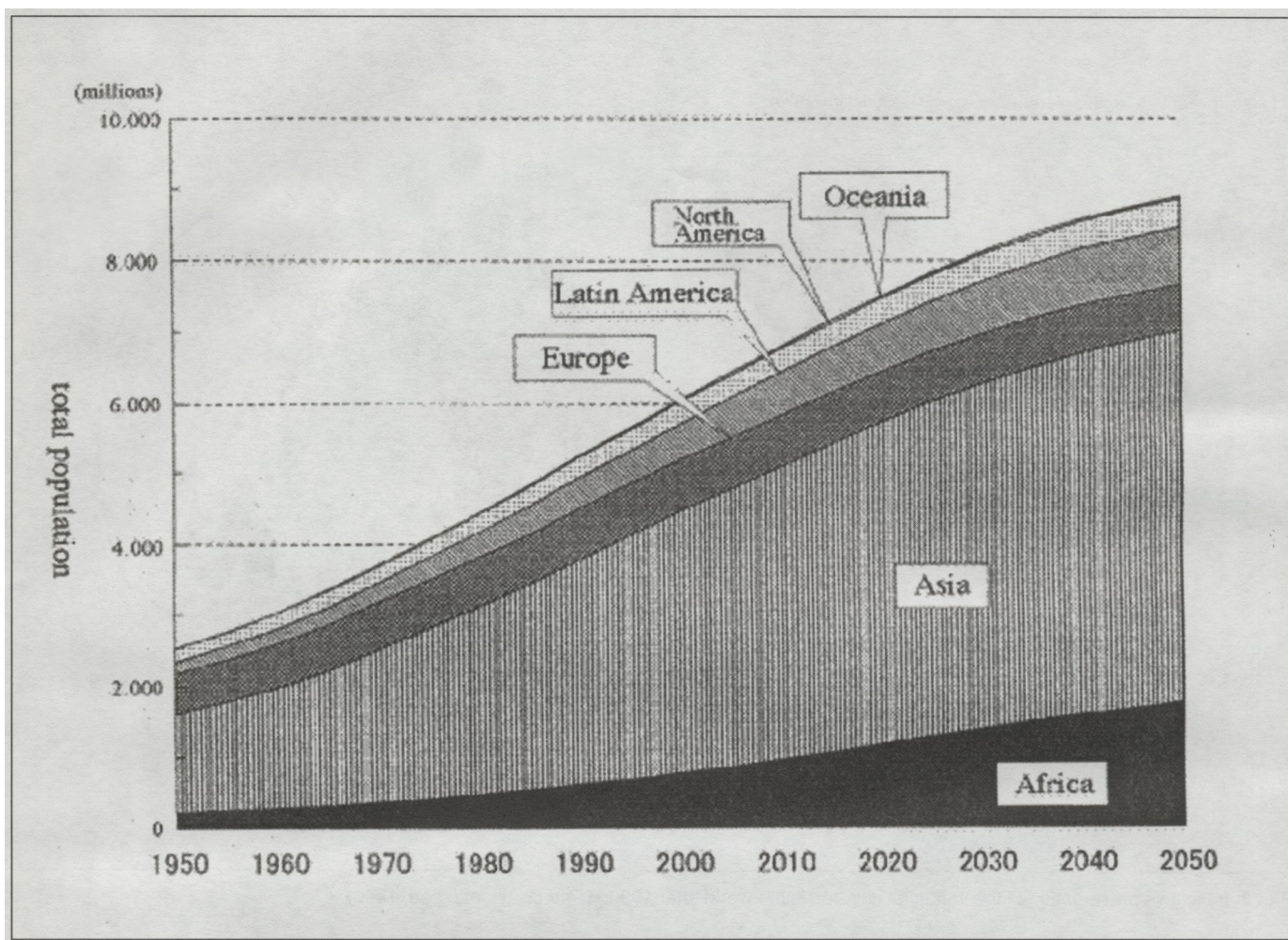


Fig. 1: Population of major regions, 1950-2050. (Source: United Nations, *World Population Prospects: 1998*).

that affect human life, that is to say boundaries, walls, and frameworks that are extremely man-made, the most typical is that of the nation, the national boundary. There are currently about 200 countries in the world, which cover the continents of the earth and their territory. Their boundaries denote a certain mutual understanding derived from the economic and political drama of human habitation during the 200 years when the world's population was growing from 10 to 50 million. Yet even now there is no end to the troubles arising regarding their appropriateness.

The origins of countries or nations can be retraced to the past. The nation is one of the prototype frameworks of human settlements, as well as the family and the house. These two poles guarantee the conditions for mankind's existence and security, thus providing shelter for human settlements.

Continuously since the beginning of history the smallest unit of the human community has been the family and the house. Looking at the details, a trend can be seen of getting smaller, from the extended family to the small family, the nuclear family to the elementary particle. Lately this trend is particularly conspicuous in Japan, America, Europe and the more developed countries.

By contrast, in the more unstable regions of the less developed countries, family unity is still strong and a framework of firm and trusting family networks stretches beyond national boundaries. There, religious credo lives on.

When the framework of the modern state is taken as the presupposition for imagining the human habitat of the era of

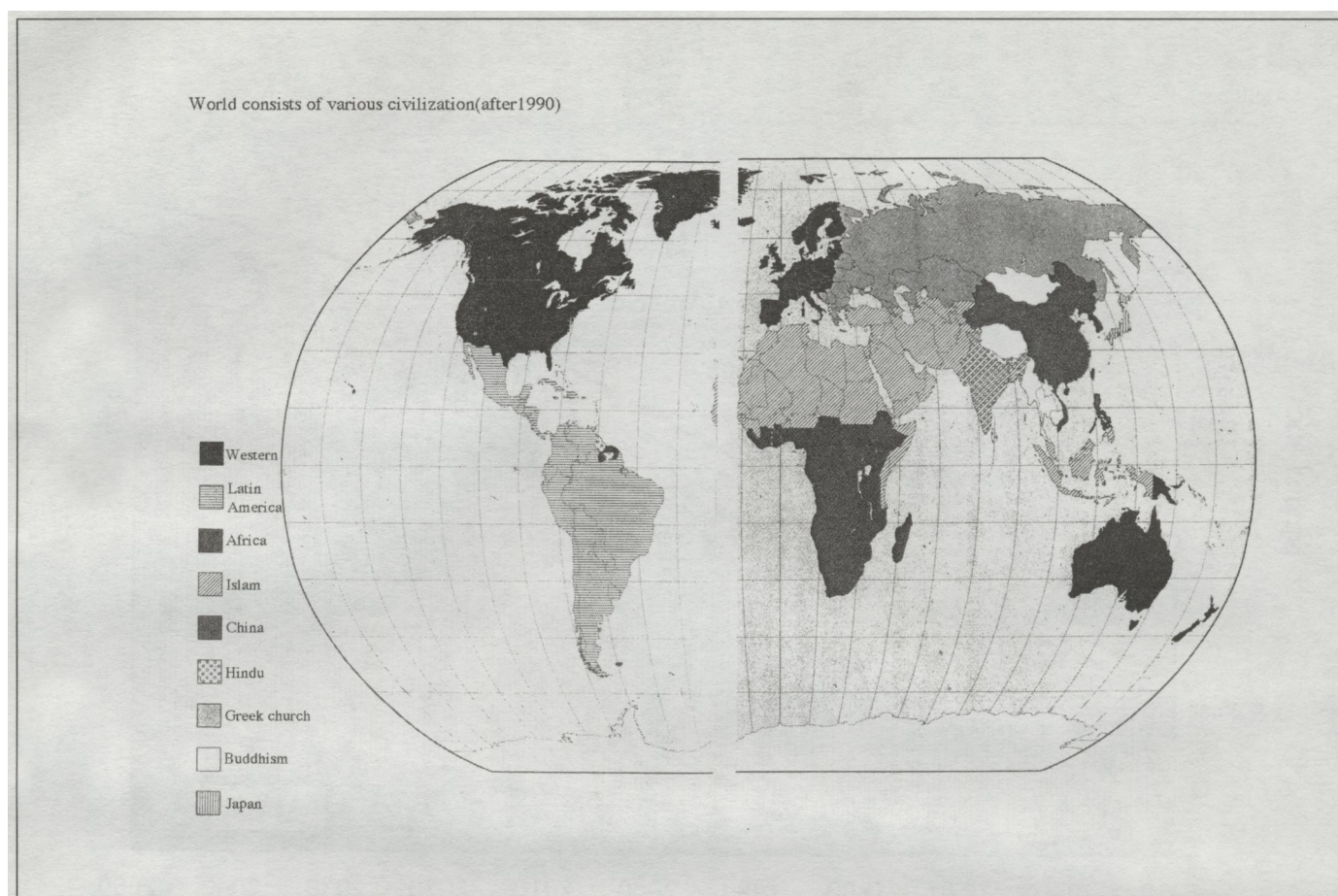
10 billion people, there is the problem of the huge gap in expectations. That is, expectations as to per capita food and resources, the whereabouts of technology, the economy, politics, social structure and the vitality of space. The migration of people beyond the 20th century modern national boundaries is likely to accelerate. The fact is that here and there in the world, national borders are already being weakened because of economic regions such as the EC, OPEC and NIES (Newly Industrializing Economies) that operate beyond national boundaries. When it comes to transportation and information, to a large degree there is no longer much meaning in having national boundaries.

Nevertheless, mankind's habitat is on this earth. The grim reality is that there are prosperous regions and poor regions, and situations where large numbers of people from the less advantaged regions put pressure to migrate to the more prosperous ones cannot be avoided.

What will be the human settlement pattern of the 21st century city? What will be called for as the basis for a stable (world) order as border-less habitation progresses, in the face of absolute population increase and international cross-border migrations? The dilemmas of this mega-peopled society will probably lead to even greater world chaos. The 21st century is a probationary period preparatory to the emergence in the 22nd century of a mature Utopia, Ecumenopolis, so will there be times when it shows dystopia-like aspects?

Arnold Toynbee, who was a WSE member, postulated that 5 spheres of civilization of the past made up the framework





**Fig. 2:** Indicative presentation of the variety of cultures in the world after 1990. (Source: Huntington, 1996).

for the order of human settlements on this earth. These five are Western Christendom, Eastern Christendom, the Islamic World, Hindu-Indian and East Asian Civilizations.

Also, because of the focus on the Islamic World due to the recent terrorist attack in America, other observations have been added. Huntington (1996) divides civilizations into 8 categories: Western, Chinese, Japanese, Islam, Hindu, Arab, Latin American and African. The crash of a civilization is the biggest threat to world peace, and he thinks the most reliable safety device to prevent world war is an international world order that depends on civilization (fig. 2).

The terrorist incident of 11th September, 2001 in front of the very eyes of the people of the world is suggestive of the urban civilization of the 21st century. Even before this big tragedy that involved many civilians, there cannot have been anyone who did not hate terrorism. The President of the United States is calling it a new sort of war. On 8th October, America attacked Afghanistan, as being the regional base of the terrorists. Whatever form war takes, it means that people die, a large death toll cannot be avoided. Modern armaments are available in great variety to an ominous degree.

Let us hope that revenge for the terror will not become an unhappy chain of slaughter of civilians and the poor. Let us listen to the voices of the people in various parts of the world who feel strongly about these issues. We can eagerly hope for wise solutions from the leaders of the world's nations.

## Conclusion

World human settlements of the 21st century call for peace. For that to happen, symbiosis between races must take many forms, and the co-existence of a variety of cultures must be acknowledged. The people of this century are also facing serious problems such as global warming. For the sustainability of Spaceship Earth, the people who are riding it during the 21st century must learn to give way to each other and take up a posture of co-existence and co-suffering.

We, as members of the World Society for Ekistics, especially share C.A. Doxiadis' concern for recovery from Dystopia.

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