"IT IS ABSURD TO BELIEVE THAT EVERYTHING IS GOING TO CHANGE, BUT POLITICS WILL AND CAN REMAIN THE SAME"

Y. Dror, "Avant-garde Politician"1)

"It is time to turn our backs on the unilateral search for security, in which we seek to shelter behind walls. Instead, we must persist in the quest for united action to counter both global warming and a weaponized world. ... To survive in the world we have transformed, we must learn to think in a new way. As never before, the future of each depends on the good of all."

— Nobel laureates 2000. Transform Our World! — The UN Agenda 2030

IDENTITY

How do we identify ourselves? Various polls show that people identify by nationality (about one third), by religion (about one fifth), by belonging to a specific sovereign nation state, by belonging to a certain class and by belonging to their profession. Often persons identify themselves in several ways, e. g. belonging to a particular sovereign nation state and identifying themselves as citizen of the EU, and sometimes people even change their identifications.

Socio-political structure of our contemporary world is composed of about several thousand different cultures (different languages and ethnic groups) and of about 200 states. As our existence and our development crucially depend on biodiversity, analogously cultural diversity is essential. The UN system lists 206 sovereign nation states: 193 are UN members, 2 are observers and 11 are 'others'. For 16 out of 2016 their sovereignty is disputed, among them there are even 6 member

^{*} World Academy of Art and Science, Croatian Academy of Sciences and Arts Montenegrin Academy of Sciences and Arts

states. The number of UN members varied from 51 in 1945 to 193 today (1955: 76 members, 1965: 117, 1975: 144, 1990: 159, 2000: 189). Often the term nation-state is used, but none of them was, is and never will be composed of one single ethnic group. Nor it should. Hungarian king Stephen (Szent Istvan, 975–1038) claimed that each state should be composed of many ethnic groups. Migrations will certainly enforce multiculturalism even more. Universities in China during Tang dynasty were multicultural, as was Paris University in the Middle Ages and of course, as most leading universities and research institutes are today. Therefore 'nation' is not identical to 'ethnic group'. Sovereign nation-states are now under assault from both above and below. In a global world a large fraction of politics is determined by global actors: the UN, the IMF, the World Bank, the WTO etc and even by regional actors, e. g. EU — and it has to be so and we want that. Intertwining sovereign states, cultures, ethnic groups and global dimension forms tensions within contemporary socio-political structure which clearly "cannot be solved by using the same kind of thinking we used when we created them" (A. Einstein)

Class identity dominated socio-political discussion during hundred years from mid 19th to mid 20th centuries. Marx argued that proletariat (wage-earner, in ancient Rome 'proles' — those having only off-springs) will eventually form a classless society. Analyzing various elections it is hard to conclude that proletariat is a revolutionary class. It is often quite conservative and in Marx terms even 'reactionary'. Contemporary society has formed another class — 'precariat' name derived from precarious and proletariat. Their condition is best described by Pope Francis "Masses of people find themselves excluded and marginalized: without work, without possibilities, without any means of escape. Human beings are themselves considered consumer goods to be used and then discarded. We have created a "throw away" culture. It is no longer simply about exploitation and oppression, but something new: The excluded are 'the outcast', the 'leftovers'", and he rightly concluded "This economy kills!"²⁾

Enormous inequalities and their disastrous effect on humankind even Marx and his followers could not imagine. In 2010 388 billionaires were as rich as 3.5 billion person. In 2015 it was just 62 billionaires and now eight billionaires have as much as half of humankind. In OECD countries the ratio of wealth of the 10% richest vs. 10% poorest increased from 7.0: 1 in 1980 to 9,0: 1 in 2000 and to 9.6: 1 in 2015³⁾. Large inequalities destroy social cohesion, freeze manufactured capital, decrease GDP/c, have no 'trickling down effect but cause 'sucked upwards' effects. All social indicators deteriorate as inequality increase ⁴⁾.

Our essential identification was, is and always should be: human beings. "Remember your humanity, and forget the rest!"

HUMAN BEINGS AND SOCIETAL SINGULARITY

Evidence for first homo sapiens has been recently discovered in Morocco and it is dated to be about 300,000 years old. Most of our existence on this planet we humans were hunter-gathers and our behavior is largely determined by that period. It is expected that our 'politics' is largely shaped by that period, while scientific

research is developed only through the last few thousand years and it is cumulative — adding, modifying and correcting previous knowledge. (This is why a high school pupil today knows more physics than Einstein did.) The title of the book by J. Avery 'Space-age Science and Stone-age Politics' does make sense, as do statements by the Swedish chancellor Axel Oxiensterna 'Behold, my son, with how much stupidity is the world politics done!' as well as Thomas Balogh's claims that knavery (rascality) more than foolishness and cupidity (greed) more than stupidity are responsible for world's trouble.

Humans are rational and irrational beings. Their lives are encompassing reality, but also what is perceived, and what is potential ⁵⁾. For instance, our economic life revolves around real world GDP of about \$80 trillion, but also about \$1,000 trillion in virtual economy. Our health includes real diseases but also imagined, fancied, we use medicine but also placebo, panacea and 'agents' that do not have any proven positive effect on our health. Politics involves everything: reality, fake-truth and untruth, perception, potentiality and theater. Politicians frequently avoid politics and reduce to theater (Therefore, history can hardly be based just on archival records. It is more complex than that, if the aim is to evaluate historical trends and consequences rather than only listing events.) All of that is superimposed on fast changes ⁶⁾, and people do not like it, as the Edelman Trust barometer (January 16, 2017) concluded that 53% of respondents claimed that the pace of change is too fast.

How should we live to successfully cope with these challenges? Aristotle recommended life of pleasure, life of political activity and philosophy — eudaimonia: good of all good. What do we mean by 'political activity'? In a letter to Bishop Mandell Creighton Lord John Acton wrote on April 5, 1887: "Power tends to corrupts, absolute power corrupts absolutely. Great men are almost always bad men even when they exercise only influence and not authority." Similar thoughts have been expressed by William Pitt the Elder, Earl of Chatham and British Prime Minister from 1766 to 1778 in a speech to the House of Lords in 1770: "Unlimited power is apt to corrupt the minds of those who possess it". Erasmus said that the difference between a common robber and Julius Caesar is that Caesar killed more people. In 'The Present Moment' (1796) F. Schiller wrote: "Our century has given birth to a great epoch, but the great moment finds a stunned generation and even more stunned politicians".

In his Farewell Address in 1796 G. Washington warned Americans "to be constantly aware" to the risk of foreign influences through propaganda. Joseph Göbbels was famous for using propaganda and lies. During the Cold War in 1982 Yuri Andropov, then the KGB head, asked his team to spread disinformation and to influence public opinion. Clearly, these attempts did not succeed to appreciably influence American elections at that time. Oxford Dictionary declared post-truth the word of the year 2016. The word 'post-truth' was first used in 1992 in magazine Nation by Steve (Stojan) Tešić writing about Iran-Contra scandal "we, as free people, have freely decided that we want to live in some post-truth world." 'Post-truth' was used 10 years ago, but its use increased by 2000% from 2015 to 2016 reflecting that objective facts are less influential in shaping public opinion

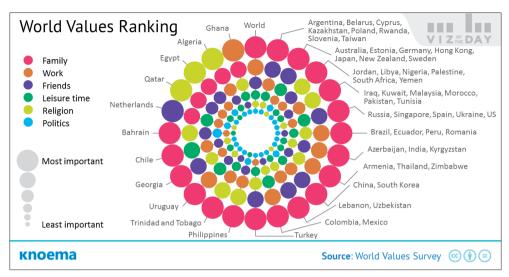


Fig. 1. World Value Survey (Ref. 7)

than emotional appeals. Planned newspaper 'Tomorrow' that will publish 'all the truth and little more' is described by Umberto Eco in his novel 'Numero Zero' published in 2015. Facts seem to be fluid. Senator Daniel Patrick Moynihan was naïve when he said: "Everybody is entitled to his own opinion, but not to his own facts." In addition to fake news and post truth facts are distorted by omission and paltering. We react to threats and fear by denial and delusion, we believe in absurd statements (recall the famous "Credo quia absurdum est" by Tertullian 203–206), but do not forget that quantum physics and theory of relativity took us beyond our common sense. "There is a large proportion of the population in the US living in what we would regard as an alternative reality," says Lewandowsky. "They share things with each other that are completely false. Any attempt to break through these bubbles is fraught with difficulty as you are being dismissed as being part of a conspiracy simply for trying to correct what people believe. It is why you have Republicans and Democrats disagreeing over something as fundamental as how many people appear in a photograph."

The World Value Survey⁷⁾ covers over 90 countries. It started in 1981 and the last, seventh wave started in 2017. In the sixth wave it asked 73,000 people in 57 countries whether democracy is a good system and 92% replied positively, but many asked for a strong leader 'who does not have to bother with parliament and elections'. Strangely, the World Value Survey (Fig. 1) ranks politics as the lowest value.

We are approaching *societal singularity* where artificial intelligence is reaching human intelligence at least the rational one. (Alan Turing Test: If the evaluator cannot reliably distinguish the machine from the human, the machine is said to have passed the test, i. e. considered equal to the human being.) Robots will soon become dominant inhabitants of our Earth. Actually robots are with us already. Robotics industry is expected to increase at a rate of almost 10% for at least the next decade. International trade of industrial robots increased by 60% between

2002 and 2012. Textile factory using robots and 140 workers now, required 2,000 workers in 1980 to assure the same level of production. Automation technology is more efficient and competitive than outsourcing. In 2014 the World Academy of Art and Science devoted a session of its international conference 'Transition to a New Society' (Montenegrin Academy of Sciences and Arts, Podgorica, 2014) to Humans and Machines and discussed how our economy and laws will and have to change due to robots coexisting with humans. Bill Gates argues that since robots take our jobs companies using robots should pay taxes. Japanese Prime Minister Shinzo Abe announced 'Robot Olympics' in 2020 and plans to triple the Japanese robotics industry.

Everything is changing and will change, possibly more and more rapidly. Through 250 years industry developed from Industry 1.0 (1784: steam, water, mechanics), Industry 2.0 (1879: electricity) and Industry 3.0 (1969: electronics, automation, ICT) to Industry 4.0 (artificial intelligence, cloud-computing, big-data, 3 D and 4 D printing, synthetic genetics, quantum technologies, robotics, space travel). Possibly, classical industrial production will be unnecessary, since the advanced 3-dimensional printing will allow for printing of complex products at home, so most of the distribution channels from a factory in the land with cheap labor to the supermarket store will not be necessary. Now 4 D printing is coming: products that will be able to modify themselves in time. The most important component will be the algorithm for printing. Similarly, machines would perform other daily tasks, and their performance would depend on the algorithm. Likely by 2040 "human body 3.0" will be developed that could change its shape and organs could be replaced by superior cyber implants. In few decades our world will in addition to natural species be composed of robots, cyborgs (cybernetic organisms) and humans 3.0, and possibly chimeras. Most technologies have dual-use, many can be misused, many have been and are misused. Our ignorance is responsible for misuse of science and technology. It is a race among actions, failures, mistakes, blunders, research, knowledge, science, education and wisdom — and art. Frank Zappa wrote "Information is not knowledge. Knowledge is not wisdom. Wisdom is not truth. Truth is not Beauty. Beauty is not love. Love is not music. Music is the best...". Our survival, our existence and our development crucially depend on research, artistic activity and education. Contemporary world is not sustainable and it is on a brink of disaster. It is changing, but only some changes can and will assure our survival and sustainable development.

On the occasion of the 40th anniversary of the publication of the Limits to Growth and the 100th anniversary of the sinking of the 'RMS Titanic' The Club of Rome launched the initiative 'Change the Course'. However, is it enough to change the course, to avoid pitfalls? Are we facing the situation where our destination is no longer the harbour of New York, and we are not travelling across the Atlantic Ocean, maybe not even on board of 'RMS Titanic'. Possibly, not only that we are facing paradigm change, but paradigm has changed already, it will continue to change and we navigate through that totally unknown medium constantly undergoing paradigm changes.

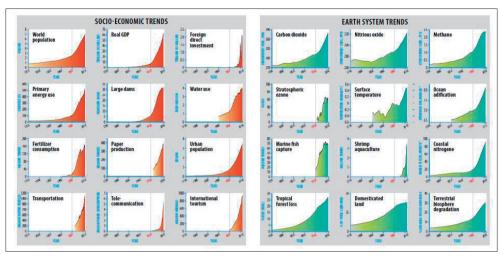


Fig 2. (Ref. 6). Global Change of the Earth System

Our economic, social and political structures and laws developed (we as individuals and society made them) in a world that no longer exists. Systems that we have, though non-sustainable, had many virtues — and they have to be preserved to some degree. For instance, sovereign nation states can and should be blamed for wars and for democide, but they have to be credited for creating conditions for flourishing of art and science, for maintaining and developing culture, and for economic development. For a long time they have assured security — the reason they were established for. Should our economic, social and political laws remain as they are or should we change them? And which one, and how? Can we change them? Are forthcoming changes incremental and/or paradigmatic? Will these changes produce the final outcome — the end of history? Or we are entering an era of long-term paradigmatic changes?

It is very likely that several forthcoming human generations are faced with and will be producing paradigmatic changes. What are the guiding determinants and what are and should be the guiding principles of forthcoming changes?

Institutions that we have established also changed and we continue to modify them.

Our world is the best ever: highest quality of life, longest life expectancy, highest education, most developed economic, political and social systems and we are healthier, we have more knowledge, possibly understanding, than ever. In so called "good old times" not even kings lived better as example of the 18th century Russian czar Peter the Great demonstrates: out of 12 children Peter had with his wife Catherine (who after his death succeed him) only two survived the age of 10. Similarly, English king Edward I and his wife Eleanor had 16 children in 13th century, and only 6 lived longer than ten years. The German weekly 'Der Spiegel' published a series of article under the title "In the old days everything was worse". Figure published on October 16, 2016 shows a significant reduction of global poverty from

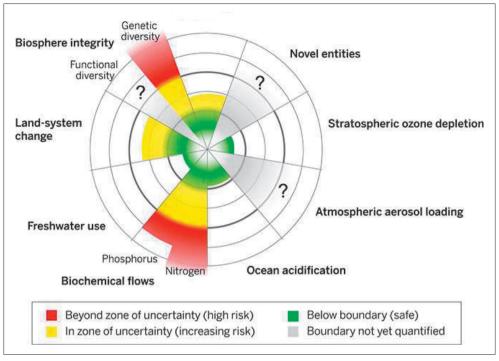


Figure 3 (Ref. 8). Climate change

1820 when over 90% of population lived in poverty, in 1970 the percentage was reduced to 60% and in 2015 to less than 10%. In absolute numbers: it was 1.022 billion in 1820, 2.218 billion in 1970 and 706 million persons living in poverty in 2015. Racism, gender inequality and colonization are largely eliminated. Slowly but definitely we all realize and accept that 'all human beings are truly equal' and not only 'white male property owners'.

However, contemporary world — the world as it is now — is not sustainable and it is self-destructive: destroying human, social and natural capitals. Fig. 3⁸⁾ shows domains where humans have overshot the natural boundaries. It estimates how the different control variables for seven planetary boundaries have changed from 1950 to present. For more than half a century military power of few sovereign nation states as well as the activities of several terrorists' groups sometimes linked with international crime constantly threaten our very survival.

TRANSFORM OUR WORLD

To survive we need to transform our world. The UN General Assembly unanimously adopted the Agenda 2030: Transforming Our World — the Sustainable Development Goals ⁹⁾. Contemporary world is rapidly changing, it is interdependent and it is necessary to transform it urgently. The Agenda lists 17 goals and 169 targets. The analysis by the International Council for Science (ICSU) demonstrates

that goals and targets are compatible and harmonious ¹⁰⁾. Transforming our world requires a new paradigm: human- and humanity-centered. More than half a century ago the Russell-Einstein Manifesto (July 9, 1955) calls "Remember your humanity and forget the rest!" The realization of the humanity-centered world is our most important and imminent task. It demands active involvement of all stakeholders: sovereign states, international organizations, academies, universities, research and art centers, businesses, civil society organizations, religions and most notably all citizens. It requires new, out-of-the-box ideas, requires appropriately changing our behavior and requires adequate political decisions. Politics permeates all these activities. "Politics", wrote Aristotle in his Nichomachaen Ethics, "is the master science of good" of good that benefits the society. Assuring the survival and the sustainable development of the humanity is the supreme value — good that benefits the society. New ideas are mainly expressed by individuals, but wisdom is expressed by the crowd¹¹⁾.

OUR SUCCESSES AND OUR FAILURES

The Paris Agreement on Climate Change (COP 21) was negotiated by representatives of 196 parties at the 21st Conference of the Parties of the UNFCCC in Paris and adopted by consensus on 12 December 2015¹²⁾. As of September 2017, 195 UN-FCCC members have signed the agreement, 162 of which have ratified it. It was reconfirmed by the Marrakech COP 22. The agreement enters into force when 55 of the parties deposit their ratification, accounting for at least 55% of GHG emission. On October 5, 2016: 100 countries deposited their ratification, accounting for 69.48% of the global GHG emission. The Agreement went into force 30 days later, i. e. on Nov 4, 2016, since the requirement: ratification of 55 countries emitting more than 55% of global greenhouse gasses was satisfied. As of August 4, 2017 195 countries signed the Agreement and 158 ratified it accounting to 86.14% of global GHG emission. On June 1, 2017 D. Trump announced the intention to withdraw the USA from the Paris Agreement. Article 28 of the Agreement permits a party to withdraw, but the earliest the USA could leave the Agreement is November 4, 2020. The USA emits 17.89%, China emits 20.09%, the Russian Federation 7.93% (signed but not ratified), Japan 3.79% and Germany 2.56 of the GHG. The Addis Ababa Action Agenda of July 2015 provided financial basis for development. Despite Donald Trump's announcement to exit the Paris Agreement, the world seems determined to make a change. At the first meeting of the "global covenant of mayors", the mayors of 7,453 cities, representing 680,448,966 people worldwide have confirmed their commitments to the climate goals set before Trump's election into office. Immediately after Trump pledged to withdraw from the global Paris Agreement, over 250 mayors representing 59 million Americans, vowed to follow the Paris Agreement, bypassing the White House. This quick reaction proved to be a sign of things to come, as more and more mayors worldwide express ambitions beyond their own nation's contribution. Notwithstanding these significant achievements, programs of most of the governments of sovereign states are far from adequate. Realization of the Paris Agreement is progressing very slowly.

In his speech at the Nazarbayev University in Astana, Kazakhstan on September 7, 2013 President Xi JinPing introduced the One Belt, One Road (Yi dai, yi lu) Initiative — now Belt-Road Initiative ¹³⁾ assuring a huge financial support backed by University Alliance of the Silk Road, a considerably larger, more comprehensive and more inclusive than even the Marshall Plan.

Nuclear weapons — unlike chemical weapons, biological weapons, anti-personnel landmines and cluster munitions — are not prohibited in a comprehensive and universal manner. The Non-Proliferation Treaty (NPT) of 1968 contains only partial prohibitions, and nuclear-weapon-free zone treaties prohibit nuclear weapons only within certain geographical regions. The Treaty on the Prohibition of Nuclear Weapons, or the Nuclear Weapon Ban Treaty 14, is the first legally binding international agreement to comprehensively prohibit nuclear weapons, with the goal of leading towards their total elimination. It was passed on July 7, 2017. In order to come into effect, signature and ratification by at least 50 countries is required. For those nations that are party to it, the treaty prohibits the development, testing, production, stockpiling, stationing, transfer, use and threat of use of nuclear weapons, as well as assistance and encouragement to the prohibited activities. For nuclear armed states joining the treaty, it provides for a timebound framework for negotiations leading to the verified and irreversible elimination of its nuclear weapons program. According to a mandate adopted by the UN General Assembly in December 2016, negotiations on the treaty began in the United Nations in March 2017 and continued from 15 June to 7 July 2017. In the vote on the treaty text, 122 were in favor, 1 voted against (the Netherlands), and 1 abstained (Singapore). 69 nations did not vote, among them all of the nuclear weapon states and all NATO members except the Netherlands. Though I strongly support the concept of NATO and I consider that it has an important role in the world which is no longer bipolar, the behavior of almost all NATO countries (except the Netherlands) shows they are still in the time of half a century ago. The 2017 Nobel Peace Prize was awarded to International Campaign to Abolish Nuclear Weapons (ICAN). This is the fifth Nobel Peace Prize awarded to eliminate weapons of mass destructions: in 1985 to International Physicians for Prevention of Nuclear War, in 1995 to the Pugwash Movement and its President Sir Joseph Rotblat, in 2005 to IAEA and M. El Baradei and in 2013 to Organization for the Prohibition of Chemical Weapons. Abolition 2000 — a global network to eliminate nuclear weapons (110 organizations and over 200 additional civil society representatives from 44 countries) in September 2017 called on 'DPRK and the USA to step back from the brink of war'.

These are remarkable achievements following many others: decolonization, end of the Cold War, fairly successful and stable UN system, spread of democracy and freedom, 115 countries (39% of world population) are included in the weapons of mass destruction (WMD) free zones and numerous successful treaties (e. g. ozone Montreal Protocol, agreed 1987, entered into force 1989), land-mine Ottawa Treaty (1997 \rightarrow 1999), Biological weapon convention (1972 \rightarrow 1975) and Chemical weapon convention (1993 \rightarrow 1997).

This is the best world, but there are also very disturbing trends. The Doomsday Clock is at 2.5 minutes to Midnight and potential conflict in Korea as well as starting of the New Cold War would put it closest to Midnight than ever. Freedom in the World 2017¹⁵⁾ opens with: "All developments point to a growing danger that the international order of the past quarter century — rooted in the principles of democracy, human rights, and the rule of law — will give way to a world in which individual leaders and nations pursue their own narrow interests without meaningful constraints, and without regard for the shared benefits of global peace, freedom, and prosperity". After years of major gains (1986: free/partv free/not free = 34%,34%,32%; 1996: 41%,31%,28%; 2006: 47%,30%,23%; 2016: 45%,30%,25%) the share of free countries declined from 47% (2006) to 45% (2016) and of not free increased from 23% to 25%, and by population in 2016 of 7.4 billion people: 39% lived in free countries, 25% in partly free and 36% in those that are not free. During 11 years number of countries that declined vs. those that improved deteriorated: Declined/Improved: 2006 = 59/56, 2009 = 67/34, 2014 = 62/33 and 2016 = 67/36. The largest decline in 10 years was in Central African Republic (not free): it declined by 30 points (maximum points 100), Turkey (partly free) declined by 28 points, Hungary (free) by 18 points and Afghanistan by 10 points. There were setbacks in political rights, civil liberties, or both, in a number of countries rated "free" by the report, including Brazil, the Czech Republic, Denmark, France, Hungary, Poland, Serbia, South Africa, South Korea, Spain, Tunisia, and the United States. Among the 195 countries assessed in 2017, 87 are free, 59 partly fee and 49 not free.

The BBC/Gallup International Poll questioning more than 50,000 people in 68 countries in 2005 found that 47% consider the election in their countries to be free and fair, but 65% consider that their country is not governed by the will of the people. Moreover, in all regions of the world people consider that their countries are not governed by the will of the people — the worst is in Middle East and Latin America with 82% and 78%, respectively, and even in the EU and the North America with 61% and 53%, respectively, the situation is not good. Recent Ipsos Public Affairs on February 6, 2017¹⁶⁾ concluded that 37% consider that their country is going in the right direction vs. 63% in a wrong direction. Only in seven countries: China, Saudi Arabia, India, the Russian Federation, Argentina, Canada and Peru people consider that their country is going in the right direction: China 90%, Saudi Arabia 80%, India 76%, Russian Federation 58%, Argentina 56%, Canada and Peru 50%, while in the USA 65% consider that the country is going in the wrong direction, as in Germany 68%, Japan 57%, Hungary 81%, Italy 82%, Brazil 83% and South Korea 87%. In my own country Croatia 73% considers that the country is going in the wrong direction. Results for the USA are confirmed by the Rasmussen Report, September 4, 2017¹⁷⁾.

Voter turnout at parliamentary elections from 1970 to 2013 fell from about 60–90% to 45–70%. Similarly political party membership dropped from 10–20% to just few percents. Moises Naim calls political parties endangered species ¹⁸⁾. He argues that democracy needs "political parties — permanent organizations that earn political power and govern, that are forced to articulate disparate interests

and viewpoints, that can recruit and develop future government leaders and that monitor those already in power... political parties are the training camps of these leaders." However, not all schools, not all universities are good, some are submediocre. Many present political parties are breeding corrupt, incapable political leaders. "Everything we do — eating, reading, shopping, dating, traveling and communicating — was disrupted by new technologies. Everything except the way we govern ourselves. We need a disruptive innovation that pulls democratic parties into the 21st century."18) A YouGov opinion poll of British voters in 2012 found that 62% of those polled think that "politicians tell lies all the time". In his essay "Can Leaders Tell the Truth and Still Remain Leaders?" Donald Michaels pointed out that we suffer from leaders who are afraid to acknowledge the existence of certain major problems because they are reluctant to admit that they do not know what to do about them. Consequently the problems do not exist in their political sphere. For many years the environmental devastation due to the use of fossil fuels has fallen into this category in North America. Unable to face real problems politicians focus on 'pseudo-issues' and on 'ancient' problems. It is a sad commentary on our leadership. Otto von Bismarck said "Politics is the art of possible." and a natural consequence is the compromise. However, compromise does not always lead to a good result. Yascha Mounk and Robert Foa studied whether citizens consider that democracy is vital for their country. The percentage of citizens considering that democracy is vital dropped from about 70% in 1930 ties to about 25% in 1980 ties. "Elections developed in a totally different context (time of the American and French Revolutions). ... In years after WWII western democracies were dominated by large parties. During 80 ties and 90 ties market became dominant. In 2004, the British sociologist Colin Crouch came up with the term "post-democracy" to describe this new order 19) "Under this model, while elections certainly exist and can change governments, public electoral debate is a tightly controlled spectacle, ... considering a small range of issues. The mass of citizens plays a passive, quiescent part, responding only to the signals given them". Elections are the fossil fuel of politics. Whereas once they gave democracy a huge boost, much as oil did for our economies, it now turns out they cause colossal problems of their own. If we don't urgently reconsider the nature of our 'democratic fuel', a systemic crisis awaits. If we obstinately hold on to a notion of democracy that reduces its meaning to voting in elections and referendums, at a time of economic malaise, we will undermine the democratic process."20)

Politicians and rulers "focus on current issues, often discounting the future, are beholden to tribal loyalties, lack understanding of the issues posed by surging science and technology, are unable to reconsider clearly dysfunctional values and goals... Far too many are morally corrupt giving more weight to staying in power and enriching themselves than coping with important issues... Many inadequacies of political leaders are imposed on them, e. g. coalition governments, exaggerated judicial interventions, dependence on capital and various interest groups, mass media pressure, populist psychology,... global processes beyond their control."²¹⁾

One reason why many democracies fail is that they emphasize election (emphasizing the winner — the majoritarianism) and neglect other essential features

of democracy, e. g. checks and balances. Madison argued "You must oblige the government to control itself." The notion of limited government was also integral to the UN Charter (1945) and the Universal Declaration of Human Rights (1948) establishing rights and norms that countries could not breach even if majorities wanted to do so. An old Chinese story tells that the best rulers are those we even do not know they are governing.

Leaders, rulers evolve from and depend on the people. "The power of kings and magistrates is nothing else, but what is only derivative, transferred and committed to them in trust from the people, to the common good of them all, in whom the power yet remains fundamentally, and cannot be taken from them, without a violation of their natural birthright." (John Milton) and "We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights ...To secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed. Whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it." (Declaration of Independence 1776) This was appreciated by the founding fathers, and Madison wrote about tyranny of the majority. Even worse is the tyranny of the elected minority. The worst is the totalitarian regime — tyranny of minority that grabbed the political power.

Political system in free democratic countries has many shortcomings (e. g. drawing constituency boundaries — gerrymandering. The word comes from the name of Massachusetts governor Elbridge Gerry redrawing election districts in 1812) and in addition new failures are appearing: the huge influence of money. There are more than 20 lobbyists per congressperson in the USA. In 2016 candidates running for a federal office in the USA spent \$6.4 billion on their campaigns, while lobbyist spent \$ 3.15 billion to influence the government, both sums twice as large as in 2000. Since the Supreme Court ruling in 2010 campaign spending is even less restricted and many political scientists in Europe describe the American system as 'legalized corruption'. Still the USA is ranked 18th on the Transparency International 176-countries Corruption Perception Index. According to Reuters congresspersons can spend as much time on fund-raising as on legislating. Many claim that there is a large democratic deficit in the EU, e. g. decision to introduce euro was done by technocrats and only two countries had referendums: Denmark and Sweden and both voted no. During the euro-crisis the euroelite forced Greece and Italy to replace democratically elected leaders with technocrats, which led to surge of populist parties in Europe.

Millennia ago rulers could be clearly identified. Not today. "Currently heads of large companies, outstanding scientists, few celebrities and social leaders often exert considerable influence and politicians are running after them. Various forms of violence are shaping politics. ...The dictum of von Clausewitz that 'war is a continuation of politics' is increasingly incorrect. Instead politics is trying to catch up with various forms of 'war' such as escalating cyber-attacks without success. Paradigm-changing thinker such as Marx and Freud have changed the world more than political leaders and some books, such as 'Uncle Tom's cabin' and 'Silent Spring' had more profound impact on public values than any politician, not to

speak about A. Einstein and the nuclear bomb. However, the fateful choices faced by humanity... are beyond the authority of markets, scientists, technologists, social movements, preachers, etc. And leaving them to the drift of non-steered historical process is a sure way to disaster... Fateful choices have to be made by political leaders... Plato's idea that "philosopher should serve as rulers... makes philosophers ipso facto 'politicians'"²¹⁾ At the Athens Democracy Forum, September 2017 Kofi Annan said "Today we have lots of little men in high places and they do not always seem to understand the risk we are in. All that is needed is one miscalculation and all bets are off."

Alexis de Tocquille pointed out that democracies always look weaker that they really are: they are all confusion on the surface, but have a lot of hidden strength. Democracies are better than autocracies at finding creative solutions to problems and rising to existential challenges though they often take a while to zigzag to right policies. It is this time scale difference that poses a severe challenge to contemporary democracy. Problems are compounded by conflicting signals, e. g. polls indicate that so called leaders have very low approval and yet some economic indicators, e. g. stock market indicators increase. James Madison and John Stuart Mills regarded democracy as a powerful and imperfect mechanism.

LEADERSHIP FOR SURVIVAL

To survive we need to initiate, propose, generate out-of-the-box ideas and even carry them in the initial phase. Obviously, we need a leader, leaders — not the leader. Recently, fellow of the World Academy and member of the Club of Rome Yehezkel Dror outlines basic characteristics for a contemporary leader ^{1,21)}. Stimulated by Dror's and Harlan Cleveland's publications I will outline my views on leadership required for our survival. Leaders have to be compassionate, humble and with out-of-the-box ideas. They need long-term and global vision and they have to be concerned for human welfare. They have to actively strive for humanity betterment. Compassion is clearly an absolute requirement for politics, since politics — as Aristotle emphasized — deals with the common good and also good for a particular segment of the society. Clearly, humanity survival depends on a few crucial numbers: our global world, about several billion people (currently 7.5 billion, Earth could possibly sustain twice as many, but not five times as many), several million different species and several thousand different cultures organized in numerous socio-economic-political structures: sovereign states, trans-nationals, NGOs, IGOs, academia, universities, schools, religions, etc. Politics has to assure understanding and harmony among all these stakeholders and among compassions for these different segments. The basic law included in all major cultures and religions is the Golden Rule, and it is imbedded in our genetic code.

It may seem that humility contradicts the very concept of leadership. However, compare a field that is much simpler than politics — physics. Whenever physicists arrogantly stated that they know everything they proved to be totally wrong — e. g. two minor clouds of Lord Kelvin turned into a new paradigm initiated by quantum physics and theory of relativity, and the Standard Model possibly accounts

just for less than 5% of our universe. Leadership is not guaranteed by being always correct (Einstein's greatest blunder in his narrow field of expertise), but only by new out-of-the box ideas, by understanding and being engaged in active compassionate endeavor leading to betterment of the entire humanity.

Arrogant, narrow-minded, short-term and stupid selfish interests focused persons hardly qualify for leading political roles. They will always hinder and obstruct any progress. Nevertheless, they are part, an unavoidable segment of the entire political system and it is necessary to structure that system in such a ways that they do least damage. The legal structures of sovereign nation states and international legal system are developed just to assure human rights, human- and humanity-centered political life within which social and economic lives are developing. Unfortunately, just since the world is changing so rapidly (ICT development doubles within less than two years, overall scientific results double within few years, etc.) the necessary changes in the laws (any parliamentarian knows that it takes at least few years to formulate and pass and implement any law) always lag behind what is necessary. Rule of law is essential, but it is not to substitute for the entire political leadership.

Harlan Cleveland wrote a book "Nobody in Charge"²²⁾. Actually, it emphasizes that all are responsible and thereby all are in charge. Democratic distribution of leadership could be a new system of governance and leadership for a rapidly changing world leading to more agile teams that turn everyone into a leader. Such a system is called 'holacracy' and scientific research is an example of 'holacracy'. It is claimed that holacracy increases agility, efficiency, transparency, innovation and accountability within an organization. It encourages individual team members to take initiative and gives them a process in which their concerns or ideas can be addressed. The system of distributed authority reduces the burden on leaders to make every decision. Holacracy is obviously not a general model and on a theoretical level many aspects are unclear, e. g. who are 'the customers' and how is their 'voice' heard. Rather than dwelling on theoretical framework of holacracy we will outline few interesting cases of democratic distribution of leadership.

First, on February 14, 1797 British fleet led by Admiral Sir John Jervis faced a much stronger Spanish-French fleet under Admiral Don Jose Cordoba y Ramos in a battle at Cape St. Vincent. Captains Horatio Nelson, Thomas Troubridge and C. Collingwood acted against clear rules but by their maneuvers British won. Admiral Jervis, who could not see what was happening, when he realized what Nelson, Troubridge and Collingwood did was enthusiastic and congratulated them.

Second, four experiments at LHC of CERN include several thousand researchers from different institutions/countries and thousand support staff operating several billion euros without chief executive officers and any hierarchical structure. Yet it is clear who should receive the Nobel Prize as the 2017 Nobel Prize in physics awarded for gravitational wave detection demonstrated.

Third, the World Academy of Art and Science (WAAS) includes over 500 fellows, associate fellows and junior fellows and they come from about hundred different countries from all continents. Many of them never met. The WAAS founding fathers envisioned the Academy to be an active organization: 'Leadership in

thoughts that leads to action', rather than just an organization based only on meritocracy. Preceding 'the UN Agenda 2030' the WAAS formulated during 2010–14 its program: new economic thinking, full employment, lifelong education and peace and harmonious relationship among sovereign nation states, among ethnic group, among cultures and among religions — essentially all 17 sustainable development goals.

Why democratic distribution of leadership worked in these cases? The goal was clear: defeat the enemy, find the Higgs boson, assure leadership in thoughts and assure actions. This was based on building unanimous spirit focused on essentials and disregarding minor goals (personal ambitions, promotions) and individuals and institutions served as role models as Meng Tzu advocated centuries ago. Democratic distribution of leadership and of power demands education — lifelong, broad and holistic and yet quite specialized and focused. It implies constant active social concern and engagement — and compassion and humility.

Great out-of-the-box ideas developing into a collective idea of progress and supported by an overwhelming majority sometime did not finalize into a success, Rapid changes, uncertainties, imperative to initiate a major paradigmatic change — all generate fear. Almost a century ago a great president F. D. Roosevelt in his inaugural speech on March 4, 1933 called Americans to overcome their fear: "We have nothing to fear, but fear itself!" (A 2014 Google search gave 46 million references to phrase "fear from fear itself" vs. only 6 million to Roosevelt's other famous sentence "a day which will live in infamy.") On January 6, 1941 Roosevelt delivered a famous 'Four Freedom Address': "The basic things expected by our people of their political and economic system are simple: equality of opportunity for youth and for others, jobs for those who can work, security for those who need it and the ending of special privileges for the few, the preservation of civil liberties for all, the enjoyment of the fruits of scientific progress in a wider and constantly rising standard of living. ... This agenda can be boiled down to four freedoms: freedom of speech, freedom of religion, freedom of want and freedom of fear." A. MacLeish, Librarian of Congress, reported in May 1942 that polls show that 70% of American approved of 'the Four Freedom' message. In his State of the Union address in January 1944 Roosevelt said: "We have to realize that true freedom cannot exist without economic security and independence... People who are hungry and out of job are the stuff dictatorships are made of." Roosevelt's Bill of Economic Rights (also known as The Second Bill of Rights) calls for: the right of full employment — to a useful and remunerated job, to earn enough for food, clothing and recreation, the rights to adequate protection from economic fears of old age, sickness, accident and unemployment, the right to good education, the right to adequate medical care, the right of every family to a decent home, the right of every businessman to trade in freedom from unfair competition and domination of monopolies, the right of every farmer to raise and sell his products at a return which will give him a decent living. The worldview that resulted into 'The Second Bill of Rights' developed during World War II both in the USA and in the UK. For instance, Vice-president H. A. Wallace said in May 8, 1942: "Men and women cannot be free until they have plenty to eat, time and ability to read and think

and talk things out." British War Cabinet required including the phrase 'secure for all improved labor standards, economic advances and social securities'. W. Beveridge formulated at the end of 1942 a comprehensive scheme 'cradle to grave' social insurance underpinned by full employment. W. Beveridge wrote "Want is one of the five giants on the road of reconstruction. The others being disease, ignorance, squalor and idleness." Beveridge Report is described as a first attempt to translate Four Freedoms into practical actions. These ideas also found their artistic echo in Aaron Copland's 'Fanfare for the Common Men' in 1943 and in Norman Rockwell's painting of 1943 'Freedom from Want'. But F. D. Roosevelt died. Full Employment Bill was introduced in January 1945, was diluted and the emphasis 'full' was dropped. In such a limited form Congress accepted it in 1946. Will the day when Roosevelt's Bill was diluted live in infamy?

Late EU President Jacque Delors often emphasized that the EU is a project in construction. We should look at our world as a project in construction and I ask the readers to read this paper as a project in construction.

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