

GOVERNANCE AND POLITICS FOR TRANSFORMING OUR WORLD

UPRAVLJANJE I POLITIKA ZA PREOBRAZBU NAŠEG SVIJETA

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Abstract

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.

Sažetak

Preobrazba našeg svijeta zahtijeva novu paradigmu: usmjerenu čovjeku i čovječanstvu. Prije više od pola stoljeća, Russell-Einsteinov manifest (9. srpnja 1955.) je zazivao "Sjeti se svoje čovječnosti i zaboravi ostatak!" Realizacija svijeta usmjerenog na čovječnost je naš najvažniji i najizgledniji zadatak. Potrebno je aktivno uključivanje svih zainteresiranih strana: suverenih država, međunarodnih organizacija, akademija, sveučilišta, istraživačkih i umjetničkih centara, poduzeća, organizacija civilnog društva, religija i posebno svih građana. To zahtijeva nove ideje „izvan okvira“, zahtijeva odgovarajuće mijenjanje našeg ponašanja, te odgovarajuće političke odluke. Politika prožima sve te aktivnosti.

"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

1. Introduction

To survive we need to transform our world. The UN General Assembly unanimously adopted the Agenda 2030: Transforming Our World - the Sustainable Development Goals /1/. 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 /2/. 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 crowd /3/.

2. Our Successes and Our Failures

The Paris Agreement on Climate Change (COP21) 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 2015 /4/. As of September 2017, 195 UNFCCC members have signed the agreement, 162 of which have ratified it and 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 /5/ 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 /6/, 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 time-bound 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 →1999), Biological weapon convention (1972 →1975) and Chemical weapon convention (1993 → 1997).

This is the best world, but there are also very disturbing trends. The Doomsday Clock is at 2.5 minutes to Midnight /7/ and potential conflict in Korea as well as starting of the New Cold (Colder) /8/ War would put it closest to Midnight than ever. Freedom in the World 2017 /9/ 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/party 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 free 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, 2017 /10/ 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, 2017 /11/.

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 /12/. 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 sub-mediocre. 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.” 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 1930ties to about 25% in 1980ties. “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 80ties and 90ties market became dominant. In 2004, the British sociologist Colin Crouch came up with the term “post-democracy” to describe this new order /13/ „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.” /14/

In the USA the medical profession and scientists, as well as religious leaders and military are highly regarded, while politicians, businesspersons and media-people are not. The change in the trust in institution in the USA is shown in Table 1 /15/:

Table 1.

	June 2002	June 2011	Change
Banks	47%	23%	- 24%
President	58%	35%	- 23%
Congress	29%	12%	- 17%
TV	36%	28%	- 8%
Military	79%	78%	- 1%
Police	60%	57%	- 3%
Church	45%	48%	+ 3%

Throughout the world only 13% trusted politicians. About third of those asked said that more power should go to academics, while one fifth argue that more power should be given to military and business leaders. One third considers they are 'defined' by their nationality, and one fifth by their religion.

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.” /16/

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.“ /17/ 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.

Socio-political structure of our contemporary world is composed of about several thousand different cultures and of about 200 states. As our existence and our development crucially depend on biodiversity, analogously cultural diversity is essential. Sovereign states appear as a rather artificial structure. The number of UN members varied from 51 in 1945 to 193 today (1955: 76 members, 1965: 117, 1975: 144, 1990: 159, 2000: 189. Membership within the UN system divides the 206 listed states into three categories: 193 member states, 2 observer states, and 11 other states. The *sovereignty dispute* column indicates states whose sovereignty is undisputed (190 states) and states whose sovereignty is disputed (16 states, out of which there are 6 member states, 1 observer state and 9 other states). 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 Mid-

dle Ages and of course, most leading universities and research institutes today. 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)

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 /18/. 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 euro-elite 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 and “the dictum of von Clausewitz about war being a continuation of politics are 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'" /19/ 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 than 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.

Politics exists everywhere. It is all-pervading and as old as human beings. Politics prevails in every sphere of human life. Whether one likes or not virtually no one is completely beyond the reach of some kind of a political system. Education and work are two other human activities that are as old as humankind. Remarkably both are presently undergoing significant – truly paradigmatic changes. The way we live, produce and learn are dramatically changing.

3. Education and Work

The school 42 is a private, nonprofit and tuition-free computer programming school established and funded by French billionaire Xavier Niel (founder of the telecommunication company Iliad) with several partners. The school was first

opened in Paris in 2013. Out of more than 70,000 candidates in France, 3,000 were selected to complete a four-week intensive computer programming boot-camp called *piscine* (swimming-pool). Any person between 18 and 30 can be registered for *piscine* after completing the logical reasoning tests on the website. No previous diploma is required. The school does not have any professors, does not issue any diploma or degree, and is open 24/7. The training is inspired by new modern ways to teach which include peer-to-peer pedagogy and project-based learning. The School has been endorsed by many high-profile people in Silicon Valley. The school is a non-profit organization and is entirely free. All the intellectual property belongs to the students. '42 Silicon Valley' is the American campus chartered as a public-benefit nonprofit corporation in the State of California and has been created and funded by the same team from France. Students have no time limits in which to complete their projects. They validate the projects by correcting each other's work. Validation of a project increases the level of the students, allowing them to unlock new and more difficult challenges. During their time at the school, students have to undertake internships. To qualify for an internship a student must have validated a certain number of projects and passed five exams. Schools stress educational methodologies such as peer-learning, whereby students are encouraged to assist one-another and self-organize, and project-based learning which favors longer-term, open-ended assignments. Several similar schools have been established, e.g. WeThinkCode (South Africa - established in 2016), a new kind of tech incubator dedicated to eliminate the IT skills gap. ACADEMY+PLUS (Romania - in 2014), ACADEMY+MOLDOVA (in 2016), Holberton (San Francisco - in 2015), UNIT Factory (Kyiv - in 2016) and TUMO (Armenia - in 2011).

Any innovation significantly influences labor. The Japanese have a phrase "giving wisdom to machines" to direct the development of future technologies so that it complements rather than replaces us. The invention of the steam engine was supposed to reduce the number of manufacturing workers. Instead their ranks soared. More than 50% of the USA workforce was in farming in 1890s when it was a physically demanding work. Today, thanks to mechanization, fewer than 2% are in agriculture and their output is much larger. New technologies eliminate jobs, but also create

new jobs. After steam engines replaced water wheels in 1800s, the sector expanded sevenfold from 1.2 million jobs in 1820 to 8.3 million jobs in 1910. ATM did not replace bank tellers. There are more tellers today. It is about tasks not jobs as bank tellers case shows /20/. When Toyota introduced robotics it solicited ideas from workers. Introduction of new technologies demands that workers are at the center of the transition. However, the process does not end there. Companies need to invest in continuous training of workers so that they can constantly use, adapt and influence technological changes. Workers have to learn hybrid skills: a combination of technical knowledge with aptitudes for communication and problem solving. An important innovation is a block-chain, a continuously growing list of records, called *blocks*, which are linked and secured using cryptography. Each block contains typically a hash pointer as a link to a previous block, a timestamp and transaction data. By design, block-chains are inherently resistant to modification of the data. A block-chain can serve as an open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way. A block-chain is managed by a peer-to-peer network collectively adhering to a protocol for validating new blocks. Once recorded, the data in any given block cannot be altered retroactively without the alteration of all subsequent blocks and a collusion of the network majority. Block-chains are secure by design and are an example of a distributed computing system with high 'Byzantine fault' tolerance. Decentralized consensus has therefore been achieved with a block-chain. This makes block-chains potentially suitable for the recording of events, medical records, identity management, transaction processing, documenting provenance, or food traceability. The first distributed block-chain was conceptualized by Satoshi Nakamoto in 2008 and implemented the following year as a core component of the digital currency bitcoin. These recorded transactions become part of an ever growing, unchangeable and encrypted ledger that can be viewed by anyone with the proper access. The 'ledger' is stored across a network of computers using cloud computing technology. The block-chained-based structure could increase the public trust in institutions which can no longer be rigged by a small minority of special interests. Centralized administration is less efficient than block-chained structure. The "Internet of Things" (IoT)

is a relatively new term for inter-networking of physical devices which are connected to the internet — it is a term used for "smart things". There was a time in which our phones were not smart, our TVs were not smart, our cars did not talk to satellites or to other cars. "Things," in the IoT sense, can refer to a wide variety of devices from heart monitoring implants and biochips to home heating systems and even clothes. Now so much of our lives are intertwined and connected in some sort of way as an effort to make our lives easier. The Internet of Things is already being integrated in energy management. With the IoT, you can program it in real time, via your phone or any internet device, thus saving a lot of money and energy. We are likely to see a lot of growth over the years in connectivity in our everyday products.

4. Human Beings

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 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 Oxensterna '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. 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, 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. 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 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 Survey 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.

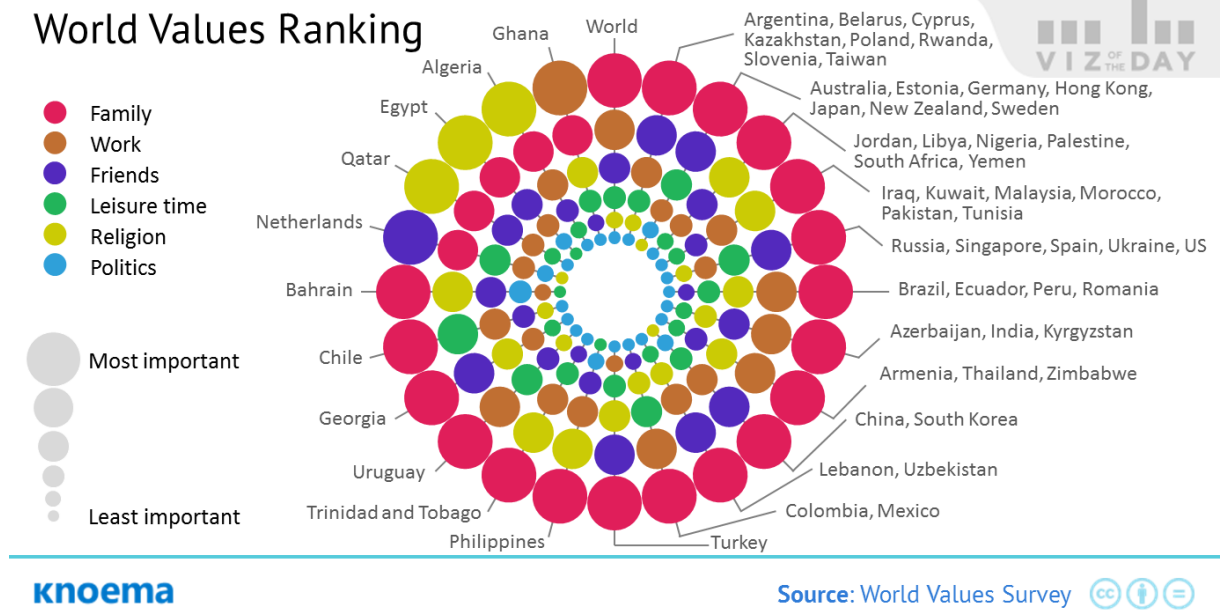


Fig. 1. World Value Survey /22/

5. Complicated and Complex Systems

Contemporary world is global, interdependent and complex. All living systems and all social systems are complex systems. Complex systems have to be clearly distinguished from complicated systems. A complex system has enormous, often infinite sensitivity to initial and boundary conditions (usually referred 'deterministic chaos', emphasizing 'nonlinearity' and 'butterfly effects') and in addition - very importantly - it includes creativity. Creativity includes the capacity to change, to learn, to anticipate, to see values and disvalues and to accept and/or reject them. While 'complicated systems' can be analyzed, reduced to their 'simpler' parts, complex systems have to be addressed holistically. Complicated systems can be – at least in principle – fully modeled and to that extent understood. Complex systems can never be fully described by any model, they are always incomplete and model diverges from 'reality' over time. Complex systems cannot be 'solved', they can be influenced by 'learning to dance with them' as Donella Meadows said. This distinction between complex and complicated systems has important consequences for decision-making, policy-advice, politics and governance. Also, it puts the 'unity of science' in a different framework: unity of science does not mean 'reduction to physics'. Nowadays physics is the queen of science in a sense that it has succeeded in proving the richness of the physical

universe (universes) and thereby it gently points that similar abundance enriches all human understandings and actions. 'Complexity is a system/ a process in which large networks of components with no central control and simple rule of operations give rise to complex collective behavior, sophisticated information processing and adaptation via learning or evolution.' /23/ 'Government officials and other decision-makers increasingly encounter a daunting class of problems that involve systems composed of a very large number of diverse interacting parts. These systems are prone to surprising, large-scale, seemingly uncontrollable, behaviors.... Complexity science has emerged and evolved ... devoted to understanding, predicting and influencing the behavior of complex systems. It deals with non-linearity and discontinuities, aggregate macroscopic patterns rather than causal microscopic events, probabilistic rather than deterministic outcomes and predictions, change rather than stasis.' /24/ Complexity science deals with resilience, robustness, emergence, attractors and phase transition /25/ (note that many appear in physics, e.g. phase transition from water to ice).

6. Politics for Survival

Politics determines the environment within which every person will organize her/his life. No one can escape from the parameters set by politics. Political power has changed. It has shifted from military through economic power and now to knowledge. While military and economic powers

are finite and subject to a zero-sum game rules, knowledge is inexhaustible, it is subject to win-win rules and increases at the rate of doubling every decade. Knowledge-based society crucially depends on democracy, and vice versa democracy depends on knowledge and it requires research and creativity. Human capital /26/ is the most valuable capital and it realizes itself both through individuals and through the collective. Our survival and our sustainable development demand that the UN Agenda 2030 are fulfilled. Following famous Einstein's dictum that it is impossible to solve problems by using the same kind of thinking we used when we created them, we conclude that a new political paradigm is required. New economic thinking will develop in parallel with and within a new political paradigm. During the last hundred year governance (the word comes from the Greek verb κυβερνάω which means 'to steer'. Remember that Don Juan in G. B. Shaw 'Man and Superman', Act III said "To be in hell is to drift, to be in heaven is to steer.") and politics did change, but more profound changes are demanded. Three quotes best represent inadequacies of our current political activities. Addressing the MIT convocation Sir Winston Churchill said: "If, with all the resources of modern science, we find ourselves unable to avert world famine, we shall all be to blame." /27/ Speaking at the 30th anniversary of Reykjavik (Oct 9, 2016) M. Gorbachov said: "It all looks as if the world is preparing for war, but ..in modern world, wars must be outlawed, because none of the global problems we are facing can be resolved by war – not poverty, nor the environment, migration, population growth, or shortages of resources." /28/. In his *Evangelii Gaudium*, issued on Nov 24, 2013 Pope Francis wrote: "This economy kills! 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 not the "exploited" but the outcast, the "leftovers". We are entering a new world not only with many more stakeholders and actors, but where importance of various determinants changed and will change. Post-truth reiterates what we learned hundred years ago in (quantum) physics: reality is not "reality" but potentiality, which establishes an intimate, non-separable, non-reducible, holistic relationship

between everything /29/. We emphasized that successful transformation of our world requires creativity, activity and political involvement of all citizens. It would seem that frequent referenda - often referred as 'festival of democracy' are the best way to involve all stakeholders. However, referenda can be marked by blatant lies, by manipulating people's feeling about facts and the people rethinking their vote the next day. Critical analyses of referenda in Switzerland, California and recently in the EU reveal their numerous shortcomings. Frustration and dissatisfaction with current political elite forms and stimulates political groups wishing to take advantage of these popular feelings thereby generating populism. Certainly, populism does not mean creativity, activity and political involvement of all citizens, and actually it displays the lack of any ideas by political groups. Current democratic processes are focused on one sovereign country. Salient features of our contemporary world: interdependence and fast changes clearly prove it is an impossible task. Several years ago an interesting proposal was made: since the USA is so important, the 'election' of the president of the USA should be influenced by factors outside of the USA. Of course, these 'outside' influences are well-known throughout the history. It is instructive to remember the influence of several ambassadors at the Russian court in influencing succession of Peter the Great heirs.

7. Leadership

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 Y. Dror outlines basic characteristics for a contemporary leader. Clearly, leaders have to be compassionate, humble and with out-of-the-box ideas. Compassion is clearly an absolute requirement for politics, since it deals with the common good and also good for a particular segment of the society. Understanding and harmony among all these compassions is the requirement for a contemporary good politician. The basic law included in all major cultures and religions is the Golden Rule, and it seems 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" /30/. 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 over 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. Great out-of-the-box ideas developing into a collective idea of progress and supported by an overwhelming majority sometime, actually often 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 fa-

mous 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'. 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?

I ask the readers to read this paper as a project in construction, as the former EU President J. Delors often emphasized. We should look at our world as a project in construction.

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