



Big
Questions
of our **TIME**
THE WORLD SPEAKS

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PREFACE

On the surface, this volume includes 89 different perspectives from scholars of various disciplines from all parts of the world. Beneath the surface, they seem unified in expressing a common concern: How is our world going to be governed in the twenty first century, when momentous technological, ecological, economic, political, social, cultural and philosophical changes are taking place?

It might be argued that change is the only constant. The world has coped with changes in the past. It will do so in the future. Several wise men and women, from Malthus to the Club of Rome, have warned us of declining resources. Several futurologists from Toffler to Kruzweil have alerted us to technological, social and cultural shifts. Several political theorists, from Hegel to Huntington, have declared that the old order was over. And yet the world has carried on, with an imperfect United Nations in the last century, a Concert of Power in the century before, and without any mechanism of global governance earlier. Why should we be particularly concerned about the changes that will take place in this century?

This book reminds us that what we have assumed for millennia will not necessarily hold true for much longer. The basic laws of physics that explain our understanding of the universe, the terms of relationship between man and nature, well established rules of biological evolution, the principles determining the working of institutions of society, and many other assumptions about life and humanity are being questioned. The present system of global governance is completely inadequate to address these big questions. G-20, UN Security Council, World Bank, IMF, the UN Framework Convention on Climate Change, and other institutions react to crisis in a fragmented way. There is nothing in the world that can anticipate and respond to revolutionary opportunities and catastrophic risks in a holistic manner. In the absence of such a mechanism, we cannot reach consensus on a vast range of issues from trade to climate change and from democracy to cyber security. We urgently need a new architecture of global governance.

The contributions to this publication have come from 89 thought leaders in 44 countries. It is an exceptional endeavour for scholars from so many countries to come together to try to define our emerging future. In the past, efforts have been made to examine the questions on the edge of intellectual evolution, but the participants in such exercises were confined to one or two societies. It is a rare endeavour where thinking from the East and West, South and North has been blended to let the world speak in a participatory and inclusive manner. It is true that most of the contributors to this book are social scientists, but the editors have made a small effort in their opening essay to address the natural science deficit.

The thought leaders from around the world ask questions that will determine the fate of humanity in our times. Will the exercise of power always dominate relations within and between societies or will power ever become subservient to principles? Will we perish in the next, which would be the last, world war? How to share a crowded world? Can we restore human dignity? Will the concept of nation state prove to be one of the shortest lived interregnums in the evolution of social organisation? What can we innovate beyond democracy? Will we develop science which will overtake us, the humans? Can we ever dream of one world, one civilization, and one dream shared by all cultures and groups of people?

While these questions appear diverse, they are interwoven by one reality that the present architecture of global governance is not adequate. Each question blends with some of the other questions, reminding us that the questions our time are integrated and therefore the response also has to be integrated.

We hope that the world leaders will listen to the voices in this volume. On the surface, it appears that the world is witnessing revival of the Cold War, finding itself unable to stop annihilation enforced by groups acting in the name of religion and ideology, negotiating bureaucratic agreements to contain climate change and depletion of water resources, and simply not serious about poverty and inequity. However, beneath the surface, there are deeper problems. These have to do with callousness, greed, obsession with aggrandising states and corporations, and an unrestrained pursuit of power. Our search for new global architecture must balance long term with short term and power with principles. Learned scholars from 44 countries in all continents, unknown to each other, are united in their concern for the future of our world. Together they have constructed a moral compass which no one can afford to ignore.

There is an underlying assumption in the issues raised by 89 contributors to this volume. Our planet has been given to us by previous generations and it is our responsibility to preserve it for our future generations. We have an obligation to manage it in a way that we are conscious of our debt to the unborn and grateful to the forces of universe for the unique endowment of intelligent life that we have. Such an obligation compels us to match our intelligence with wisdom, our spirit of endeavour with compassion, and our ambition with sustainability. We hope that an open debate on the big questions of our time will provide big and bold answers.

Mumbai
January 2016

Sundeep Waslekar
Ilmas Futehally

THE WORLD SPEAKS

89 thought leaders from the following
44 countries have contributed to this volume:

Jordan Romania Singapore Switzerland
Costa Rica Austria Sri Lanka
Timor-Leste Dominican Republic UK
China UAE Bangladesh India Turkey
Guatemala Bosnia and Herzegovina
Denmark Cyprus Tanzania Spain
Haiti Estonia Hungary Pakistan
Israel Russia USA Nigeria Ecuador
Armenia Palestine Greece Finland
Brazil Australia Qatar Slovenia
New Zealand Canada Thailand
South Africa Macedonia Croatia



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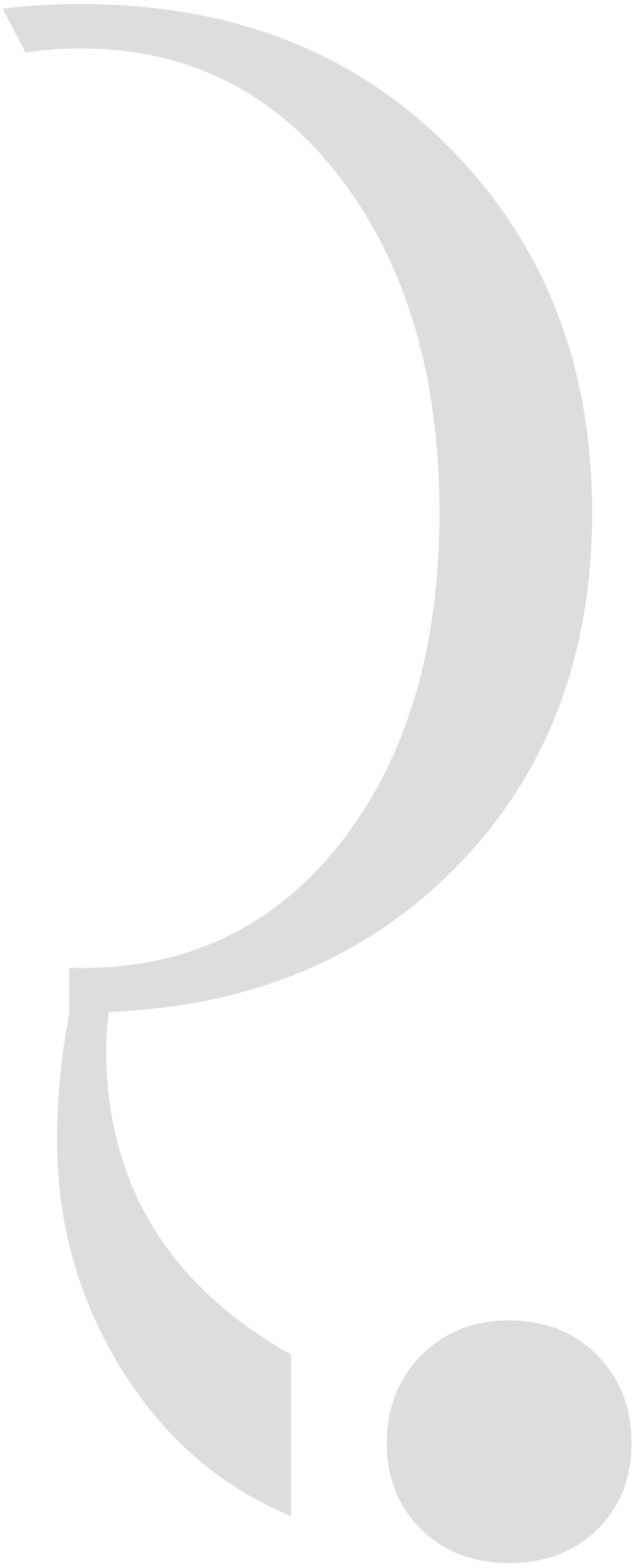
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NOT TO STOP QUESTIONING

Albert Einstein once said: “The important thing is not to stop questioning.” This insight underpins the existence of Strategic Foresight Group. It also explains why we invited 89 scholars from 44 countries to question together.

Since change is the most certain dimension of future, what hypothesis can one use to explore how the world will transform from 2020 to 2050? A lot of people mistake the future as the continuation of trends. Actually, the future is more about discontinuities. The most significant developments in history – transition of life from bacteria to human beings, domestication of plants and animals, industrial revolution, development of surgery and medicine, colonisation and decolonisation, manned flight to space and later on to the moon, invention of high speed computers – were all discontinuities. Therefore, we need to ask questions about which discontinuities will be significant in the next 30 to 50 years.

The most fundamental big questions belong to the sphere of natural sciences:

- Will there be the unified theory of physics?
- Will we have an encounter with an extra-terrestrial intelligent being?
- Will human beings be able to build self-sustaining colonies in outer space or other planets or their moons?
- Will space-based instruments be able to transmit solar power to the earth?
- Will a synthetic germ or synthesis of genomes between two species create a chimera capable of terminating life on the earth?

The critical thing is to recognise that we know very little. At the beginning of the twenty first century, we did not know that penta-quarks existed and that pathogens could be created in a laboratory. At the beginning of the twentieth century, we did not even know that neutrons existed. At the beginning of the twenty second century, we may conclude that we were quite ignorant in 2016 in our understanding of the concepts of nation state, environment, oceans, space and the universe.

If in the next 30-40 years, we find that there is an explanation beyond DNA for life-forms, we will realise that as of now, we know very little about biology. If, indeed, it is proved in the future that there are some intelligent beings in the cosmos, our

knowledge of life will be challenged. And if the scientists finally write the unified theory of everything or find a way to bypass the speed of light, or create artificial intelligence that can replicate and programme itself, or create a form of life more intelligent than human beings, our knowledge of the fundamentals of the universe will prove to be obsolete.

The history of the last ten thousand years proves that the societies that innovate tend to lead the world, advancing human civilization on the path of progress. The same societies have the capacity to push humanity towards the precipice. In the next 30-40 years, the societies that have invested in science and technology will guide the destiny of 9 billion that may inhabit our planet by 2050.

These are the societies that have recognised the importance of the following sectors:

- Nano-technology
- Rare earth elements
- Outer space
- Arctic
- Synthetic biology and genomics
- Nuclear fusion
- Artificial general intelligence.

The seven sectors mentioned above will define how the world will be shaped in the twenty first century. Nano-technology is advancing very fast in fusion with genomics and robotics. The lead in nano-technology will determine the ability of a society to take a lead in medicine, electronics, defence and many other critical areas.

Rare earth elements are required for mobile phones, solar technology, electric batteries, computer chips and precision guided instruments, besides other things. Basically, they are at the core of the post-fossil and post-industrial economy.

Outer space will be explored for minerals, habitat and energy in the years to come. Space based solar power stations can satisfy the energy needs of the whole world. Any country that wants to guide the future of the planet must have an ability to harness resources beyond the earth.

Within the planetary limits, the Arctic will open a new economy of energy and trade routes. The nations that have presence in the Arctic economy, though not necessarily in its geography, will have significant advantage.

Three developments will change the basic rules of the world as we know today. The development of synthetic biology will open an era of artificial pathogens, chimeras, human organs, hybrids of human and other species, and finally hybrids of humans and machines. The development of nuclear energy, through safe and reliable fusion method, will bring about democratization of nuclear power and race for helium-3 on the moon. And artificial general intelligence along with genomics and nanotechnology will usher in the fourth economic revolution - following agricultural, industrial and computer revolutions.

Together the seven spheres will change the terms of reference of our definition of the world, in a way no less significant than Copernican, Newtonian, Darwinian and Einstein revolutions in science.

The potential of a country to lead the world will depend on commitment to research in the seven scientific and technological areas, policy support, soft and hard infrastructure, and the application of research to the real world. In addition to leadership of these fields, the ability of a society to lead will depend on internal strength of the economy and its place in the world economy.

Our global foresight research team has used over 50 parameters to analyse the commitment, strength and infrastructure of countries in these spheres in the context of their internal and global economic strength and compared them on weights developed from the studied parameters. Thus, economic growth matters but not by itself. Advancement in science and technology, good governance and peace are critical for shaping the destiny of a nation. The research outcome shows that 21 countries are likely to lead the world from 2020 to 2050 and perhaps beyond.

Country	% share of global leadership potential
1. US	18.7
2. Germany	11.51
3. Japan	11.1
4. France	8.01
5. UK	7.19
6. China	6.78
7. Canada	6.16
8. South Korea	5.65
9. Norway	4.11
10. Singapore	3.59
11. Russia	2.87
12. Sweden	2.46
13. Spain	2.46
14. Italy	2.05
15. Switzerland	1.84
16. Australia	1.64
17. Denmark	1.23
18. India	0.92
19. Brazil	0.61
20. Finland	0.51
21. Iceland	0.51

The list of 21 leading countries in the world shows that the countries which did not have a place in global governance in 1950 such as Brazil, India, Singapore, China and South Korea, will have considerable role in 2050. However, their potential is much more limited than what is made out to be in the media. The countries that lead the world currently such as the United States, Japan, France, UK, and Russia will still be leading, but will have to include China and at a later stage South Korea in their club. The analysis also reveals that the countries that are not generally considered as great powers will be among the 21 leaders of the global future. They include the entire Scandinavia and Switzerland.

This analysis is based on the assumption that the societies are organised on the basis of nation states. This may change by 2050. The idea of the nation state was born at Westphalia in 1648. One of the big questions of our time is whether the nation state will exist in its present form on the 400th anniversary of the Westphalia Treaty.

It may sound preposterous to some political scientists to question the idea of nation state. But the important thing is not to stop questioning. This is as true of politics as it is of physics.

Our world today is managed on the hypothesis that the interests of the state and the corporate entities should be maximised at any cost. As Rousseau pointed out, someone once drew a line on the ground and the concept of property was born. Since then it has become commonplace to aggrandise the interests of the estate, state and the corporate. A book or a flag has been used to justify ambition, fear and greed in the name of religion and patriotism. If the concept of nation state breaks down, the notion of patriotism will become irrelevant. This will be one of the biggest philosophical changes to influence mankind in this century.

The future of the nation state, the risk of war, the future of inequality, the future of democracy, limits to growth and prospects for human dignity depend on our ability to establish a balance between power and principles in the conduct of human affairs. The world we live in is divided between 3.5 billion inhabitants in the market and 3.5 billion people living in the periphery. By 2030, there will be more than 8.5 billion on our planet. And if we maintain current growth rates, we will have 5 billion people in the market. But we will still have 3.5 billion in the periphery. These 3.5 billion people do not merely suffer from developmental deficit. They also experience the deficit of political opportunities and dignity.

At the deepest level, mankind needs to determine whether its driving force should be mere power or certain principles. This will depend on our understanding of the nature of man – whether it is good or evil. When we understand the true nature of man, we will be able to construct a model of global governance derived from it.

It is not obviously possible to have such a world devoid of power. However, unrestrained power that makes us callous not only towards half of the planet's population but also plants, animals, rivers, lakes, glaciers and the climate. It must be restrained by the operation of certain universal principles. Just as we need a horse to run the cart and

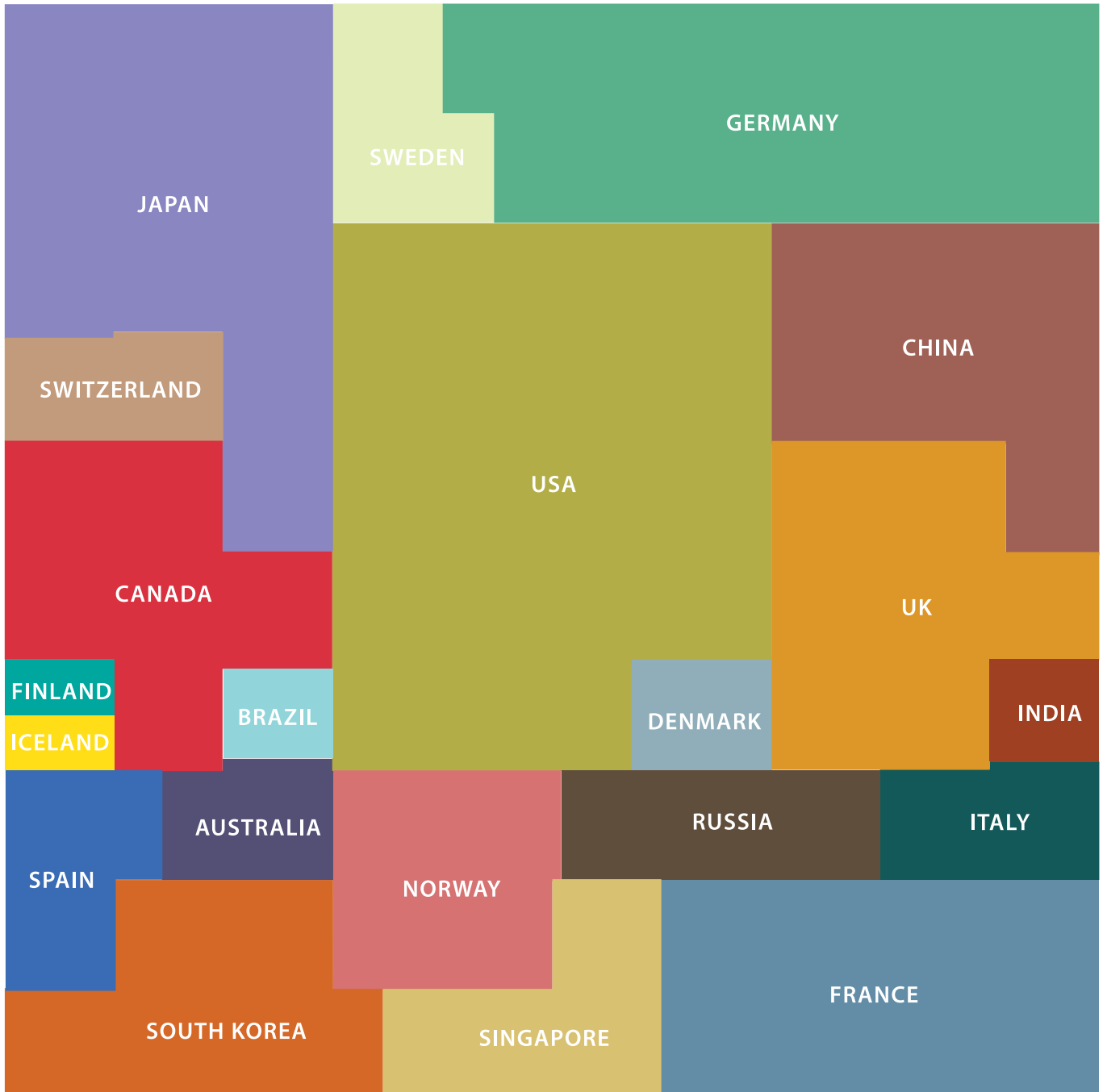
reins to restrain the horse, we need power to move the economy and principles to restrain it. We need a balance between power and principles. Democracy is meant to provide such a balance but in reality we are witnessing the limits of democracy in this respect.

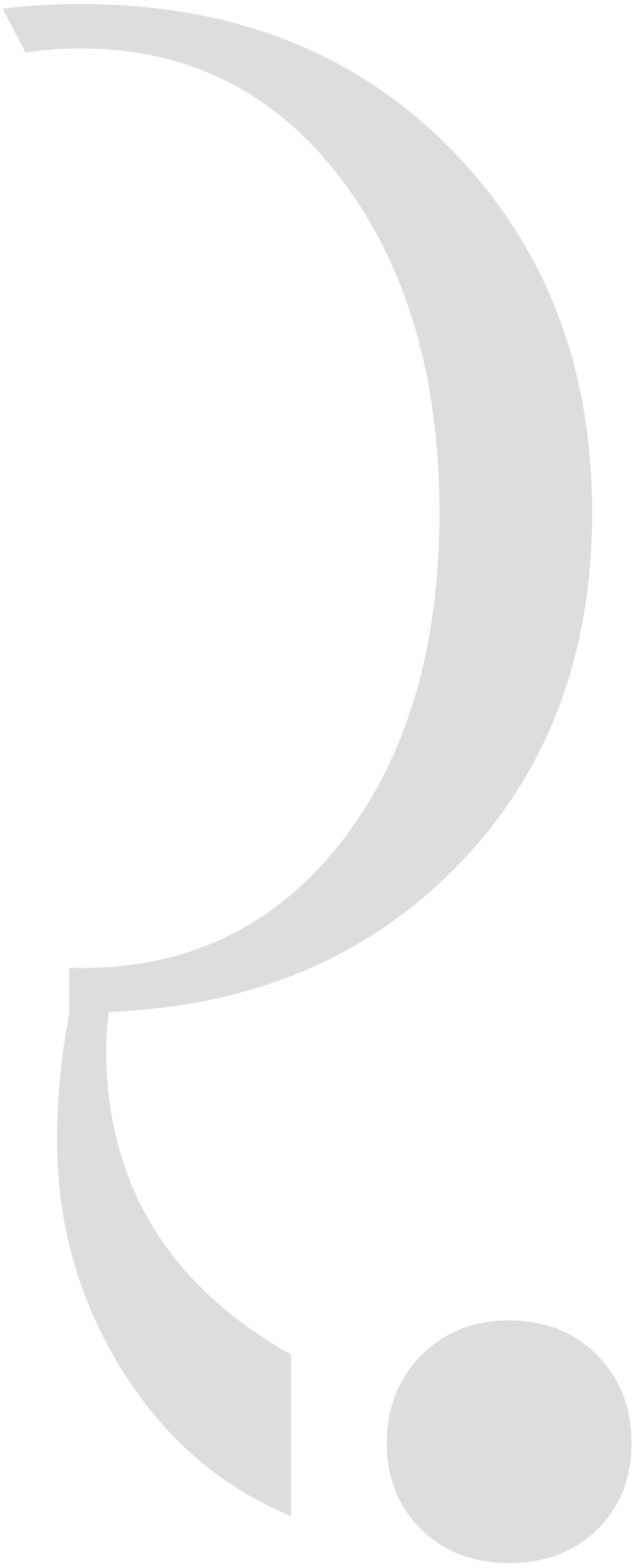
It is necessary to question our beliefs and ideas since both beliefs and ideas predate civilization. They even predate humanity. The ideas of fire, weapons and symbols were probably thought of by *Homo erectus* before the birth of *Homo sapiens*. Whether we wish or not, beliefs and ideas evolve all the time. At times, we may allow their evolution in an orderly manner. At times, we may be forced to accept new ideas despite our failure to question the old ones. The concept of 'end of history' basically means the end of evolution of ideas. It is rather stupid to declare some idea to be so good and so ultimate that we don't need any better idea.

In the daily humdrum of managing our love and enmity portfolio, deluding ourselves by collecting hundreds of 'friends' on Facebook, following the lives of movies stars and saving to buy the latest car, we treat the given as given. And therein hides the risk of our accepting ideas as they are, and allowing those with vested interests to manipulate them. It is this complacent attitude that can take us closer to the end of history in a physical sense. If instead, we want to benefit from the promise of progress, it is necessary for us to examine our long-held ideas and reshape them. Our future will be determined by our willingness to question ourselves.

The big question of our time is whether the human mind that seems to be on the verge of breaking the speed of light barrier and the blood-brain barrier will break the barriers that have imprisoned it in the pool of darkness, ego, greed and obsession with power. The big question of our time is whether, as a result of post-biological evolution or enlightened self-realisation, the human mind will liberate itself and save the project earth from extinction. The big question of our time to ask is whether the human mind will understand the real meaning and essence of humanity.

Global Power Structure by 2050





A photograph of a stone path with a gold crown emblem in a circular inset. The path is made of large, grey, irregularly shaped stones. A circular inset in the center of the path is made of a darker, reddish-brown stone and contains a gold crown emblem. The text "POWER AND PRINCIPLES" is overlaid in large, white, bold, sans-serif capital letters across the center of the image.

POWER
AND
PRINCIPLES

AUSTRALIA

Michális S. Michael

Honorary Senior Research Fellow, La Trobe University

Director of the Centre for Dialogue – associated with Global Reconciliation and Dialogue, Emphatic Engagement & Peacebuilding (DEEP) Network

DIALOGUE: THE NEED FOR A NEW WORLD DISCOURSE

Global society is being remade at an unparalleled pace as a result of the multilayered flows of people, ideas, money, technology and images and the political changes since the end of the Cold War 25 years ago. We have scarcely begun to understand the implications of these changes. While much has been made of the economic and technological dimensions of globalization, much less has been said of the role of culture in a globalizing world. Yet, cultural, linguistic, religious and civilizational currents are now an integral part of international political and economic life, and are closely entwined with the major axes of economic and military conflict. The challenges presented by diversity, whether cultural, linguistic or religious, require a broadening and deepening of intellectual capital by harnessing in a global way the best possible skills to bear on the interaction of different cultures, civilizations and political systems. The most important lesson to be learnt from the events of September 11 and their aftermath is that the world has a renewed opportunity to address fundamental issues of world order – an opportunity that was presented to us by the end of the Cold War, but one that was largely squandered during the 1990s and 2000s.

As a contribution to this global paradigm shift, is the need for genuine reengagement through unfettered dialogue beyond the stifled confines of the bureaucratic state and the vicissitudes of social media's self-flagellation.

AUSTRIA

Wolfgang Dietrich

UNESCO Chair and Director of the MA Program for Peaces Studies,
University of Innsbruck

The philosophical fundament of modernity is the Cartesian idea of the individual, that is, a homunculus which is situated in the human brain and enabling us to say "I". This assumption was the base of politico-economic projects that range from secularization, nation state, democracy, human rights, educational and technological progress to the modern religions of liberalism, communism and fascism. It allowed us to fly to the moon and create the horror of Auschwitz and Hiroshima. Yet, since the 20th century we know that there is no homunculus in the human brain. A thought is nothing but a myriad of neurons in complex and simultaneous

interaction. **The most significant challenge for the 21st century is twisting the individualistic fantasies of modernity and understanding our individually perceived peace(s) as a systemic, relational, plural, dynamic, homeostatic and trans-rational expression of human interaction.** Peace(s) begin in the human beings' understanding of their own minds.

SINGAPORE

Kumar Ramakrishna

Associate Professor and Head of Policy Studies in the Office of the Executive Deputy Chairman, S. Rajaratnam School of International Studies, Nanyang Technological University

Must we live with the “Us-and-Them” mindset? From infancy we are told that we are part of an in-group. “Us-and-Them” is the evolved default cognitive setting for how our minds make sense of the social environment. Neuroscience shows that powerful emotions accompany the process of cleaving the social world into

in- and out-groups. **This is ethnocentrism – where in-group members are socialized from infancy into believing myths portraying themselves as occupying by birthright a morally superior pecking order status vis-a-vis the out-group. Ethnocentrism has a darker side – xenophobia – which inclement political and economic circumstances, amplified by an extremist ideology, could even transform into terrorism and genocide.**

But is “Us-and-Them” set in stone? Social psychology suggests that celebrating the multiple simultaneous social identities a person possesses; not merely ethnic and religious but also those involving sports, leisure, hobbies and the professions, fosters an “Us-and-Us” mindset - thereby checking the ethnocentric tendencies that reside at the root of inter-group violence.

INDIA

Medha Bisht

Assistant Professor, Department of International Relations, Faculty of Social Sciences,
South Asian University

Given the rise of ISIS and its potential to be an enduring political phenomenon for some time and the growing attention that the Asian theatre is receiving in

shaping the economic contours of the international system, **the big question in the twenty-first century is the central thrust one needs to place on dialogic explorations directed towards understanding and exploring “the other” based on enlightened self interest.**

This is both a challenge and opportunity to test not only the resilience of diplomatic practice but also on how international relations scholarship and praxis responds to understanding what Asia and its philosophies stand for. While this is a tall order, it however demands that to move from confrontation to cooperation one needs to craft a philosophical bases to strategic interactions. What are the prerequisites for dialogue and what role do philosophies, ideologies and cultural specificities play in facilitating strategic dialogic interaction are fundamental to resolving the issues of the times.

JORDAN

Salih N Akour

Associate Professor at the Mechanical Engineering Department, University of Jordan

The big question of our time is ethics and justice. The world is suffering from an ethics and justice crisis for the past century and continues into the twenty first century. All aspects of human life on earth are suffering in one way or another a lack of ethics and / or justice. Abusing resources by mis- use or over consumption is the practice of individuals and countries. The developed countries are, burgling the resources of the developing countries either by getting these resources below their value price, or, by occupying these countries directly or indirectly by supporting dictators, traitors, thieves to rule their own people and work as agents for these developed countries. Political leaders in the developed countries lack ethics, when they do not treat other nations as they do as their own nations; when they empower dictators and traitors to rule. Economists who undertake projects for fast and vast profit without considering the drawbacks of such projects on the people and environment, without moving an extra step to make such projects or business free of any drawbacks with reasonable profit are selfish and lack ethics. When the economists play dirty games by inflating the prices of merchandise way beyond its real value to gain fast and vast profit, this is

fraud. **The world is suffering from an ethics and justice crises rather than energy, environmental and other problems.**

Applying high standard code of ethics is not beyond practice worldwide, e.g. during the Islamic civilization when Muslims are applying and practicing the teachings of real Islam. I believe that implementing high standard codes of ethics at both national and individual levels through education will solve all other problems that our planet is facing.

CHINA

Shaofeng Jia

Vice Director of the Center for Water Resources Research at the Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences

No matter whether you are American, Arabian, Brazilian, British, Chinese, French, Indian, or from any other country or region, no matter whether you are Christian, Muslim, Buddhist, or belong to another religion or are an atheist; you are a member of human destiny community.

All the people in the world share one earth. We live together with the finiteness of the earth, including its space, resources and environment. Our population should not override the earth. Adverse anthropogenic impact on life supporting ecological systems should not damage its basic functions. But we already face many risks such as environmental pollution, natural resources exhaustion, ecological degradation and global warming.

What is worse are the fierce conflicts and fighting between different countries and peoples while the whole of humanity faces big challenges. Terrorist attacks are tearing up the hearts of kind people.

If there is no change, there is no bright future for all of us. Can human wisdom guide us to find a new global governance mechanism to guarantee the sustainable development of our Human Destiny Community?

SLOVENIA

Simona Kukovič

Assistant Professor and Researcher at the Centre for the Analysis of Administrative-Political Processes and Institutions, Faculty of Social Sciences, University of Ljubljana

Public leadership in future: Leading without leaders? Public leadership is drastically changing, modernizing and transforming: the practice of public leadership is changing, the context in which public leadership takes place is changing. Our thinking about public leadership is changing as well. All these changes are taking place connected, intertwined and at the same time. In the current century, public leadership is facing many challenges such as globalization, (hyper)competition for resources and markets, enormous progress of technology, postmodern terror, global warming, challenges in the ability of states, challenges in erosion of confidence, corporate and banking scandals, diversification of markets and labour, deepening the divide between the developed and underdeveloped areas and many others. All this marks a new era, in which old leadership models are being replaced by a new paradigm to successfully navigate the complexity, uncertainty, interdependence, globalization and the increasing changes. Specific challenges related to the conceptualization of leadership in the future, is the “art” of leading people in post-managerial environment. These are the challenges of the dominant leadership paradigm, which is aimed at solving the problems of control and efficiency.

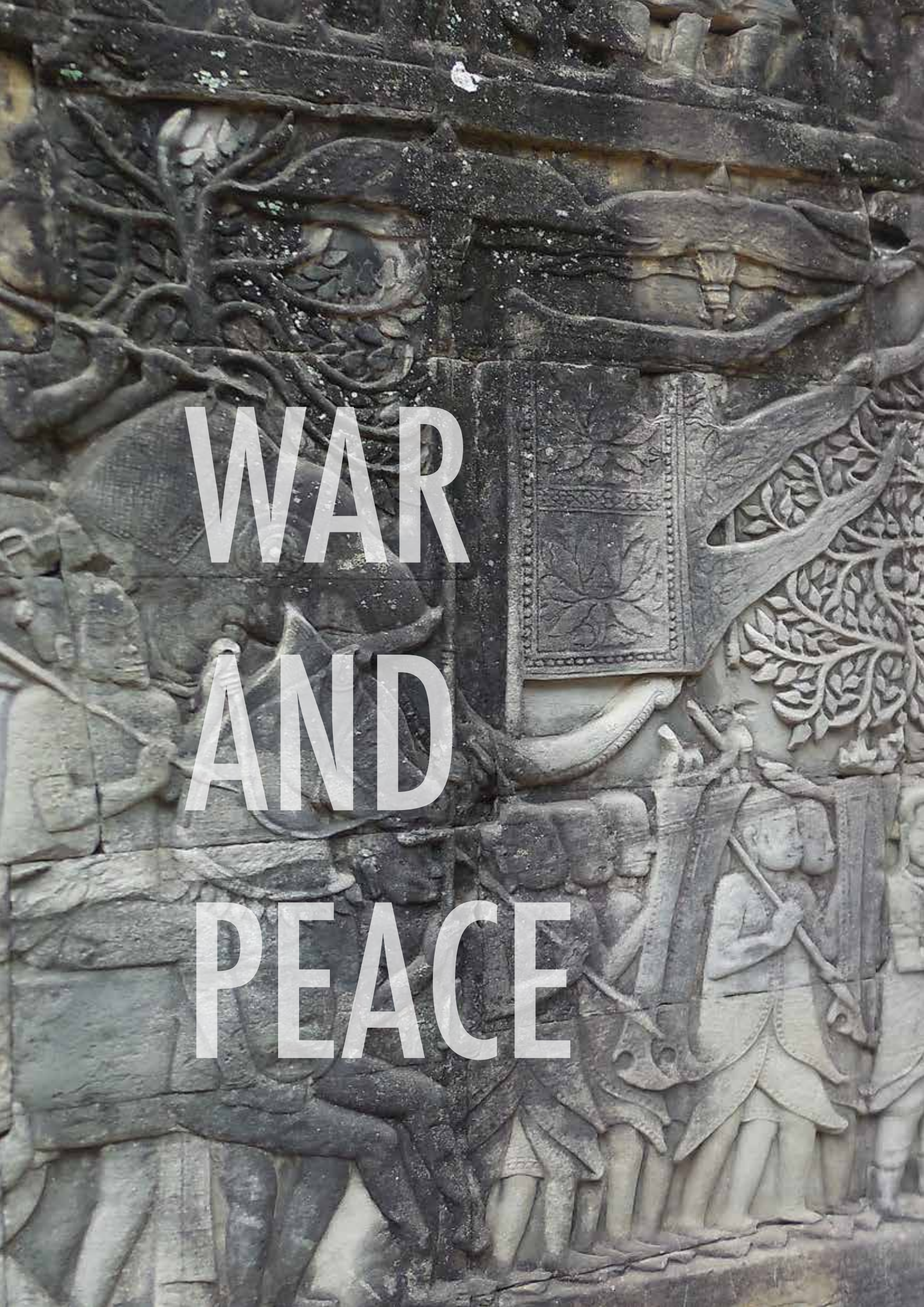
Furthermore, public leadership is moving away from the prevailing hierarchical, organizational and positional paradigm to a new conception dominated by governance, networking and cooperation. Moreover, public leadership is moving away from traditional, individualistic and linear paradigm of organization to the more complex, collective, cooperating, quantum and nonlinear viewing on public leadership. Public leadership is carried out on uncharted social space, beyond the traditional boundaries of the state, or even bypassing the state, and involve private and other actors (universities, trade unions, charities, third sector) who are trying to make sense of new situations, new environment, procedural, personal and policy shifts and changes. The partnership and civic empowerment (engagement) causes the obsolescence of many of the established theories of leadership. Governance as a departure from the new public management is not just part of the government, but it is a collective action aimed at resolving public problems. New public governance is changing patterns of (co)

operation and leadership in the public sector as public services are no longer in the hands of leaders/professionals, but are increasingly leaning on cooperation with users and citizens. New concepts of “joined up government” or “whole of government” are crucial to the future operation of public, political and civil society leaders. Leadership may be the most critical factor in changing the civil society, public organizations and services, and the realization of political democracy and public accountability.

The world moves from a primary vertical model with highlighting of command and control to the horizontal model, based on integration and cooperation. Such an approach represents a challenge for the classic, time-consuming and tough tripod between the leader - followers - common objectives and its replacement with collective action as the ontological structure of leadership understanding. Leadership is not the sum of the actions of individual leaders, who have power and influence over followers.

It is a process that allows people to learn, understand and make decisions for the operation, which will serve the common interests of the community. Keeping such a social practice that intentionally facilitates collective interests, setting priorities and coordinating differences and cooperation provides for joint positioning and development interests, builds commitment and motivation and provides the resources and skills to realize these interests.

So, whether public leadership is moving from government to governance is not anymore the question, it is the reality. Whether governance will exist without leaders, is in fact a question ... perhaps the most crucial question of our time.

The background of the image is a detailed ancient stone relief carving. It depicts a scene of conflict or a significant event. On the left, a soldier is shown in profile, wearing a helmet and holding a spear. In the center, a figure is seated or standing under a decorative canopy, possibly a ruler or a deity. To the right, another soldier is visible, also in profile, holding a spear. The carving is highly textured and shows signs of age and weathering. The text 'WAR AND PEACE' is overlaid in a large, white, sans-serif font across the center of the image.

WAR
AND
PEACE

TIMOR-LESTE

Jose-Ramos Horta

Nobel Peace Laureate, Former President of East Timor

There are two issues that I believe will impact the world. The first is the growing problem of the Middle East refugees in Europe leading to a demographic, ethnic and religious transformation. As the European population is aging, a significant influx of young non-Europeans from different cultures and religions will raise tensions. This will lead to the strengthening of right wing parties.

The conflict is not between Islam and the West. It is a battle within Islam where Sunnis are killing Shias and other Muslim minorities. There are many more people being killed in Pakistan and Afghanistan than in Europe. However, the manner in which the West handles this conflict, can cause it to spill over from a battle within Islam to a battle between the West and Islam. And in such a situation, the moderates suffer doubly, as they are targeted by the extremists and they are viewed with suspicion.

We must not forget history. The religious wars in Europe lasted for hundreds of years and led to the formation of the United States. We are witnessing wars within Islam. Wars of today are leading to the transformation of social and economic fabric of Europe. But despite this, the Christians are co-lateral damage. The non-Islamic societies should show solidarity towards victims who are in the Arab world.

The other issue that is of concern is that of clean water supply. This is a huge human, political and social issue. Water is diminishing over time due to climate change and overuse. Very few countries have abundance of water. The African continent and Asia have a major problem due to shortage of water and overpopulation. Water is closely linked to peace and security.

The survival of human beings is dependent on drinking water and agriculture. **If there is no water, agriculture will be finished. This will lead to fighting and wars.** In Asia, over 4 billion people are dependent on water resources that are depleting due to climate change. If the Himalayas melt, there will first be flood, and then there will be less water leading to famine.

USA

James J.F. Forest

Professor and Director of Security Studies, University of Massachusetts Lowell

What will we be fighting about towards the end of the 21st Century? Energy resources, access to water, political ideology, religion? Throughout the world, energy and environmental security challenges are projected to get worse, while at the crux of many conflicts is a nation's natural desire to control its own destiny and ensure a positive future for its people. **Throughout modern history, political and religious differences have been central to a broad range of conflicts between nations or subnational groups of people, so it is a safe bet this will be part of our future as well.** The question is whether today's political and social leaders can act creatively now to reduce the likelihood of at least some conflicts in the future.

USA

Andrew Bacevich

Professor Emeritus of International Relations and History, Boston University

Can Islam reconcile itself with modernity? Of course, the answer to that question is that it can and it has, at least in some circumstances. Nonetheless, in certain quarters of the Islamic world, antipathy toward or difficulty coming to terms with modernity stokes violence and upheaval, misleadingly characterized as "terrorism" or "radical Islamism." The juggernaut of modernity, which compartmentalizes faith while celebrating individual self-actualization and material consumption, demands conformity. In the realm once known as Christendom, the required conformity largely prevails, whether for better or worse. In large swathes of the Asia-Pacific region, something similar appears to be in the offing. Only in the Greater Middle East does widespread, organized resistance persist. **How that resistance plays itself out in the coming decades will greatly affect our prospects for establishing some modicum of global stability.**

SOUTH AFRICA

Theo Neethling

Professor and Head of the Department of Political Studies and Governance, University of the Free State

Perhaps the most important question is whether the rise of and bloodshed caused by Islamic fundamentalism in the international community could be stopped. The rise of Islamic fundamentalism seems to be funded by oil money and as such fundamentalists as part of a worldwide drive are advancing the orthodox Islamic agenda in the Middle East, Africa and far beyond. In addition, the demographic and actuarial deficit in Europe, the United States of America, Australia, and beyond, has facilitated the movement of millions of Muslim immigrants from the Middle East, Africa and Asia into these regions.

This has a major impact on global order as extremist Islamic movements and terrorist groups use religion as a political tool, even though moderate Muslims agree that these groups fundamentally misinterpret Islam. The problem is also that unemployment and inequality has pushed many poor Muslims to become foot soldiers in extremist movements across the globe.

PAKISTAN

Zahid Anwar

Professor with the Department of Political Science, University of Peshawar

The greatest challenge of 21st century will be peace, both within and without. Since time immemorial, humanity has faced uncountable natural and man-made disasters. Human beings could not properly respond to these disasters due to lack of peace. Even many man-made disasters were caused by absence of peace. Violent conflicts are usurping precious resources on earth. The contemporary world is a custodian of rich civilizations, and cooperation among them which is possible only in a peaceful environment, will unleash unimaginably powerful human faculties. **Peaceful resolution of inter and intra states violence will equip the human race to reach higher level of physical, intellectual, emotional and ethical excellence. Strengthening peace within and without will help homo-sapiens to cooperate successfully on economic, social, political and environmental problems.** Proper response to the challenge of violent conflict will reduce expenditure on war and the saved resources can be diverted to enriching human life on earth.

INDIA

Uttam C. Sharma

Former Vice President of the International Commission On Water Quality

Are the declining moral values of our people and leadership posing a threat to the existence of our nation. Should we tolerate the intolerant. We are facing an embarrassing conundrum. The shadow of global warming due to anthropogenic GHG emissions is looming large. Are we worried about that and trying for a solution?

SINGAPORE

Rohan Gunaratna

Head of International Centre for Political Violence and Terrorism Research

Will terrorism wreck the world? The Achilles heel of most governmental efforts is their inability to protect their communities from large scale violence and terror. No country is immune to the online and offline threat posed by the so called Islamic State. By dominating the social media platforms, IS is able to reach out beyond the core areas of Iraq and Syria! In addition to building their intelligence and investigative prowess, governments worldwide must invest in preventive and rehabilitation programs. Without investing in counter radicalization to engage segments of vulnerable youth, the threat will grow culminating in wolf pack and solo terrorist attacks. At this point, global counter- radicalization efforts are limited and modest and are not robust and of a scale to challenge the spread of the extremist ideology. The weakness of most governments is their failure to develop rehabilitation programs. In the prisons, terrorists and criminals coexist with each category learning from and influencing each other. Despite discussions and plans, most countries have no concrete strategy to prevent the making of extremists and rehabilitating terrorists. **Ideological extremism and its vicious byproduct, terrorism, presents the greatest global threat today. If the threat is not properly managed, terrorists will develop or acquire CBRN weapons and wreck the world!**

INDIA

Dhananjay Tripathi

Assistant Professor with the Department of International Relations, South Asian University

The most important question of 21st century is growing extremism of different types. This religious fundamentalism is posing the biggest threat to international peace and order. Unfortunately, scientific rigour and rationality of the 20th century is losing its general appeal and obscurantist forces are gaining ground in almost every corner of the world. These fundamentalist forces are heavily armed and do not hesitate in using violence to cull dissent – individual or societal. While this problem has only magnified, a section of intelligentsia labeled it as ‘clash of civilization’. This supports the logic of those who propagates hate on pretext of religion, culture and identity. The world is also on the verge of new crisis like the one we witness in terms of Europe’s refugee crisis. Dealing with fundamentalism is a challenge and here the international community has to be extremely sensitive. **Securitizing this entire discourse might not give us a solution; constructive and creative engagement is necessary. This includes promoting human development and bridging the gap between rich and poor at the international level, making it difficult for fundamentalist to take advantage of chaos and poverty.** Also necessary is to promote rationality thus, countering fundamentalism in all its forms and types.

USA

Seth D. Baum

Executive Director of the Global Catastrophic Risk Institute

Affiliate Researcher at the Center for Research on Environmental Decisions, Columbia

University Columnist for the Bulletin of the Atomic Scientists

What actions will keep human civilization intact? If global human civilization collapses, little else matters. All of our hopes, our dreams, our promise, our potential as individual human beings and as a collective civilization: all of it depends on our civilization remaining intact. Without our basic civil infrastructure, let alone our advanced technology, many of us will die and none of us will live well. **Yet many forces threaten to destroy civilization, including global warming, nuclear warfare, pandemic diseases of natural and biotechnological origin, and artificial intelligence.** The threats are great, but with smart and dedicated action, they can be confronted. It is utterly crucial that the right actions be taken to make sure that no catastrophe ever destroys human civilization.

ISRAEL

Amatzia Baram

Professor Emeritus at the Department of the History of the Middle East and Director of the Center for Iraq Studies, University of Haifa

The most serious challenge the world is going to face in the next five to ten years is the synergy of two of the most threatening challenges of today: climate change and radical Islam. There are two mutually-reinforcing reasons for the huge wave of migrants flooding Europe from the Middle East and Africa. One is a well-known and much discussed disaster, the hyper-active atrocities of a large number of radical Islamic movements, beginning with ISIS and al-Qaeda affiliates in the Arab world and ending with Boko Haram and similar movements in sub-Saharan Africa.

The other pushing force is the drying of the Middle East, most likely as a result of a long-term climate change. There is a noticeable decline in rainfall and the water level in the Tigris and the Euphrates and their tributaries is getting very low. Due to a combination of government neglect and technological limits, for over a decade millions of farmers have been leaving their land and moving to the large cities, where the state is unable or unwilling to support them. The land itself is gradually turning into dust. The “desertification” of the Middle East and ways to remedy it depends, first, on political stability, then on technology and massive injection of funds.

BOSNIA AND HERZEGOVINA

Suad Arnautovic

Member of the BiH Central Election Commission

Faculty Associate at the Faculty of Political Sciences, Sarajevo University

The 21st century cannot bring global peace without the resolution of “the Muslim Issue”. This “issue” is in fact a “question” of equality of the Muslim’s world at the global level and in the global village. Current international relations ignored this issue and showed all its weaknesses resulting in escalation of the conflict, not only of low intensity but also in terrifying wars. In my opinion, some of the steps that would contribute to resolution of this issue, inter alia, are a guaranteed seat from some of the Organization of Islamic Conference member states in the UN Security Council and the second one is finding a permanent solution to the Palestinian issue. Neither the dominant ideas nor ideologies of the 21st century can get primacy until the world resolves the “Muslim question”. **Why are the bloodiest wars, terrorist attacks and other conflicts at present are taking place predominantly on the soil of Islamic countries and countries where Muslims are the majority population?** Is the strategy of so called “forward defense” employed by some force the only one that may result in the establishment of a lasting peace?

GREECE

Alexandros-Andreas Kyrtzis

Professor of Sociology, National and Kapodistrian University of Athens

Are the political elites of the 21st century capable to live up to the challenges of our time? **Or will they succumb to their fears of failure and loss of power, and thus get trapped in demagoguery, opaque practices, exploitation of bigotry, or in the use of force? Can they understand, and thus make their people understand, that co-operation, and often painful compromises, are preferable? Or will they opt for new hostilities that can lead to new wars?** Because of the tremendous complexity of the governance problems and the frustrated expectations of the people they have to cope with, most leaders are driven by the perception of risks and not by vision and bold creative ideas. They tend to adopt rhetoric of fear and conflict, instead of peace and welfare. This makes power hungry, but at the same time panicky politicians a threat to our societies and our earth a rather unsafe place.

RUSSIA

Irina Zvyagelskaya

Senior Researcher, Institute of Oriental Studies

International terrorism has become a most serious challenge of our time. Islamic State and similar organizations while reformatting the Middle East, has created chaos and violence and might bring it forth into other countries and regions. ISIS is an ambitious political project of creating a state in Iraq and Syria (protocaliphate), which will eventually extend to the whole region and then conquer the rest of the world. The struggle for the Caliphate has a special attraction for many Muslims, who have perceived it as an ideal form of government. Jihadism, the main ideology of ISIS, has been interpreting Jihad in a purely military sense, as an armed struggle against the infidels and as a sacred duty of Muslims. ISIS has positioned itself as a new global state-building project, devoid of problems generated by disbelief and deviation from the genuine faith. The success of ISIS– territorial conquests, fighting capabilities and huge financial resources, greatly exceeding the ones of any other powerful terrorist organization are key reasons for the growth of its adherents. ISIS with its medieval ideology has fitted itself into the postmodern world with its cruelty and an absence of clear division line between virtual and reality. **The need to coordinate efforts of external and regional players in the fight against this clear cut threat would not only contain the spread of ISIS, but also help to reduce the level of confrontation in international relations.**

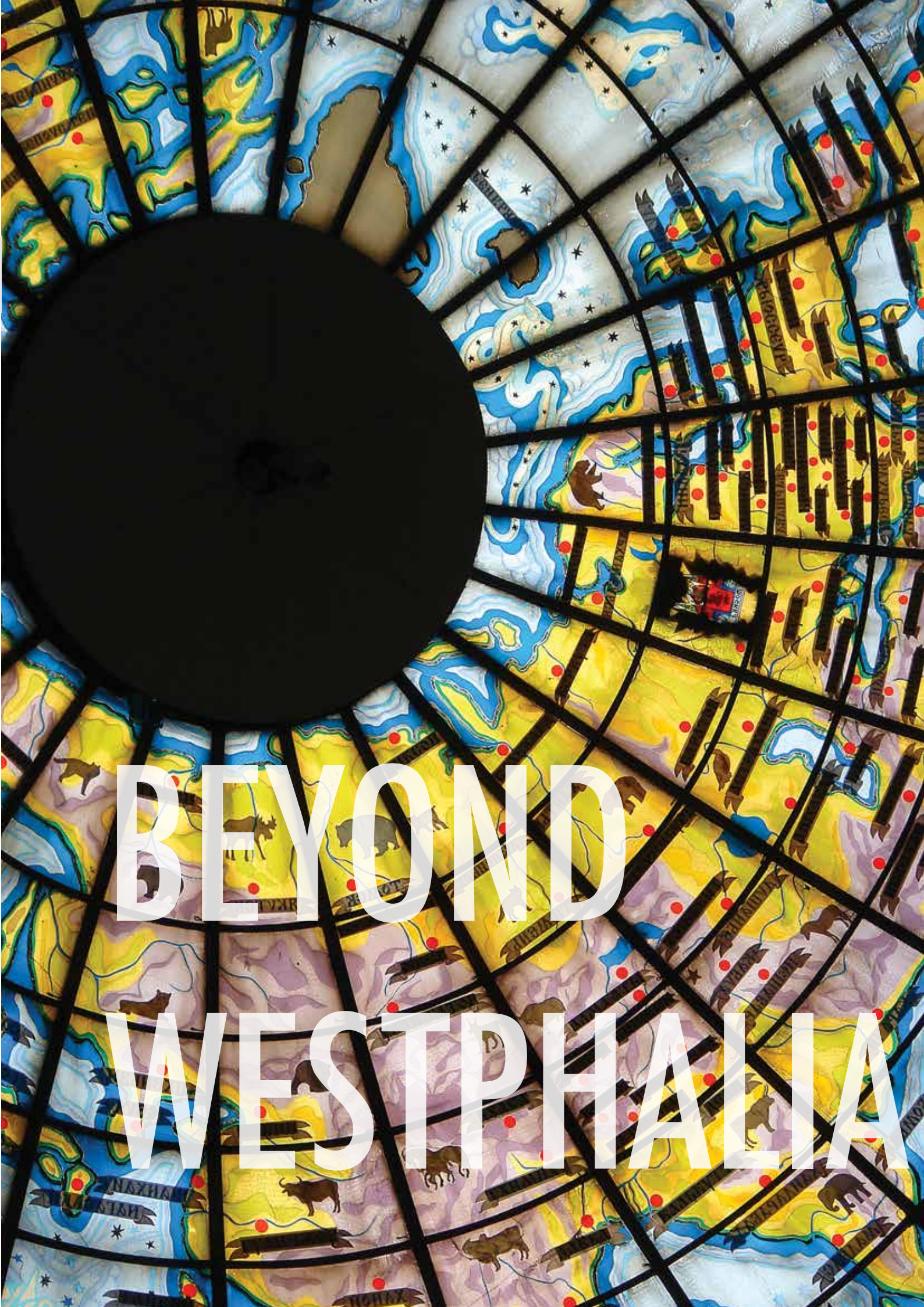
DENMARK

Morten Laugesen

Deputy Director for the Sino-Danish Center for Education and Research (SDC) in Beijing

When will (wo)man end all wars? Looking at the history of mankind, war almost seems inevitable. Since the dawn of time, men has fought wars over territory, resources, ideology, religion, etc. Lately, arguments for preventive wars have even

been raised. **But is war really something we have to accept as a fact of life? Is war a part of the human culture? Some antropological studies suggests that empowering women reduces the rate of violence committed within a society and by the society against other societies.** When will man be intelligent and clearsighted enough to realize that the key to more stability and peace in the world is actually lying next to him when he wakes up in the morning?



BEYOND

WESTPHALIA

SOUTH AFRICA

Daniel D. Bradlow

SARCHI Professor of International Development Law and African Economic Relations at the Centre for Human Rights, University of Pretoria

Can we find an alternative to a sovereign state based international order in time to resolve the increasingly globalized problems that we face? For almost 400 years a key organizing principle of our international order has been non-interference in other sovereign states' domestic affairs. This principle is increasingly becoming an impediment to dealing with humanity's most pressing problems, such as climate change, and the global economy's impact on poverty and inequality, which require states to take an interest in the internal affairs of other states. Logic and efficiency suggest that this requires reconstructing the international order on a more flexible basis. However, historical and political attachments constrain our

ability to do so. Thus, the “big question” is can we either adapt the principle of sovereignty or identify a new organizing principle that will allow us to construct new and more effective global governance arrangements before these problems overwhelm us?

HUNGARY

Péter Balázs

Director of Center for EU Enlargement Studies and Professor with the Department of International Relations and European Studies, Central European University

The 21st Century will put to test the continuity of two great ideas of the last hundred years: modernisation and integration. The first was done mainly by totalitarian regimes whose expansionism led to three world wars, two 'hot' and one 'cold'. Big conflicts were followed by regional and world-wide integration attempts of states which favoured and supported peace. By the end of the 1990s strong reverse tendencies occurred: anti-modernisation reactions, mainly in the post-Soviet and Islamic area; and the decline of joint action in the United Nations Organisation and the European Union. Their combined consequences have made our world less safe, and unpredictable.

Our future security and welfare depend on finding new and efficient governance structures that overbridge the limited territory, power and identity of states and their frequently changing governing forces.

Extended regional and world-wide networks should guide action in the fields of transport, energy supply, water management, migration, environment protection, etc. The alternative is conflicts and wars between states and cultures.

USA

Simon Adams

Executive Director at the Global Centre for the Responsibility to Protect

Can we prevent another genocide? Genocide is a twentieth-century word. In 1944, Raphael Lemkin, a Polish-Jewish lawyer and refugee, coined the term while grappling with the magnitude of the Holocaust. Lemkin was also responsible for the 1948 UN Genocide Convention. Despite this, over the following decades our fidelity to the promise of “Never Again” was dismal. From the killing fields of Cambodia to Bosnia or Rwanda, the international community usually failed to prevent atrocities and struggled to punish the perpetrators. In response to past failures, in 2005 at the UN World Summit, the largest meeting of Heads of State and Government ever assembled, world leaders committed to the concept of the Responsibility to Protect

(R2P). **The purpose of R2P is to end once and for all the politics of inaction, indifference and injustice in the face of genocide, crimes against humanity, ethnic cleansing and war crimes.** Today’s conflicts in Syria, Iraq, Burma/Myanmar, Darfur and elsewhere reveal how far we still have to go to uphold our collective Responsibility to Protect. Globally, we have more refugees displaced by war and conflict than at any time since World War Two. But with the focus on preventing atrocities and protecting those under threat, R2P remains essential to ensuring that this century does not repeat the horrors of the last one.

SOUTH AFRICA

Manie Geyer

Urban and Regional Planner

Founder of the Centre for Regional and Urban Innovation and Statistical Exploration (CRUISE) at the Stellenbosch University

What are the long term spatial consequences of the information technology revolution on society? The latest wave of the IT revolution, beginning with the early 1990s, has resulted in unparalleled reductions in the costs of time and distance of information dissemination. The Internet reduces global inequality by providing access to information in the remotest parts of the world, just as mobile technology weakens communication barriers. Anecdotal evidence shows that the two – the Internet coupled with mobile technology – have two conspicuous outcomes: Firstly, the dissemination of liberalism and secularism has resulted in the spread of modernisation but also at the same time the invigoration of cultural and religious resistance. The result is deepening global divides and social and political community fragmentation. Secondly, the availability of information increases knowledge about conditions in other communities; through concatenation, this reduces uncertainty about living conditions and employment opportunities at prospective migration destinations which increases the mobility of the global poor. This results in the rapid redistribution of people from global pockets of poverty and tension to more prosperous and peaceful areas in the world or places that offer more opportunities and freedoms. Indications are that the combined effect will be: sustained, large scale migration initially from areas of poverty and conflict to areas that offer better outlooks; the resultant weakening of the status of national boundaries; dividing loyalties and increasing challenges to state authority; the rapid diversification of societies; the transformation and reinvention of traditions; and the emergence of new social, cultural and religious political clusters. **Ultimately this is likely to lead to the degradation of the current political boundaries born out of nationalist and colonial eras, resulting in new arrangements of communities, boundaries, territories and authorities – locally, nationally and internationally.** To obviate, on the one hand, the historical failures of democracy in socially, culturally and ideologically diverse

and divided societies and on the other hand, to maximise individual involvement in decision-making, the focus of political power in the 21st century will eventually gravitate to the local level. This will result in the gradual reorganisation of communities into new clusters of more alike identities with more meaningful representation at the grass roots level. Coupled with this will be the formation of new incarnations of higher level governments which will change current decision making processes and jurisdiction areas dramatically.

CANADA

Stéfanie von Hlatky

Professor of Political Studies

Director of the Centre for International and Defence Policy, Queen's University

The 21st century is defined by social movements challenging the established functions of the state. **To be sure, while states will continue to provide basic services to their citizens, their inability to successfully bridge issue areas such as security, economics, the environment and development will increasingly lead to alternative modes of political action. Increased connectivity empowers citizens to opt for bottom-up models of collective action which may displace the authority of the state and continue to transform the concept of sovereignty.** Demographically, diversity is also likely to change the game of international politics, leading to multiculturalist foreign policies. This means more open borders, but an interventionist strategy that is more focused on humanitarian aid and emergency assistance, rather than international military interventions that are driven by regional competitions for power.

UAE

Frank Cibulka

Associate Professor, Department of Humanities and Social Science, Zayed University

My main concern is the increasing anarchy in the international system since the end of Cold War and the decline of sovereign power of the states. Combined with the decline of the West, meaning the United States and Europe in particular, this will precipitate the loss of the universal values enshrined in the past century and open the way for the increased power of organized crime and international terrorism, as well as for catastrophic ecological decline in many areas of our planet.

This situation is seen also in the decreasing ability of international organizations, including the United Nations, to positively influence global and regional events. The decline in power and influence of the West, not yet filled by the rise to leadership from the Third World, has resulted in the realization that the 20th century idea of progress of mankind, ascribed to scientific technological discovery and institutions of universal humanitarian values, must be reassessed. **Our world has become one of spilled blood and raging fires of madly proliferating civil wars and religious conflict; it has become a world of renewed slaughter of elephants and other endangered wildlife and increased destruction of forests; it has become a place where the world seemingly shrinking due to globalization has become vulnerable to more deeply penetrating organizing crime, including cyber-crime and potential for nuclear terrorism. It has become a world of growing anarchy which feeds on the decline of the power of the West and on the erosion of sovereignty of states.** And that is the troubled vision I have for the rest of the 21st century.

BRAZIL

Eduardo Viola

Professor of International Relations at the University of Brasilia

Coordinator of the “Brazilian Research Network on The International System in the Anthropocene and Climate Change”

The greatest challenge of humanity in the 21st century is to deeply recognize it is living in a new geological era: the Anthropocene. The Holocene was the period of climate stability in which humanity developed; the Anthropocene is a new geological epoch in which climate stability was lost due to the scale and cumulative effects of economic development on the environment. The change is unprecedented. Guaranteeing a safe human existence requires mitigating climate instability; international cooperation is needed, but it must be based on a reformulated understanding of threat, security issues

and national interest. **This reformulated cooperation will allow the flourishing of post-sovereign global governance:** a rational cooperative scheme in which responsibility for tackling a problem is proportional to the contribution to cause the problem; measures are undertaken and implemented according to players’ own interests and the interest of future generations. It is a difficult change and will have important impacts in geopolitics, but will update it to the complex and non-linear reality of the twenty first century.

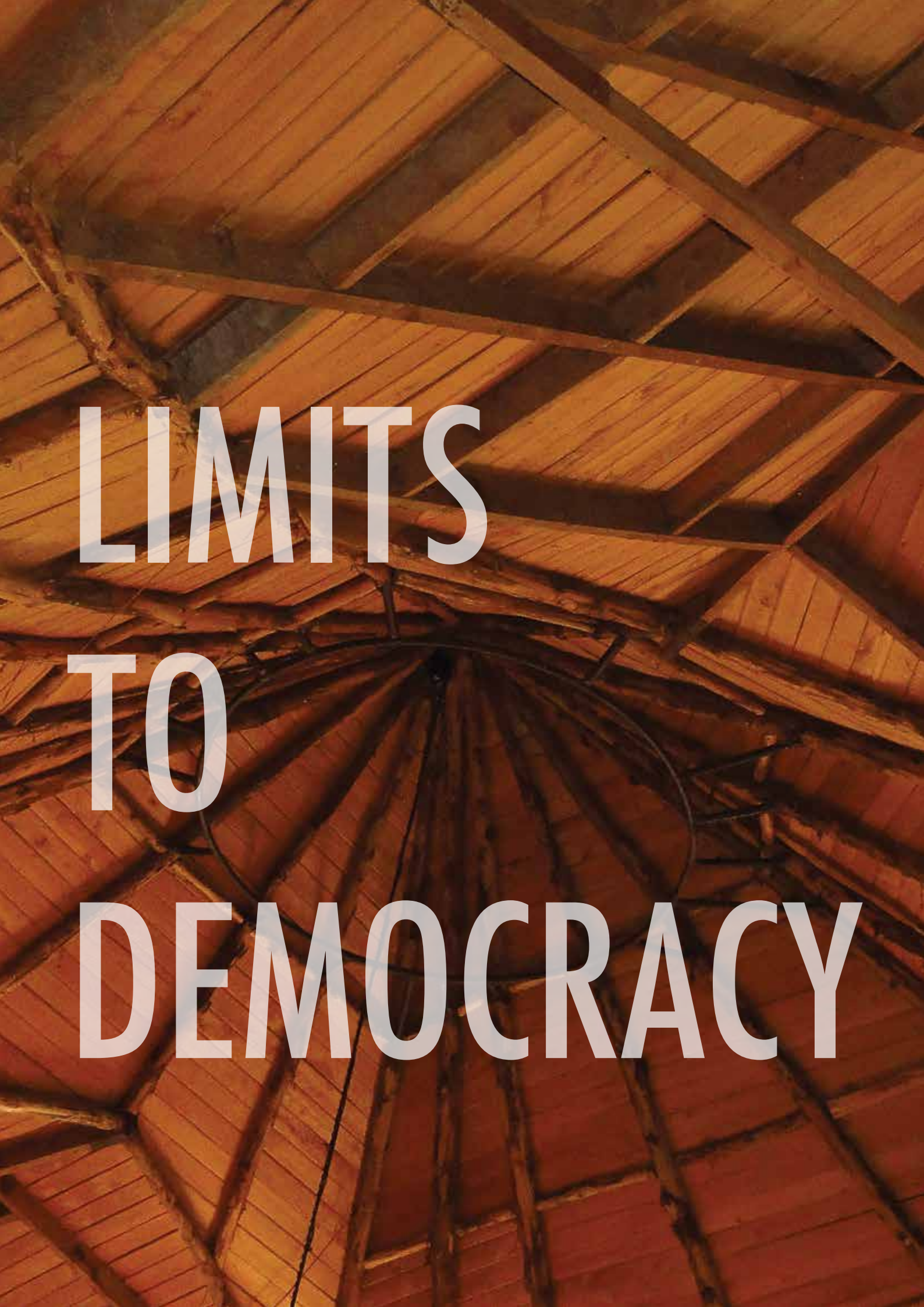
USA

Christopher Malone

Associate Dean and Associate Professor at Lehman College, City University of New York

It is self-evident that global climate change presents the greatest challenge to humankind in the new century. That is a given. What is not being discussed, however, are the only underlying global structures – one economic, the other political – at our disposal to combat it. Capitalism and the nation-state are creations of the modern era. We can say they grew up together, and like rival siblings they tug in different directions. Capitalism forever tests the integrity of national borders, while the nation-state forever seeks to harness capitalism's vigor and direct it within its boundaries.

The question of our time is not whether global climate change exists – it does – but whether the symbiotic relationship between global capitalism and the nation-state has the capacity to meet the challenge it presents. We see early signs of the cracks and fissures and clefts. Thus, climate change in the 21st century not only tests our ability to solve the global problem of our time, it will test the very legitimacy of the international order humankind has known for the last three centuries.



LIMITS
TO
DEMOCRACY

ISRAEL

Tamar Hermann

Professor at the Open University of Israel and the Israel Democracy Institute

Will democracy 'kill' authority and if so – how will critical decisions be made? Democracy is based on representation: citizens “lend” their representatives the authority to make decisions. We all do it when giving the surgeon permission to cut our body open while under general anesthesia or when leaving our car in the garage giving the mechanic a free hand in fixing the brakes. All these decisions are based on trust.

Extensive democratization processes seems to have pulled the rug from under the feet of this state of mind. The unprecedented complexity of the contemporary problems undermine the professional ability to offer clear cut and comprehensive solutions.

Thus trust is severely eroded leaving (almost) no authority unchallenged. Yet, critical decisions must always be made. The big question is then: can new modes of authority delegation be developed in time? If negative, with various calamities pending and calling for harsh decisions, humanity may well find itself susceptible to political, bureaucratic and technocratic despotism.

INDIA

Neera Chandhoke

Visiting professorial fellow at the Centre for the Study of Law and Governance,
Jawaharlal Nehru University

Malaise of our post-modern world. Across the globe we live, today, in frighteningly blinkered worlds. A time-tested project: secularism, which enabled people speaking different languages and professing different religious beliefs to live together in a degree of civility, has broken down. European philosophers have announced the onset of a post-secular age marked by the presence of religion. This has been paralleled by fear at the changed geographies and histories of Europe caused by immigration. The discomfort with the pervasiveness of religion catapults one question onto our

conceptual horizon. **Does secularism need to be written off because the precondition of secularism, i.e., secularisation has gone missing?**

The Indian experience however tells us that the two concepts are semi-autonomous of each other. It is time we recognise that political secularism along with its companion concepts, equality and toleration, is more not less important for religiously plural societies.

THAILAND

Sandro Calvani

Senior Adviser on Strategic Planning at Mae Fah Luang Foundation (under Royal Patronage)

Doing good and doing it well engender a change of human species: People power is restoring smart global/local governance in a politically disconnected world. We hold these truths to be self-evident, that all men are created equal, that they are endowed with certain unalienable Rights, that among these are Life, Liberty and the Pursuit of Happiness. That to secure these rights, Governments are instituted among Men. (U.S. Declaration of Independence July 4th, 1776). Billions of people all over the world are self-declaring their independence from failing governments, ineffective leadership and the sub-optimal management of public goods, peace, security and equitable development. At the global level, unprecedented manifestations of social unrest represent strong evidence of the failure of traditional and national representative democracy to protect true liberty, life and the genuine pursuit of happiness. The human aspiration to contribute to society's wellbeing is increasingly evident: inspired by a sense of belonging to global humankind, people are leaping beyond old and misleading beliefs, petty self-interests and traditional cultural values, moving beyond borders, even beyond times and generations. **Pushed by an innate and irrepressible sense of global justice, the human race is engendering a change of the species, from the irresponsible Homo Sapiens Sapiens, into the purposeful, modified genus of Homo Sapiens Sollicitus: smart enough to become capable and willing to use intelligence and wisdom to care for all.**

SPAIN

Jacint Jordana

IBEI Director at Campus de la Ciutadella (Universitat Pompeu Fabra)

The most significant question for the twenty first century is the worldwide struggle between regulatory capitalism and financial disorders. In recent decades, globalization has become an omnipresent reality, transforming multiple social and economic dynamics at the local and national levels in most parts of the world, and also has

created new global risks. **These transformations have raised new political problems that often have a multi-level nature, and require sophisticated forms of governance to deal with, but resistance to policy changes is also enormous.**

Among these problems, we find as the most critical one the tremendous benefits the global finance industries obtain from political-economy turbulences and idle regulatory frameworks. Such state of affairs will persists over the twenty first century, as it provides great incentives to the world financial community, but will be also challenged by collective action of multiple actors trying to make capitalism sustainable, by means of stronger regulatory governance.

MACEDONIA

Mirjana Najchevska

Professor at the Institute for Sociological, Political and Juridical Research, University “Ss. Cyril and Methodius”, Center for Human Rights and Conflict Resolution

How can the state become a tool for satisfying the needs and interests of the people, rather than their subjugation, division and exploitation? States were created so that a certain group governs a certain territory (protecting the interests and wealth of a small number of people, subjugating and manipulating others in order to secure even greater power for even less people) going against the concept of human rights.

The historical development of the machinery of government is towards its transformation from a tool for those in power to protect their own interests into a tool for the promotion and protection of the rights and freedoms of citizens. Thus, patriotism remains the final stronghold of the state's outdated uses and the last obstacle to developing a sense of belonging to humanity, instead of the power of a small group of over underprivileged people.

UK

Peter Kingstone

Professor at the International Development Institute, King's College London

The conflict between representative democracy and modern capitalism: The fall of the Berlin Wall marked the triumph of liberal democratic capitalism – the “end of history” as Francis Fukuyama called it. And the remaining years of the 20th century seemed to support the claim. But, the 21st century has witnessed a growing inability of capitalism to provide for the needs of large segments of the population in both rich and developing countries. The changing nature of work and technology has led to a shortage of secure, high quality jobs that can support rising incomes, and finance public services and infrastructure. The growing economic alienation has reached higher into the middle classes – both established ones in the rich world and the emergent ones in the developing world. **As a result, representative democracy has appeared a less and less satisfying way of organizing politics, even in the West, where growing numbers of people believe that the rules are made by the rich and powerful for the benefit of the rich and powerful. As a result, representative democracy cannot propose and implement solutions that correct its own shortcomings.** Finding solutions on both the political and economic side of the equation will be one of the key challenges in the 21st century.

INDIA

Umesh Kulshrestha

Professor at the Jawaharlal Nehru University (JNU)

How to save democratic regimes round the globe? What will be dominating in the 21st century needs the analysis of 20th century. The 20th century has been the century of democracy throughout the world. But a new world is now emerging - that is the word of 'Returning Dictatorship' throughout the globe. Hence, the big question of 21st century will be 'how to save democratic regimes round the globe'. No one can deny that with the growing refugee crisis, Europe is going to miss its developmental targets and will be forced to reorient from technology to social engineering. This will finally trigger more ambitious economic targets which cannot be achieved through democratic ways due to various humanitarian complexities as seen in case of India. In order to maintain the same living standard for the additional population, the states will be pressurized drastically. The fact that the richer states cannot go along with the poorer states of the union, will trigger split of EU and more crisis in Middle East. This means more wars and sale of weapons throughout the globe. This will further trigger crisis of resources such as energy, food and water. Though such problems will be of local and regional in nature within the states, they will be responsible for civil war. The growing population will cry against the ruler but will be suppressed by demolishing democratic structures of the country. Again the principle of caste and creed will be used to rule the public. Once again, underdeveloped will remain deprived of democracy and opportunities. The present deteriorating education and political systems, large scale unemployment of youth with super ambitions will rampage traditional values and ethics. **The youth will believe in virtual society with short face to face interactions limited to the parents. This is what big business houses want because such a society can be controlled from remote regions. Similarly, governments will be controlled remotely. Unlike in democracy where a common man can play a key role, in the coming decades, active businessmen/groups will be the governments in different countries which will assist in the business of globally central houses who control different business sectors.** Very few people pay attention to

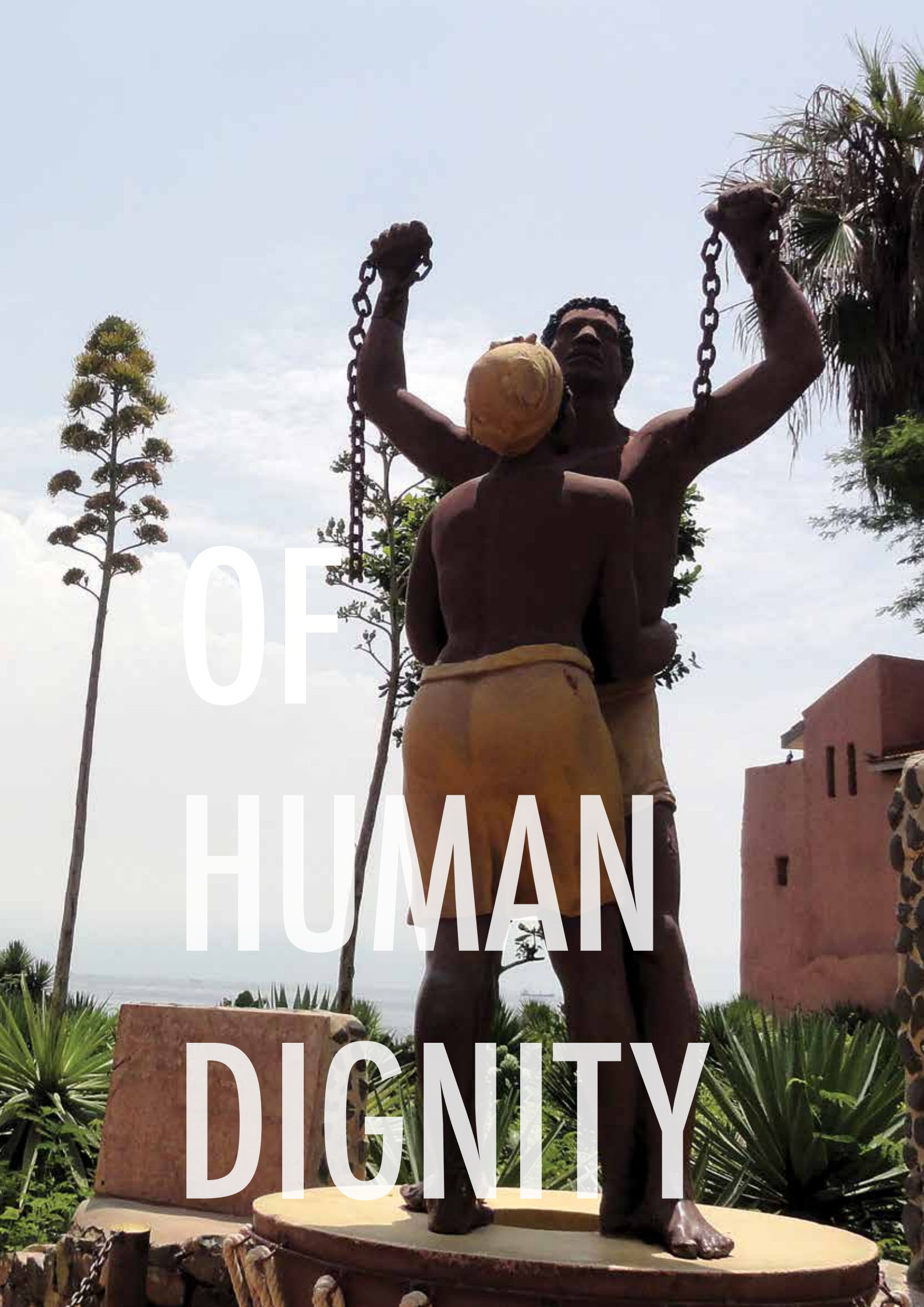
the fact that data collected for any reason when shared with global stakeholders, can be misused by any of the users or mischievous elements. For example- Aadhar card information is very sensitive. It has everything in it which can be used for controlling the population movements, business patterns, economy changes, future planning, consumption patterns etc. Ultimately, due to selfish nature of the business, the 21st century will observe the death of democratic regimes or free world. Due to global disorder, people will be searching another planet for survival and peace. My guess is that symptoms of dying democracy will peak in the second half of the 21st century.

TURKEY

Şebnem Udum

Co-Head of the Department of International Relations at Hacettepe University

The most significant question for the 21st century is the capability of policymakers to adapt themselves, their institutions and decision-making tools to the needs of the time, their societies and citizens. Traditionally, we gave priority to hard security issues. Social movements, environmental issues, migration and gender issues could draw much less attention. **The developments of the last decade have demonstrated that the tools that have been in place so far are sometimes necessary but most of the time insufficient to deal with the current and pressing issues of our time. Therefore, to develop adequate measures, it is necessary to gain a new perspective for the definition of problems, issues, threats and challenges.** This can be achieved by an “inclusive” rather than an “exclusive” approach, that is, by tackling the problems that affect humanity and address them. This is possible by international organizations developing or strengthening norms of environmental protection, human security, human rights and women’s rights.



OF
HUMAN
DIGNITY

NIGERIA

Mohammed-Bello Yunusa

Professor of Urban Development and Management in the Department of Urban and Regional Planning, Ahmadu Bello University

The biggest issue of global concern is how to develop strategies to shore up human dignity in this century. The human being has been perverted by development and its consequences in the last century. The indignity of man stares at us from the screens of our technology. Human life is being compared to the cost of guns, war planes and drones – instruments of power – and power is opposed to fairness and justice. All creatures are equal in a symbiotic existence; no creature can perform

the role of the other. **We need to know, recognise and appreciate differences in values, philosophy and lifestyles as a basis for mutual understanding, fairness and justice.** Let the poor and rich, male and female, powerful and weak co-exist without hindrances and without offending common values and sensibilities. The human society must be recreated on the basis of fairness and justice.

CANADA

Andrea Charron

Assistant Professor and the Deputy-Director of the Centre for Defence and Security Studies, University of Manitoba

As of 2014, over 59 million people in the world have been forcibly removed from their homes. The sheer number of refugees, internally displaced persons and asylum seekers world-wide will be a continuous source of instability and conflict for generations to come because 1) few are ever able to return home and 2) children below 18 years represent half of the refugee population. The top “host” countries (Turkey, Pakistan, Lebanon, Islamic Republic of Iran, Ethiopia and Jordan) are hardly models of stability. **The displaced populations are at an extreme disadvantage and their presence often breeds contempt and xenophobia in the host country.** Displacement and instability seems to benefit only the human smugglers. A lucky few are able to resettle but many are unable to do so legally –left to survive in the shadows and black markets of the world. How to deal with this growing crisis is the big question of our time.

SRI LANKA

Kalinga Tudor Silva

Professor Emeritus, University of Peradeniya

In my view providing compassionate quality care to the growing elderly population and harnessing their accumulated knowledge to its full potential are the biggest problems facing the contemporary world. The numbers and percentage of elderly are likely to increase in both developed and developing countries. The advances in medicine, increased access to health care and related lifestyle change have made it possible for

people to live longer. **Providing satisfactory care to the elderly has become a serious challenge due to changing family dynamics, excessive cost of geriatric services, shortage of dedicated care givers with required skills and the global epidemic of non-communicable diseases.** Finally, the accumulated wisdom of the elderly are by and large neglected by a world preoccupied with modernity and innovation.

USA

Emily Welty

Director of Peace and Justice Studies at the Dyson College of Arts and Sciences, Pace University

Main Representative of the International Peace Research Association to the United Nations

One of the most important questions of our time is how we can most productively help the stranger. This is a question that cuts across multiple fields of inquiry including humanitarianism, politics, religion, economics and sociology. What do we owe the stranger whom we have never met? How does the stranger shape our own sense of self? We are living in a time that has often been defined by international interventions into contexts of conflict, hunger and natural disasters. Non-profit organizations and individuals both struggle to determine how to make a difference in the lives of strangers. Is it better to send funding and source materials locally? Or is it better to send shipments of food, clothing, building materials? What about volunteers?

How do we train people to best intervene in ways that are appropriate, sensitive and useful rather than just fueling the image of superheroes and saviors swooping in from the outside to save the day?

CROATIA

Ivo Šlaus

Professor at the College of International Relations and Diplomacy

In 1990 Alvin Toffler argued that power shifted from violence to wealth and now to knowledge and creativity. Power shift does not merely transfer power, it also transforms power and leads to a new, paradigm. To protect natural and augment human/ social capitals. the new paradigm has to be human- and humanity- centred assuring

security for all and full employment. **It should be us + them instead us vs. even against them. The new paradigm includes the interdependent, global and rapidly changing world generated by scientific research and much more continuous research is demanded. Our ignorance is enormous and as we learn more we should be aware of the sin of vanity, the danger of arrogance.** All humans are by nature curious. "The world has enough for human needs, but not for human greed" wrote Mahatma Gandhi.

GUATEMALA

Raquel Zelaya

Executive Director at Asociación de Investigación y Estudios Sociales (ASIES)

Migration originates and increases due to economic, political and discrimination. It is a growing phenomenon in various parts of the world derived from war, hunger and lack of opportunities. It is also relevant in religious persecution that extends dangerously in various forms and attitudes, some personal, other institutional. This challenge requires the direct involvement of international entities in charge of migration issues and of governments that apply principles of democracy, human rights, and the dignity of the human person, regardless of their ethnicity, sex, education or culture. If there is no a prompt humanitarian intervention, we can pride ourselves on the principles we proclaim, but in practice, we will evidence a great gap of consistency.

Children, women and elderly people are uprooted from their hometowns. Their origin, culture, language and religion leave them abandoned and neglected due to conflicts and wars often caused by geopolitical interests.

Climate change is a reality that is imposed over ideological differences. On large parts of the planet there is suffering from various sources due to abrupt changes in the natural phenomena. All agree that the challenge of change in the medium term, relies on our patterns of production and consumption. Countries that practice personal and social austerity, permanent care of nature as a common good of society, have a traveled road that must be considered as reference. Change of our consumption patterns will be a difficult process that will be met by indifference in many sectors of society, but in youth the topic has had an increasing rate of appropriation, expressed in the criticism of ostentation, luxury consumption and lack of solidarity. New attitudes arise towards the protection of natural resources, especially the non-renewable, in the interests of a rational use of the fruits of the earth, and to partially mitigate the effects of nature floods, droughts, earthquakes and famines. We still have time for changing the ways people consume and behave toward land, water and air and resources.

ISRAEL

Yair Auron

Scholar of Genocide and Contemporary Judaism and teaches at the Open University of Israel

Can We try to Stop Genocides? Genocide is the most extreme of all crimes against humanity. Although there have been mass killing through human history, some argue that the twentieth century witnessed more genocides than any other century, and therefore refer to it as “the century of genocide”, “the century of evil”, and “the century of violence”. What will happen in the 21st century? **The final stage of genocide is denial. If genocide denial is “working” the genocide is “successful”. By not recognizing Genocide we are preparing the ground for future genocides.**

CANADA

Patricia Goff

Associate Professor of Political Science at Wilfrid Laurier University
Senior Fellow at the Centre for International Governance Innovation

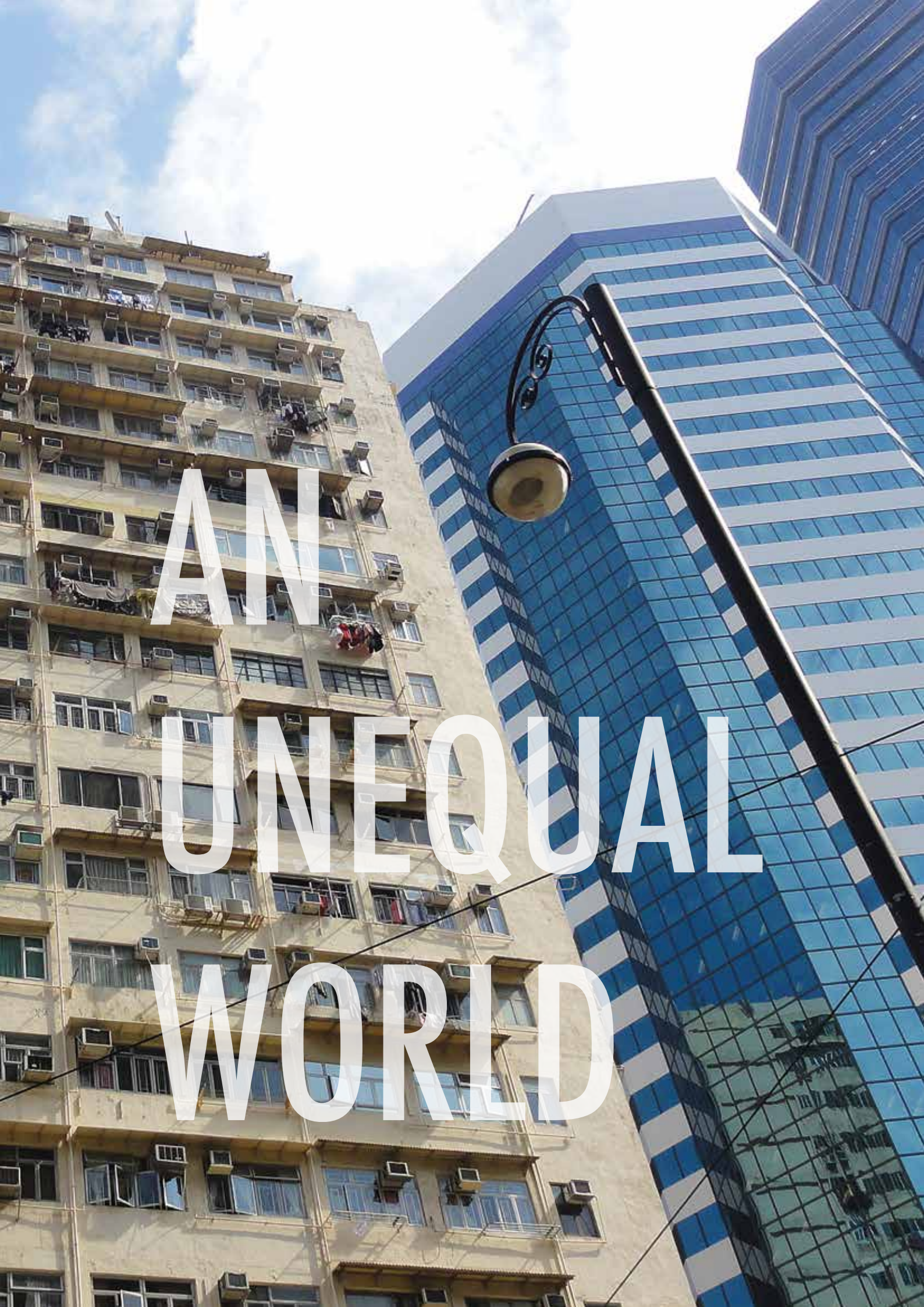
One big question of our time, in my view, is how we will live together peacefully in our difference? Our societies are increasingly diverse. People of different ethno-cultural and religious backgrounds live alongside each other, as do people with different sexual orientations, people who are differently-abled, and so on. **In some societies, we have managed to find ways to respect each other’s differences and ensure that all enjoy basic human rights. However, this is not the case throughout the world.** In many places, people are persecuted for attributes and traits that make them distinctive. Finding effective ways to navigate this injustice – by changing our beliefs and our policy frameworks – is a big challenge of our time.

AUSTRIA

Josefina Echavarría Alvarez

Core Faculty member at the MA Program in Peace, Development, Security and International Conflict Transformation and Research and Publications coordinator at the UNESCO Chair for Peace Studies, University of Innsbruck

How can we peacefully transform the conflicts originating from international migration movements? The movement of people constantly reshapes the world. Whether this movement is caused forcefully or voluntarily, contemporary societies face the great challenge of how to deal with the tensions created by movements that defy clear-cut nation-states borders. **The current international framework fails to recognize the contingency of national identities and falls short when confronted with the duty of offering hospitable conditions to all humans, independent of their characteristics in terms of national, gender, ethnic and religious affiliations. The movement of persons, with their ideas, beliefs, customs and worldviews also challenges host societies in so far they do not necessarily attend to traditional loyalties.** As such, international migrants tend to bring in new and fresh ideas to conventional politics, contributing greatly to enliven concepts of citizenship and thus to redefine democracies. Yet, migrants also create a deep fear of otherness in host states and societies, that in some cases turns into direct, structural and cultural violence against migrants. Migrants themselves sometimes meet alienation and indifference with violence. Public policies, civil society engagement and activism, as well as scholarly publications both contribute to exclusionary and inclusionary practices of migration. There is no easy portrayal of this conflict. In the face of such relevant and multidimensional phenomenon, how can we rethink international migration movements in a way that we take advantage of the positive potentialities and contribute to more peaceful relationships around the globe?



AN
UNEQUAL
WORLD

PAKISTAN

Nargis Zahra

Lecturer with the Department of International Relations, Faculty of Contemporary Studies at the National Defence University

Stress oriented development: Was Marx right? The developing discourse of peace, security, conflict and development has posed serious questions to the pol-

economic system we are living in. **Has capitalism followed**

Marx's predictions obediently? Are MNCs affecting socio-communal conditions in the South? Are we living in a global system of haves and have nots? Our generation has a feeling of living in a stress oriented society. Are Iraq and Afghanistan prey of capitalists? Is world leadership pushing the South too much in the name of economic interdependence? Why is stress a normal attribute of

developed societies? Why is there consumerism in inflation? **No one feels sufficiently placed on the economic ladder. Nothing is enough. Where is orientalism of contentment?** Isn't this the materialism Marx warned about?

FINLAND

Tuomo Melasuo

TAPRI Mediterranean Studies Project, TAPRI, University of Tampere

In 2015 the most important challenge for the mankind in the 21st century concerns its own well-being. The global public debate is focusing on climate change and global warming. This is not at all sufficient to solve any of the problems we and our planet are facing. There is a general ecological deterioration caused by our way of life - our economic models, consumption patterns and production systems. This means misuse of natural resources and huge pollution provoking health problems for an important part of population, especially among the poorest. At the same time, due to scientific advancement the life expectancy among the well-off in the rich countries increases.

This means that the inequalities among human beings are growing more than ever. In order to solve these problems, which might lead to our disappearance as a species, we must rethink our relation and our place in nature. And put the well-being of human beings in the center of our preoccupations.

AUSTRALIA

Monika Barthwal-Datta

Senior Lecturer in International Security at the School of Social Sciences, University of New South Wales (UNSW)

What is the future of global food security without small farmers?

Small farming households feed the planet today, growing the vast majority of the world's food. They are the custodians of the earth's agricultural resources, playing a central role in their sustainable use and management. Complex and adapted to local conditions, small farms tend to be more efficient and biodiverse than large farms such as those owned by big agribusinesses.

Yet, small farmers around the world are being forced to abandon agriculture. From a

lack of secure access to resources like land and water, and low farmgate prices, to the rising costs of inputs like fuel and fertiliser, and the damaging effects of climate change – small farmers, especially in developing countries in regions like Asia and Africa, are overwhelmed and increasingly unable to cope.

As their numbers dwindle, who or what will take their place? And what will this mean for global food security?

ARMENIA

Vahram Ter-Matevosyan

Senior Research Fellow, National Academy of Sciences of Armenia

For two years in a row, I give students quite a thought-provoking assignment: “Determine Global Megatrends and Envision Armenia in 2030”. That assignment is based on the methodology of a report prepared by the National Intelligence Council of USA in 2012. The findings of this assignment can be characterized with a few words: The longer we ignore current challenges, the more complicated the life will be in the visible future. Among the most pressing issues in the world, a dozen of global and

local problems stand out. **Poverty and unemployment top the list, followed by major security concerns.** Governments around the world underestimate the power of education, which has been and will continue to be a driving force for transformations. Demonization and dehumanization of the “other” are no less important global trends, which require instant steps to stop them.

PAKISTAN

Taimur Rahman

Assistant Professor of Political Science, Humanities and Social Sciences at the Lahore University of Management Sciences (LUMS)

At no time in the history of the human species has the wealth inequality been as asymmetrical as it is today. At present, the richest 1% in the world already own more than the other 99%. If social relations do not change, the world is unlikely to witness any significant reduction in this trajectory. On the one hand, preservation of the status quo, and on the other, the redistribution of economic resources, therefore, is likely to increasingly fuel conflict within and between states. While control of resources has always been central to major conflicts in history, what differentiates the continuation of this ancient conflict in our times is the sheer scale that is a product of globalisation. Global inequality, therefore, is arguably the quintessential contradiction of the 21st century.

SLOVENIA

Maja Bucar

Professor of Development Economics at the Faculty of Social Sciences, University of Ljubljana

One of the all-encompassing issues of our time is growing inequality within and between countries. **The naive expectations that economic growth will result in convergence of the national economies and thus equalise the well-being of citizens around the globe has proved to be the recipe for economic and environmental disaster.** As today many statistics and analyses prove, inequality can only be resolved through conscious activity of policy-makers. Yet, the current political approach to economic development remains short-sighted and incapable of addressing the difficult questions of human society's future. Resolving inequalities of our time through sustainable life-styles is the issue every single country needs to address, as well as global community. Yet, as we were able to witness during the debates on the post 2015 Agenda, we are unable to move beyond the concept of economic growth: In spite of all of the experience and evidence, the growth is still equated with development, the issue of redistribution is carefully avoided and more and more we see the philosophy of blaming the victim. On one hand, we witness artificial and even perverse consumption of the ultra-rich and on the other, the inability of providing for basic needs of the poorest. No amount of charity or development assistance can resolve this; only a fundamental change in prevailing philosophy of what the human values should be.

INDIA

Sreeram Chaulia

Professor and Dean at the Jindal School of International Affairs of O.P. Jindal Global University

What happens to inequality within and between countries in the 21st century? We are living in the most unequal period in world history where wealth is heavily concentrated in the top 0.1 per cent and top 10 per cent of the population and Gini coefficients are exploding. Thomas Piketty's book 'Capital in the 21st Century' predicts that inequality will keep mounting as capitalism advances, with extreme consequences for social and political stability. **Yet, the wealth and power gap between rich and poor countries as a whole is narrowing despite distributional iniquities within both rich and poor countries. Will more inter-state equality (or multipolarity) be sufficient to mitigate the widening inequalities among people and societies?**

CYPRUS

Farid Mirbagheri

Professor and Dialogue Chair in Middle Eastern Studies with the Department of European Studies and International Relations at the School of Humanities, Social Sciences and Law, University of Nicosia

Capitalism as a wealth-creating system has increasingly turned into a money-grabbing mechanism. The recurring crises in the global financial markets will only worsen as greater number of people become more and more interested in pocketing profit, rather than creating the wealth that generates that profit in the first place. **The need for either a return to the original ideas of profit in wealth-creation and value-adding entrepreneurship or a viable alternative to the current system will progressively dominate the agenda in the twenty first century.** However, short of a financial calamity in the world financial system it is difficult to imagine how the holders of wealth and power will acquiesce to a change in the status quo.

USA

Harry Targ

Professor and Coordinator of Peace Studies with the Department of Political Science at Purdue University

The intersection of poverty and starvation, growing global and national inequality of wealth and income, environmental devastation, internal and external violence and class exploitation, racism, and sexism continue to plague humankind. While there are a multiplicity of intervening variables that affect these problems, the fundamental cause of them is the system of global capitalism. The capitalist system, from the dawn of primitive accumulation in the fifteenth century to the neoliberal globalization and financial speculation of today have done more to shape the human community than any other possible cause. **As a result, global social movements, increasing cooperation of poor and marginalized countries, and more and more people of every demographic have begun to stand up and shout: “enough is enough.”** They all ask how this global behemoth can be transformed to a humane, democratic 21st century socialism.

USA

Neva Goodwin

Co-director of the Global Development and Environment Institute at Tufts University

Which of four paths will our economies go down in the next 25 years? The High Tech path allows each worker to be more productive, to where relatively few people are needed to produce the goods and services needed by the whole population. **This path bifurcates into an Egalitarian path on which either jobs are shared or a way is found to share output fairly equally among all – vs. an Unequal path in which the lucky workers get the lion’s share of the output, the rest very little.** On the Resource Constrained path human productivity decreases, because of depletion, degradation or other constraints on natural resources (including fossil fuel energy sources). Human labor is then used to substitute for increasingly expensive natural resources. There are plenty of jobs, but most are relatively low-paid. Output over all – hence overall consumption – decreases. The grid of possibilities will again bifurcate, depending on how equally, or unequally, the output is shared.

SLOVENIA

Marjan Svetličič

Professor at the Faculty of Social Sciences, University of Ljubljana
Fellow of the European Academy of International Business (EIBA)

The key question of the 21st century is inequality (income, wealth, governance) between individuals and countries and how it is managed. Manifestation of the North's intellectual dominance is triggering rebellion among the less privileged and preventing us seeing the world's most pressing problems, including the need for new development models. **Inequality lies behind most contemporary and future problems like inefficient allocation of and access to resources and inequality of opportunities, depriving many of education.** Their ignorance was exploited by financial institutions, resulting in the crises. It breeds terrorism and religious extremism, creates unemployment, migrations/refugees, cross-cultural conflicts, and waning trust, causing serious political instability and security problems, even the threat of major war(s). By eradicating the huge nationally and globally (interconnected) inequalities, there is a chance to strike a new balance between globalisation – democracy and autonomy make the benefits of globalisation more equally distributed through more equal global governance adjusted to the emerging new power structure.

INDIA

Neeta Inamdar

Professor and Head of the Manipal Centre for European Studies

Jean Monnet Module Leader of Cultural Analysis and European Identity

Will the politics of knowledge determine the power contours in the new world order? There is no confusion; knowledge is power. It has always been, and history holds testimony to this fact. Here, knowledge is the breadth and depth of inquiry the human kind has made in unearthing the hidden secrets of nature. Though knowledge is power, there is a difference in its intrinsic power and ascribed power. As the gap between the two increases, politics makes room for itself in between. **As knowledge is also a creation of the human kind, it becomes susceptible to manipulation. This has created a new void in the world – the knowledge haves and have-nots.** Several debates about the flow of knowledge surface every now and then about whether the direction of this flow was from east to west, or west to east with a quest to find answers in antiquity. Any such debates in no time turn into what are fondly termed as leftist, rightist or centrist, or combinations of these within their own countries, and resort to retelling of history. Equitable dispersion of knowledge throughout the world may reduce rift and developmental disparities. However, that is only an ideal situation of imagination. The politics around it may only redefine power contours in the new world order - no one knows the direction or magnitude of this change.

BRAZIL

Antonio Jorge Ramalho

Professor of International Relations at the University of Brasilia

Researcher at National Council for Scientific and Technological Development (CNPq)

Will justice prevail? The idea of justice and fairness will dominate the 21st century. Common citizens understand their place in the world and know how the rich live. People repudiate inequalities, particularly when they are on the wrong side of it. Globalisation spread information. Technology empowered people. Interdependence will deepen, having crossed a point of no return. Power has shifted from states to individuals, who want legitimate governments. Legitimacy will require both appropriate selection and excellent performance. **Tensions between individual and common interests will mount, as productivity grows. Economic crises will increasingly result from problems of redistribution, rather than from deprivation. Unrest will spread as a result of inequalities.** Revolts tend to become commonplace because of a widespread sense of unfairness. Climate change will affect people unevenly, imposing higher cost on the poor, who will seek the scarcest of the commodities: leadership. And leaders will have to promote justice, a condition to materialize a more prosperous and sustainable world.

COSTA RICA

Jorge Mora- Alfaro

Sociologist and Director General of FLACSO Academic Headquarters

Inequality and survival of democracy: the most significant question for the twenty first century: The twenty-first century finds humanity living a crucial dilemma for its future development – the major democratic crossroads of our time. Prominent social inequalities, social exclusion and precarious employment, extended insecurity overwhelmingly by the most diverse social systems in the world and in which live millions of human beings who are unable to enjoy citizenship, threaten the persistence of democracy in its most profound sense. **Deepening social polarization, resulting in the deterioration in the quality of life of the middle classes, the loss of social cohesion, the abandonment of welfare systems and acute concentration of power in the political and economic elites, are leading to social confrontation and the weakening of the main democratic institutions.** In times when humankind confronts major challenges such as climate change and the need to search for peace, cohesive societies and solid democracies need to give a new direction to development. Returning to the path of social inclusion, welfare, freedom and social justice is the main goal to follow for humanity in our time.

USA

Kostas A. Lavdas

Constantine Karamanlis Professor of Hellenic and European Studies at The Fletcher School of Law and Diplomacy, Tufts University

Is democratic governance at a crossroads? Combinations between equity (resources), access (participation), and efficiency (performance) have thus far determined democratic governance in its variations – predominantly at the national level. Contemporary forms of deterritorialization tend to disrupt two fundamental conceptions of the modern understanding of democratic politics: the fellowship of citizens and the fiduciary nature of the relationship between political power and those represented. **Middle classes, mostly national-based, became a pillar of democracy; shrinking middle classes against a background of growing gaps in resources exacerbate the challenge.** The shifting of attitudes (and emotions) involves larger spaces and ever more distant templates and has become a vital component of today's political relating. Increased global initiatives for the growth of a sociotechnical infrastructure that will enhance open interaction coupled with the development of norms of global responsibility will soon become a sine qua non for the continuation of the journey of democracy.

NEW ZEALAND

Robert G Patman

Head of the Department of Politics at the University of Otago

Honorary Professor of the NZ Defence Command and Staff College, Trentham

The most significant question for the twenty first century is whether humanity can fully harness the transformative power of education. **Today, in a globalizing world of 7.3 billion people, 900 million do not have enough to eat, 1 billion are illiterate, and 1 billion do not have access to safe water. So what can be done to alleviate these awful problems?** I believe the expansion of education is central to the vision of building a better world. Qualities like courage, passion and persistence will be necessary, but ultimately the success of this effort will depend on the tools provided by a sound education – reasoned arguments, evidence, analysis and good communication skills.

NIGERIA

Abidemi Oyegoke Lalude

Professor and Dean of Postgraduate School, Fountain University

Why, inspite of obvious potentials of over six decades that oil as a product represents to the Southern, developing nations of the globe does its technology of exploration and production continue to reside with the Northern developed countries? **What role does a culture of subordination play in the neutralisation of what would have ordinarily been a great source of power for the developing South that has refused to assert its independence and sovereignty after over a century of post-colonialism?** In what way has existence of research-based technology in various Southern Universities and Southern skilful labour in foreign oil companies a clear illustration of a gap between knowledge acquisition and application? To what extent is low quality of leadership in the South responsible for effective translation and utilisation of a potential power into an advantage in international resource control? Why is the academic community in the South indifferent to the glaring contradictions that exist between a control in reserves and taking full charge of the international politics that surround oil?

AUSTRALIA

Alexander ('Sandy') Gordon

Retired Professor from the Australian National University

Former Head of Intelligence, Australian Federal Police

The twenty-first century will likely see the relative decline of the US as an Asian and even global power. What will the security architecture of the post-US hegemony look like?

Will it involve a concert of powers?

- A bipolar power balance such as existed in the Cold War; or
- The rise of another hegemonic power such as China or India?

In the so-called 'Asian century', has the time come to develop an 'Asian' sensibility towards human rights commensurate with rising Asian power and so-called Asian values, such as the joint family and maintenance of social cohesion?

- If so, how would such a sensibility be integrated with currently held human rights values—largely derived in the West— revolving around the rights of the individual and democracy?

Will countries like India 'leapfrog' labour-intensive manufacturing? If so, what are the implications for absorbing agricultural labour?

- New technologies will allow for more decentralised, less labour-intensive manufacturing. These include robotics, digitisation, the Internet of 'things', 3D printing and 'nimble' sub-contracting by small firms assisted by the ICT revolution.
- **How should economies which still have large numbers of agricultural labourers, modernise and plan? For example, could small-to-medium towns and businesses be developed as substitutes for mega-cities and mega-businesses?**

THAILAND

Kenneth Houston

Lecturer in International Relations at Webster University's Thailand campus

Are developing societies ready for post-religious ethics? It is a taken for granted assumption among some scholars of religion that the secularization of the world has been in reverse gear since the closure of the 20th century – so called 'de-secularization'. The truth is that the global South was never secularized to begin with. In the global North, particularly in Europe, the collapse of religiosity continues apace. This decline in belief among Western publics has accelerated considerably as the 21st century unfolded. Some communitarian scholars have clung to the apparent resilience of traditional religious adherence among populations in developing societies of the global South. However, with the rise of the information age, tentative signs are emerging that societies associated with strong traditional faiths are being confronted with an unprecedented challenge. Secularization occurred in Europe over several tortuous centuries through multiple socio-political processes. As global attention shifts to the emergence of the BRICS economies the important question becomes:

Can the societies of the global south manage the profound social and political consequences of secularization when telescoped into a few decades in a networked, globalized society?



LIMITS
TO
GROWTH

CANADA

Simon Dalby

CIGI Chair in Political Economy of Climate Change and Professor of Geography and Environmental Studies at Wilfrid Laurier University

Can political and corporate leaders learn that their primary task now has to be to figure out how to share a crowded world rather than continuing to operate as though their role is to try to dominate a divided one?

This follows directly from the new insights in earth system science that make it clear that humanity is now a geological scale actor shaping the future of the increasingly artificial biosphere of which humanity is a growing part. If human civilization is to flourish beyond the next few decades in this new geological epoch of the Anthropocene, this crucial insight has to be both widely promulgated and accepted by decision-makers as the basis for their actions in making the future of humanity. How to do this is the challenge for scholars, intellectuals and activists for the twenty first century.

ECUADOR

Luis Alberto Fierro

International Development Economist and Climate Finance Adviser for the Independent Association of Latin America and the Caribbean (AILAC)

Without doubt, the defining issue of the 21st century, and centuries to come, is climate change. The emission of greenhouse gases has already caused an increase of 0.8 C degrees since pre-industrial times, and future forecasts range from two to six degrees. Even an increase of two degrees, which climate scientists consider inevitable, will have devastating consequences. Forecasts regarding the rise of the sea level range from one to six meters; one meter would be devastating, six meters would be catastrophic. **Hundreds of millions of people would be displaced (especially in China and India), at least four nations would disappear (Kiribati, Maldives, Marshall Islands, Tuvalu), tropical cyclones would increase in intensity, and climate-related events would cause trillions of dollars in losses and damage annually.** Given the magnitude of the problem, additional progress needs to be made, within and outside the UNFCCC negotiation process, to effectively address climate mitigation, adaptation and finance.

ISRAEL

Baruch Rinkevich

Professor at Ben-Gurion University

Faculty of Science and Science Education at the University of Haifa

Is there is any hope for the worldwide coral reefs? Once acknowledging the vital ecological importance of coral reefs and their fundamental roles in sustaining hundreds of millions of people worldwide, it is dismaying to realize that over the last four decades ca. 40 per cent of the global coral-reef system has been lost, a process galloping at 1-2 per cent per year, not considering the developing global change impacts that are exacerbated by further severe anthropogenic pressures. **Thus, coral reefs, while exhibiting exceptional biodiversity and importance to humans, are exposed to multiple, persisting and increasing envisaged threats. These stressors, and notwithstanding all traditional conservation management measures implemented so far, would lead to loss of up to 70 per cent of reef area within four decades or to their phase shift.** What should we do to revive coral reefs on the global level?

BANGLADESH

Monirul Khan

Professor and Chairman of the Department of Sociology at the University of Dhaka

I would like to raise the issue 'big questions' in a contextual manner. In other words, critical question about society has got a local societal and global flavor, if you like. **Countries like Bangladesh would be engaged with tackling the issue of demographic challenges, particularly accommodating a huge population spatially and feeding them.** This challenge may also be relevant to the countries like India or China. If we accept that demographic growth is on decline, still the forthcoming years would keep the countries engaged with it. The next question is related to how the world is going to deal with the climatic question. In the last three decades, Bangladesh has lost thousands of hectares through river erosion out of unprecedented flood and accompanying disasters. Several storms have already rendered thousands homeless, Dhaka is now one of the most dense cities of the world. The third question is the ideological conflict in the world and the rise of fundamentalism. Western enlightenment based modernization is now being challenged, how the world is going to tackle it?

DOMINICAN REPUBLIC

Osiris de León

Geologist and engineer with a specialisation in the use of geophysical methods for the exploration of groundwater

Former Scientific Adviser of the National Commission for the Environment, chaired by the President of the Dominican Republic

Water shortages in poor countries: Since the origin of civilization, humans have been located on the banks of main rivers, by the need and the obligation for access to clean water. By that reason the first biblical texts called “Garden of Eden” to the only regional place where freshwater, fruits and vegetables were available, between the Tigris and Euphrates rivers, amid a vast and hostile desert, because the survival of every human being is depending on access to clean water and food.

Hence the commitment to ensure drinking water to every human being, in a world where the global population growth is exponential, represents a major challenge for political leaders and decision makers, threatening the political stability and world peace, as each day will be greater conflicts over increasingly limited access to increasingly scarce drinking water.

Latin America, India, Asia, Middle East, Africa and many small island territories have great challenges resulting from the commitment to supply drinking water for present and future generations, since the population, and the water demand, are growing, but freshwater sources are not growing in the same way. As result of climate change, droughts will become longer and more severe, and will force, more and more, to rational use of groundwater, and given the absence of adequate sanitary sewers, and the absence of adequate sewage treatment plants, each day will increase the bacterial contamination of surface and groundwater.

When the poor people will have limited the access to drinking water, they will create social unrest, difficult to control, because free access to drinking water is a fundamental

right of every human being, and it is mandatory for every government to guarantee to the entire population the access to drinking water.

The solution to the serious problems of the future water supply must go hand in hand with the reduction of extreme poverty, because extreme poverty forces many people to live along river banks where absence of basic sanitation is causing pollution of surface and groundwater, diseases, and destruction of biodiversity. By reducing water pollution, drinking water availability will increase for tomorrow's society, if at the same time the population is trained to optimise the use of water in its basic requirements. If states guarantee 150 litres of water per day free of charge for every citizen, and charge excess consumption at very high differential tariffs, people will be forced to economise on the water that is provided free of charge, so that they do not have to buy expensive water.

TANZANIA

Francis Bagambilana

Assistant Lecturer at Mwenge Catholic University

The most significant question for the 21st century is climate change that might ruin the livelihoods of millions of people globally. **Its significance is due to the difficulty of fully understanding the main components of the global climate system and a myriad of interactions and feedbacks that involve the flows of energy and matter between the main components.** Furthermore, there have been hot debates with respect to theories (e.g. of solar variability, orbital variability and greenhouse effect) that explain climate change in the past, at present, and in future. Despite the use of advanced complex climatic models, i.e., the coupled atmosphere–ocean general circulation models (AOGCMs), scientists cannot predict accurately the behavior of humans and the non-linear processes of the global climate system. Yet, policies to address climate change in future need to rely on, inter alia, climate scenarios that are generated by such climate models.

QATAR

Conrad Sturm

Clinical Assistant Professor of Law and Director of the Legal Writing and Advocacy Skills Program at the Qatar University College of Law

Will human civilization advance at a sufficient rate in this century to ensure its long-term survival? In the face of many challenges over the millennia, human civilization has evolved and its population has grown exponentially. Along with its physical growth, humanity's intellectual growth has enabled it to steadily achieve the unimaginable. But in recent times, humanity has come to understand impending threats to its existence that scientific assertions declare could be outside its control.

One such threat concerns whether humanity will damage the earth so much in the coming decades that the effects will be irreversible. Other threats posit that the earth will inevitably become uninhabitable. If current political, environmental, and cosmic trends persist, will advances in technology and civilization in the next century prove that we can sustain humanity on earth? Or, will these advances enable humanity to one day exist elsewhere?

USA

Shafiqul Islam

Professor of Engineering and Water Diplomacy at Tufts University

Who decides who gets water and how?

The World Economic Forum recently rated water crises as the greatest risks facing the world. Millions of people lack access to water. Children die daily due to lack of clean water. Why do these problems persist even as science and technology give us better tools to measure, treat, and deliver water?

Because the solution space for these complex problems - involving interdependent variables, processes, actors, and institutions - can't be pre-stated. Consequently, we can't know what will or can happen with any reasonable certainty. **To address these persistent water problems, we need to start by acknowledging the limits of our knowing to act and the contingent nature of our action.**

In this pursuit, an explicit recognition of disconnect between values, interests, and tools as well as problems, policy, and politics is needed. Interpretive complexity and related pluralism of understanding need to be addressed before scientific and technological solutions become relevant and actionable. This requires difficult trade-offs in exploring and sharing benefits and burdens through a carefully crafted negotiation process. A pragmatic approach to identify enabling conditions – as opposed to mechanistic casual explanations - that is rooted in contextual conditions and rests on the principles of equity and sustainability is a step in that direction.

CANADA

Warren Mabee

Canada Research Chair in Renewable Energy Development and Implementation and Associate Professor at the Department of Geography and Planning with cross-appointment to the School of Policy Studies and the School of Environmental Studies at Queen's University

How can we live without fossil fuels? On June 8, 2015, the leaders of the G7 group of nations backed a goal of eliminating greenhouse gas emissions by the end of the 21st century. If this goal were adopted by every nation on Earth, about 80 per cent of current global energy production would have to be sidelined. To meet this goal would require a re-engineering of our energy infrastructure – and a re-examination of our relationship with energy itself.

The energy systems of our future can't simply replace fossil fuels. They must address inequality in energy availability and cost; today's rich nations will likely have to do more with less power, while the developing nations should rightfully expect that per capita use of energy will increase. It's difficult to say how much energy is enough; some places on Earth simply require more energy to heat homes, or move people, than others. But energy conservation – through better buildings, vehicles, and lifestyles – could make a serious dent in energy demand in the richer nations of the world. One might imagine that per capita consumption of energy in the United States might drop by 50 per cent, while poorer nations in Africa or Asia might see consumption rise by a similar proportion. Such a shift would nearly double the required global energy supply by 2100, to almost 900 PJ per year.

At the present time, renewable energy – plus nuclear power – makes up about 18% of the world's energy supply. To meet future demand as projected above, the effective production of renewables must expand 12-fold. While this sounds unrealistic, consider that production of solar electricity rose from about 25,000 MWh in 2003 to 225,000 MWh in 2014 – a 9-fold increase in just 11 years. Consider also that much renewable power – particularly from wind – currently is lost, as few energy storage options are available. As these options come online, the overall efficiency of wind and solar energy will rise and thus the expansion of infrastructure for power generation need not be as dramatic.

The world can survive without fossil fuels. But the solution requires significant social engineering as well as technical know-how. Our generation needs to make decisions now, to benefit generations to come.

PALESTINE

Jawad Hasan Shoqeir

Director of the Soil & Hydrology Research Unit, Al-Quds University

Throughout human evolution, the relationship with land has been critical. There are critical zones that harbour soil preservation and biodiversity, supporting the food chain. Soil terraces evolved over thousands of years at these critical zones. Soil terraces served small communities covering simple basic needs. Human nature is influenced by factors such as land ownership, conflicts over access and rights, evolving in both space and time. In the process of evolution, critical zones were neglected; habitats demolished, natural forests were replaced by modern pastoralism and large scale agriculture. Fragmented elements of the landscape and habitat which used to give us the sense of happiness no more exist. Therefore understanding of our place in our natural and cultural environment is a question of time and space. **The big question is about the new civilization: What are the values and elements - other than habitat and landscape - that can give us the sense of continuity and understanding of our place in our natural and cultural environment?**

HAITI

Fritz Deshommes

Economist and Vice-Rector for Research, University of the State of Haiti

Scientists are categorical that the climate change is real. It is caused primarily by human action. Its impact irreparably threatens the survival of humanity and the planet. It is still possible to slow the process and improve the quality of life on earth. It is imperative to contain the increase in global temperature below 2 degrees Celsius by the end of the century (2100). At the current rates of greenhouse gas emissions, the increase in temperature is projected to be more than 4 degrees for the same period and perhaps even 6 degrees. This would be a disaster in terms of increase in sea levels, glaciers melting, floods and even disappearance of major cities and the North and South islands, drastic loss of biodiversity, climate destabilization, decrease in food and agricultural production, etc. **The major question is: Can we limit the increase in temperature to less than 2 degrees Celsius? Will we overcome our selfishness, our individual and national interests, our short-sighted view of social, spatial or temporal preference to the common good, the survival of humanity? Will we convince ourselves of the fact that the threats that loom spare neither the rich nor the poor, neither white nor black, neither Christians nor Muslims, neither superpowers nor fourth world, neither islands nor continents? And do this before it's too late? Will we - governments, citizens, states, communities, businesses, researchers, ... - work together, build together for human and social solidarity, respect for nature, preservation of life in all its forms within the framework of the common good of all humanity and the best interests of present and future generations?**

ISRAEL

Michael Lazar

Co-founder and Interim Chairman of the Dr. Moses Strauss Department of Marine Geosciences, University of Haifa

Joint Head of the SeisLab Laboratory for Seismic Interpretation

Can the oceans survive the 21st century? 70% of the planet is covered by water yet only the surface of this vast area is visible. For years, the ocean has been the world's dumping ground. Working under the assumption "out of sight, out of mind", nations have been using the ocean as their personal garbage pail - a place to get rid of dangerous materials that cannot be disposed of on land. **It has been suggested that 250,000 tons of radioactive, chemical, biological and conventional ordinance has been thrown off ships into waters worldwide and some assume that even this is a gross underestimation.** That may not seem like much but let me say it differently: 250 million kilograms of old, rusty bombs, some leaking deadly poisons such as mustard gas. Additional hazardous chemicals are being transferred to sealife as they ingest microplastics from the cosmetics and clothing industries. This then get passed on to us as we eat what little fish are left in the oceans (thanks to over fishing). We are killing off the oceans. We swim in toxic water. We eat poisoned fish. As global warming poses an additional threat, their fate is unclear.

Can art and science really find common ground? Art is influenced by what we see around us. Like science, it is a means of exploring the world we live in, as well as a reflection upon it. The combination between disciplines, while becoming more and more popular these days, is not new. Despite efforts made by scientific bodies like CERN with their prize for artists to create digital art or dance/performance influenced by particle physics, the connection between art and science still remains a "holy grail" – something that is sought after by many but still very elusive. This is in part due to the differences in the expected outcome of each field. **One of the central topics for discussion – and one of the major**

challenges – is how to break down the barriers between the two disciplines to present something that is collaborative, yet neither a sculpture/painting/dance nor a 20 minute lecture or paper in a peer-reviewed journal. A reshuffling of these accepted paradigms by providing new ways of presentation that can be achieved through the combination between the two disciplines will truly bring them together.

BRAZIL

Heline Sivini Ferreira

Professor of Environmental Law, Pontifícia Universidade Católica do Paraná

Will mankind be able to understand that it is an inseparable part of nature?: **By extricating itself from nature and judging itself capable of mastering and modifying it according to its wishes, mankind has disregarded the fact that, ultimately and definitively, damage caused to the Earth is damage caused to humanity itself, as an inseparable part of the environment in which it lives and on which it depends.** In a context of multiple and interrelated crises, the environmental question reflects unsustainable choices and behaviors, emerging as a clear proof of how inconsistent and senseless modern man can be. There seems no other way out: humanity must reconnect with the Earth, make its way back to its origins, and understand that it is neither superior nor inferior, but simply part of the complex and wonderful web of life that does not expire over time.

CYPRUS

Andreas Theophanous

Professor of Political Economy and President of the Center for European and International Affairs, University of Nicosia

The imperativeness of advancing sustainable development: Our complex world today is facing multiple problems and challenges in various countries and regions. These include poverty, injustice, great inequalities, violence, intolerance, ethnic and religious fanaticism, terrorism, violation of human rights, unemployment and serious deterioration of the environment. Currently the huge migrant crisis and the inability to deal with it effectively have been receiving international attention. The magnitude of the problems is such that the definitions of concepts have been changing. For example, in the past security focused more on the state level and on macro issues. Today this definition will be incomplete if we do not include the concept of individual security. These problems and challenges could be addressed under three broad categories: sustainable development, security and governance. I choose to underline the objective of sustainable development because its implementation will also inevitably influence positively the other two important themes. Indeed, the advancement of sustainable development regionally and internationally will improve security, governance as well as the environment. That brings us to the definition of sustainable development. Several thinkers have devoted time to address this issue. Sustainable development goes beyond economic growth as it entails the improvement of the standard of living, equitable distribution and at the same time an upgrading of the sophistication of a society at the collective and individual level. It also entails the existence of an effective health and educational system, as well as offering equal opportunities and guaranteeing human rights and democratic processes. **Sustainable development also entails pursuing policies which will lead to balanced growth and respect for the environment. It is essential that while sustainable development is advanced at the national level, a minimum level of international cooperation should also exist for its advancement. Last but not least, the new paradigm will inevitably entail a new value system at the national and international level which emphasizes quality of life and mutual respect.**

SOUTH AFRICA

Louis Kotzé

Research Professor of Law at the Faculty of Law of the North-West University

Deputy-director of the Global Network for Human Rights and the Environment

Have humans become as powerful as volcanoes? Today there is persuasive evidence suggesting that humans have become a major driving force in modifying the biosphere and moving the Earth and its systems into a critically unstable state, with Earth systems gradually becoming less predictable, non-stationary and less harmonious. The Anthropocene (or epoch of humankind) was recently coined by Eugene Stoermer and Paul Crutzen as a term of art expressing the geological significance of this overwhelming human imprint on the biosphere. Preparatory work is underway to propose the formal acceptance of the Anthropocene to the International Commission on Stratigraphy as a new geological epoch. To do so will require of scientists to find evidence of human-induced environmental change in the fossil record, such as evidence of cities and diversion of waterways, or a warming climate and radioactive traces of nuclear activities, and then to prove that these human impacts changed the way the Earth and its systems operate. If accepted, the proposal will have the effect of amending formal time stratigraphic nomenclature, indicating that humanity's stratigraphic imprint would be discernible to future geologists in the same way that a volcano's imprint on the Earth would be visible to future geologists.

It is highly likely that humanity has already become a geological agent in much the same way as a volcano is; able to change the Earth and its systems, and possibly even to cause a mass extinction as a result of human mastery over nature, limitless consumption, and the many deliberate inter and intra-species hierarchies and vulnerabilities that humans create and that span this generation and well into the future. Together with the realisation that we are powerful geological agents capable of changing the Earth, we will also have to acknowledge our vulnerability and assume far greater responsibility for other human beings, the many non-human constituents on Earth, and the Earth system itself, if we are to survive the Anthropocene. A business-as-usual approach will not do since

the Anthropocene problematic will ultimately require a critical re-interrogation of our social regulatory institutions such as law, economics, religion and politics in a manner and to an extent never undertaken before. Vulnerable humans will have to become responsible agents of change and planetary stewards in the Anthropocene.

BRAZIL

José Goldemberg

Former Rector of the University de São Paulo

Member of the Brazilian Academy of Sciences

Winner of the Lifetime Achievement Award (2013) from the Zayed Future Energy Prize

Will renewable energies be capable of replacing fossil fuels in the 21st century? Renewable energy is obtained from resources that are naturally replenished on a human time scale. In contrast, fossil fuels are exhaustible on the same time scale. All renewables originate in the Sun and will last as long as the Sun itself. Most of them, such as wind, waves, hydroelectric, solar thermal, and biomass result from the radiation incident in the Earth which is thousand times all our energy needs. Furthermore they are available in all continents in contrast to fossil fuels concentrated in a limited number of countries. However the density of the solar radiation is very low and intermittent compared to fossil fuels. These are great challenges that are being solved. Renewables represent today approximately 18 per cent of all energy consumed in the world, half of which in the form of biomass which, in many developing countries, is the sole source of the heating and cooking needs of more than 2 billion people. The other half (fuels and electricity) drive the devices that make our life comfortable such as automobiles, airplanes, motors and telecommunications. Electricity production from solar photovoltaic systems as well as grid-connected wind turbines has been growing at an impressive rate. Between 1998 and 2008 wind electricity grew at an average rate of approximately 30%, while grid connected photovoltaic energy grew by almost 40% “albeit” from a low base value. **Public policies can help the widespread use of renewables. Germany, for example, has a target of 50 percent renewables by 2050 and others such as the United State and China are moving in that direction.**



**FUTURE
SHOCK**

INDIA

Arun Kumar

Former Professor and Sukhamoy Chakravarty Chair at Centre for Economic Studies and Planning, Jawaharlal Nehru University

The most significant issue for the twenty first century is whether mankind will have the wisdom to survive on Earth? The last century has seen massive changes in social, political and economic realms but lacking a long term perspective.

Technology has created a mist for the future leading to short termism and inability to understand the long term consequences of our actions. The speed of change is so great that by the time we realize that a mistake has been made it is too late to correct of it. Technology is outstripping social change.

Consequently, there is growing atomization of people, decline in collective functioning and alienation. The result is deteriorating environment, growing inequity, rise in social strife and failure of governance in many parts of the world. Mankind needs to be circumspect in moving forward.

NIGERIA

Charles Reith

Professor of Natural and Environmental Sciences and Director of Sustainability,
American University of Nigeria

How does humanity prepare for the eventuality that some among us or our successors will live forever...or nearly so? I recently overheard it speculated that the first person to live 1000 years is alive today. If true, this reflects the breathtaking pace of advancement in understanding and arresting aging and degenerative disease, mostly through adjustments in the metabolic environment...pH, anti-oxidants, and rates of neuro-stimulation. Combine the best of pharmaceuticals, nanotechnology, and behavioral modification – diet, yoga, et al – and expect miracles...or at least an increased possibility thereof. Achieving human endlessness is presently not the point. It's how to prepare for it, eventuality or not. Should national policies and prohibitions be set forth – as has been done for cloning and stem cells – to regulate scientific inquiry and experimentation toward the prospect of indefinite prolongation? But wouldn't this limit the field of opportunity and potential for discovery in the broader field of gerontology that will benefit those of us who merely seeking comfort and vigor in our golden years but scarcely dream of immortality? **And assuming that prolongation therapy will be affordable only to a select few, how will the rest of us non-billionaires react to its mere availability? The anticipation of endlessness raises questions that only the shortsighted would evade.**

ROMANIA

Calin Emilian Hintea

Professor and Dean of the College of Political, Administrative and Communication Sciences, Babes Bolyai University

Served as Secretary of State, Head of Strategy Unit for the Prime Minister's Office (2009-2011) of Romania

The most significant question for the 21st century is how societies and governments will succeed to correlate technological development with existing national cultures. Will we be able to modify our perceptions in a coherent way in order to match the new realities? Technology is now progressing at an unprecedented pace. Changes are now visible also outside technical or highly specialized areas such as engineering or medicine. They have a huge impact on a significant number of people (regardless of their economic status or geographical location) through a number of tools and instruments which affect their daily life: social networks, financial transfers, information flow. Proximity is acquiring a new meaning: what seemed distant and irrelevant can become very close and relevant in terms of direct effects on the individual. A crisis in Africa, US or Asia will most likely affect in a direct way the ordinary European citizen who is used to living comfortably in a comfort zone previously untouched by major conflicts. **The most significant challenge is whether national or supra-national communities are capable of accepting that technology has and continues to transform proximity and of integrating in their own culture the changes they are confronted with.** Paradoxically, technology-driven development can lead to even greater cleavages among different communities.

ESTONIA

Wolfgang Drechsler

Professor and Chair of Governance at Ragnar Nurkse School of Innovation and Governance, and Vice Dean for International Relations of the Faculty of Social Sciences, Tallinn University of Technology
Served as Advisor to the President of Estonia

The most significant questions for the twenty-first century are whether Asia will take over full global leadership, and whether Information and Communication Technology (ICT) will so profoundly transform human life that all our basic assumptions about it, from personal-individual to political-social, will have to give way, and will give way, to new ones. Because of its universal significance, I would say that this second question is even more important. **If there would be no autonomous individual in the Kantian sense anymore, not even as an ideal, because one entire point of ICT is that we should not be able to make unforeseeable personal decisions, but just to act in predictable, safe, group-fitting way – and we are already on the way thither – then our world would truly become another one.**

SWITZERLAND

Sergio Bellucci

Managing Director of TA-SWISS

The development of new technologies is getting always faster and faster. If we, for example, look how fast the Internet and new communication technologies are, we realize how those completely changed our daily life within the time period of the last 20 years. For example in the health care sector, in our mobility, in the education-system, in our economy, in our banking-system and so on. **Our wish or ideal is that all these new technologies primarily should bring new positive inputs and an improvement of the quality of our life. Unfortunately there is also “the other side of the medal” and the abuse of new technologies is a big threat for our society.** If we can, for example, think of the misuse of social media or other communication technologies to plan and implement terrorism acts. The big challenge within the development and implementation of new technologies will be to find a feasible way where the benefits will be in the majority, and find a way to eliminate as much as possible the misuse of the development. An increased social debate with a strong sensitization on the benefits and risks on new technologies has more and more to take place. This should lead to finding out where there is an acceptance of new technologies in our society, so that our citizens could ideally decide if they want to use it or not.

U.K.

Anders Sandberg

Future of Humanity Institute at Oxford Martin School, Oxford University

Existential risk - the threat of extinction of humanity or permanent curtailment of human potential - is of paramount moral importance since it threatens not just current lives, but the vast potential of humanity's future. While in the past, humanity was threatened by natural risks such as supervolcanos, pandemics and climate instability, today anthropogenic risks such as nuclear war and biowarfare dominate.

In the near future biotechnology, artificial intelligence and geoengineering can pose existential risks. As our technology gets more powerful, the potential for misuse increases even if it on average improves the human condition. Improving our insight, coordination, ability and protective technologies is hence clearly an urgent and rational aim.

The largest human-caused disasters so far have been wars and democides. While individuals and small groups empowered by new technology may wreck havoc, it is likely that the greater power and coordination abilities of states or state-like actors represent a larger threat to humanity as a whole. The rapid growth of surveillance and automation can empower totalitarian states to an unprecedented degree, while other technological innovations increase the destructive potential of conflicts. Hence finding ways of ensuring good governance, open societies (societies that allow citizens to point out and correct flaws), and tolerance in the face of an increasingly transparent, globalized and multicultural world, is of paramount importance for reducing existential risk.

FINLAND

Heikki Patomäki

Professor of World Politics at the University of Helsinki

Learning determines our future: “Human history becomes more and more a race between education and catastrophe”, wrote H.G.Wells in the *Outline of History* a century ago. By education, Wells meant progressive learning not only by the intellectuals but amongst the common people, based on the most plausible truth claims available. The problem is that there are many types of learning. Through a series of responses and pathological learning processes – reducing resources for future learning – we have seen first a succession of neo-liberal and neo-imperial turns and then, especially during the past decade, various geo-political responses to the alleged imperialism of the others, such as those that co-generated the conflict in Ukraine. Pathological learning processes are associated with a mixture of illusions, understood as local and particular knowledge, in contrast to understanding the totality of social relations and processes. The characteristic illusions include the fallacy of composition (what may be possible for one actor in a given moment is not possible for all or many simultaneously); the narcissism of collective memory (actors only see themselves and their own unique suffering and/or success in the mirror of history); and the Manichean dualism of good and evil (actors are incapable of seeing how their conception of the other mirror images the other’s conception of them). Assaults against free universities and especially social sciences and humanities across the world are exacerbating the problem. **The big question of our time is thus: how can we reverse these developments and learn again to learn in the progressive sense? – before it is too late.**

USA

Norman Uphoff

Professor of Government and International Agriculture, Sr. Advisor, SRI International Network and Resources Center (SRI-Rice)

Core Faculty Member, Cornell Institute for Public Affairs (CIPA)

A huge question that comes to mind is whether, or how fast and to what extent, humankind can make perhaps the biggest paradigm shift since the Copernican Revolution. It took centuries after it was demonstrated that the heavens do not rotate around the earth for us to accept a view of the cosmos in which the very small planet that we inhabit, is part of an immense, unending universe.

The evidence of our senses seemed to confirm the notion that the sun and the moon go around the earth. It took telescopes to provide the evidence which de-centered our cosmology from a geo-centric understanding of the universe, and of our place in it, to a helio-centric perspective. It took a very long time for this latter concept to gain widespread acceptance, along with the view that the earth is not flat. The earlier view persisted not only because of the misleading evidence of our eyes, but because of its implications for Homo sapiens. Should we not pride ourselves for being at the center of the universe?

Humankind is now confronted with a similarly de-centering change in worldview, but in the opposite direction -- not outward to the cosmos, but inward to the infinitesimal scale of microorganisms. Starting a hundred years ago with improvements in microscopes and increasing microbiological research, now accelerating in the past several decades, we have been learning that much of what occurs in the natural realm on earth is driven, constrained, mediated, accelerated, impeded by bacteria, fungi, archaea and other organisms that are as invisible to the unaided eye as the far reaches of the universe used to be.

With some anagrammatic wordplay, I suggest that agricultural enterprise is still viewed and promoted in an ego-centric manner when it would be more appropriate to regard agriculture in helio-centric terms. Rather than being preoccupied with our own actions and interventions, we should be emphasizing -- and then assisting and benefiting from

-- the processes and outcomes that are fueled and sustained by solar energy and its transformations into useful products through biological and ecological dynamics.

An ego-centric agriculture is input-dependent because there is less understanding of human actions as a part of larger processes, in the way that the earth is to be seen as part of the solar system. While human actions are certainly important, they are not as determining as the ego-centric concept suggests. And some of these actions have adverse effects. A helio-centric appreciation of agriculture yields a more ecologically-informed appreciation of the natural cycling of energy from the sun through complex chains of transformation, from photosynthesis upward through trophic linkages to what are considered the higher and highest living forms. These like all others, decrease and decay and remain part of energy and food webs that enable the biosphere to persist.

Most essential to all this are the humble, invisible microorganisms which are the basis for all life on earth. In his momentous book *On the Origin of Species*, Charles Darwin sketched a great tree of life, with microbes at the base and Homo sapiens at the top. I tell my students that this was wonderful taxonomy, but untenable biology. It implies correctly that we evolved from microbes but also, incorrectly, that by becoming more complex we are separate, superior beings, when in fact it turns out that we never left the microbes behind. They reside in us, and we depend upon them fully and profoundly and on their services for our survival and capabilities. It has become recently estimated and widely accepted that there probably are ten times more microorganisms in our bodies than the total number of our own Homo sapiens cells. We are thus not really organisms, but rather consortia, systems, conglomerations.

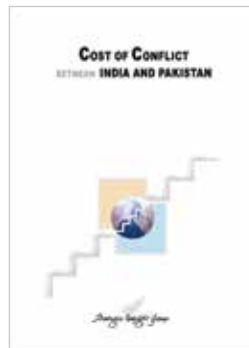
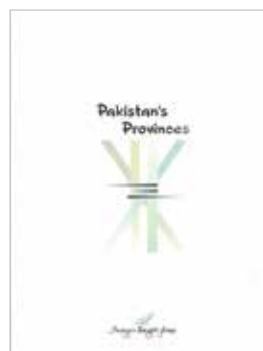
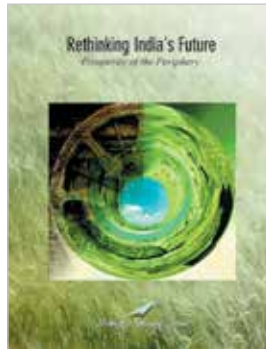
There is still much, indeed very, very much to be learned about the roles and effects of microbes in the plant and animal kingdoms. It took centuries of further research to make the Copernican world view in astronomy as scientifically illuminated as possible. Indeed, discoveries continue to be made. Hopefully our exploration of 'inner space' which is inhabited by invisible life forms -- not extraterrestrials but inner-terrestrials -- will proceed much more quickly.

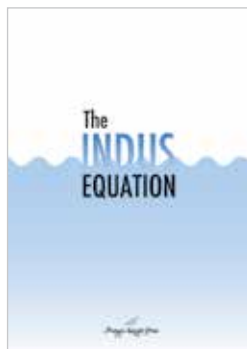
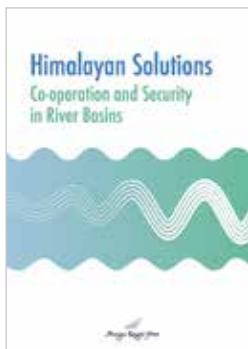
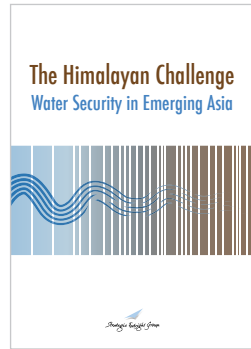
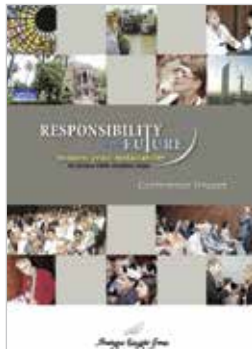
Whether our species can make it through this 21st century will depend on many things. One

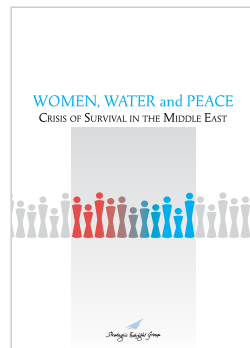
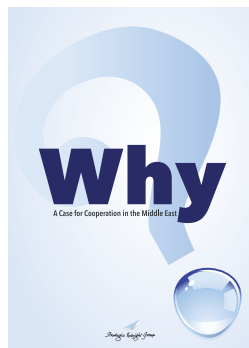
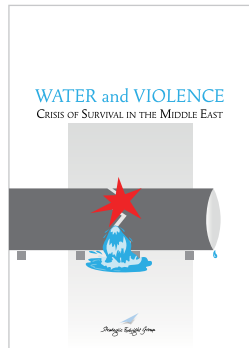
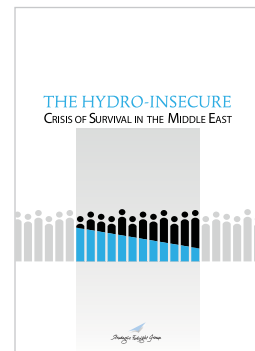
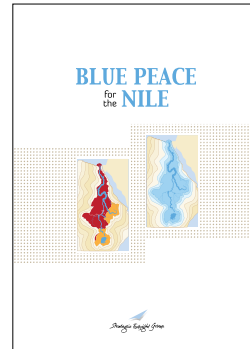
of the most critical areas in which our thinking needs to evolve is to make a mental journey toward an appreciation and understanding of this microbial realm, which is more ubiquitous and more determinant of our lives and well-being than ever imagined. I recall how when I started my life, 'germs' and other microorganisms were all regarded as pathogens, to be wiped out as fully and quickly as possible. That view we now know was rather primitive. There are 'bad guys,' but there are many more potentially 'good guys,' indeed one of their services is to help keep the harmful microorganisms in check.

How soon can we humans correct our current misimpressions? Our misunderstanding of the microbial realm is like a geocentric view of the universe which stemmed from our inability to see and study and reason about phenomena that were beyond our unaided vision. Further advances in food, medicine, environmental sustainability, all depend on such a revision of worldview like that which Copernicus initiated, only micro rather than macro.

PUBLICATIONS







NOTES

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About Strategic Foresight Group

Strategic Foresight Group (SFG) is a think - tank engaged in crafting new policy concepts that enable decision makers to prepare for a future in uncertain times. Founded in 2002 to create new forms of intellectual capital, it has worked with or on over 50 countries, across four continents. SFG analysis and recommendations have been discussed in the United Nations, World Bank, UK House of Lords, House of Commons, Indian Parliament, European Parliament, Alliance of Civilization, World Economic Forum (Davos), and quoted in over 3000 newspapers and media sources. SFG works on three focus areas:

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- SFG has prepared a framework for preventing conflicts over shared rivers between India and Bangladesh with the involvement of major political leaders from both countries.

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